EUMETSAT

EUMETSAT Polar System Second Generation (EPS-SG) Programme Status

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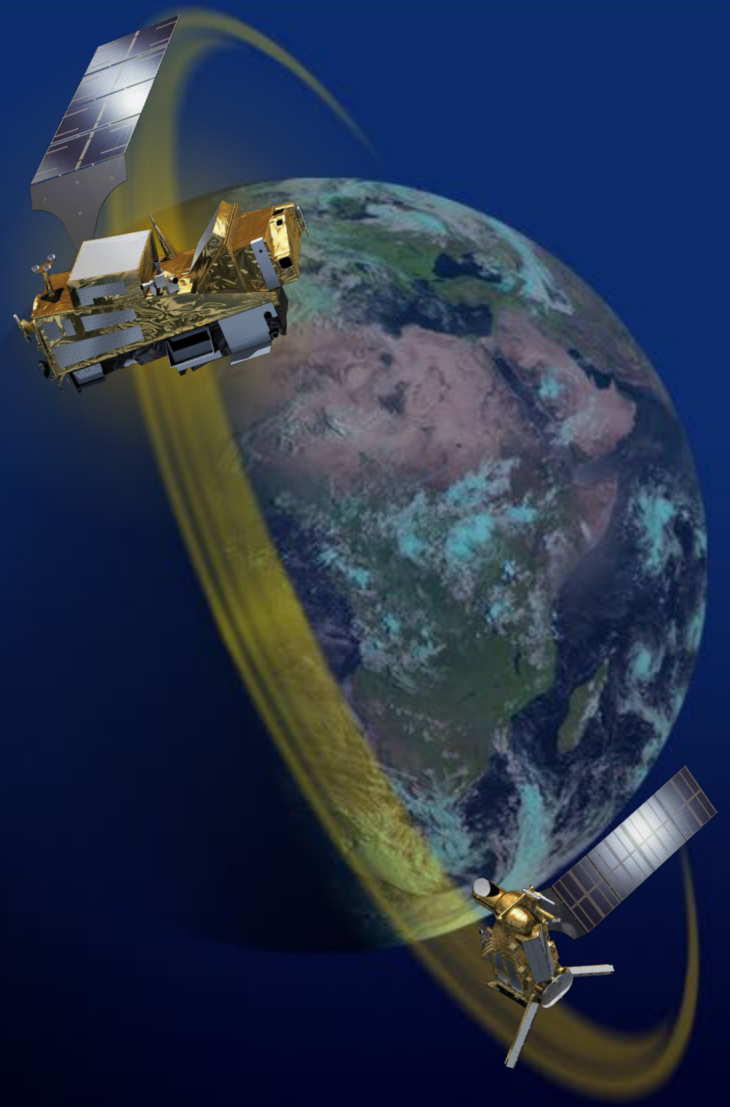
EPS-SG Objectives

- Primary mission: further improve observational inputs to Numerical Weather Prediction models.
- Continuation and enhancement of service from mid morning polar orbit in 2025 – 2046.
- Significant contributions to other real time applications: Nowcasting at high latitudes; Marine meteorology and operational oceanography; Operational hydrology; Air quality monitoring.
- Climate monitoring: expand by 20+ years the climate data records initiated in 2006 with EPS (first generation).

EPS-SG Space Segment

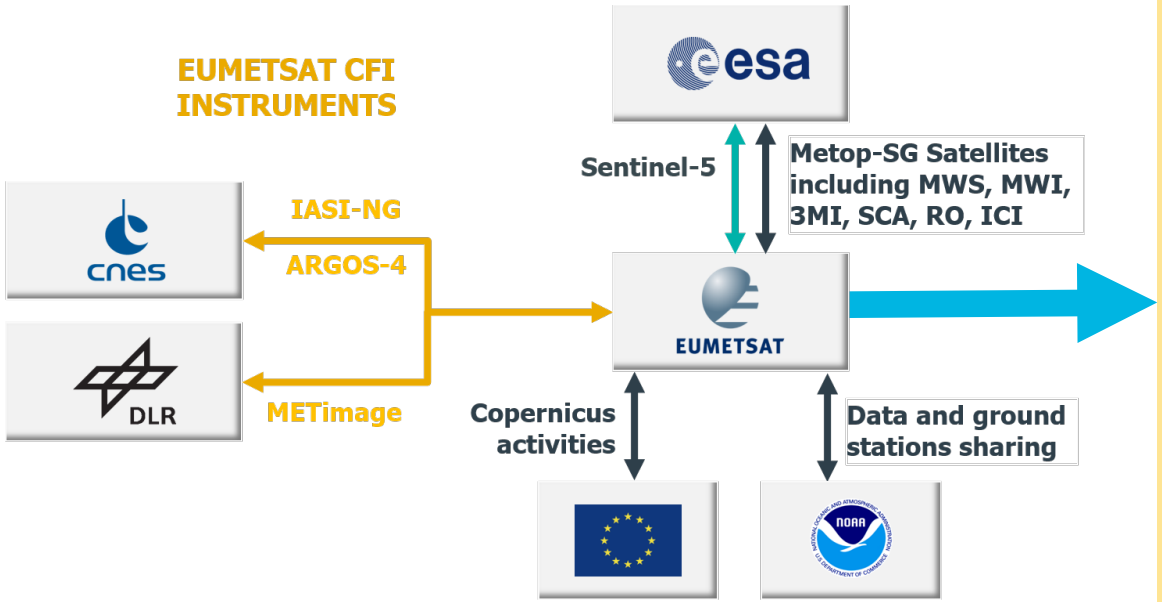
3 x Metop-SG A
Sounding & Imagery



Two series of satellites in the same mid-morning orbit as Metop satellites (EPS first generation).

3 x Metop-SG B
Microwave Imagery

EUMETSAT Role and Partnership



EUMETSAT Responsibilities vis-à-vis Partners

Polar Stations Svalbard & McMurdo

Credits: ESA

6x Launch Service

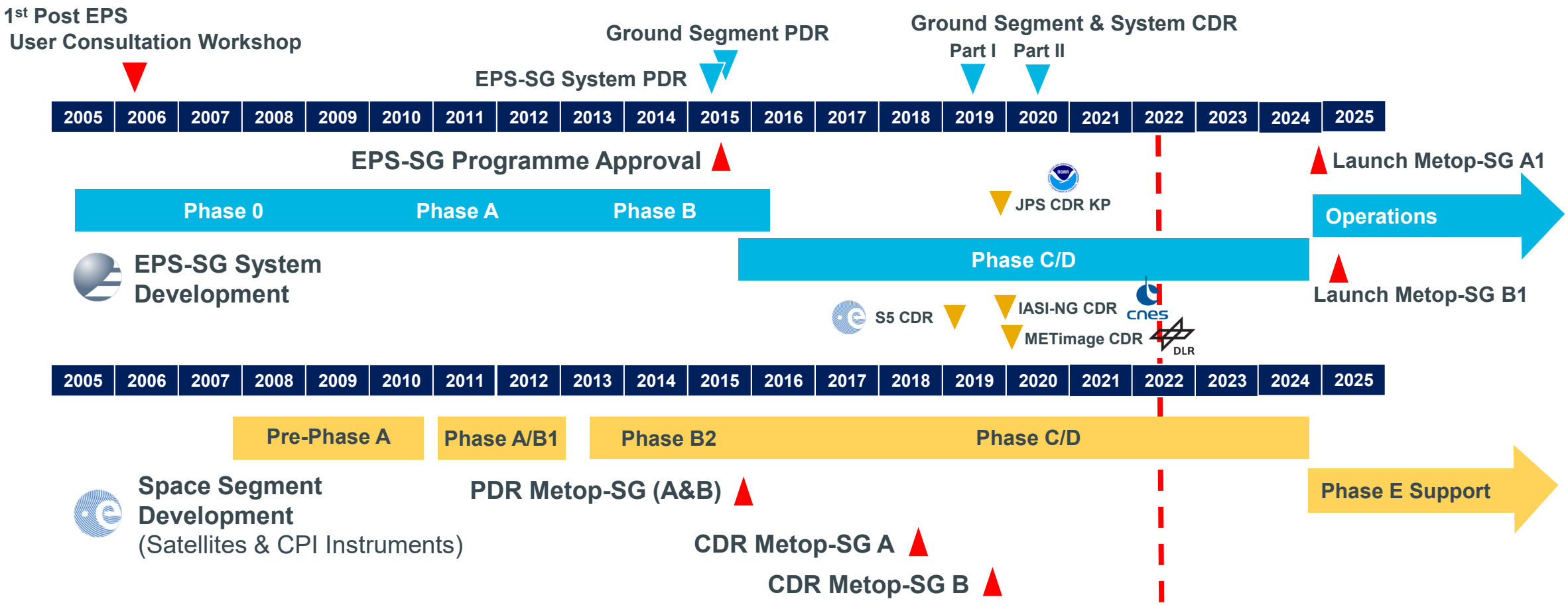
6x LEOP Service

Ground Segment and 21 years of system operations

8 Satellite Application Facilities (SAF)

EUMETSAT is the overall system authority

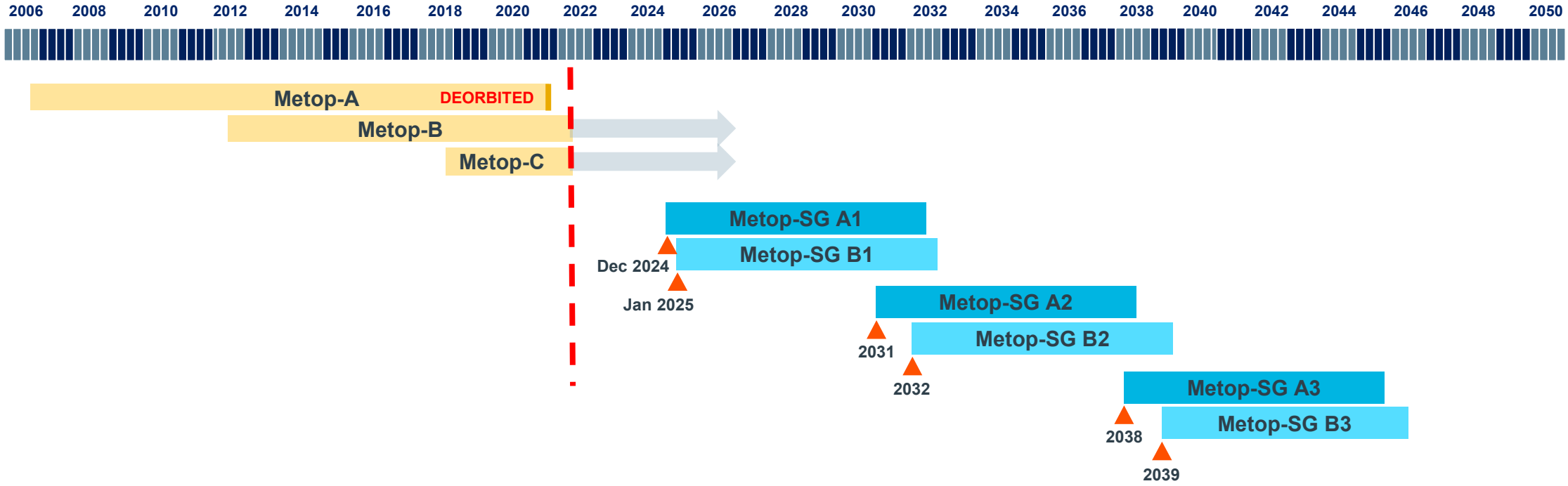
EPS-SG Development Timeline



Metop-SG Satellites Deployment Schedule

EUMETSAT POLAR SYSTEM (EPS)

First Generation | **Second Generation**



- ✓ Metop-SG satellites nominal lifetime: 7.5 years (9.5 years extended)
- ✓ Satellites will be actively de-orbited

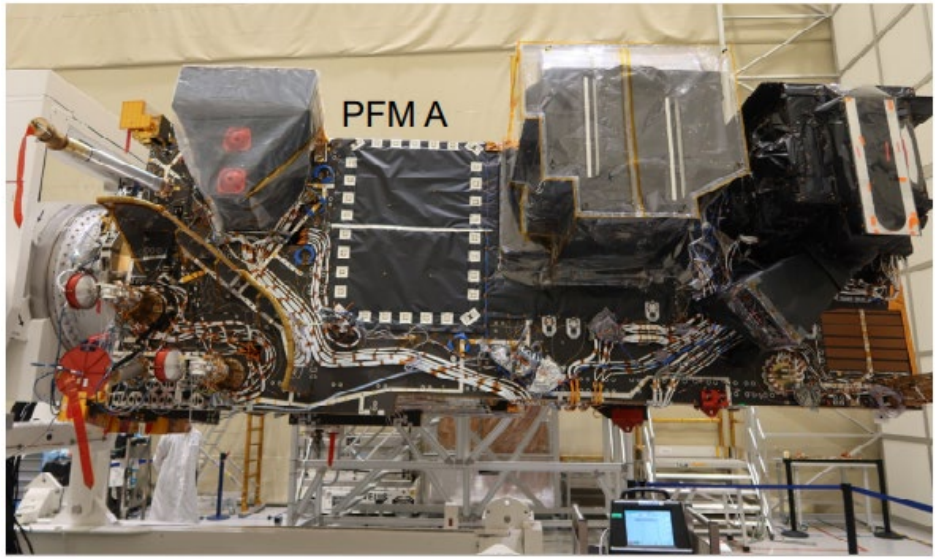
Metop-SG Satellites – Payload Overview (Video)

EPS-SG Space Segment status

Metop-SG A1

- Qualification Review: closed
- Assembly, integration and test of the platform is completed, except for the Solar Array,
- RO PFM, 3MI PFM, Sentinel-5 and METimage intermediate models integrated.
- MWS delivered in May,
- Awaiting IASI-NG in August prior to start the satellite environmental test campaign.

Metop-SG A PFM
Photo Credits: ESA/Airbus



Metop-SG B1

- Qualification Review: April to June 2022
- Platform partially completed with RO FM2, ARGOS-4 FM3, and MWI intermediate models integrated
- ICI, SCA and MWI PFM's to be delivered

Metop-SG B PFM
Photo Credits: ESA/Airbus

Instruments delivery status

Metop-SG A1

Microwave Sounder (MWS)

→ PFM delivered in May 2022.

Multi-View -Channel -Polarisation Imager (3MI)

→ PFM delivered and integrated in April 2022.

Visible Infrared Imager (METimage)

Intermediate integration model on Metop-SG A1.
Assembly of the proto-flight model on-going.
→ PFM delivery in early 2024.

Sentinel-5

Intermediate integration model on Metop-SG A1.
Assembly of the proto-flight model on-going.
→ PFM delivery in Q3 2023.

Infrared Atm. Sounder Interferometer (IASI-NG)

Functional and performance testing on-going.
→ PFM delivery in Q3 2022.

Metop-SG B1

Microwave Imager (MWI)

Intermediate integration model on Metop-SG B1
→ PFM expected in Q2 2023.

Ice Cloud Imager (ICI)

→ PFM expected in Q3 2022.

Scatterometer (SCA)

→ PFM expected in Q4 2022.

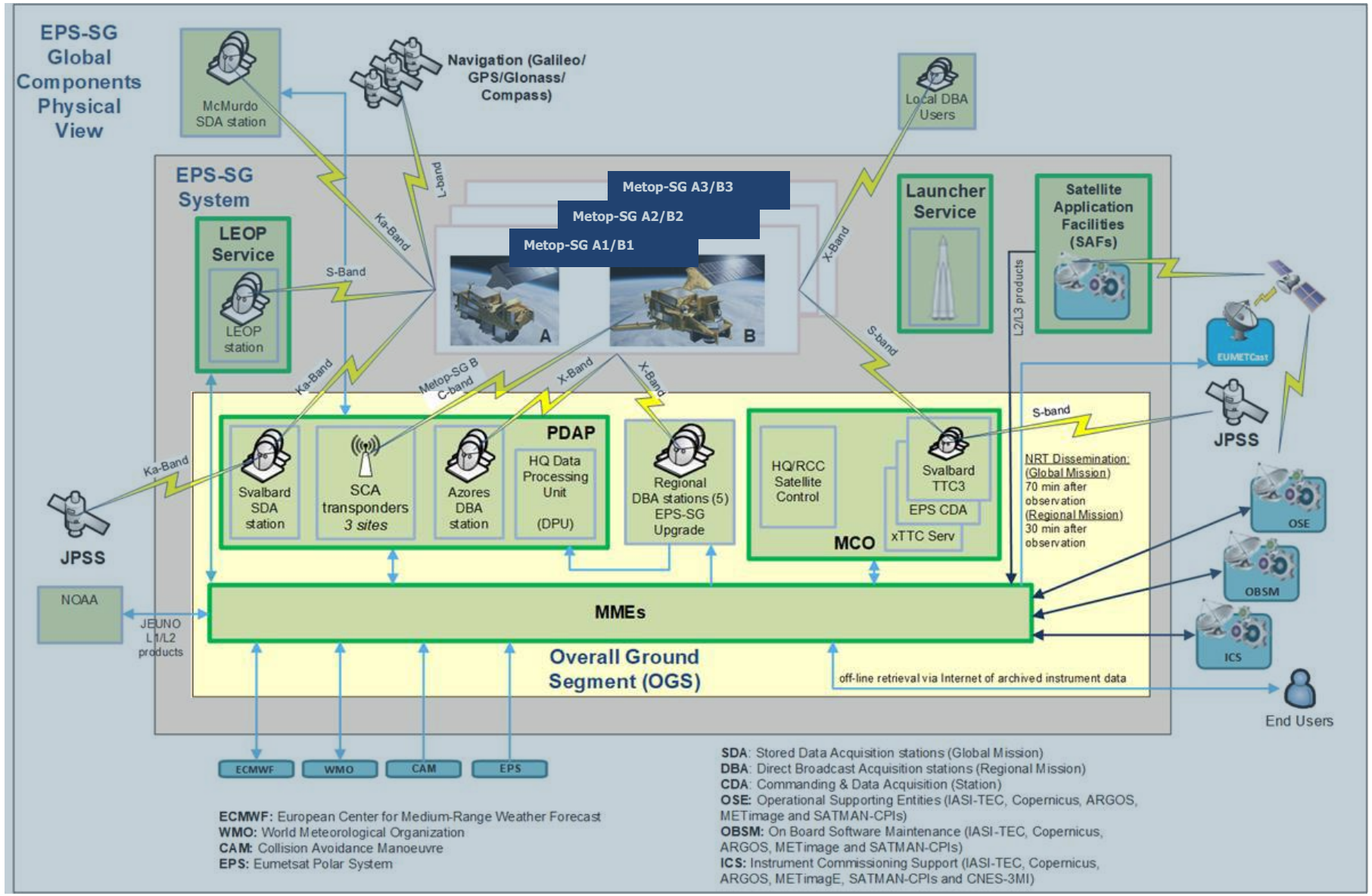
ARGOS-4

→ FM delivered and integrated.

Radio Occultation (RO) on Metop-SG A and B

→ 2 FM's delivered and integrated

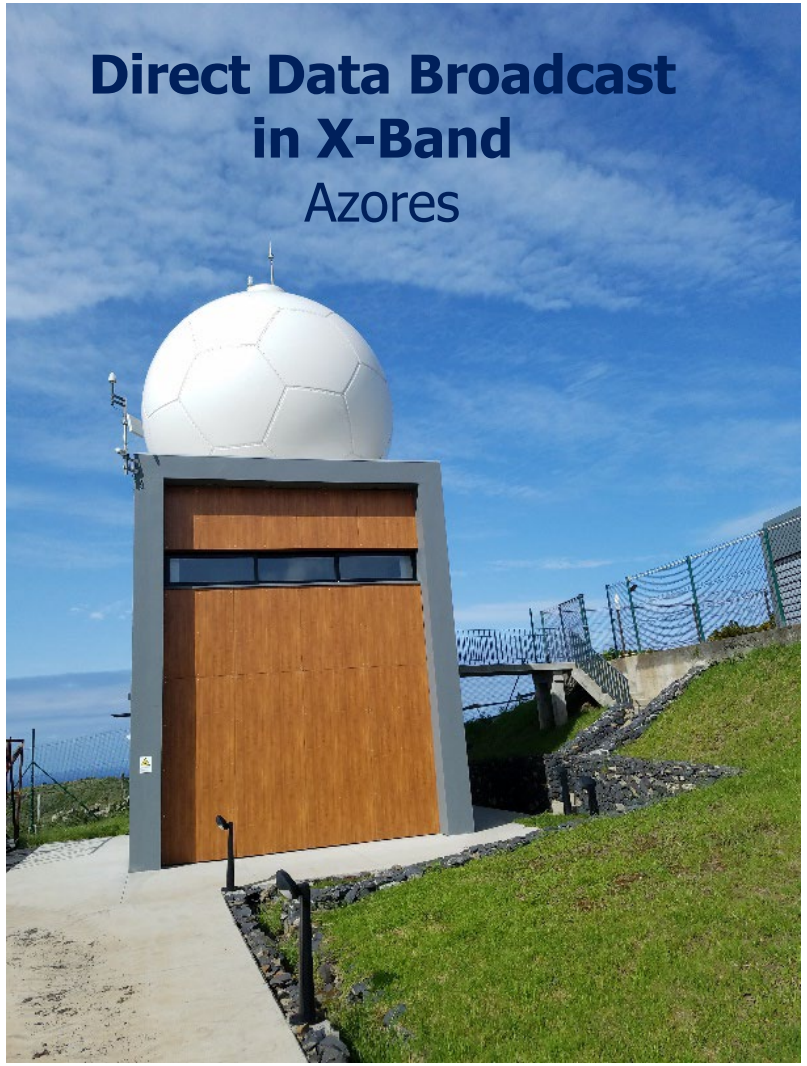
EPS-SG Overall Ground Segment - Overview

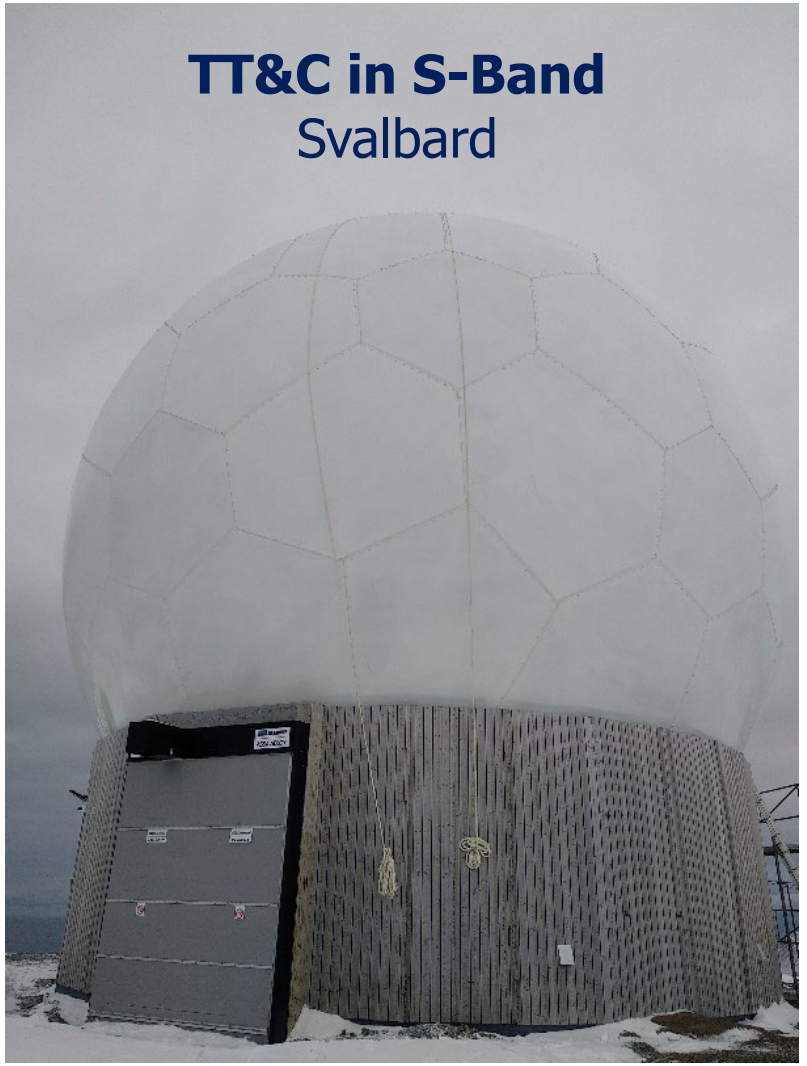


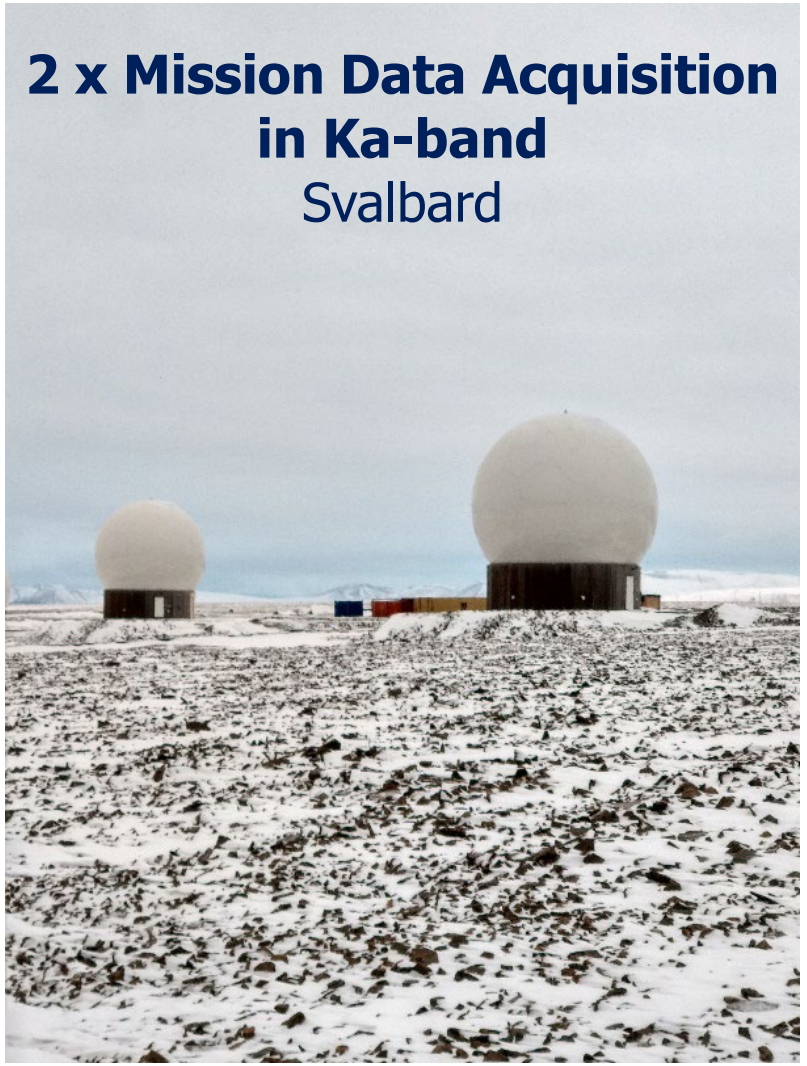
EPS-SG System and Ground Segment Status

- Mission Control and Operations (MCO): First version delivered. Delivery of the second version ready for launch in Q4 2022.
- Payload Data Acquisition and Processing (PDAP): First version capable to support data circulation tests delivered. Successive versions, progressively enhancing capabilities are planned to be delivered until Q4 2023.
- Integration, Verification and Validation activities on-going with initial versions of the monitoring and control and data processing sub-segments incl. their respective ground stations and with EUMETSAT Multi Mission Elements.
- Science & Processing Specifications completed for Metop-SG A in 2021 and will be completed for Metop-SG B by 2022. These specifications target the operational processors to be deployed in 2023 to support Calibration/Validation activities in-orbit .
- Launch Vehicle for the first Metop-SG A/B satellites is Ariane 62.

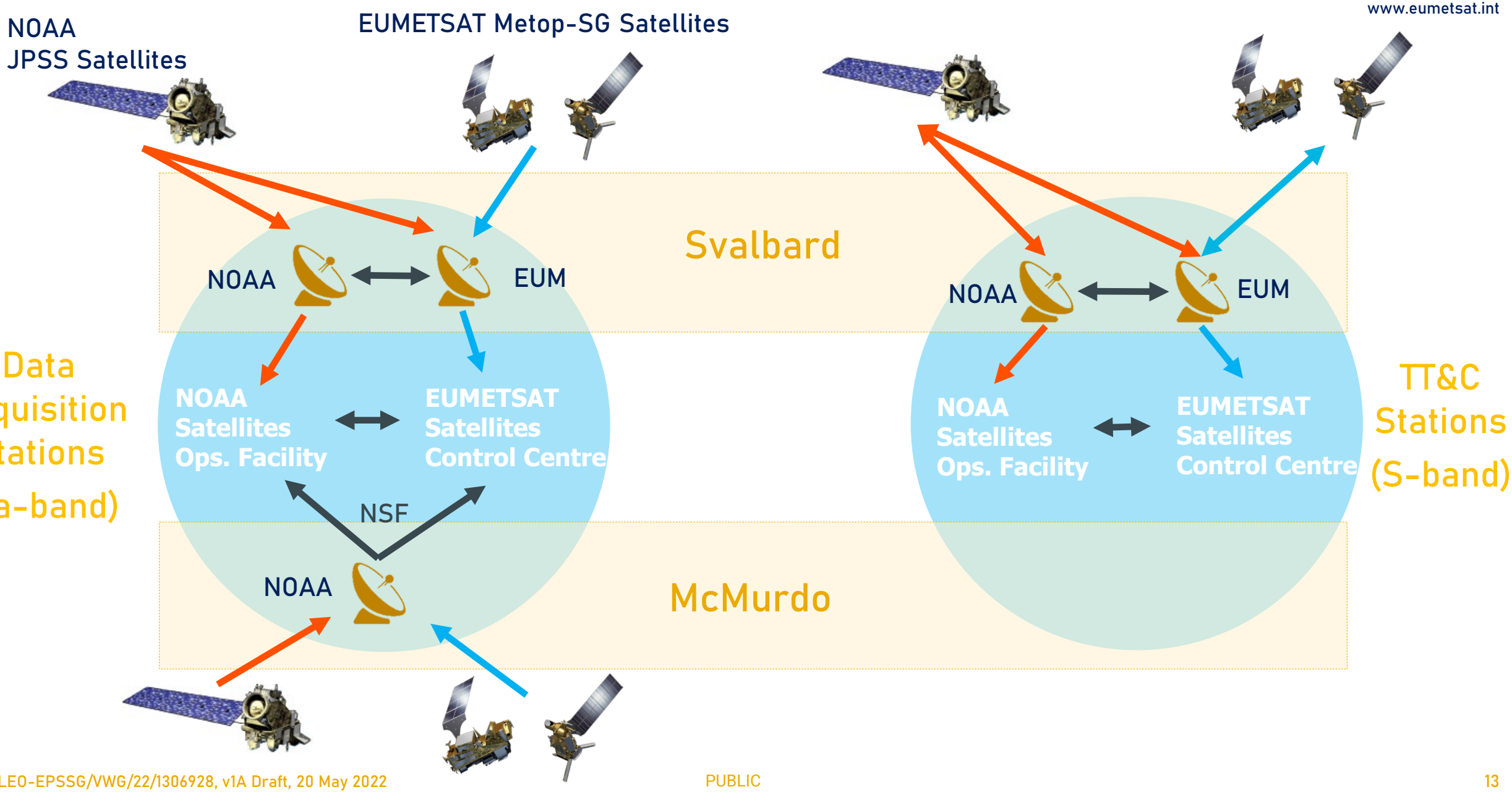
EPS-SG (new) Ground Stations







Joint Polar System (JPS) – System of Systems with NOAA



Summary

- Space Segment: Good progress of assembly integration and test activities at satellites level. Awaiting delivery of IASI-NG PFM to start satellite level testing on Metop-SG A1.
- EPS-SG System and Ground Segment: Integration, Verification and Validation activities on-going with initial versions of the delivered sub-segments and with EUMETSAT Multi Mission Elements.
- Joint Polar System with NOAA: Activities on track.
- Launch of Metop-SG A1 December 2024 earliest.
  Metop SG B1 launch scheduled for Q1 2025 (under review)

Thank you!

Questions are welcome.