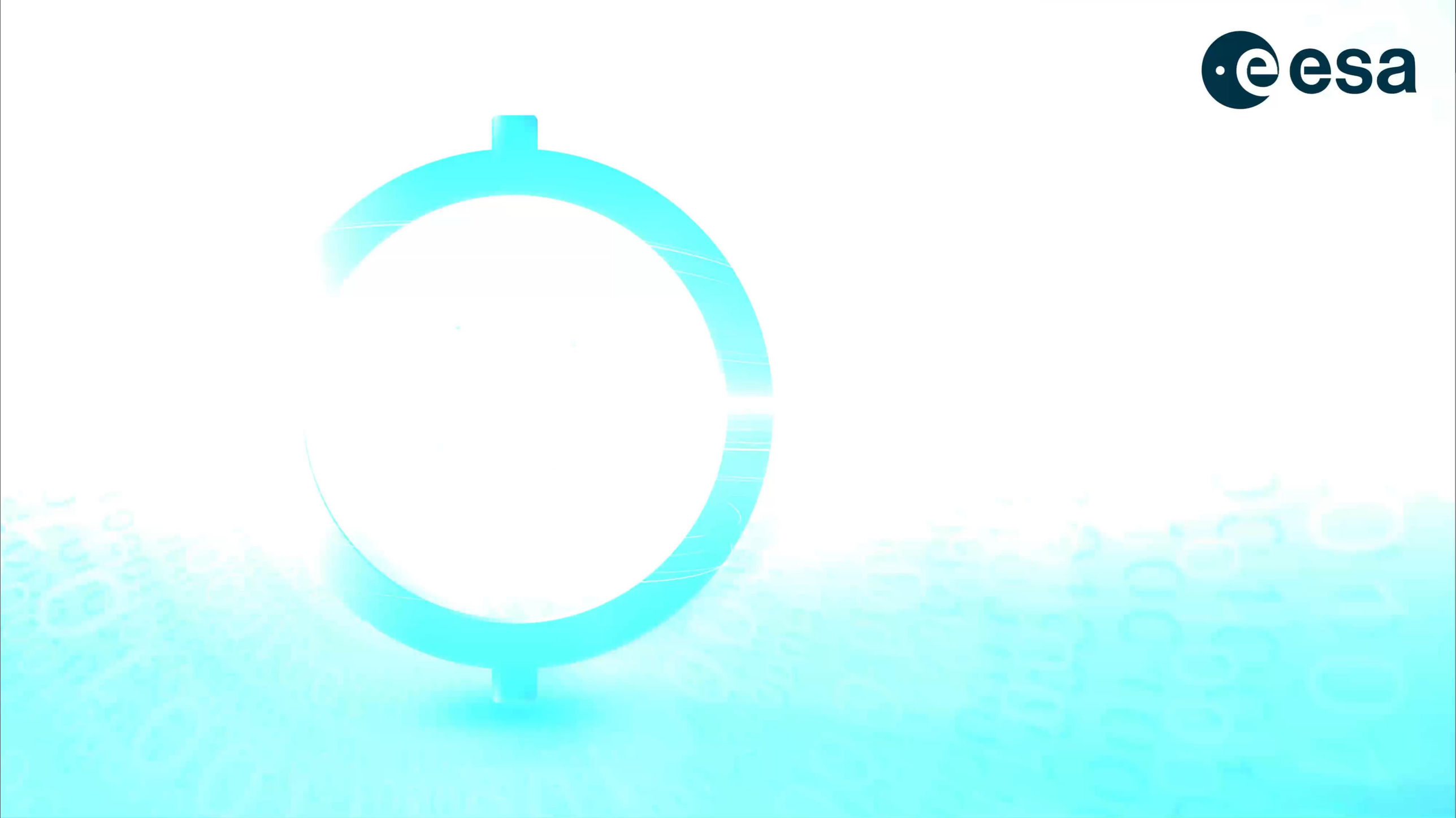
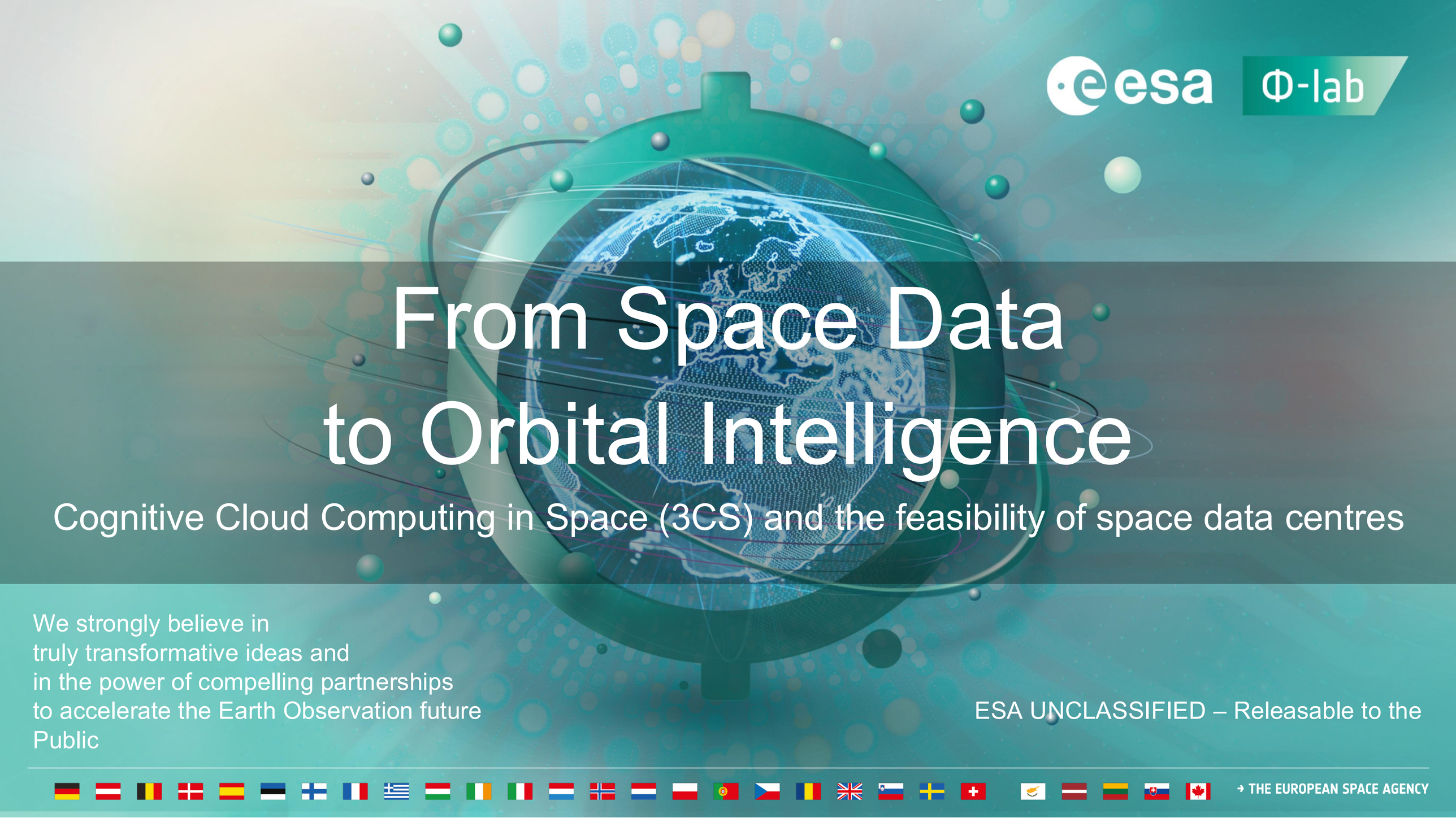


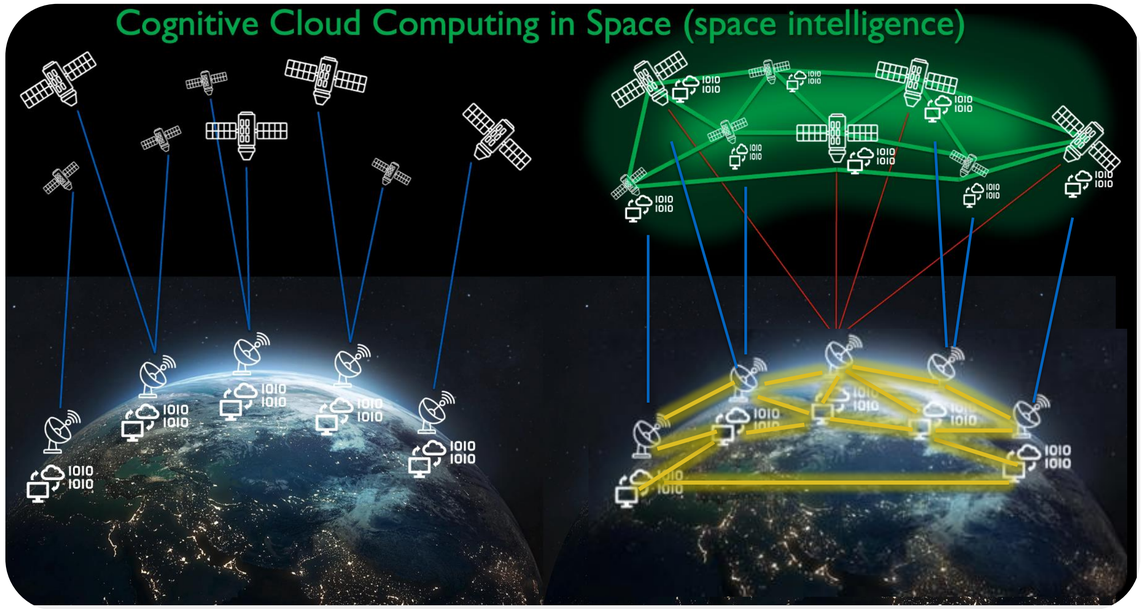


From Space Data to Orbital Intelligence

Cognitive Cloud Computing in Space (3CS) and the feasibility of space data centres

We strongly believe in
truly transformative ideas and
in the power of compelling partnerships
to accelerate the Earth Observation future

Cognitive Cloud Computing in Space (3CS)



Why 3CS?

What is Cognitive Cloud Computing in Space (3CS)?

Integrating mature technologies into a cohesive architecture is ongoing.

New 3CS-enabled applications

- Early alert systems (e.g. disaster monitoring, maritime surveillance)
- New observation model (e.g., tip & cue)
- New commercial missions (e.g. space cloud, satellite as services)

Current activities

- **3CS Technological studies:** 2 ongoing parallel studies aiming at:
  - Deriving a holistic technological vision of 3CS for the next 10 years
  - Defining feasibility, preliminary requirements, architecture and enabling technologies for a constellation enabling in-orbit experimentation

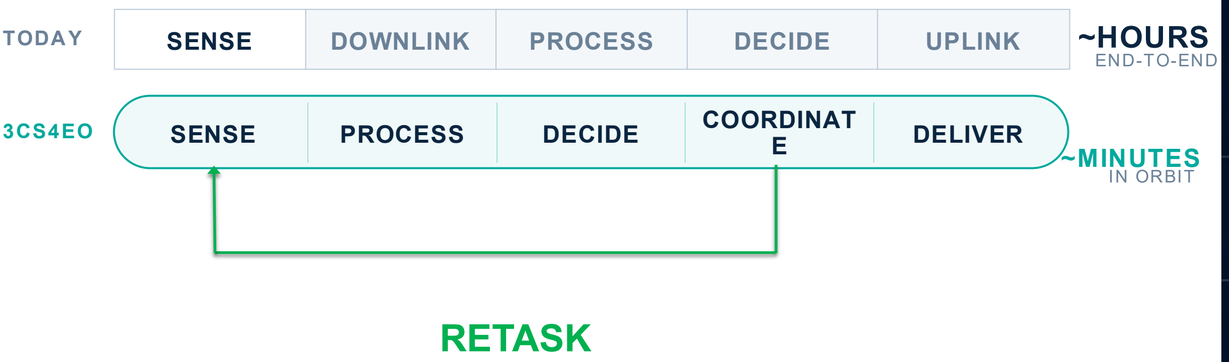
- **3CS Commercial studies:** 1 ongoing study

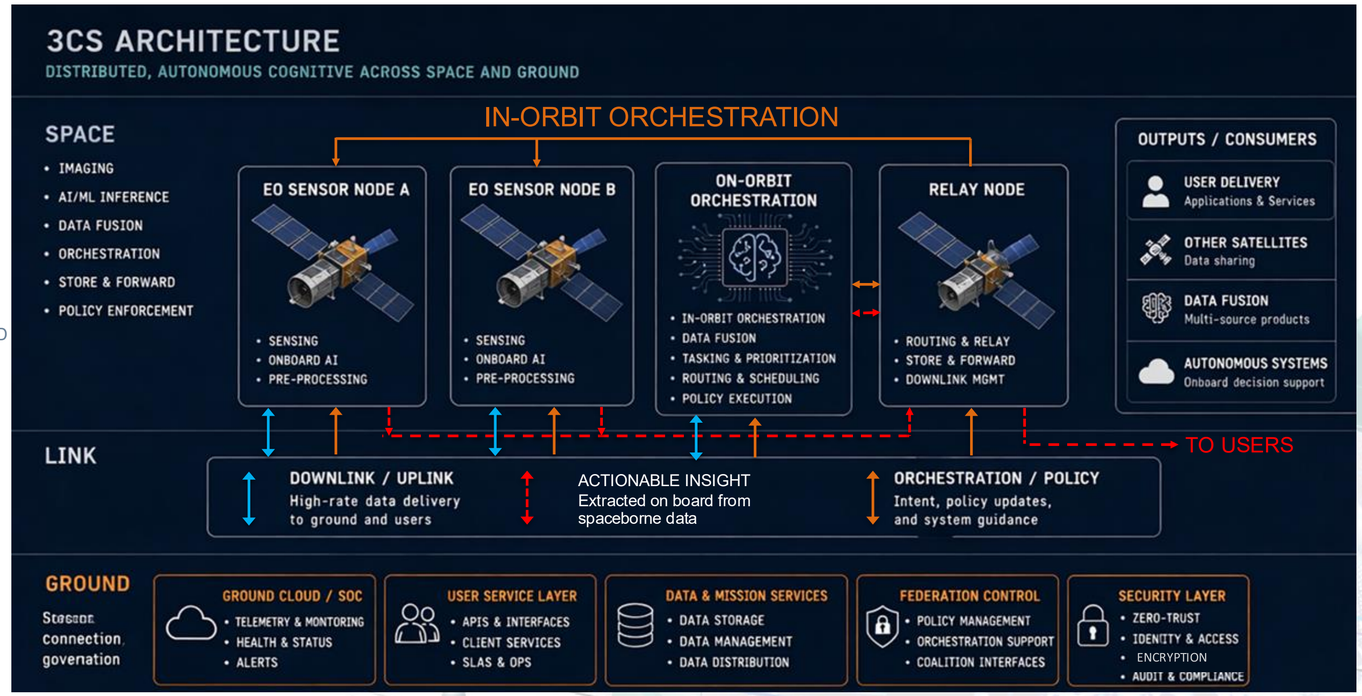
- **EO Virtual Constellation:** one ongoing project aiming at:
  - Designing a distributed system of interconnected smart sensing nodes across space, and ground.
    - operating as a highly coordinated virtual instrument, enabling semi- or autonomous detection and dynamic responses to events, measurements, and external information
    - fostering collaboration among various sensing nodes, ultimately transforming how we monitor and
    - analyse environmental changes in real time.

3CS: meaning and enabling capabilities

Satellites stop being sensors and relays. They become intelligent nodes, which can react at events and cooperate in a distributed, secure, cloud infrastructure.

The same transition terrestrial computing made when isolated servers became the cloud.





Market Pull

REUTERS – 30 April 2026

Meta looks to raise up to $25bn via bond sale for AI build-out

Signal — capex is now drawn from public credit, not just operating cash.

REUTERS – 23 April 2026

Europe risks falling behind US, China on AI data-centre build-up

Signal — regional competitiveness, sovereignty, strategic autonomy.

FINANCIAL TIMES – 29 April 2026

Google, Meta and Microsoft boost AI spending forecasts

Signal — the capex wave is broad — every hyperscaler, simultaneously.

WHY 3CS NOW

Terrestrial AI is hitting the limits: power, water, land, permits, capital.

Space may offer natural advantages where Earth is constrained — solar abundance, global coverage, resilience, autonomy.

Capital shock

Financial Times – 30 April 2026

Google outpaces rivals as Big Tech's AI spending plans rise to $725bn

Alphabet, Microsoft, AWS, Meta, Oracle.

Reuters – 18 December 2025

Rheinmetall partners with ICEYE to fulfil a $2bn satellite constellation order

European giants and New Space

Reuters – 4 February 2026

SpaceX acquires xAI in record-setting deal as Musk looks to unify AI and space ambitions

AI+space+compute = orbital-data-centre

The market pull for 3CS is not only technical: it is financial.

AI compute scarcity is creating a capital-allocation shock across hyperscalers, frontier AI companies, space infrastructure and future IPO markets

Not anymore 'can we put computing in space?' .

The harder question is which parts, when, under whose governance.