Socioeconomic Benefits of ESA Earth Observation

Advancing the understanding and measurement of the societal benefits of Earth Observations

Frascati, 1-3 July 2019

Josef Aschbacher, ESA
Director of Earth Observation Programmes
Global EO Market Growth

**Downstream**
EO data and services
- 6% p.a. – global
- 12.5% p.a. – Europe

**Upstream**
>50 kg, excl. defence

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Taking the Pulse of our Planet
Satellites for Operational Meteorology

The **MetOp satellites** account for 31% of the error reduction in day 1 forecasts due to all observations ingested in real time by numerical prediction models.

EUMETSAT, 2016
Growing Role of Earth Science

Scientific publications 2002 - 2018

SCOPUS database

- Swarm
- CryoSat
- SMOS
- GOCE
- Sentinel
- Envisat
- ERS

European Space Agency
“In the eyes of Europeans, the primary area of progression for space activities would be to foster a better understanding of what is happening on Earth, particularly regarding the climate.”
**Copernicus 4.0**

**Complete 1st Generation**
- S1
- S2
- S3
- S4
- S5P
- S5
- S6

**Develop 6 new Missions**

- Prepare the next generation of Sentinels

- Largest EO data provider in the world
- 250 terabytes of data distributed per day
- to 235,000 registered users and counting
Return on European EO Investments

For every €1 invested

€1 → €10

Copernicus
€ 93-191 billion (2017-35)

Meteorology (MetOp-SG)
€ 16-63 billion (2020-40)

up to €4 return in FutureEO
Thank you for your attention!

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