



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
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Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
**State Secretariat for Education,
Research and Innovation SERI**
Swiss Space Office



Space has no limits – how public procurements unlock innovation

Polish-Swiss Innovation Day

Warsaw, April 20 2016

Johann Richard, SERI/Swiss Space Office

“A small step for man, but
a **giant leap** for mankind”



Apollo11, Sea of Tranquility, 20 July 1969, frames A11-40-5872 and A11-40-5874 : Buzz Aldrin is shown deploying the Solar Wind Collector and saluting the U.S. Flag

- 4 day

#CometLandin



... and (almost) 50 years later, an ESA Mission gave mankind the first images from the surface of a comet!





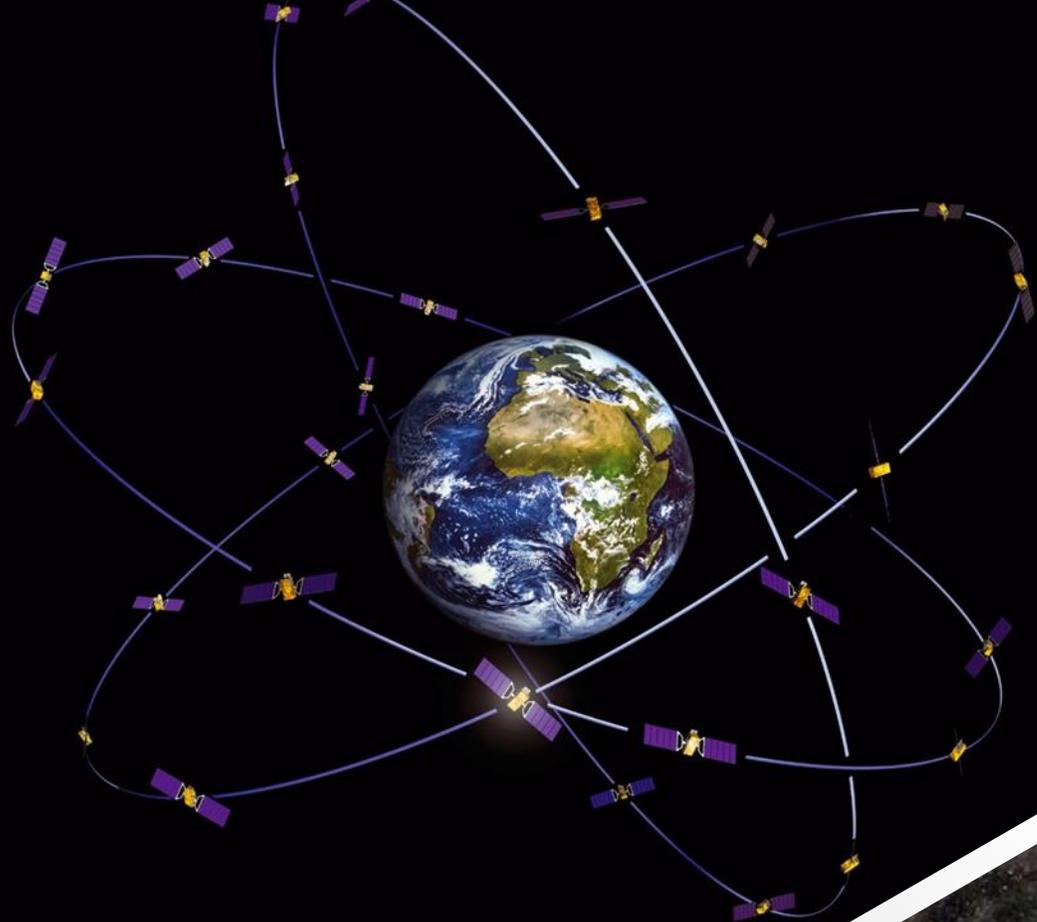
Europe and Switzerland in Space Why?



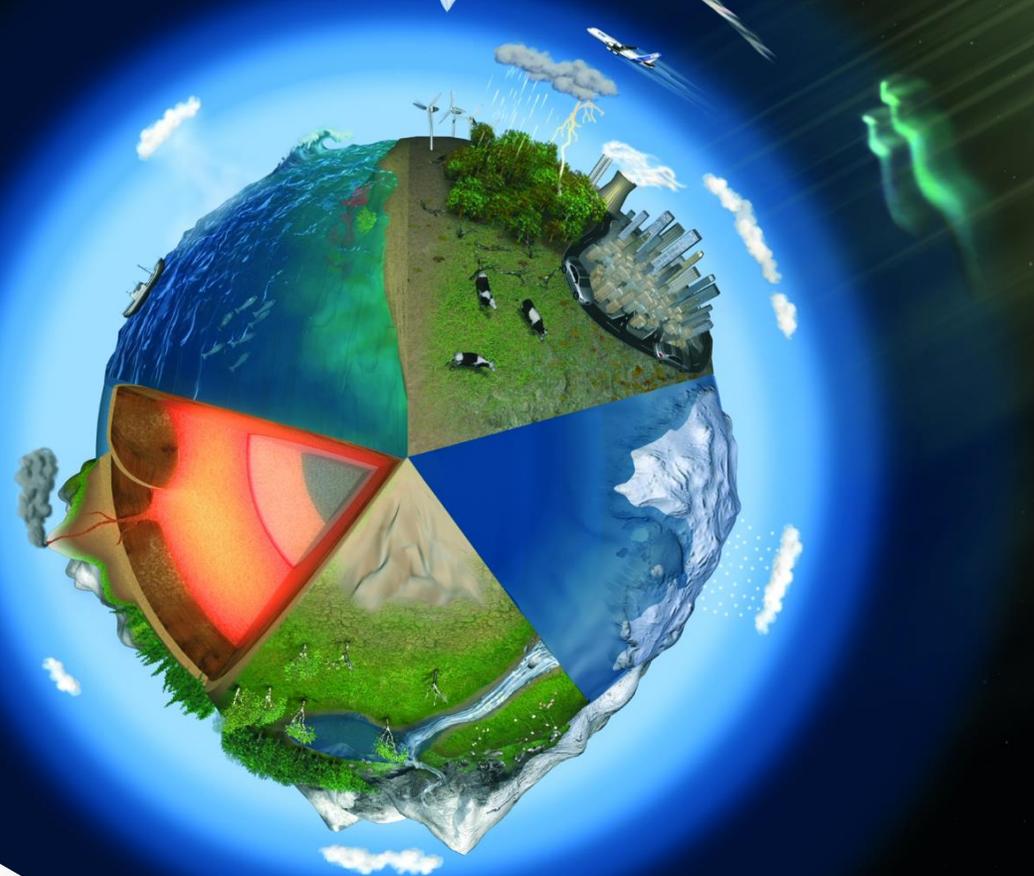
Mission-driven European collaboration

“to provide for, and to promote, for exclusively peaceful purposes, **cooperation among European States** in space research and technology and their space applications, with a view to their being used for scientific purposes and for operational space applications systems [...] by **elaborating and implementing activities and programmes** in the space field”





Systems



Applications

Curiosity

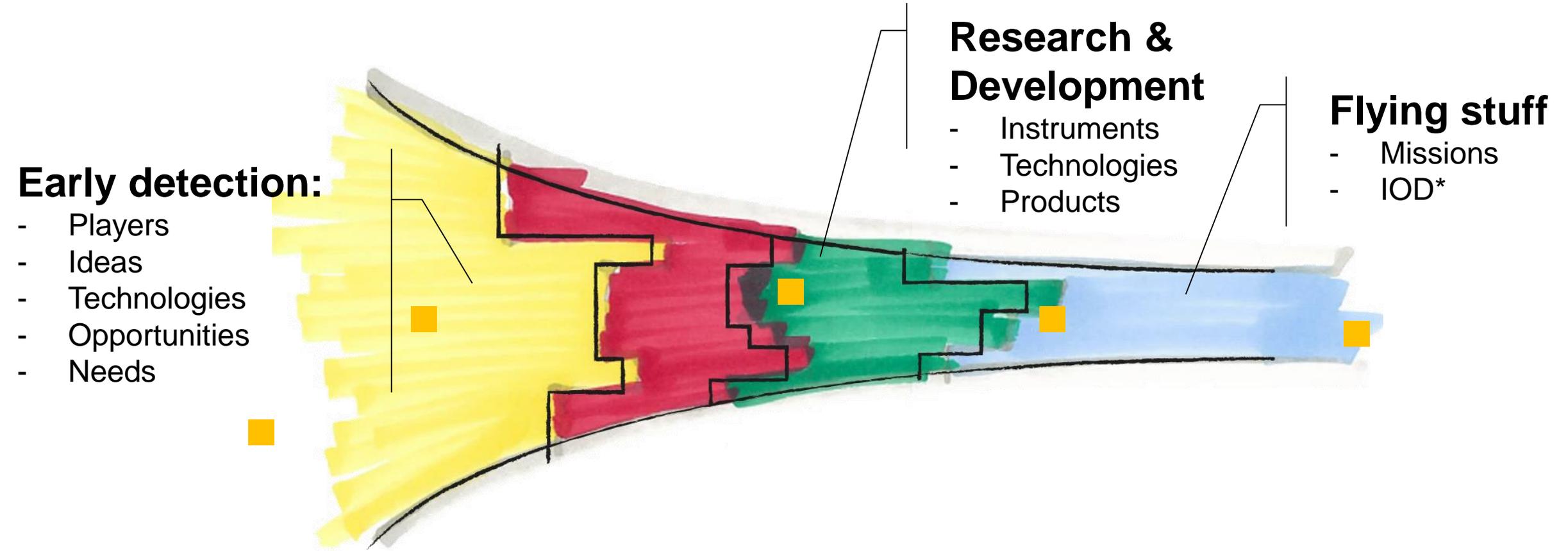


IT'S TIME FOR A
NEW PERSPECTIVE

DIFFERENT!



The ESA innovation funnel



... is also a question of Industrial Policy

* IOD: In-Orbit Demonstration



ESA's industrial policy shall ...

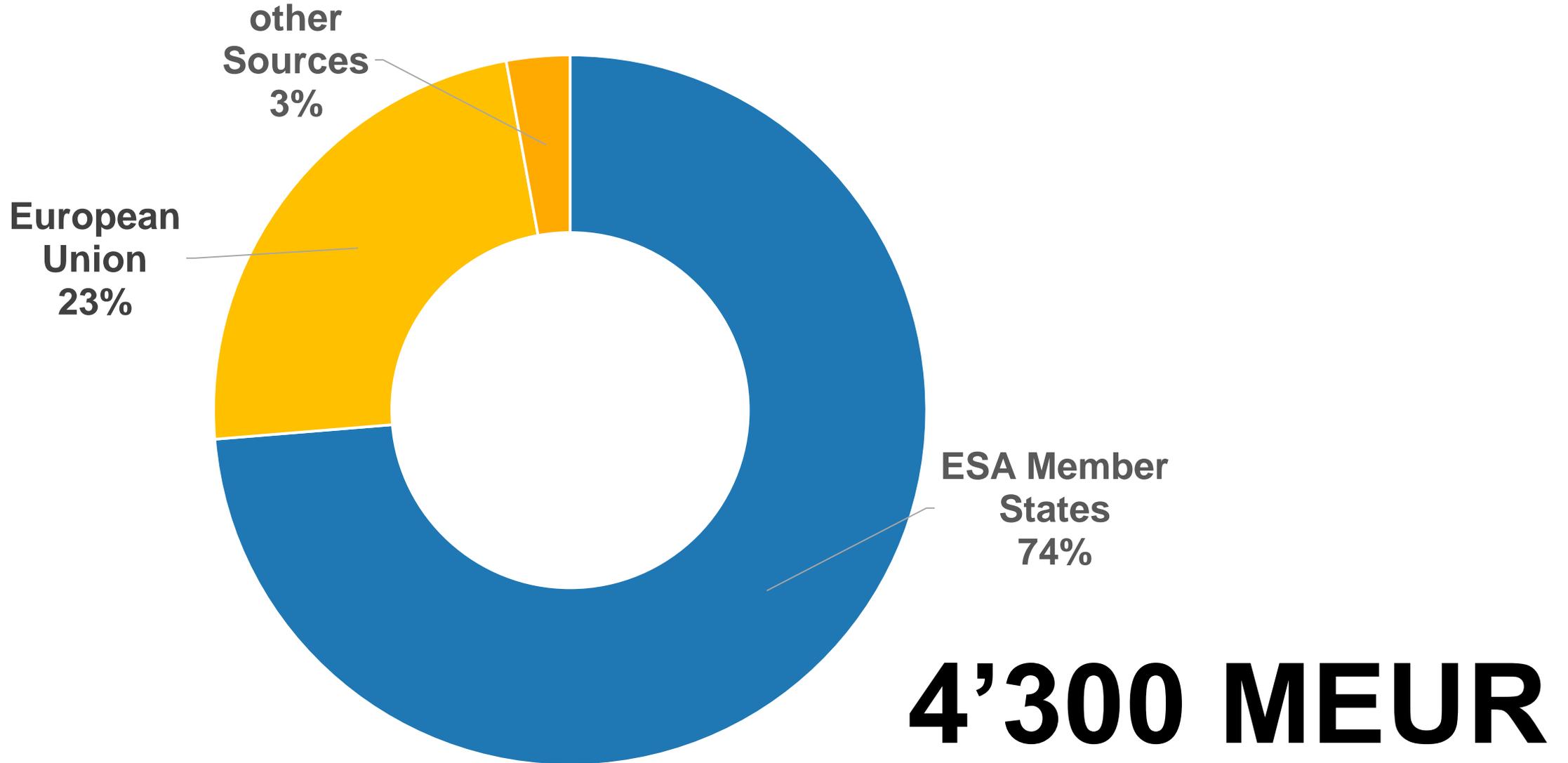
“[...] meet the requirements of the programmes in a **cost-effective manner**, [and] improve the **world-wide competitiveness** of European industry”



... which inherently must be achieved through and result in **innovation**

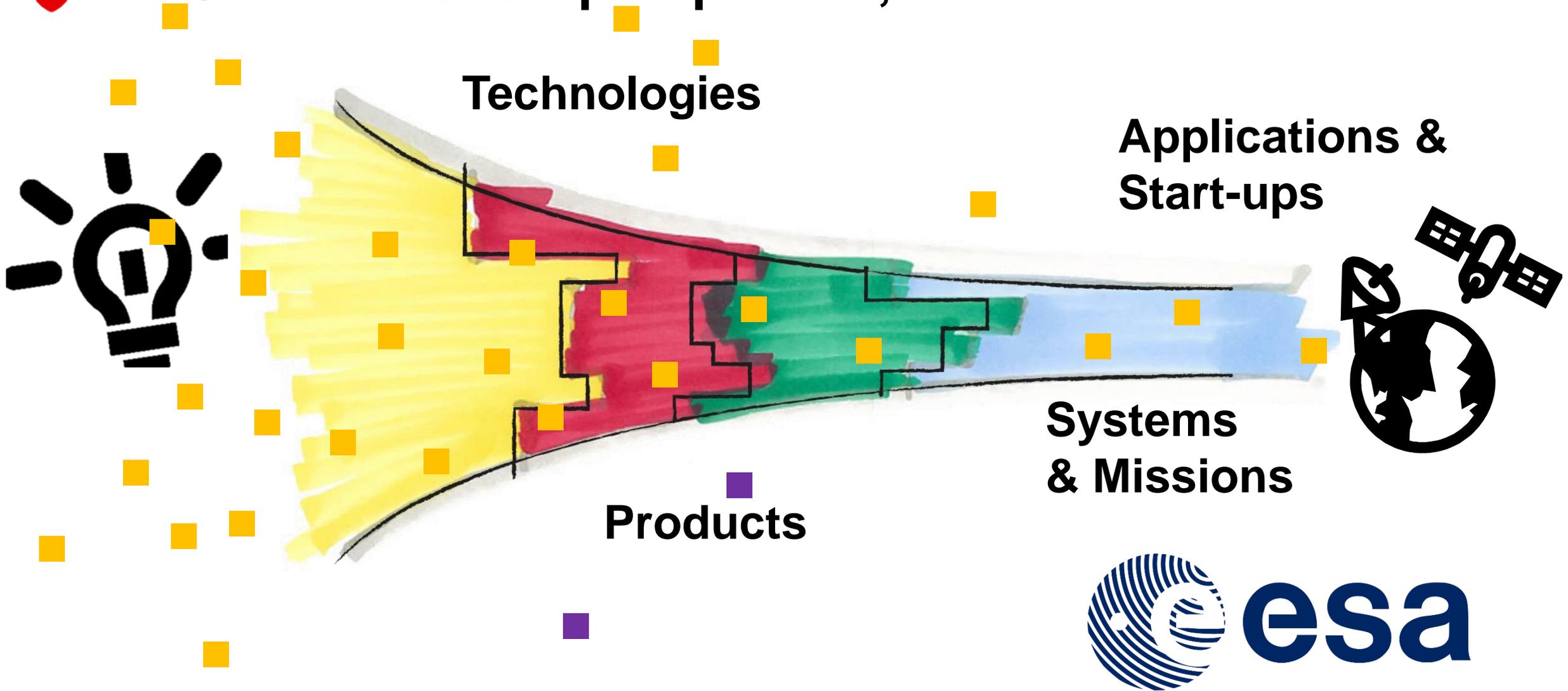


ESA Budget in 2015 (and its funding sources)





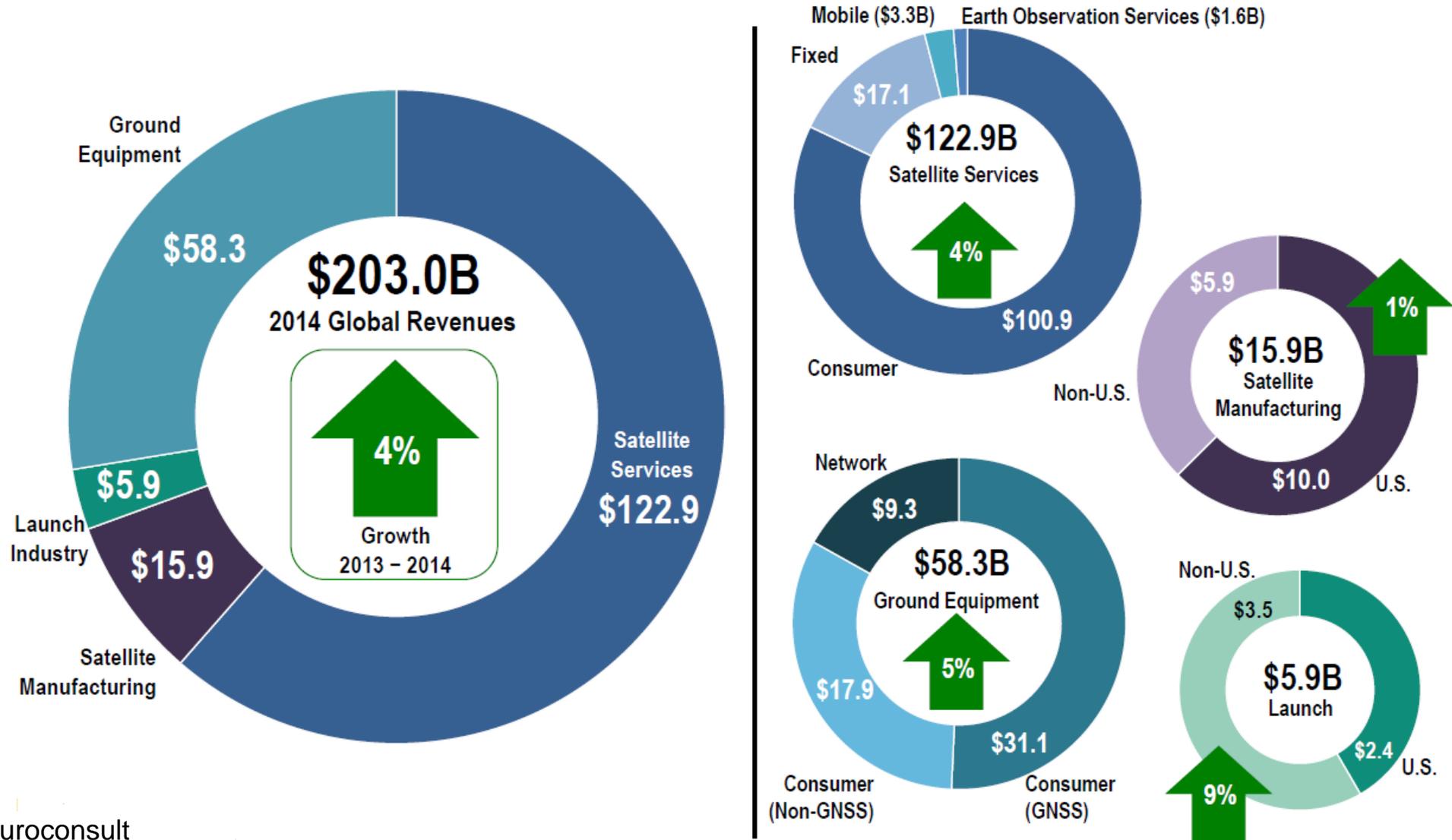
Seen from that perspective, ...



... ESA is a 4 Billion EURO Innovation Engine



Let's put these 4 BEUR into perspective ...

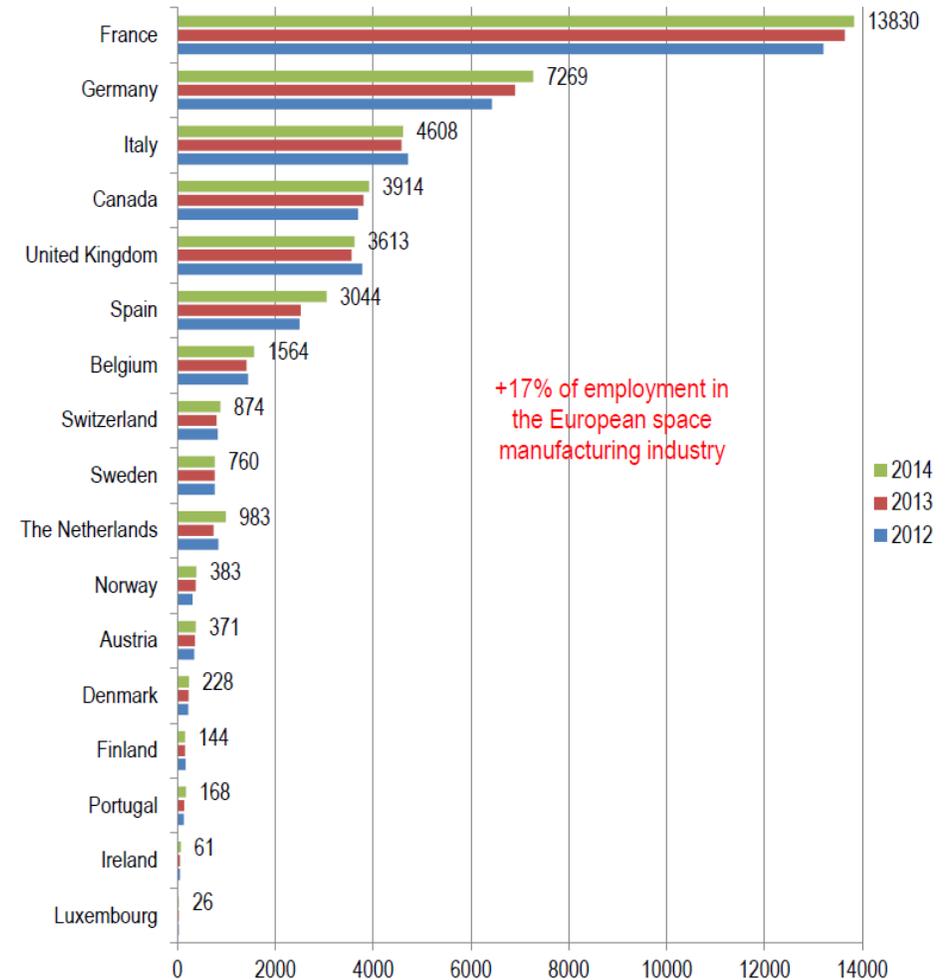




Growth in space manufacturing

17%

growth of employment in the European space manufacturing Industry between 2012-2014.



Sources: Data extracted from ASD-Eurospace 2015, national reports, estimations



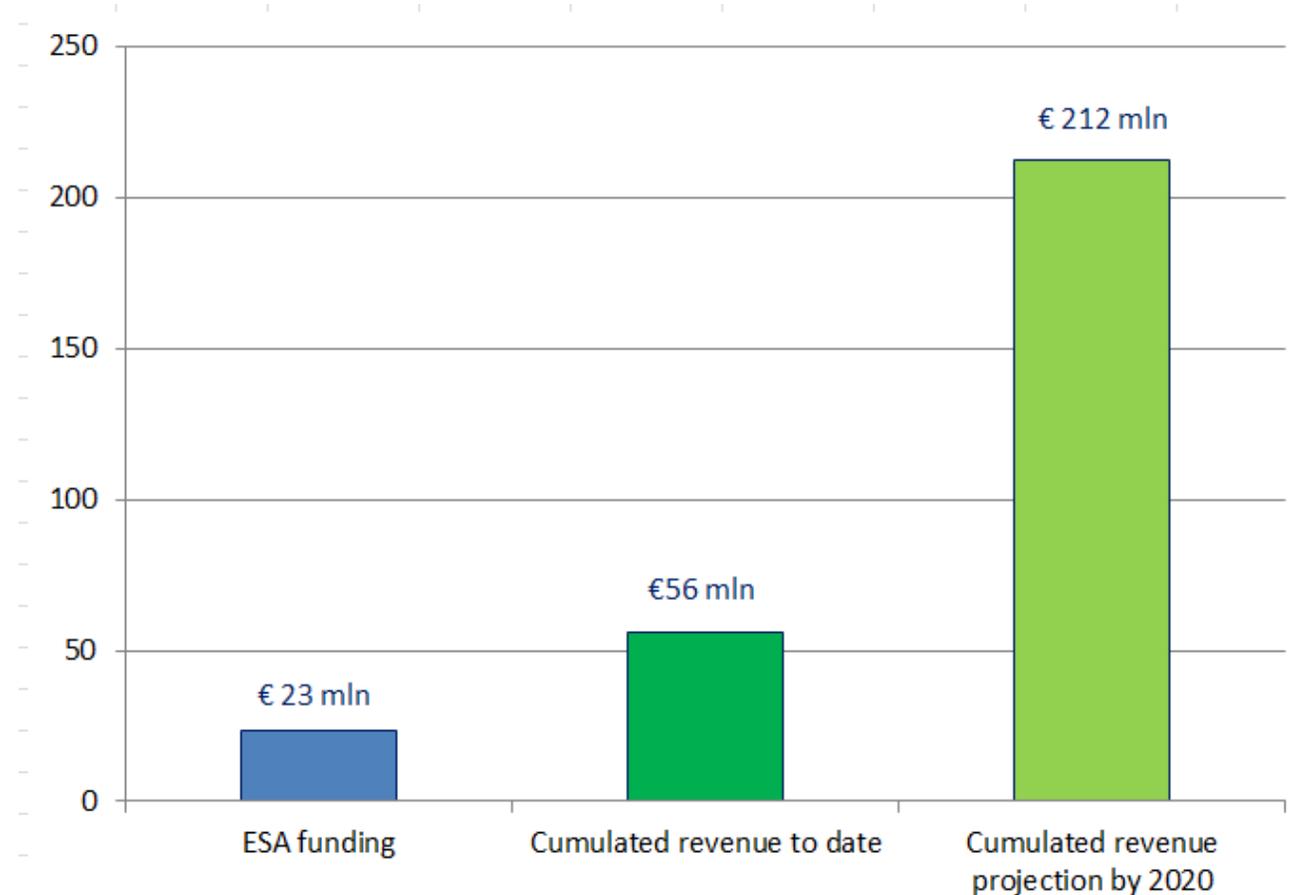
Telecommunications Products supported by ESA

2.5:1

ratio of cumulated
revenue vs ESA
funding (to date)

9:1

ratio of cumulated
revenue vs ESA funding
(projected)



Source: ESA, Socio-Economic Impact Assessment,
Competitiveness & Growth Projects, n=20



Technology Transfer and Business Incubation

34

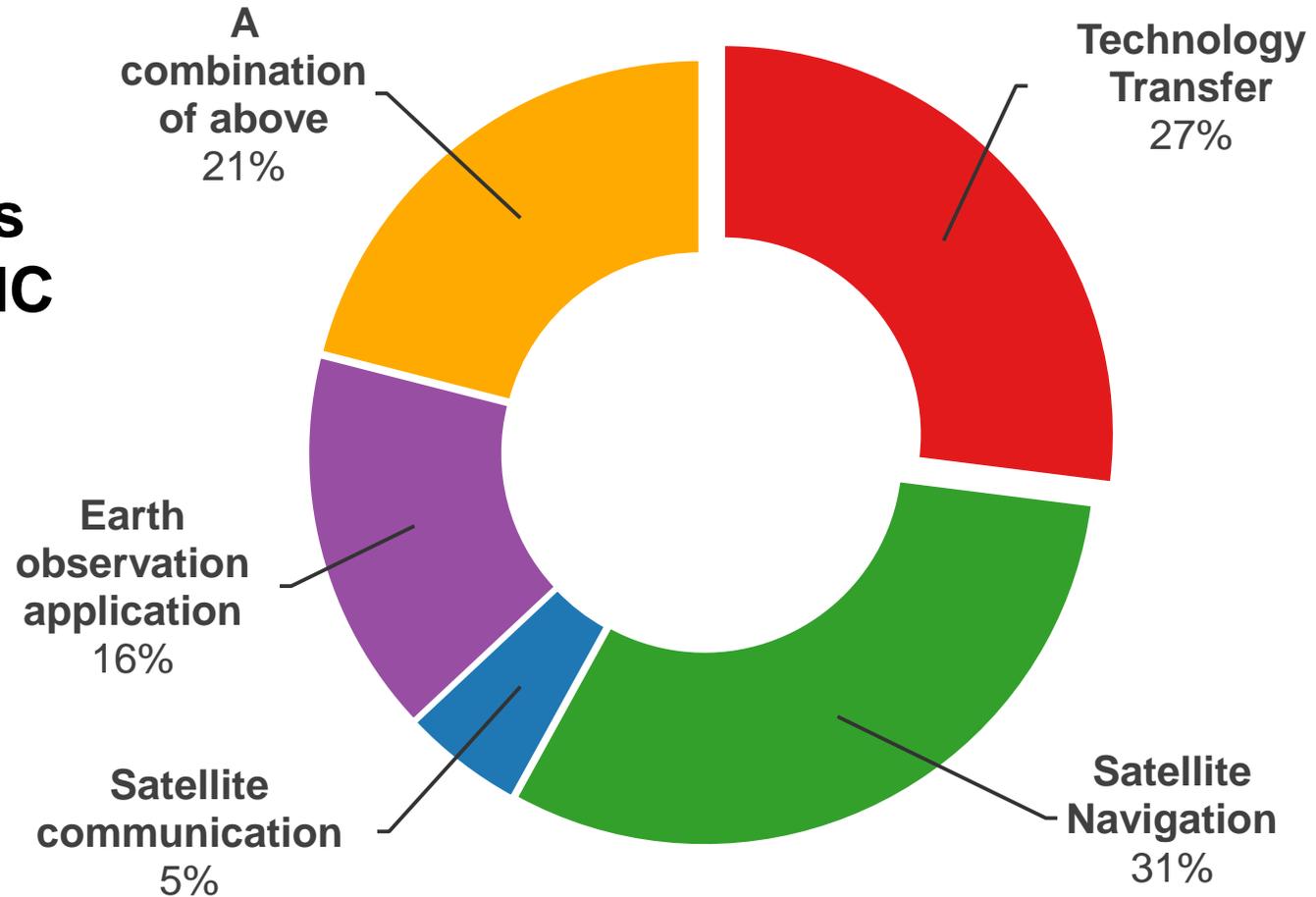
number of patents
granted to ESA BIC
start-ups in 2014

800

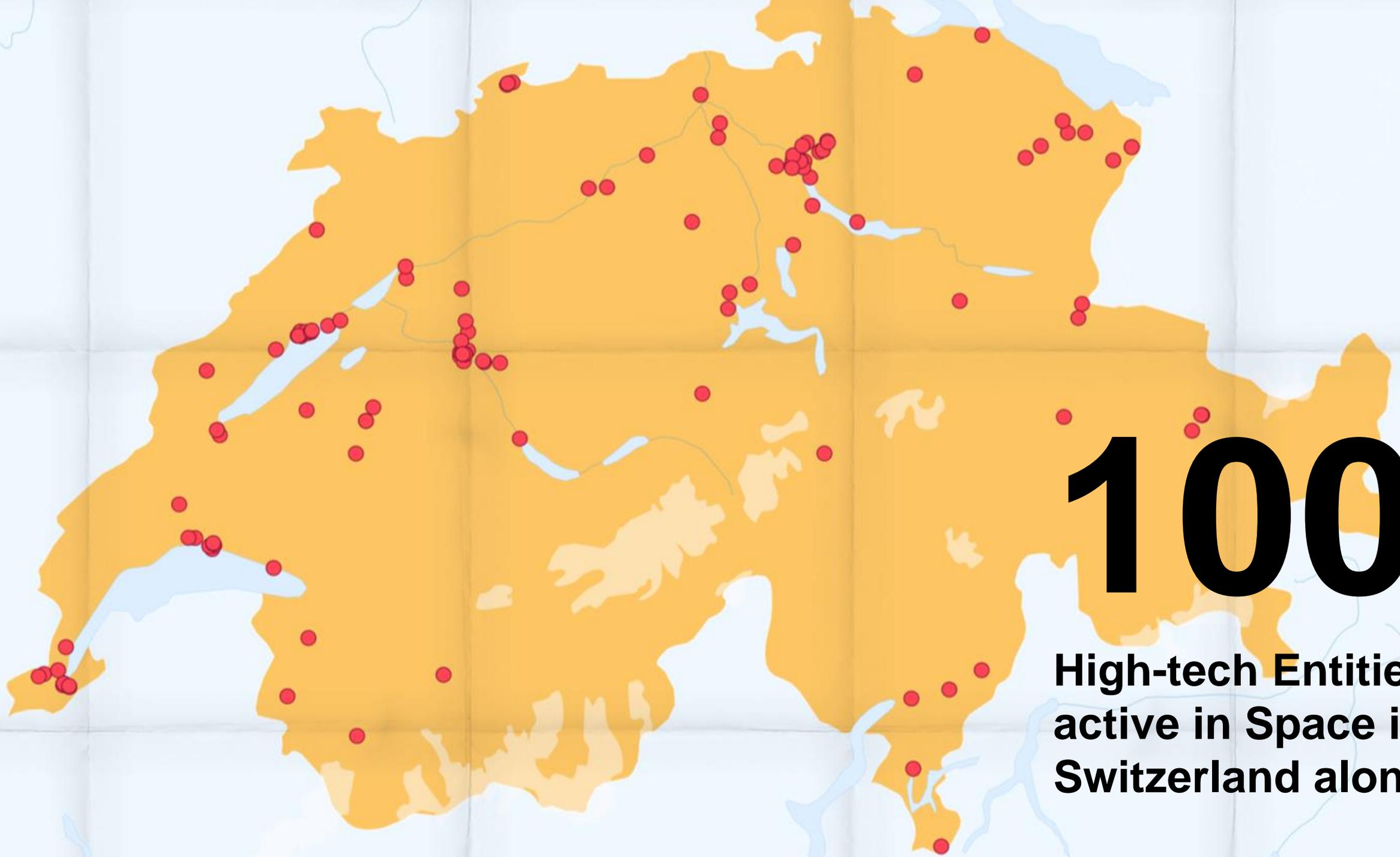
employees in BIC
start-ups in 2014

144

start-up "Alumni"
since 2006



ESA BIC Space Connection in 2014 (Source: ESA)



100

**High-tech Entities
active in Space in
Switzerland alone**



is unlocking
innovation in and for
its Member States
and their societies



306'337'953 km

distance between Rosetta and the Earth today

2016-04-20

Why care?



Characteristics of Space Activities



Space



Transport

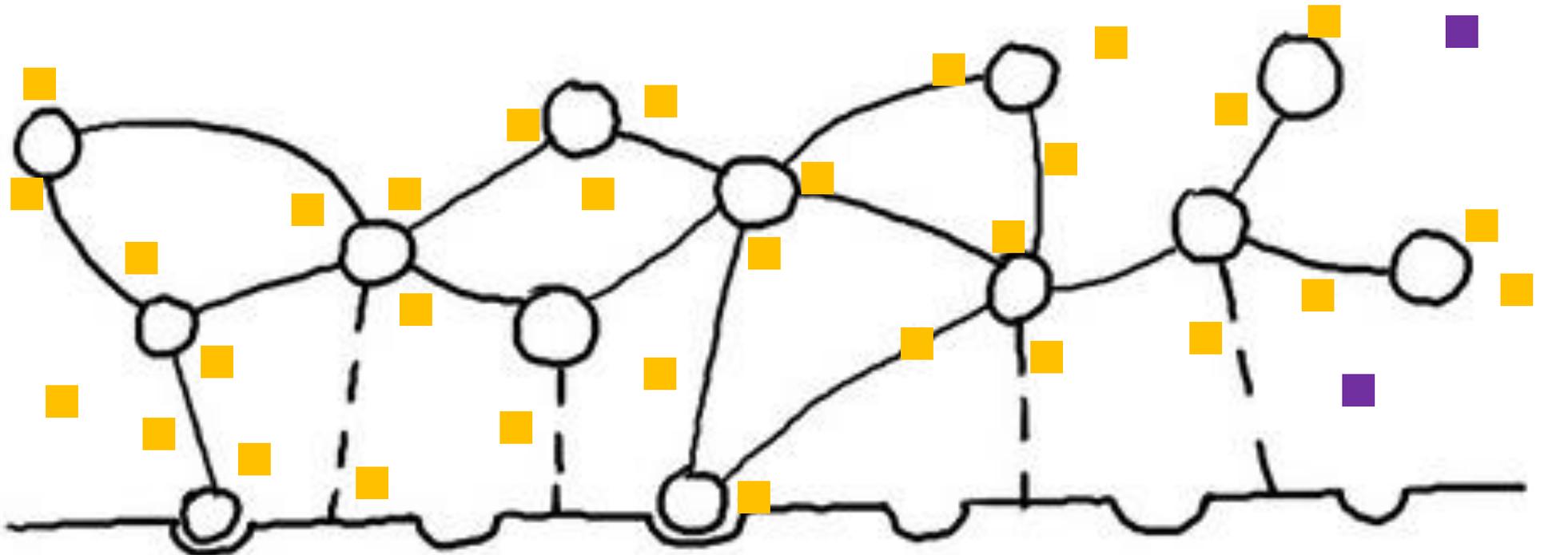


Cities





Public procurements ...

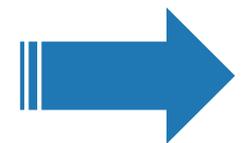


Regional

National

International

Space



Outer Space

... can unlock innovation with (almost) no limits.



Thank you!

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