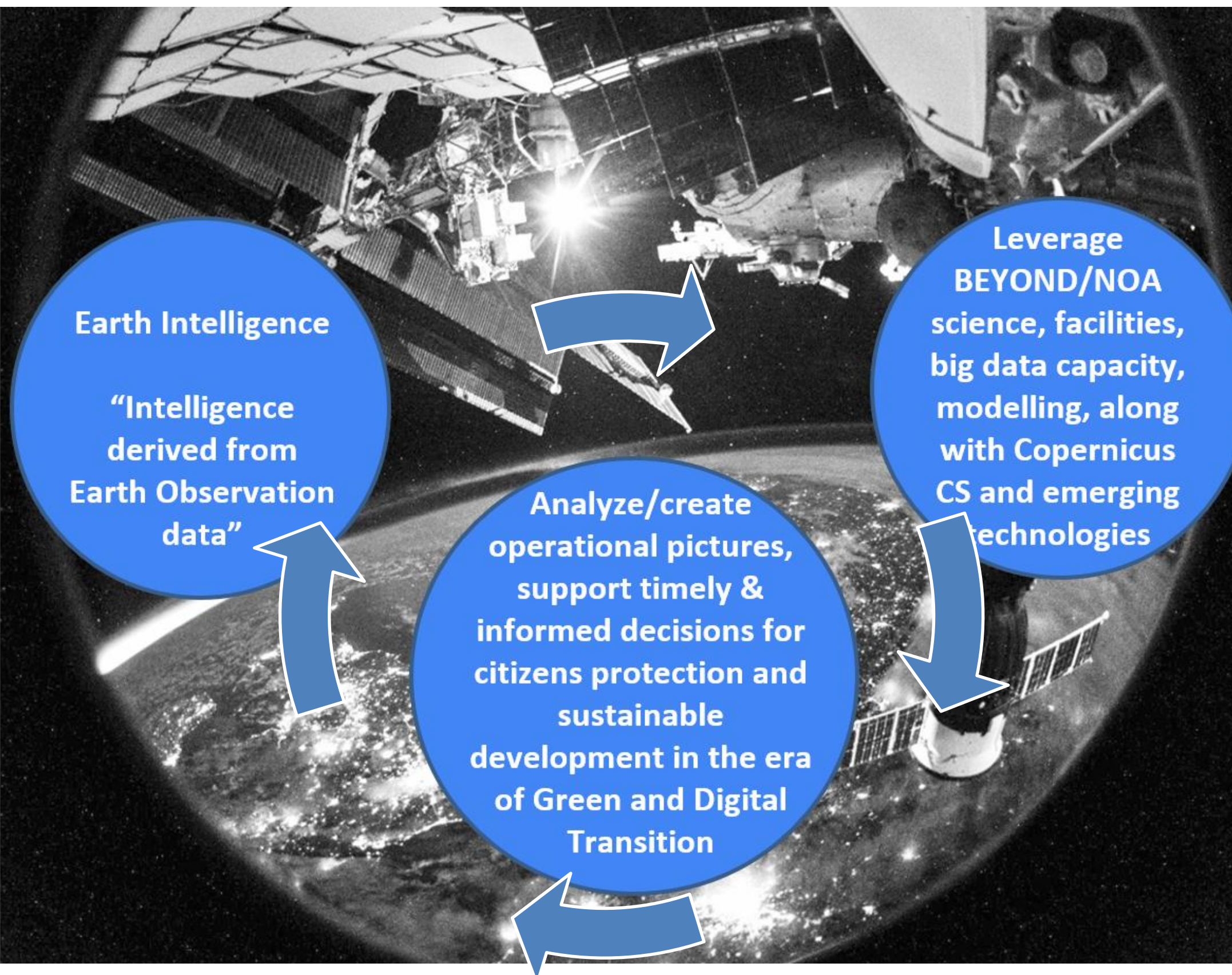


COPERNICUS DOWNSTREAM & EO Operations Center BEYOND/NOA



**EARTH INTELLIGENCE TOWARDS
SUSTAINABILITY AND SOCIETAL WELL-
BEING**

**EO SCIENCE AND INTEGRATED FOR
INFORMED GOVERNANCE AND
DECISION MAKING**

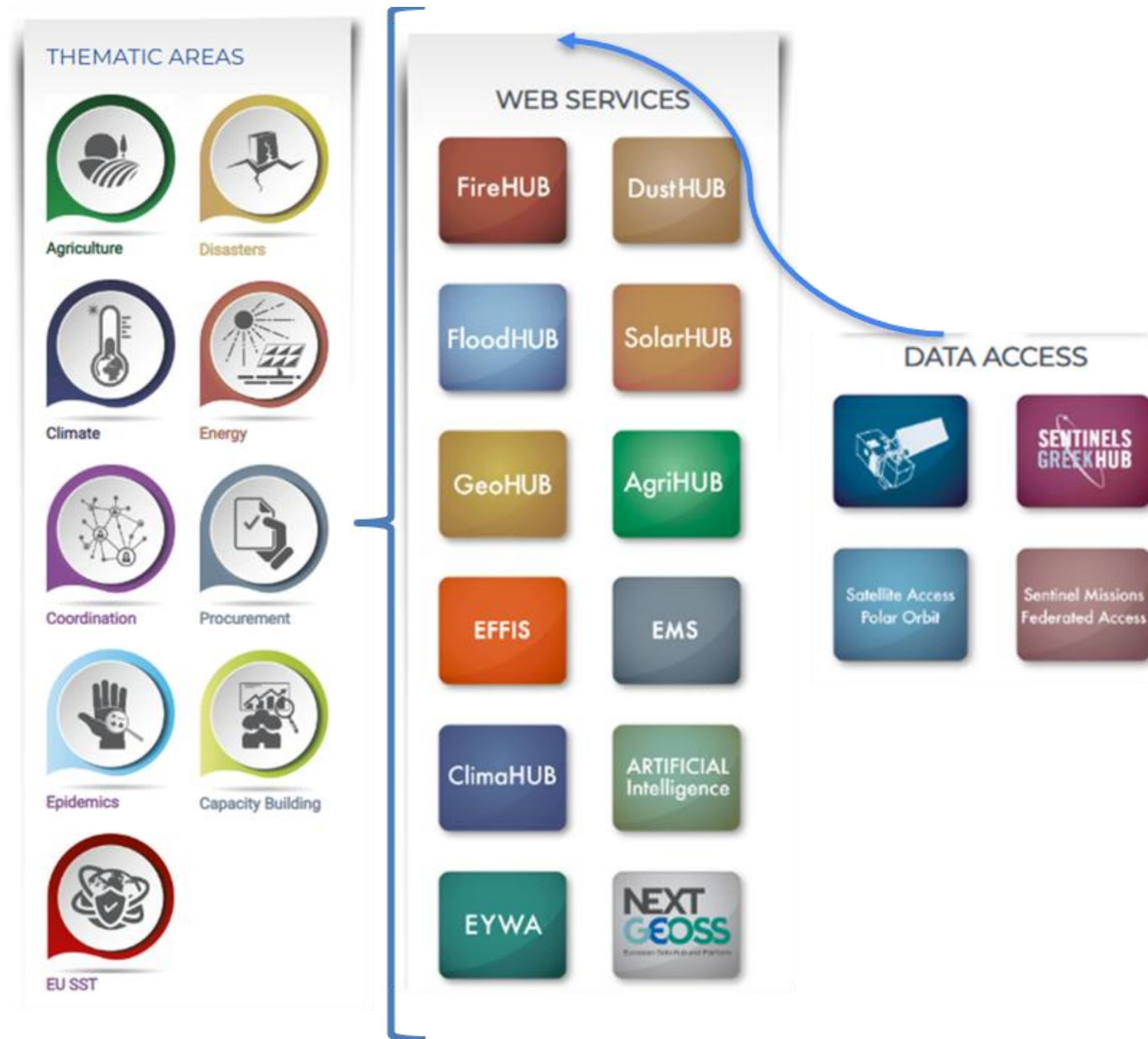
**Services of BEYOND Operational Unit /
National Observatory of Athens (NOA)**

COPERNICUS DOWNSTREAM & EO Operations Center BEYOND/NOA



Stakeholders Benefiting from BEYOND

- ✓ **40 Civil Protection Authorities** for Crisis Management and Natural Disasters (in Europe, Latin America, Africa and Asia) through COPERNICUS CEMS
- ✓ Also
 - **22 Governmental Institutions** in EU and beyond through GEO
 - **20 Prefectures** (e.g. Attica and 4 more in Greece, in France, Italy, Germany, Serbia, Sub-Sahara, Argentina, Pacific Islandic Territories) through EuroGEO/GEO/GRSS
 - **11.000 municipalities / 40 M citizens, and practitioners** Addressing cross-sector/cross-border **Disaster Risk Reduction, Health Outbreaks, Ecosystem Sustainability, Food Security, Energy Droughts, Water Resource Management.**
- ✓ **10 Industries and Certification Bodies** are engaged as stakeholders benefiting from derived Earth Intelligence solutions in Agriculture, Energy and Insurance Sectors.



COPERNICUS Operations Center – BEYOND/NOA

Ground Segment - Copernicus Coll GS and DHR

- ❑ INTHUB #1
- ❑ COLHUB #3
- ❑ DIASHUB #3
- ❑ AfricaCastHub
- ❑ S-5p PreOps Hub
- ❑ S-5p Expert Users Hub
- ❑ TMPHUB #1
- ❑ HNSDMS

60 VMs
storage: 800 TiB,
680 CPU cores,
2.2 TiB RAM

A 550 TB network
filesystem for storing >
500 thousand Sentinel
products at any time

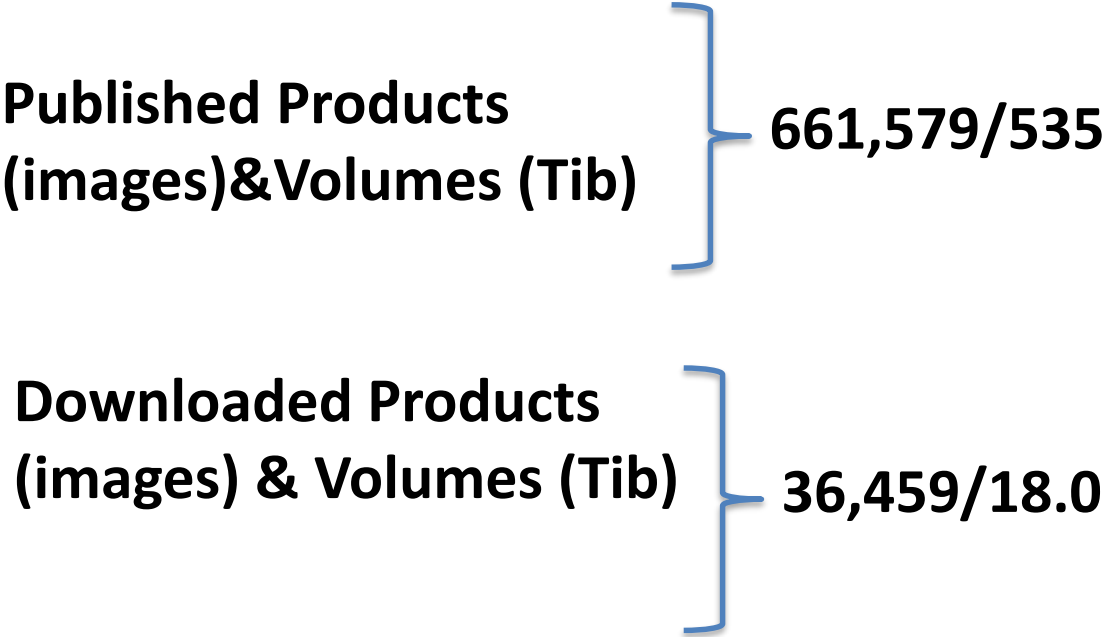


Copernicus Sentinel
Missions & Data Access

Federated Ground Segment



Operation/year Coll GS



Operation DataHub Relay Overall 2021-2024

User Downloads : 16 Pib

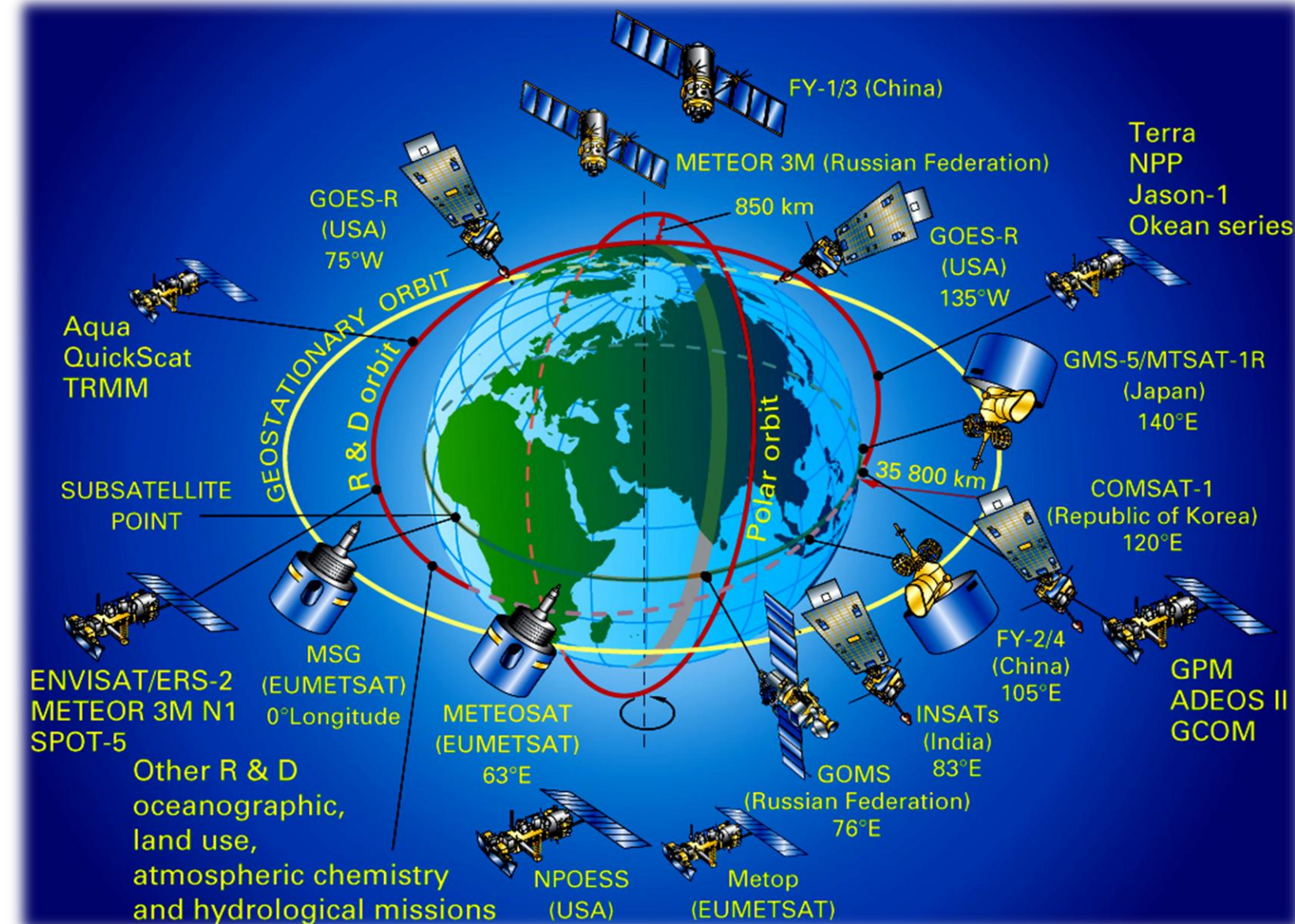
Overall 2017-2024

Published: ~4.4 M products — 3.54 TiB
Downloaded: ~183K products — 140 TiB

Collaborative Missions Ground Segment

Download 10 Satellites

SUOMI/NPP, EOS AQUA,
TERRA, NOAA-AVHRR,
METOP, LANDSAT, National
Missions



- Polar Orbit Satellites, 3 antennas , 2.5-9 m, X-/L-/S-/Ku BAND - 300TB Live Archive
- Geostationary Satellites, 2 antennas: METEOSAT Second and Third Generation Operation 24/7



e-genesis

Generating Earth iNtelligence for
Environmental and Sectoral Impact
and Sustainability



e-genesis has received funding from the European Union under the Horizon Europe research and innovation programme, Grant Agreement No. **101293990**.



for the World



Earth Intelligence

EU-EOSS

European Earth Observation Science Service
for Policy Intelligence and Decision Support



EU-EOSS has received funding from the European Union under the Horizon Europe research and innovation programme.



Governance-driven Earth Intelligence

e-genesi



GA 101293990 - Generating Earth iNtelligence for Environmental and Sectoral Impact and Sustainability

HORIZON-CL6-2025-03-GOVERNANCE-09 Innovation Action

Project starting date: 1 November 2026

Project end date: 28 February 2030

Project duration: 40 months

e-genesis in a nutshell



Core targets:

- 1. Operationalize (High TRL and CRL >8)** Earth Intelligence for **balanced governance** by transforming [Earth Observation](#), [Artificial Intelligence](#), [Generative AI and FMs](#), and [Emerging Digital Technologies](#) into actionable EU policy implementation and strategic decision-making
- 2. Deliver integrated solutions** that strengthen the [resilience of ecosystems](#), [biodiversity](#), [water resources](#), [urban ecosystems](#), and [energy sectors](#) across Europe, in turn, contributing to [public and sector health](#) and [climate adaptation](#)
- 3. Address the climate and anthropogenic anomalies** by delivering **spatially detailed, scalable, and dynamic Earth Intelligence**, fully aligned with the strategic objectives of **GEO & EuroGEO, Copernicus, EC KCEO and EO SRIA**

Consortium:

21 leading organizations from 10 European countries, comprising:

- 13 top research and technology institutions ([BEYOND/NOA](#), [ARMINES/MINES Paris PSL](#), [IUSS](#), [KTH](#), [FONDAZIONE CIMA](#), [FMI](#), [FORTH](#), [CBK PAN](#), [CNRS](#), [GFZ](#), [CNR](#), [PMOD WRC](#)),
- 6 pioneering small and medium-sized enterprises ([EDGE](#), [AG EUROPE SAS](#), [SNOWCAP](#), [SPATINEO OY](#), [MURMURATION](#), [WeMET](#)),
- 1 industrial partner ([CLS](#)),
- 1 government agency ([NSO](#))

Budget:

Total Eligible: € 8,401,341.25 → Maximum Grant Amount (award decision): € 7,499,747.50

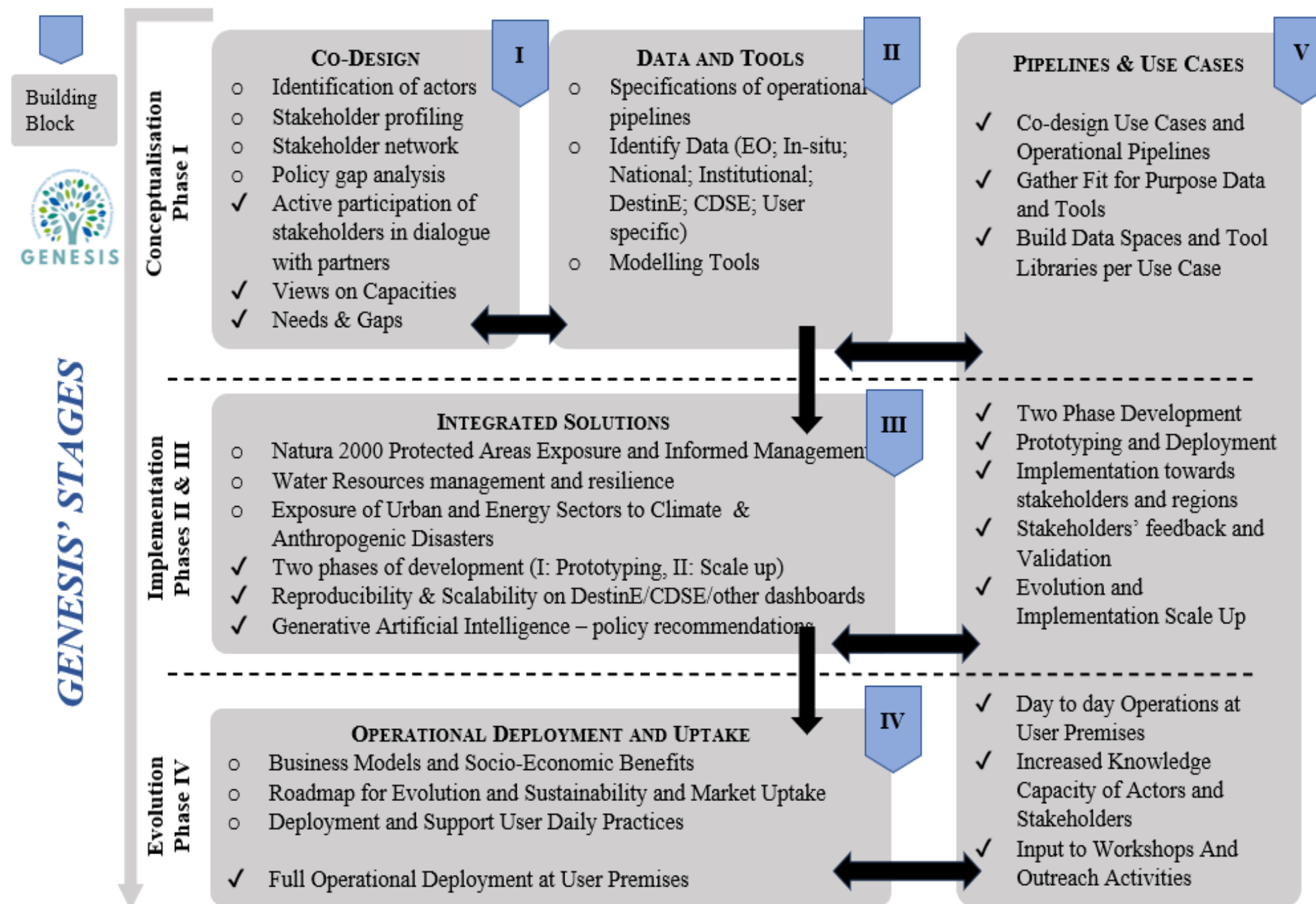
e-genesis in a nutshell

Methodology:

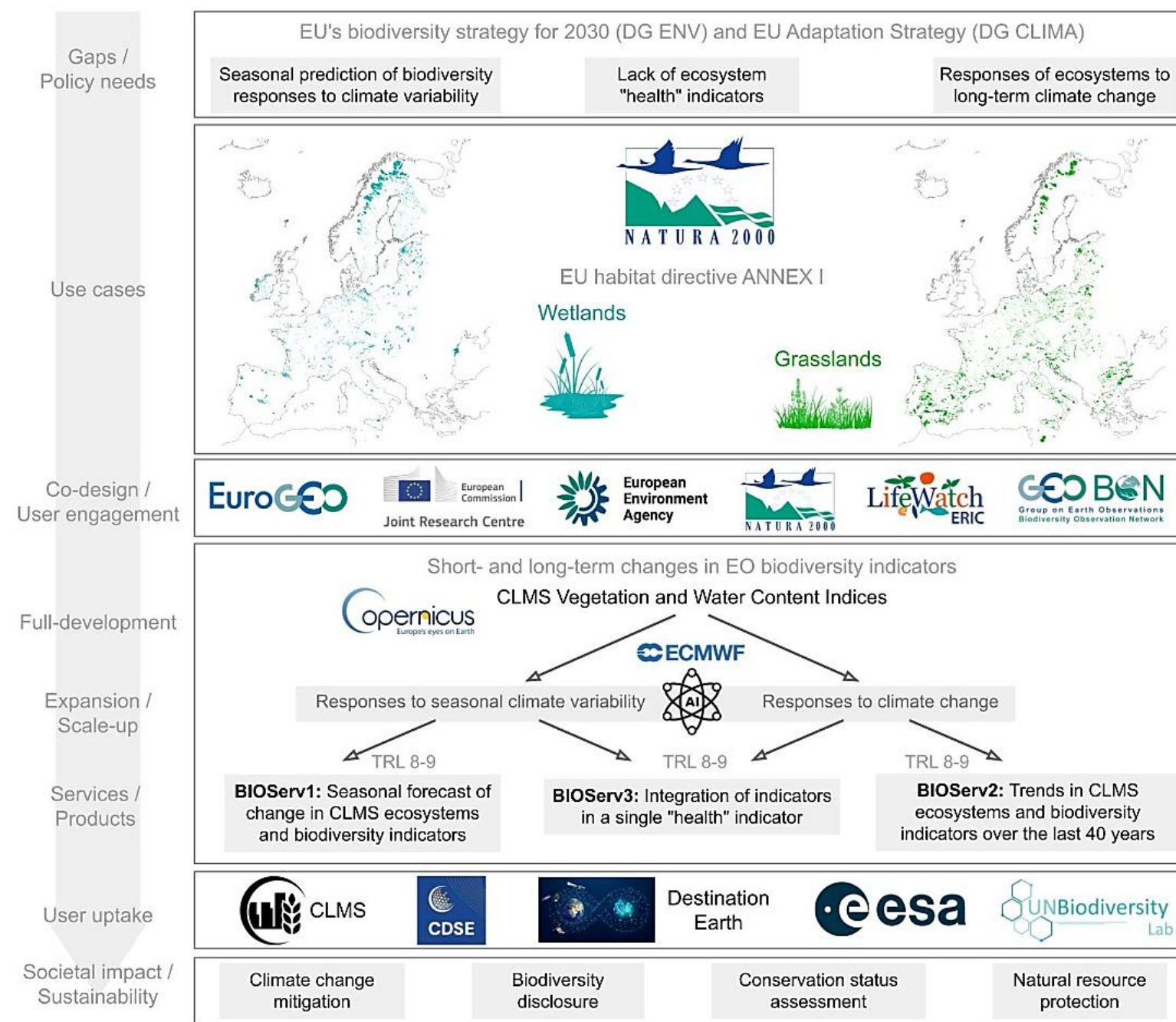
1. **Evolves** through a **four-phase** approach involving **co-design/co-creation** processes that actively integrates expertise from partners, user entities, and external advisors from [Entrusted Entities](#), [Copernicus User Forum](#), [5 EuroGEO Action Groups](#), EC [KCEO](#), and the [private sector](#)
2. **Leverages EU investments in** Copernicus Core Services, European Data Spaces, ESFRIs, federated cloud infrastructures, and modular AI/GenAI pipelines to **Deliver > 30 integrated operational products** across **three interconnected Service Pillars** known as
 - (i) **biodiversity and ecosystem resilience,**
 - (ii) **water resource foresight and sustainability**
 - (iii) **urban-energy-health nexus under climate extremes**
3. **Ensures** that the services and solutions are designed for [real-world uptake](#), while their prototyping, validation, and operational deployment undergo continuous **user evaluation and systematic societal benefit and impact assessment**
4. **Aligns with major EU policy frameworks** (e.g. [Biodiversity Strategy 2030](#), [Water Resilience Strategy](#), [Zero Pollution Action Plan](#)) and the [EuroGEO](#) and [GEO post-2025](#) implementation plans, and accelerates roadmaps for the green and digital (twin) transition
5. **Runs strategic capacity building, training, and exploitation actions** ensuring scalability, commercialization, and long-term sustainability, reinforcing Europe's leadership in Earth Intelligence

e-genesis in a nutshell

Overview of methodology



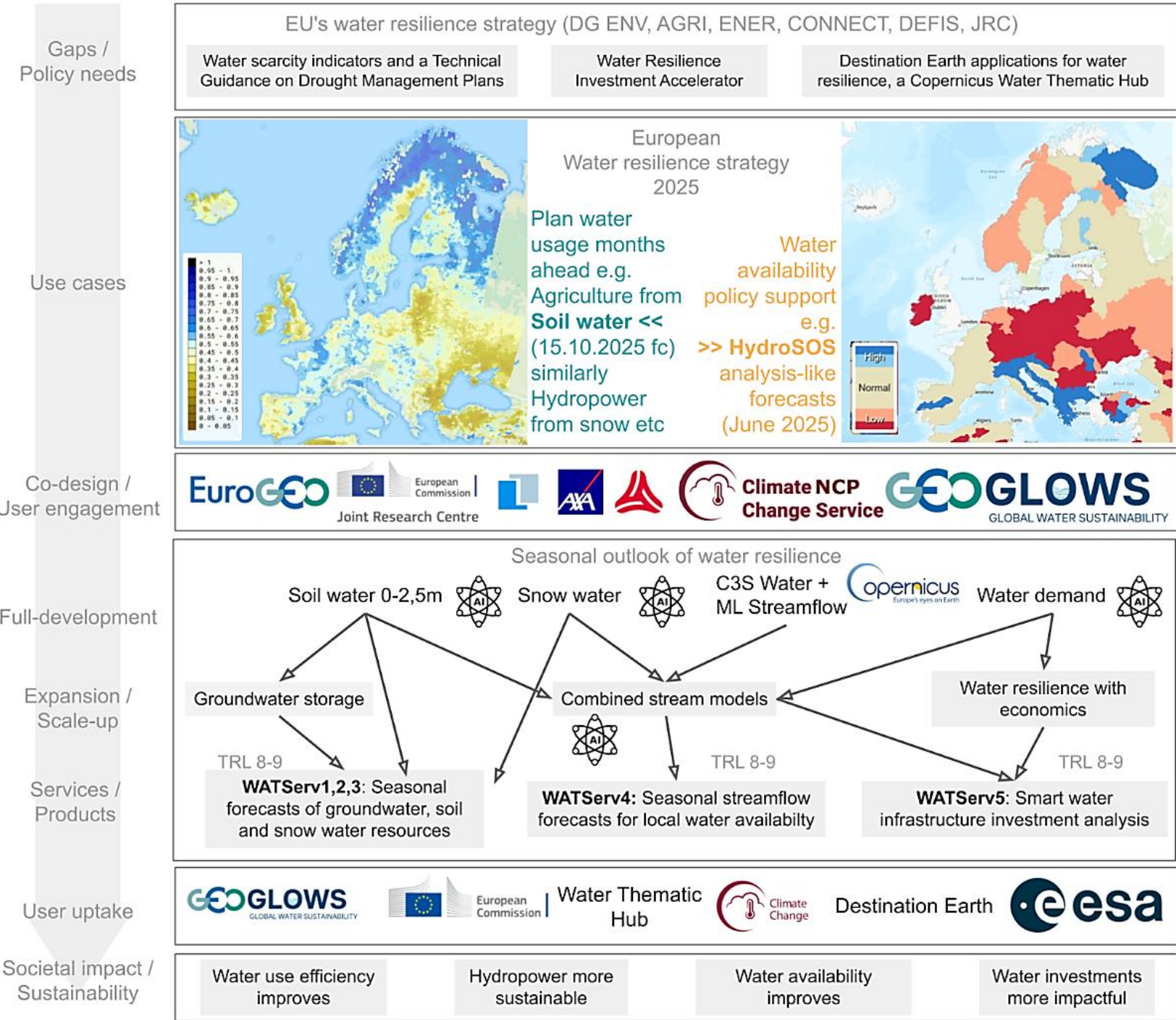
Overview of Pillar A



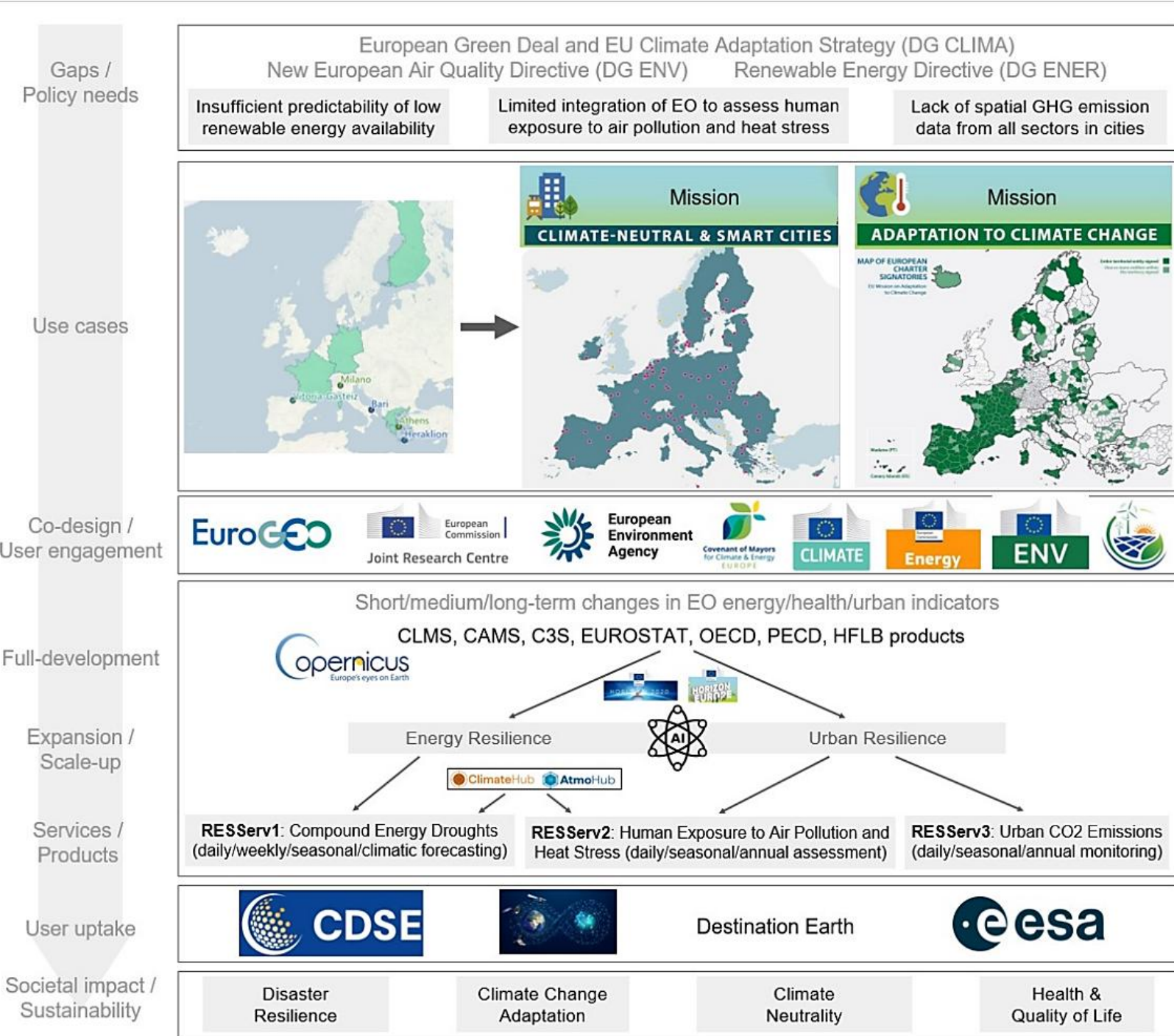


e-genesis in a nutshell

Overview of Pillar B



Overview of Pillar C





**Policy-driven
Earth Intelligence**

EU-EOSS

**GA– 101339606 - European Earth
Observation Science Service for Policy
Intelligence and Decision Support**

HORIZON-CL6-2026-03-GOVERNANCE-07 Coordination and Support Action

Project starting date: 1 February 2027
Project end date: 31 March 2030
Project duration: 38 months

EU-EOSS in a nutshell

Core targets:

1. EU-EOSS (European Earth Observation Science Service) **bridges technological and legal gaps** that currently limit EO and Copernicus from going further down the value chain by integrating Earth Intelligence into [policy implementation](#), [regulatory transparency](#), and [reporting processes](#).
2. **Analyse** (i) [policy needs](#), (ii) [existing barriers](#) and (ii) [EO capabilities in the EU context](#)
Lead the creation of the [EU-EOSS R&I Observatory](#)
Identify and implement [Last Mile Applications](#), [workflows](#) and [datasets](#) that best support the derivation of indicators or policy implementation, monitoring and reporting across MSs/EU
3. **Update** the [EO Strategic Research and Innovation Agenda](#) in support of the EOSS goals
4. **Create** the [“EOSS innovation ecosystem”](#), that builds on the scientific resources of [EuroGEO Action Groups](#), the [Copernicus User Forum](#), and [NCP network](#), and [DestinE](#), [CDSE](#) and [European Data Spaces](#)
5. **Incorporate** key external scientific and technological expertise through managed [open calls for third parties \(FSTP\)](#)

EU-EOSS in a nutshell

Consortium:

10 leading organizations from 8 European countries, comprising:

- 5 top research and technology institutions ([BEYOND/NOA](#), [ARMINES/MINES Paris PSL](#), [VITO](#), [FMI](#), [CNR](#)),
- 3 pioneering small and medium-sized enterprises ([EDGE](#), [EVF](#), [ASSIMILA](#)),
- 1 industrial partner ([ZABALA](#)),
- 1 government agency ([EARSC](#))

Budget

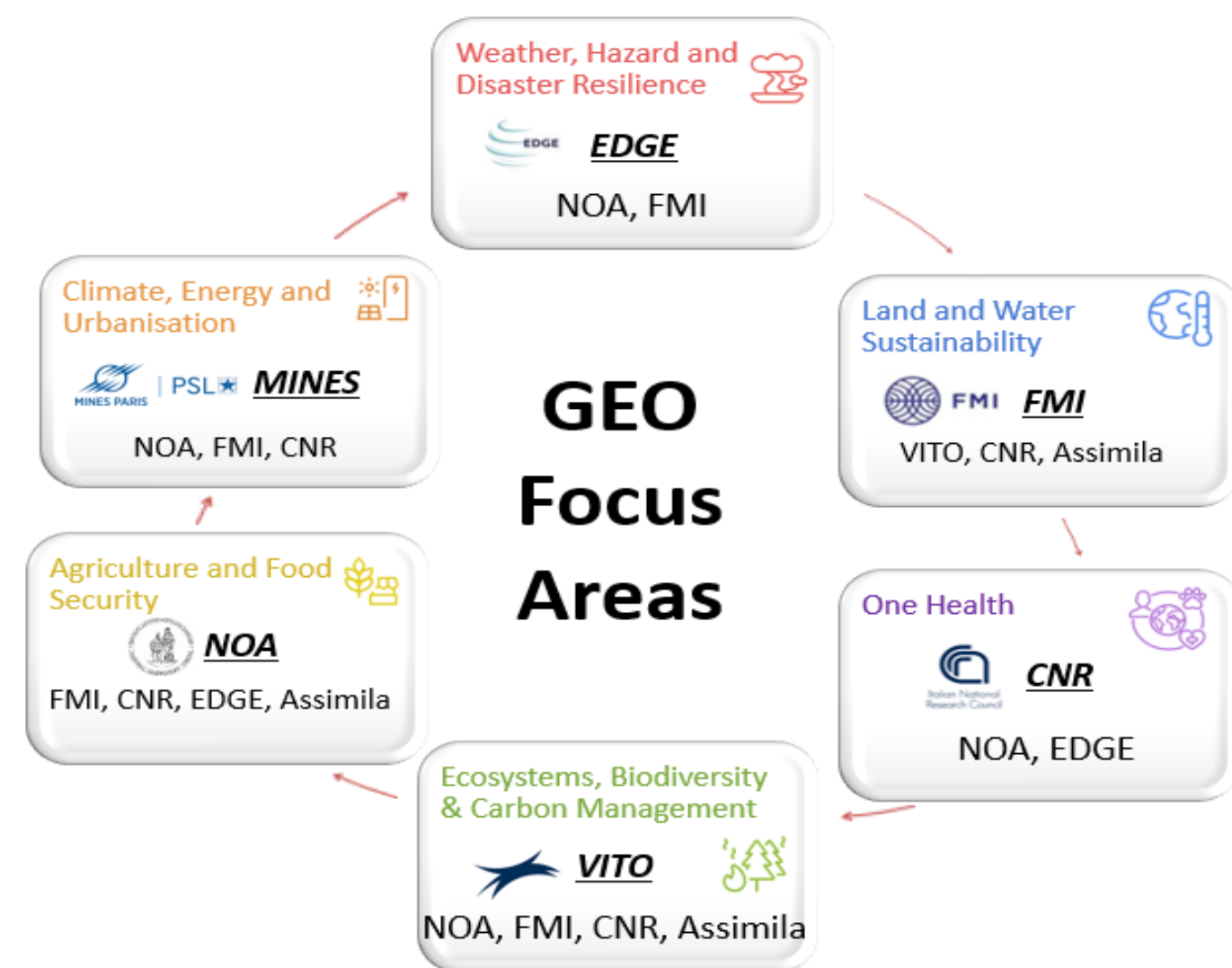
Total Eligible: € 5,399,851.88 → **Maximum Grant Amount (award decision):** € 5,399,851.88

From which **FSTP Budget:** € 1,200,000



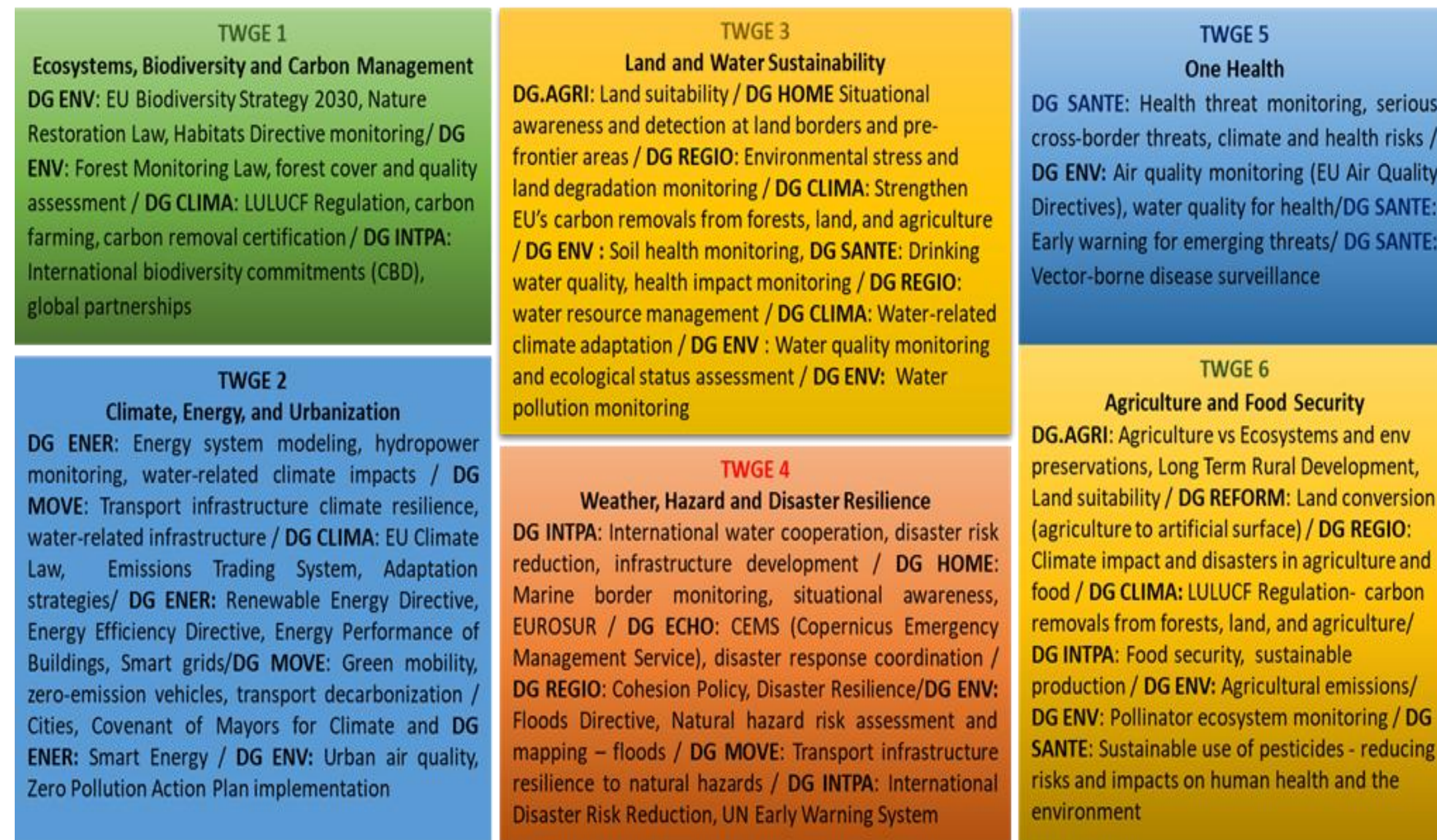
EU-EOSS in a nutshell

Overview of methodology



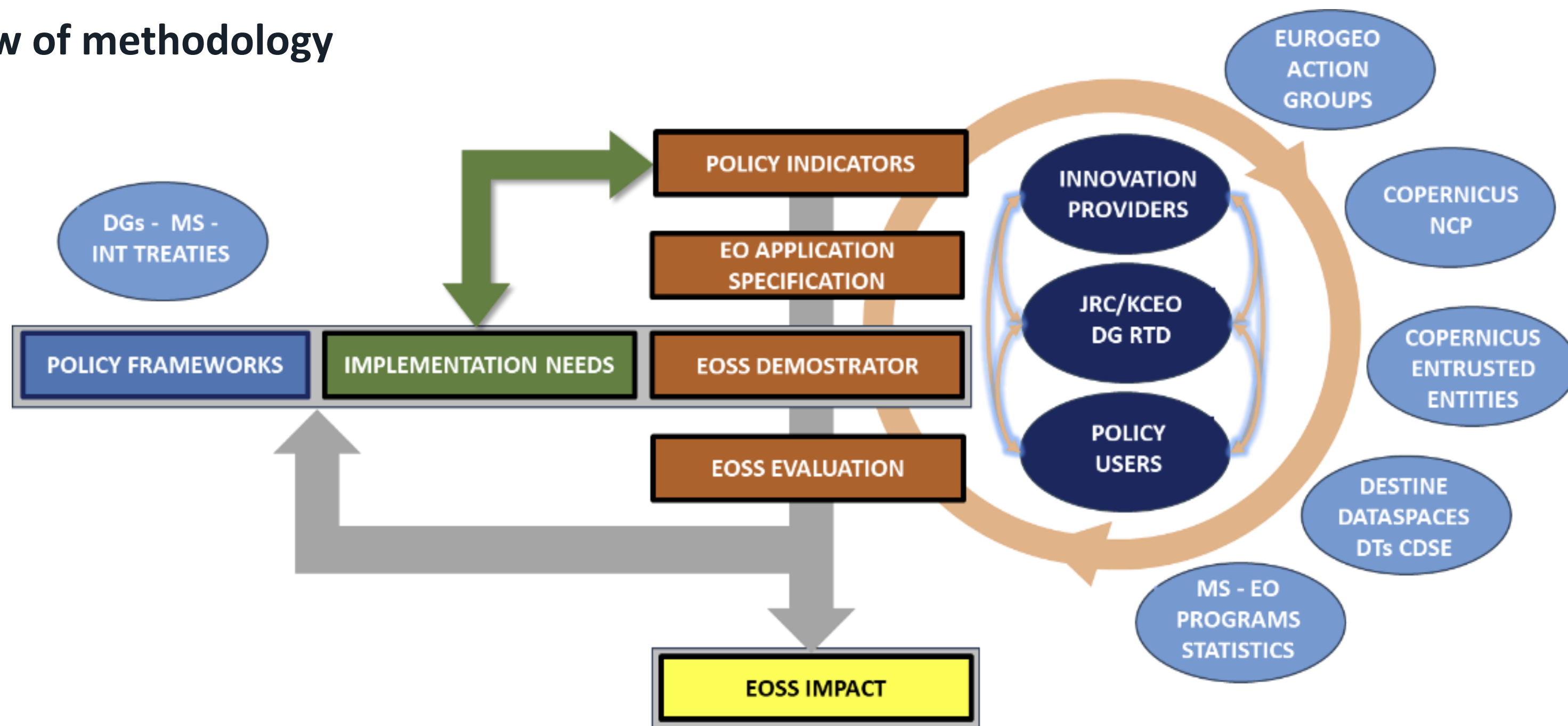
Thematic Working Groups of Experts

TWGEs vs Policy context



EU-EOSS in a nutshell

Overview of methodology



EU-EOSS Agile Development Cycle



Thank you!

