

# Earth Observation in ESA Opportunities for Slovenia

## *Participation in ESA Delegate Bodies*

*Practical case: Definition and implementation of EOEP*

Bilateral meeting with  
Slovenian Space Actors  
Ljubljana, 08/06/2016

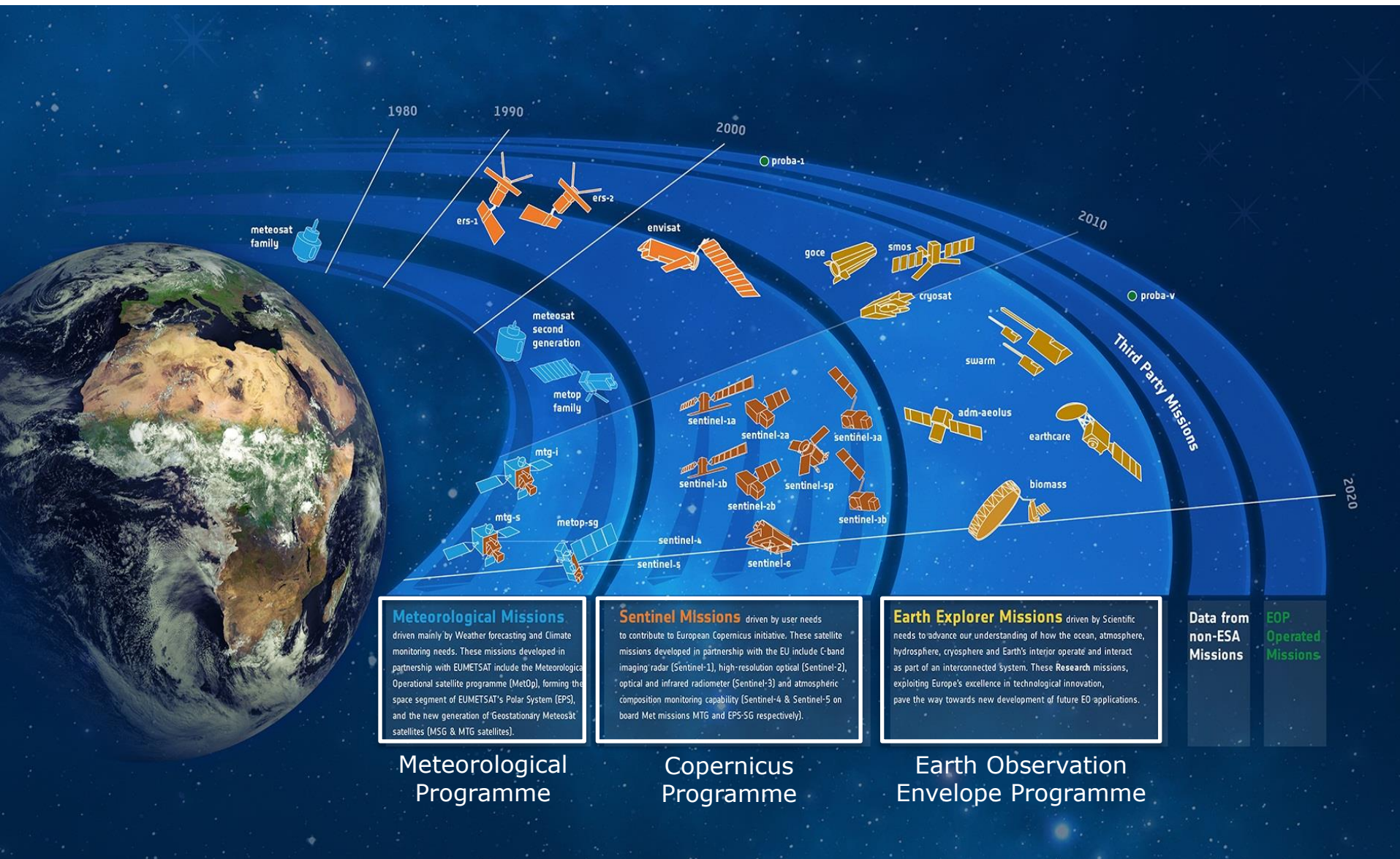
# Purpose of this presentation

To provide Slovenian space authorities with background information for their participation in ESA EO Programmes as Associate Member State.

1. ESA purpose, its organs and programmes
2. Role and functioning of the Programme Board – Earth Observation (PB-EO)
3. Role of national delegates
4. EOEP as an example



# #1 ESA Earth Observation Programmes



**Meteorological Missions**  
 driven mainly by Weather forecasting and Climate monitoring needs. These missions developed in partnership with EUMETSAT include the Meteorological Operational satellite programme (MetOp), forming the space segment of EUMETSAT's Polar System (EPS), and the new generation of Geostationary Meteosat satellites (MSG & MTG satellites).

**Sentinel Missions** driven by user needs to contribute to European Copernicus initiative. These satellite missions developed in partnership with the EU include C-band imaging radar (Sentinel-1), high-resolution optical (Sentinel-2), optical and infrared radiometer (Sentinel-3) and atmospheric composition monitoring capability (Sentinel-4 & Sentinel-5 on board Met missions MTG and EPS-SG respectively).

**Earth Explorer Missions** driven by Scientific needs to advance our understanding of how the ocean, atmosphere, hydrosphere, cryosphere and Earth's interior operate and interact as part of an interconnected system. These Research missions, exploiting Europe's excellence in technological innovation, pave the way towards new development of future EO applications.

**Data from non-ESA Missions**  
**EOP Operated Missions**

Meteorological Programme

Copernicus Programme

Earth Observation Envelope Programme



# #1 ESA – a gentle(women)men club....

- What for?
- With which members ?

*Different type of stakeholders  
(mostly Ministers of Research, but not only)*

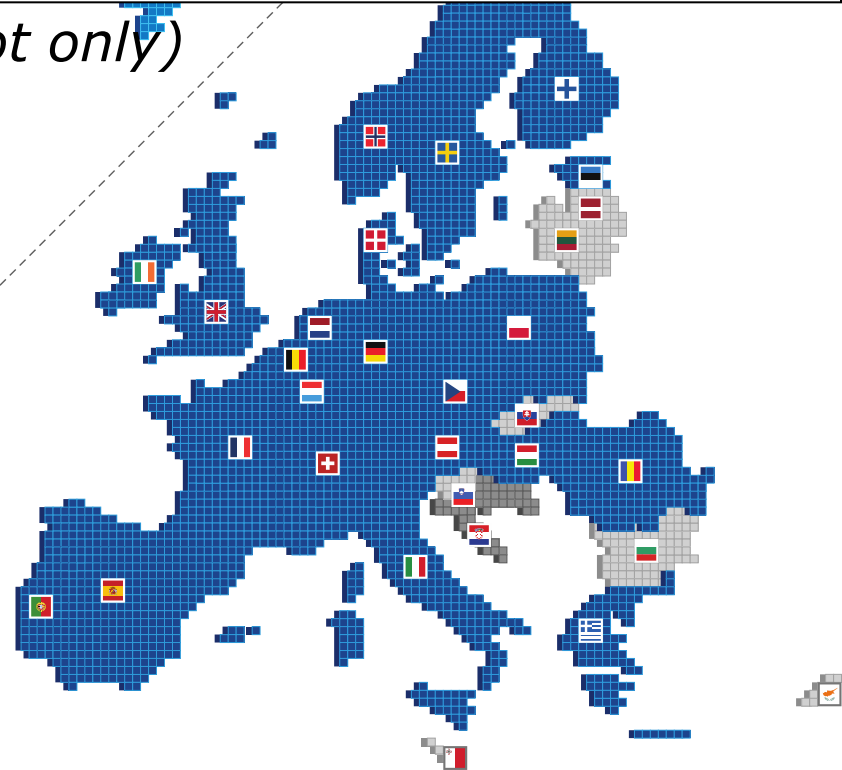
- To do what in practice?  
*Mandatory and optional programmes*

- Based on which model?  
*Intergovernmental ≠ Supra-national  
MS must adhere to programme  
proposals !*

*All gentle(women)men ... but high  
interests at stake*

## Article 2 of ESA Convention

“To provide for and promote, for exclusively peaceful purposes, cooperation among European states in **space research** and **technology** and their **space applications.**”



# #1 Two Players (organs) in ESA

## *The Member States*

### The ESA Council

#### Role:

The Decision-maker body  
(Art. XI of the ESA  
Convention)

*Assisted by  
(delegating its power to):*

- *Programme Boards*
- *Committees*

## *The Executive*

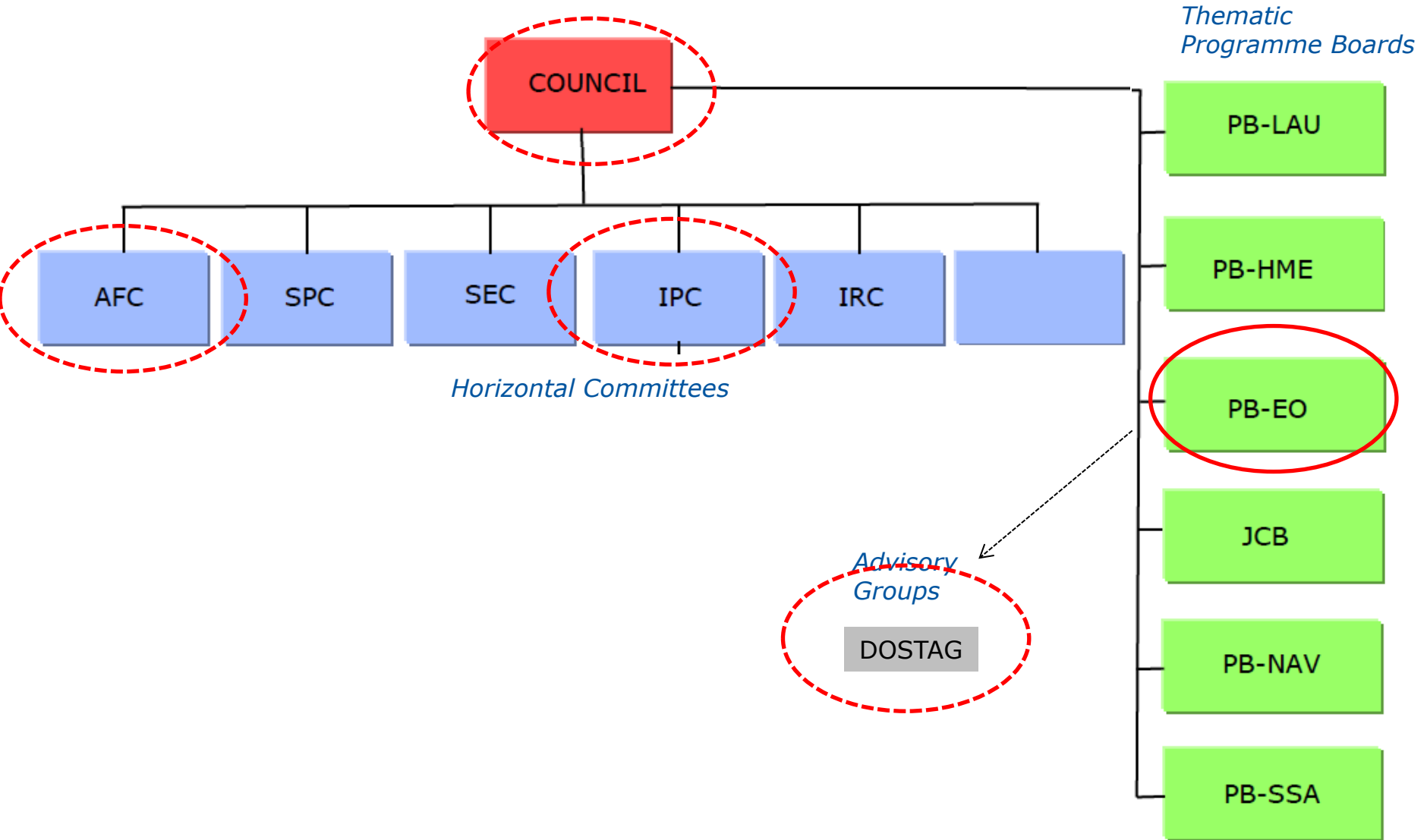
### The ESA Director-General

#### Role:

Responsible towards  
Member States for the  
implementation of the  
programmes

*Assisted by a  
Staff*

# #1 Organigramme of ESA Delegate Bodies





## #2 Role and functioning of PB-EO (1)

- PB-EO is entrusted by Council to:
  - Examine proposals for future EO programmes and prepare decisions that remain within competences of the Council
  - Monitor and take all decisions related to the execution of the EO programmes, except for these decisions that remain within competences of the Council
  - Provide for the coordination of the European and national space activities.

## #2 Role and functioning of PB-EO (2)

- Brings together delegates of all Member States, plus observers (e.g. EC, EUMETSAT) as agreed by Member States.
- Meets quarterly; two-days meeting.
- Is Chaired by a delegate elected by his/her peers.
- Agenda and documents are provided two weeks in advance.

NB: Slovenia is de facto invited as observer in PB-EO since 2011

### **PB-EO is gathering to take programmatic decisions. Also to build thrust**

- ✓ *About 50 delegates: different in style, 'interests', education (scientists, applied scientists and engineers, book-keepers, lawyers, MBA, military staff)*
- ✓ *About 200+ documents per year...*



## #2 DOSTAG

- The “Data Operations Scientific and Technical Advisory Group” is an advisory structure set up by PB-EO
- Terms of Reference include:
  - ✓ Review status report of programmes/projects;
  - ✓ Recommend HLOP and monitor implementation of EO data policy;
  - ✓ Provide advise on specific scientific/technical matters;
  - ✓ Prepare scientifically/technically “A (decision) items” in PB-EO.
- Same rules and procedures as for PB-EO.

## #3 Role of Delegates

- Member States are represented in PB-EO by up to two Delegates, empowered to vote (take a commitment in the name of their parent State), and accompanied by Advisors the case being. *Typically one Participating State = one (weighted) vote.*
- Delegates are formally nominated by the National Administration in charge of space affairs.
- Must be civil servant (= “neutrality”, ≠ any organization (private business, academia) with a vested interest, e.g. private business, academia)
  - ✓ *Sympathetic to ESA purpose (go forward with cooperation and programmes!)*
  - ✓ *Empowered (take decisions) and autonomous (meetings are dynamic, documents prone to changes)*
  - ✓ *Knowledgeable about procedures*
  - ✓ *Enough time to prepare meetings*

# #4 Earth Observation Envelope Programme

## *The backbone of ESA's EO activities*

### **Content:**

- Prepares EO 'future'
- Develops complex 'Earth Explorer' missions
- Develops a European Ground-Segment concept and operates Earth Explorer missions
- Supports the exploitation of European EO assets

### **Features:**

- An envelope concept: a combination of different but mutually supporting activities; not all of them defined when subscribing to the programme (e.g. next Explorer missions...).
- Implemented in consecutive and independent periods of nominally 5 years
- Next Period is EOEP-5, 2017-2021, 1410 M€.

# #4 Earth Observation Envelope Programme

*Preparation before CM16*

## **PB-EO must:**

- Welcome the programme proposal for EOEP-5
- Approve the revision of the existing Programme Declaration (unanimous decision of current EOEP Participants)
- Approve the revision of the existing Implementing Rules (unanimous decision of current EOEP Participants)

**We are well advanced in this process; next PB-EO is on 20-21 September, ESA HQ, Paris**

## **AFC and IPC must:**

- Recommend to Council the administrative/financial and industrial policy aspects of the revised Implementing Rules

## **Council must:**

- Take note of the revised Declaration
- Approve the revision of the Implementing Rules

# #4 Earth Observation Envelope Programme

*At the time of CM16*

## Interested Member States will be invited to:

- Subscribe to the EOEP-5 programme, 1410 M€ envelope.

## Subscription level by Interested Member States

- By default, approach is ~ relative GNP (Slovenia = 0.26 % → ~3.7 M€)
- Theoretical minimum is ¼ of relative GNP (Slovenia → 0.92 M€)
- Can in practice be lower but will impact Participant's voting rights



# #4 Earth Observation Envelope Programme

*After CM16*

## **PB-EO will :**

- Approve all programmatic decisions related to the implementation of the programme (e.g. call for new missions, selection of missions, extension of mission operations, yearly work plans, international cooperation schemes as needed, recommendation of yearly cost plans)

## **DOSTAG will :**

- Support some of these decisions in its advisory capacity

## **AFC will :**

- Recommend yearly cost plans and budgets
- Recommend administrative/financial aspects in cooperation agreements

## **IPC will :**

- Approve procurement and contract proposals
- Monitor geo-return

## **Council will:**

- Approve the yearly budget
- Approve international cooperation schemes

# One ESA - Build trust

