

Earth Observation in support of the Lazio Pulse Open Data Partnership

Lazio Pulse Community Building Event
ESRIN, 7 Dec 2016

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Director of Earth Observation Programmes

ESA facts and figures

- Over 50 years of experience
- 22 Member States
- Eight sites/facilities in Europe, about 2200 staff
- 5.2 billion Euro budget (2016)
- Over 80 satellites designed, tested and operated in flight



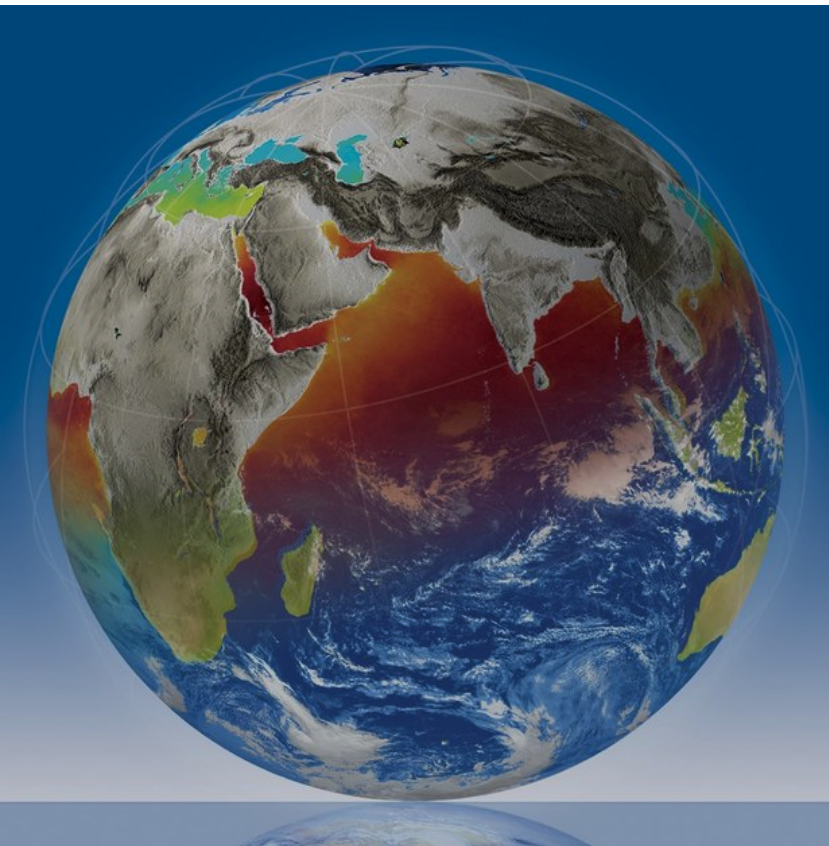


Personnel on site (Dec 2015): 557

- **209 ESA staff**
- **348 contractors**

Activities

- Earth Observation
- Vega Launcher
- Corporate Informatics
- ESA Security Office
- Contracts, Personnel
- Site Management
- Communication



3 main programme lines

- Meteorology
- Copernicus
- Science

All elements of EO

- Technology and studies, satellite development, launch, operation, data exploitation

Satellites

- **29** satellites under development (+**5** instr.)
- **11** satellites in operation

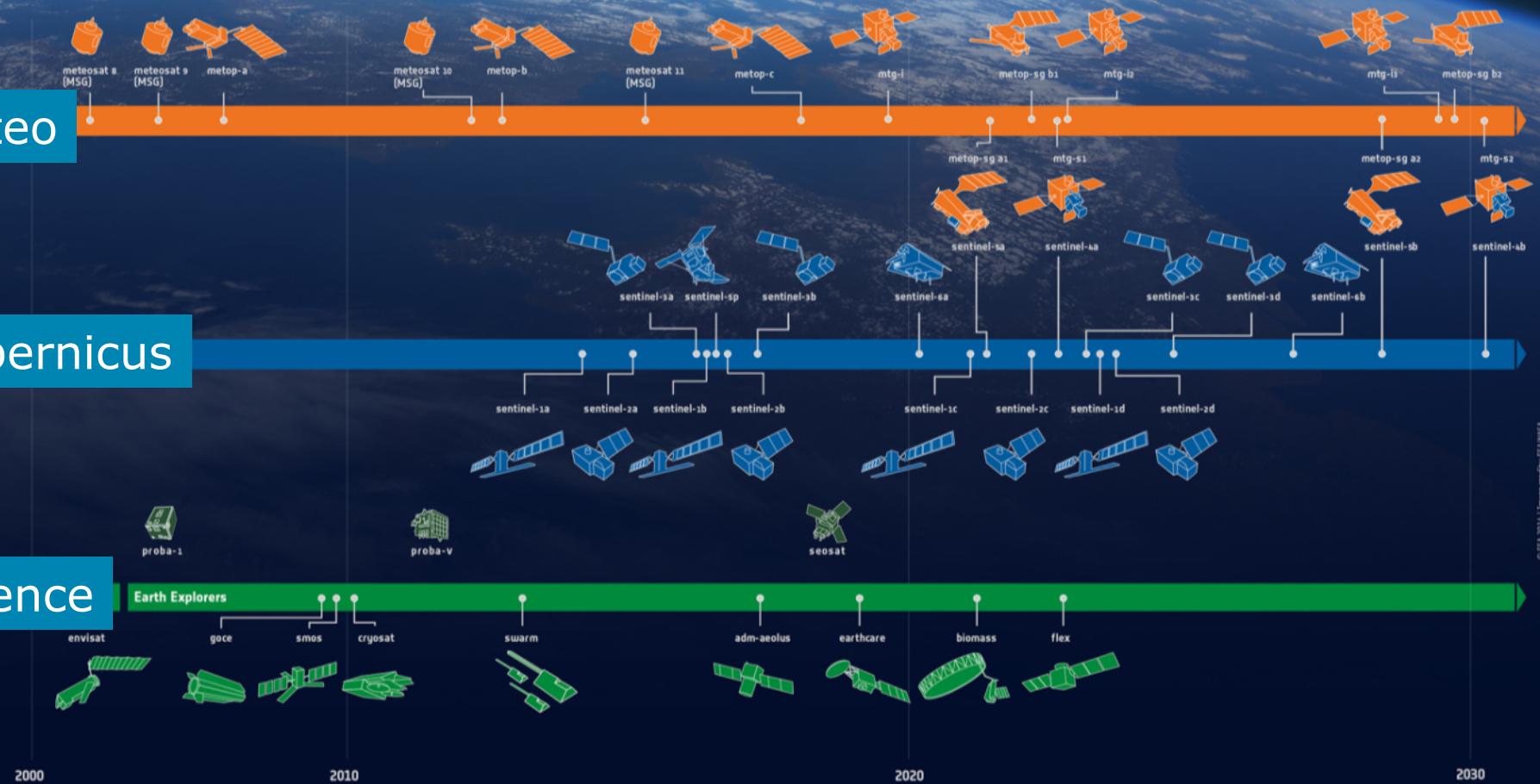
Budget (2016)

- 1,6 bn Euro

Meteo

Copernicus

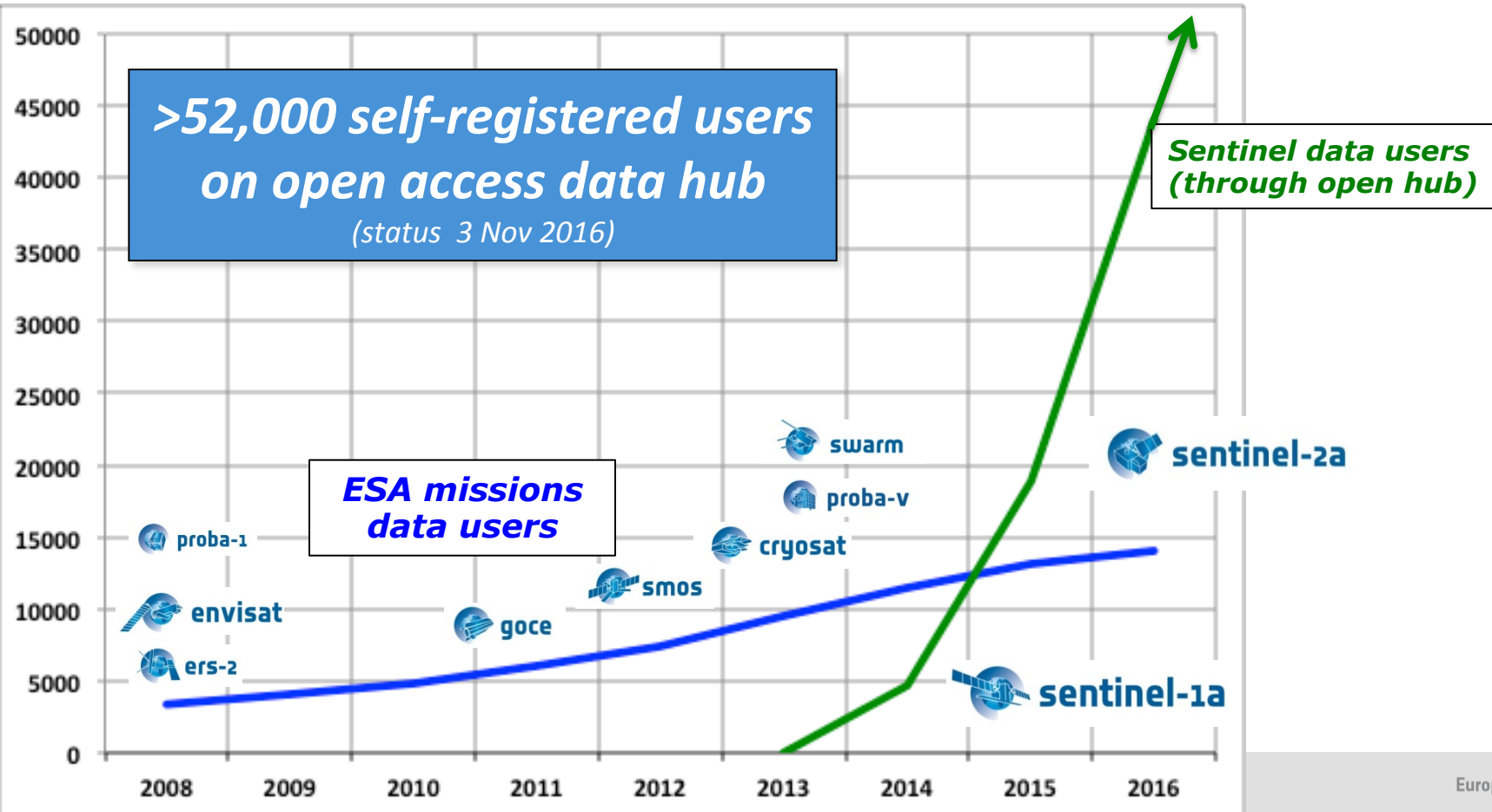
Science



→ ESA-DEVELOPED EARTH OBSERVATION MISSIONS



Sentinel User Registration



Copernicus: Economic Benefits

The **global geospatial analytics market** was valued at US\$ 27.42 bn in 2015 and is projected to reach **US\$ 72.21 bn by 2020**

→ **Increase by factor 3 in 5 y**

Research and Markets, 2016

based on free and open data policy

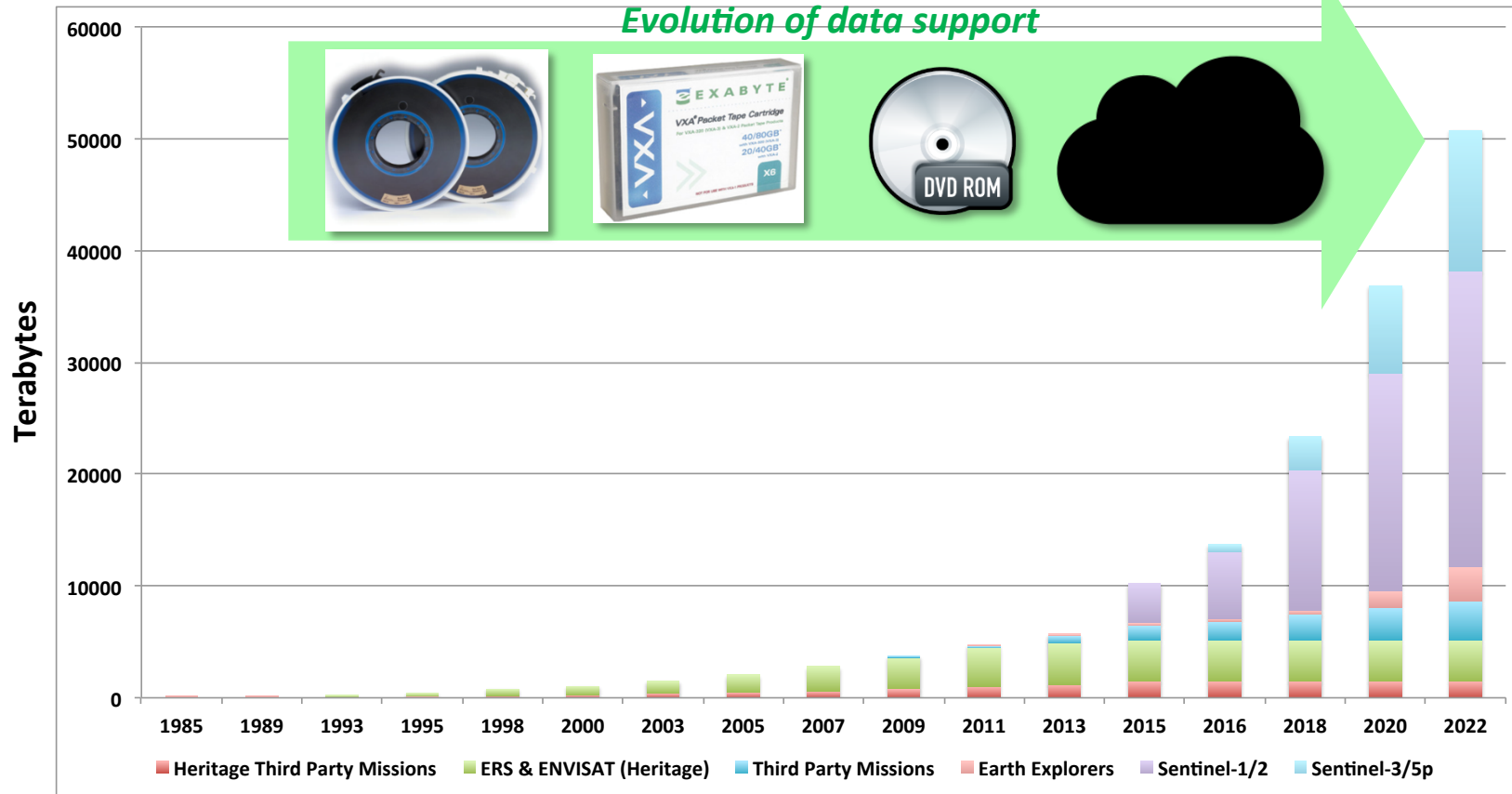


1 € spent by European tax payer on Copernicus results in **public return of up to 10 €**

→ **Ratio 1:10**

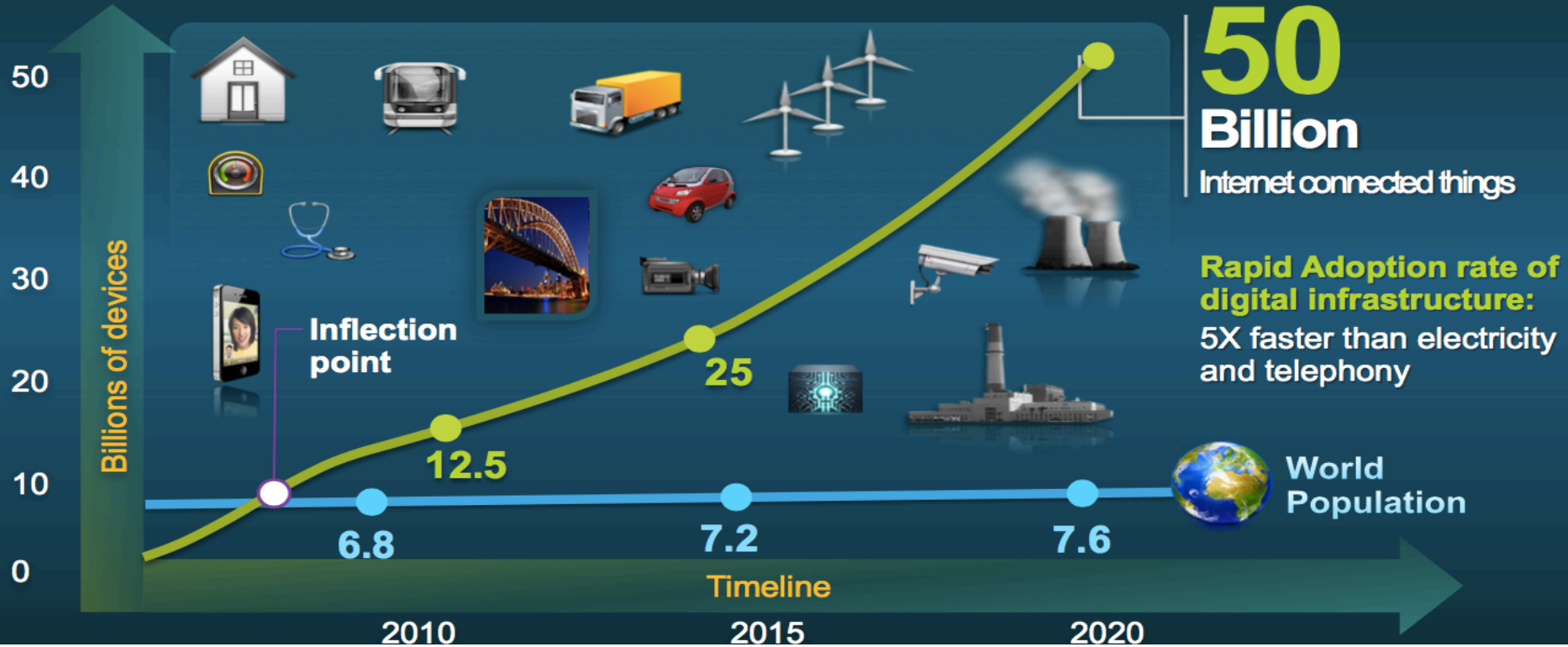
"The Socio-Economic Benefits of GMES"
ESPI report 39, November 2011

Big Data – ESA EO Missions



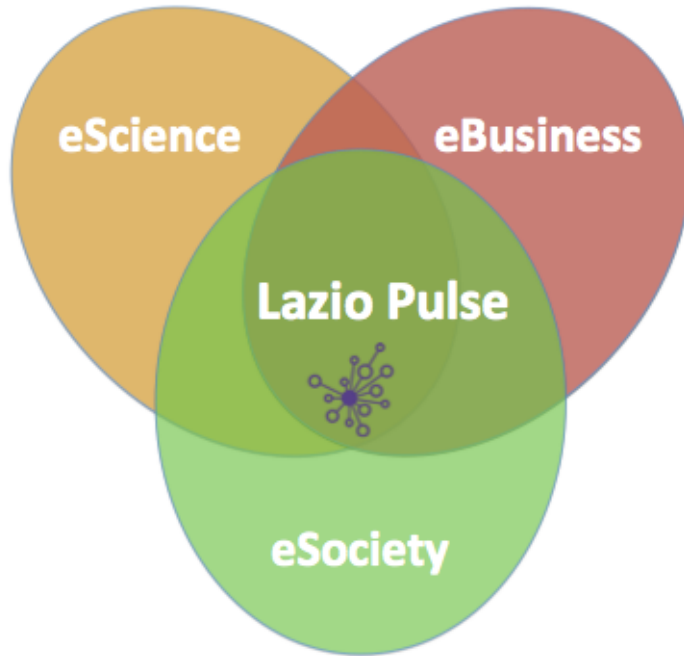
Internet of Things (IoT)

50B connected devices by 2020



Source: CISCO IBSG, 2011

Lazio Pulse Open Data Partnership



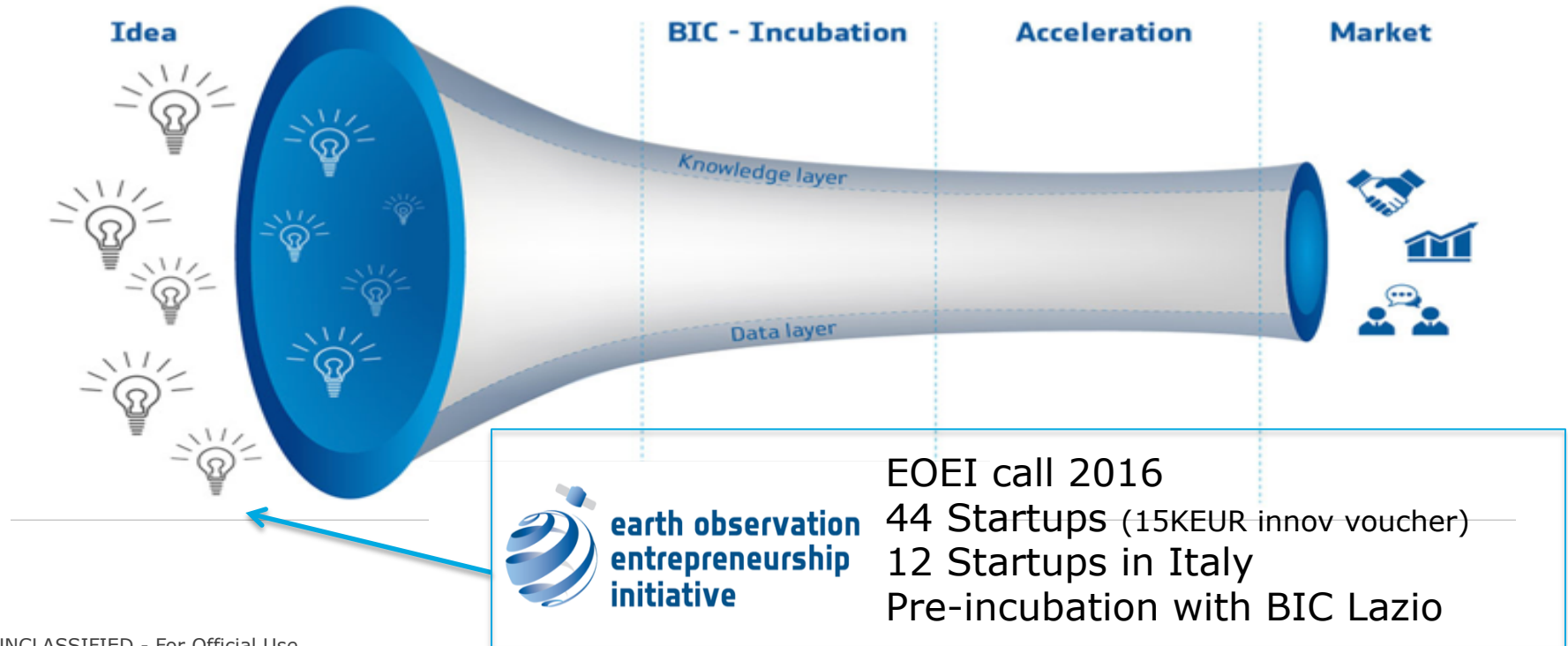
ESA could support the Lazio Pulse data partnership with:

- Open EO data (e.g. Sentinels, archive)
- Open Tools & e-infrastructure (e.g. TEPs, toolboxes, DIAS)
- Expertise
- Network & Communities

To

- Advance Science,
- Fuel the data economy
- Inform Society

Building a Seamless Pipeline for Data Innovation



Example: Copernicus Masters – ESA App Challenge



A Social Network
to create and share pictures from space



for everyone
from scientist to artist



ESA UNCLASSIFIED - For Official Use



European Space Agency

EO data to help breeding the new gen data entrepreneurs

