

Status of the European Plate Observing System (EPOS)

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on behalf of WP10**

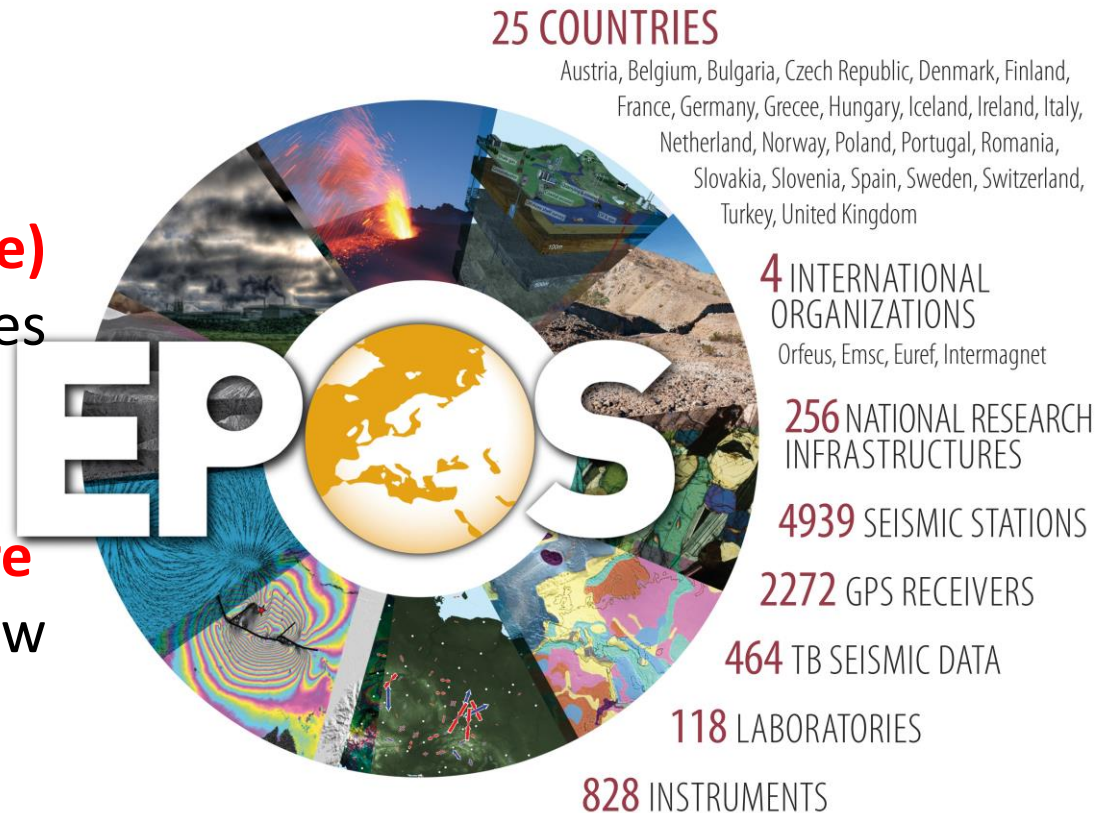
What is EPOS?

EPOS is a **long-term project for the integration**

of research infrastructures for solid Earth Science in Europe

One of the three priority projects of European Commission within ESFRI

EPOS integrates the
existing (and future)
advanced European facilities
into
**a single, distributed,
sustainable infrastructure**
taking full advantage of new
e-science opportunities

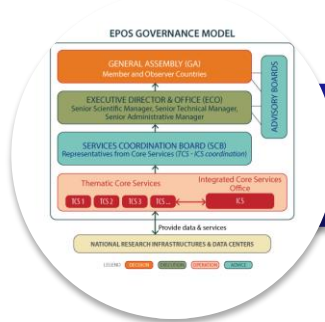


Several PetaBytes of solid Earth Science data will be available

Several thousands of users expected to access the infrastructure

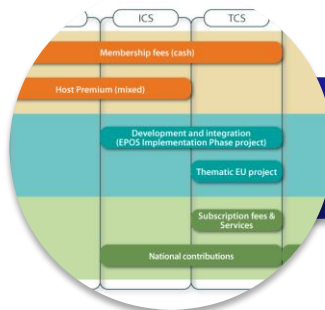
How will EPOS work?

Architecture



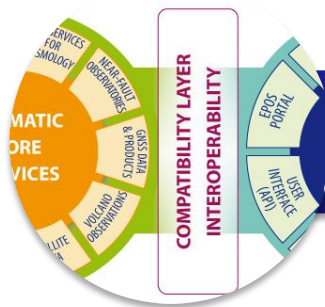
Legal & Governance

The ERIC (European Research Infrastructure Consortium) has been chosen as the **legal model** for EPOS



Financial

A financial plan has been adopted to guarantee the **long-term sustainability** of infrastructure – the countries will pay for it



Technical

Technical solutions designed and adopted **to implement the access** to data and services

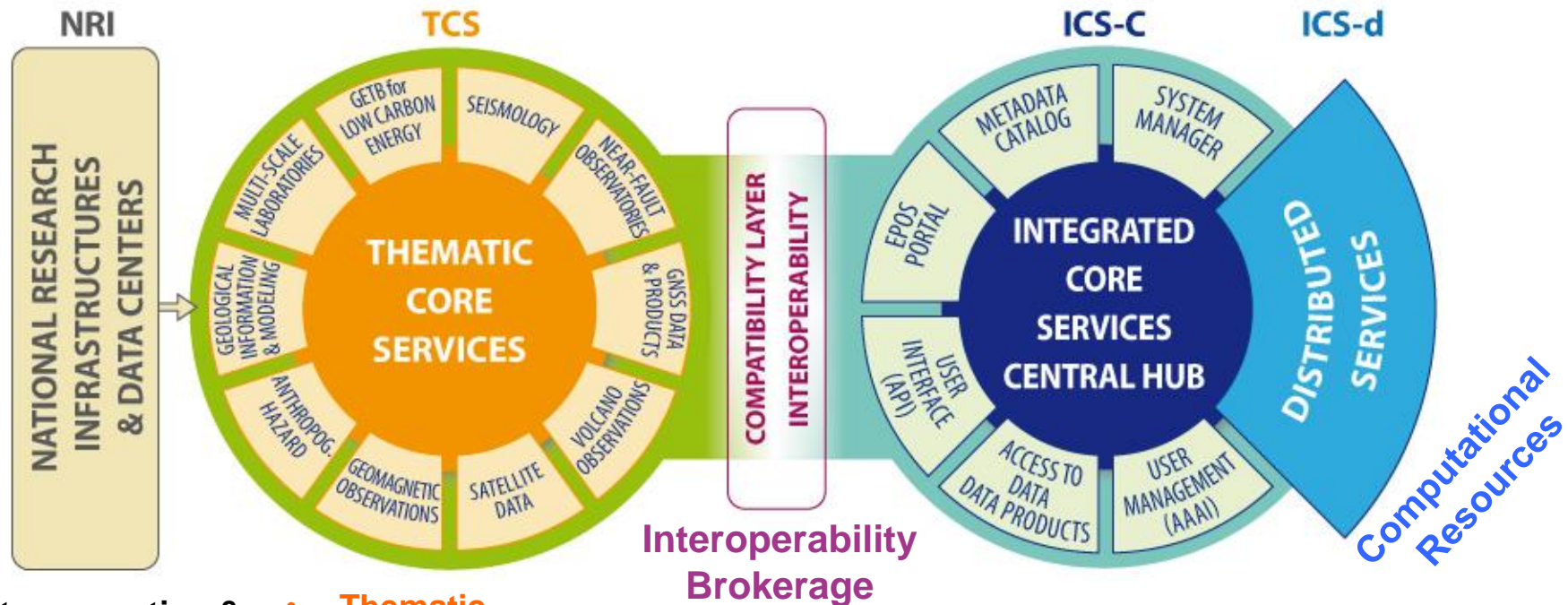
National Research Infrastructures (NRI)
Thematic Core Services (TCS)
Integrated Core Services (ICS)

How will EPOS work?

Functional Architecture

community-specific integration

novel e-infrastructure



- Data generation & standardization
- Sustainability and operation
- Quality checked repositories

- Thematic integration
- Engagement of communities
- Community service provision

- Metadata registry
- Processing
- Aggregation
- Integrated analyses
- Visualization

EPOS Timeline



- The preparatory phase ended by November 2014 with the participation of 23 countries.
- 19 of which have already signed a letter of intent (LoI) for joining the EPOS-ERIC to be hosted in Italy (Rome);
- At the completion of the Implementation Phase (starting in October 2015), it is expected that most of the EU28 countries will be involved in EPOS.

EPOS-IP (Implementation Phase)

Main Points

EPOS IP is a H2020 project that will start at October 1st 2015

EPOS IP is the consequence of EPOS being selected among EU priorities

EPOS IP has the effective goal to implement TCS and ICS

EPOS IP will differ from EPOS PP in:

Goals: from design/validation to *implementation/construction*

Partnership: partners are *makers* and TCS/ICS *developers*

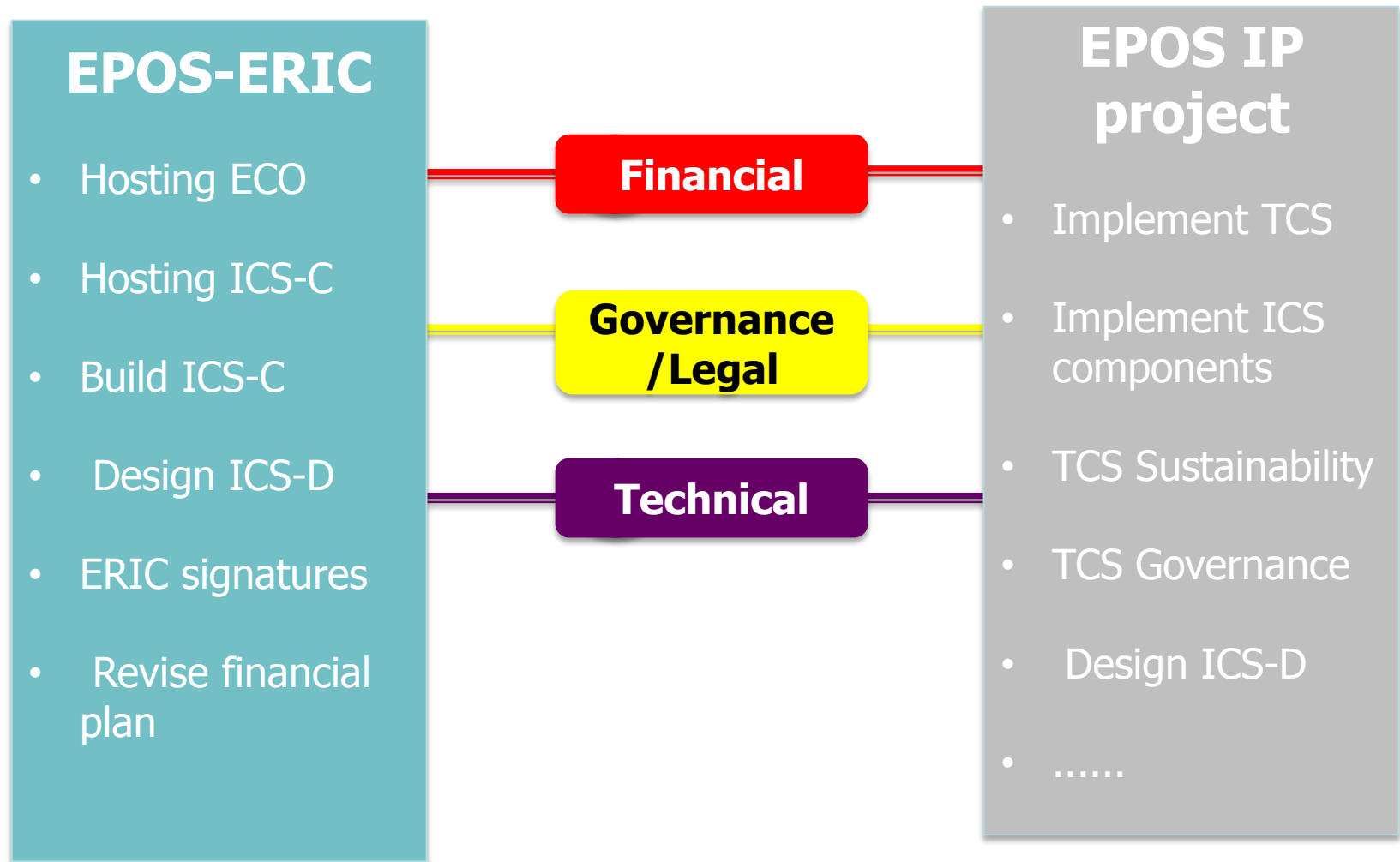
Coordination: need for a clear *link with EPOS-ERIC*

Sustainability: it will be a key objective *to convince BGR**

BGR – Board Of Government Representatives of countries signing EPOS-ERIC

EPOS-IP (Implementation Phase)

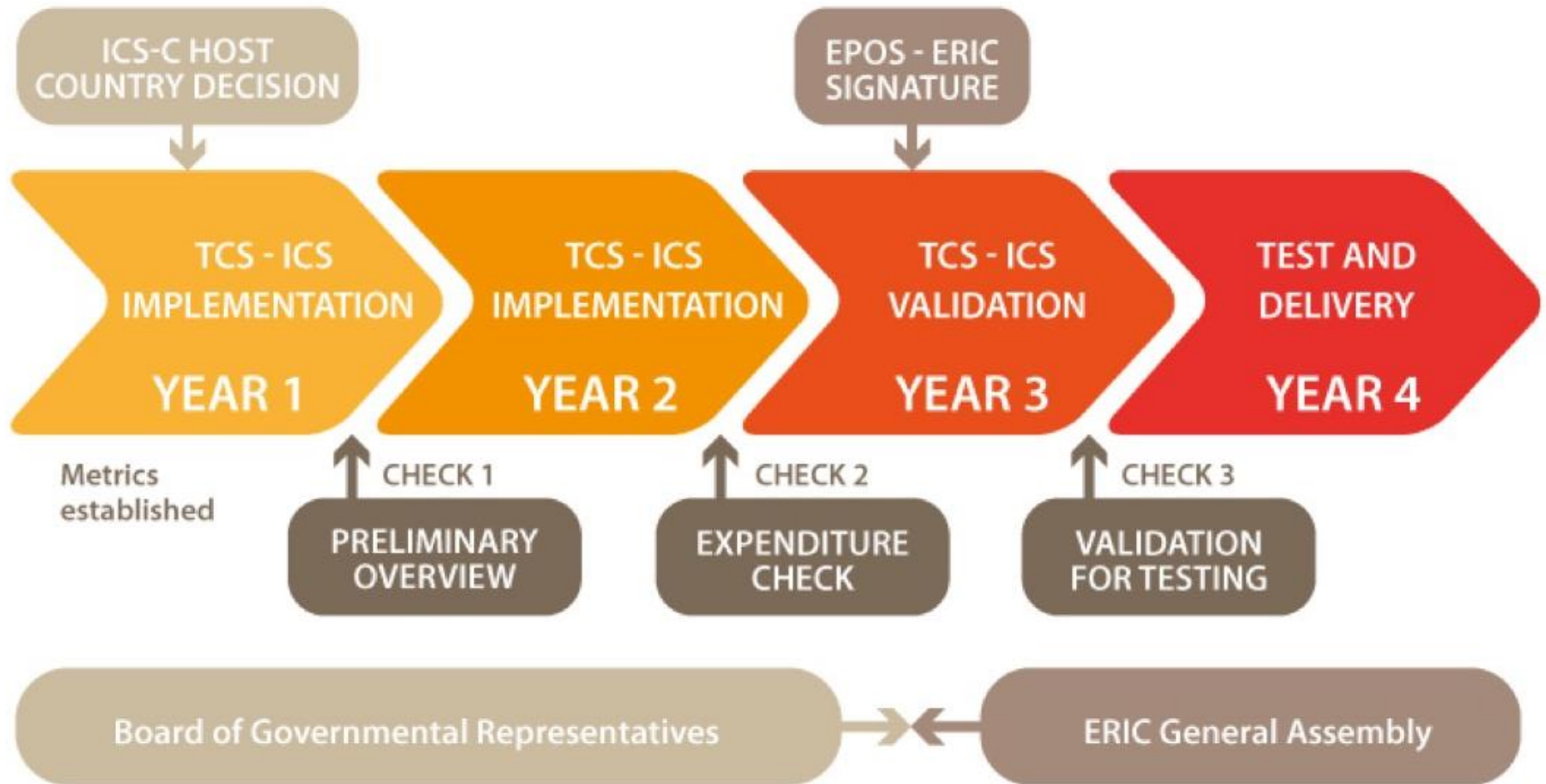
Phase 1



EPOS-IP (Implementation Phase)

Work package No	Work Package Title
1	Management
2	Communication and Dissemination
3	Harmonization and Integration
4	Legal and Governance Framework for TCS and ICS implementation
5	Financial Framework for TCS Implementation
6	ICS-TCS integrations and interoperability
7	ICS design & development
8	TCS Seismology
9	TCS Near Fault Observatories
10	TCS GNSS Data & Products
11	TCS Volcano Observations
12	TCS Satellite Data
13	TCS Geomagnetic Observations
14	TCS Anthropogenic Hazards
15	TCS Geological information and modelling
16	TCS Multi-scale laboratories
17	TCS Geo-Energy Test Beds for Low Carbon Energy (GETB)

EPOS-IP (Implementation Phase)



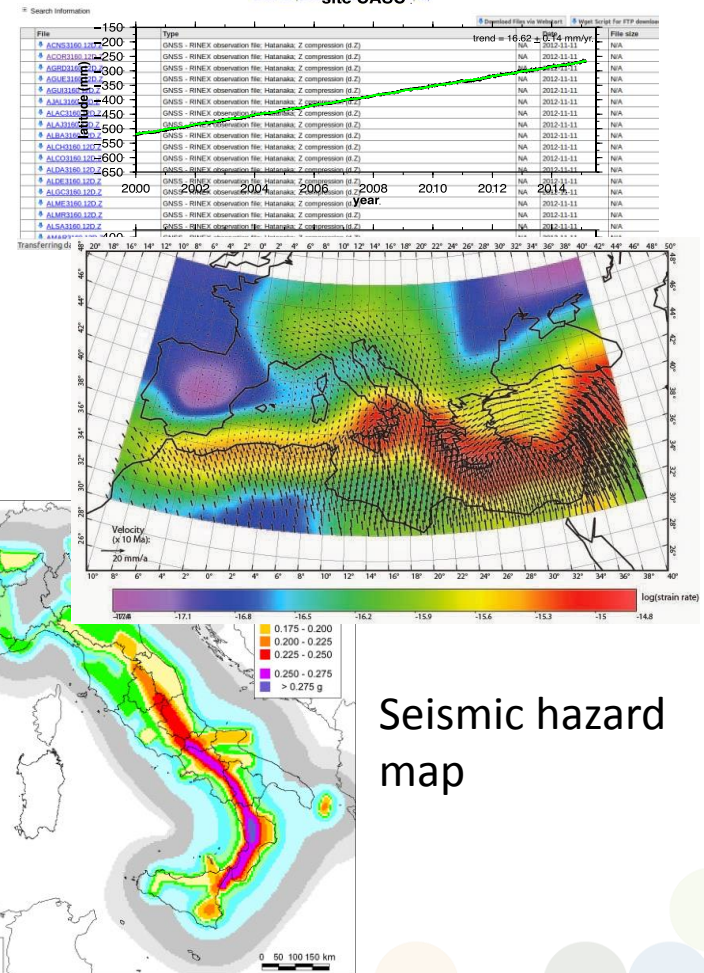
Tasks WP10 - GNSS

Task	Title	Goal / Service
1	Governance Setup	Preparation of GNSS EPOS-ERIC
2	Coordination and Interaction with the GNSS community	Management of GNSS EPOS-IP
3	Interoperability with EPOS ICS	Interaction with EPOS
4	GNSS Data Dissemination	DATA
5	GNSS Data Gateway	
6	GNSS Products	PRODUCTS
7	GNSS Products Gateway	

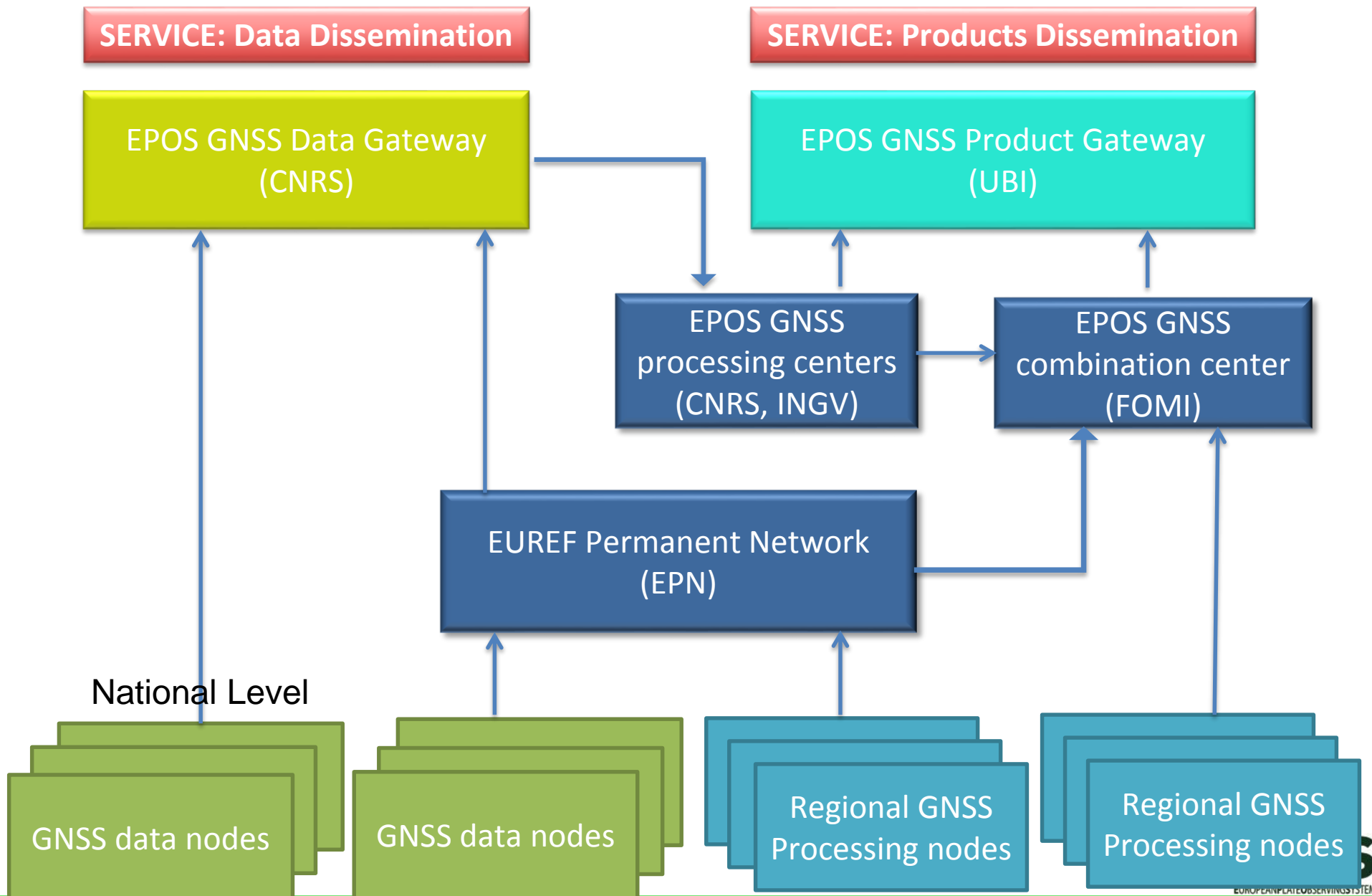
Focused on daily data and long-term post-processing products only.

Data & Products

- **Level 0:** raw data, or basic data
- **Level 1:** data products coming from nearly automated procedures
- **Level 2:** data products resulting by scientists' investigations
- **Level 3:** integrated data products coming from complex analyses or community shared products
- **Level 4.** Software, IT tools



Functioning scheme of TCS GNSS



Added value of EPOS for GNSS community

- **Sustainability:**
 - Countries that join EPOS-ERIC commit to maintain their GNSS infrastructure integrated in EPOS (stations, operation).
 - Data and Product Gateways chosen based on the commitment of France and Portugal to sustain them on long-term (EPOS-ERIC operation).
- **Provision of software tools:**
 - Standardized data quality check and visualization
 - Standardized exchange of metadata
 - Seamless data access (GSAC based)

To be developed and tested during EPOS-IP

There are clearly synergies between the EPOS-GNSS and EUREF goals.

The collaboration will be formalized through a MoU, setup during EPOS-IP

Thank you for attention

