### Rune Floberghagen Head of the Science, Applications and Climate Department



# Welcome Introduction

### Welcome to the ESA ESRIN Establishment

- Earth Observation
- Space transportation
- Science Hub
- NEO Coord. Centre
- ESA Security Office
- Corporate IT
- Comms, Archives
- Contracts, Personnel
- Site Management

EO centre for cooperation on Earth system science



### ESA's EO Vision Taking the Pulse of our Planet

Protecting from Threats to the Space Ecosystem keve

A End users & terminal hijacking



Spying the signal Eavesdropping

**NEOCC**, a core

Office

element of ESA's

Planetary Defence

Satellite Jammer

ESRIN hosts the VEGA European Small Launcher Team - Vega-C Successfully launched July '22

### **Earth Observation**





### Global data to address global and inter-connected challenges



### collaboration

### complementarity

"passion"

synergy

\*

+

→ THE EUROPEAN SPACE AGENCY

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### Ingredients we need





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ESA Develops world-class EO systems with European and global partners to address Scientific & Societal challenges





DIGITAL

TWIN

**EARTH** 

(DTE)

industry, Member States

esa

Securing the long-term continuation of Europe's eyes on our planet

COPERNICUS Sentinels Next Gen.

FutureE0

**BASIC ACTIVITIES** 

Heritage Space

CLIMATE-

SPACE

Earth Science, Preparation of EO future and Worldclass EO Research Missions

Earthnet

Worldwide data and a walk in the past to better understand the present and the future

\*

→ THE EUROPEAN SPACE AGENCY

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### FutureEO - ESA's core Earth Observation R&D programme since 2000



Earth Science, Preparation of EO future and World-class EO Research Missions



The only ESA (EO) optional programme bringing together all Member States The Earth Observation locomotive at the Next Ministerial The European space agency

### **Science for Society – Core Elements**





- **Deliver scientific excellence** in EO, maximizing the scientific impact of European EO capabilities and advancing our fundamental understanding of the Earth and system in close collaboration with EC.
  - **Pioneer innovative and reliable Earth Observation applications** to support international policies on the environment and sustainable development.
  - Strengthen European EO industry competitiveness through new technologies, stimulating innovative approaches to open new market opportunities.
  - Making full leverage of IT advances ensuring competitive R&D cycle generating information EO-derived information in an agile and rapid innovation process.
- Maximising the impact of existing EO capacity (EE, Sentinels, National Missions) and preparing for a fast exploitation of the next Sentinel missions

### We are not doing this alone....





The European Commission's Deputy Director General for Research and Innovation, Patrick Child and ESA's Director of Earth Observation Programmes, Josef Aschbacher at the signing ceremony, January 2020. ".... to jointly advance Earth system science and its contribution to respond to the global challenges that society is facing in the onset of this century"



### Joint EC-ESA Earth System Science Initiative



### ESA FutureEO

ESA new Science and Innovation Earth Observation Programme

## EC-RTD

### Horizon Europe

New EU Research and Innovation Framework Programme

 Advance EO capabilities, Advance Earth System Science, and predictive capabilities
Accelerate science and innovation
Maximize scientific impact of Earth observation
Transfer results into solutions for society
Promote international cooperation

### We are taking action!



- Open Innovation for EO Programmes workshop is a crucial input for the Agency to further define its open science framework
- ESA EO has (admittedly) so far lacked a solid framework for its activities in this area → but we are catching up fast!
- Openness is traced from the top-level, ESA-wide Agenda 2025: "fast innovation", "agile framework for innovation", "open innovation approach"
- Ties with Earth system science, and hence the communities beyond satellite-based EO, are strong and powerful
- Beyond a white paper on a Framework for Open Innovation, we are at the same time working on a new EO Science Strategy



# We are eagerly awaiting the output from this workshop

Thank you!

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