



Horizon Europe & SRIA State of play

Peraspera workshop

03/04/2019 – Brussels Bozar

Rémy Dénos

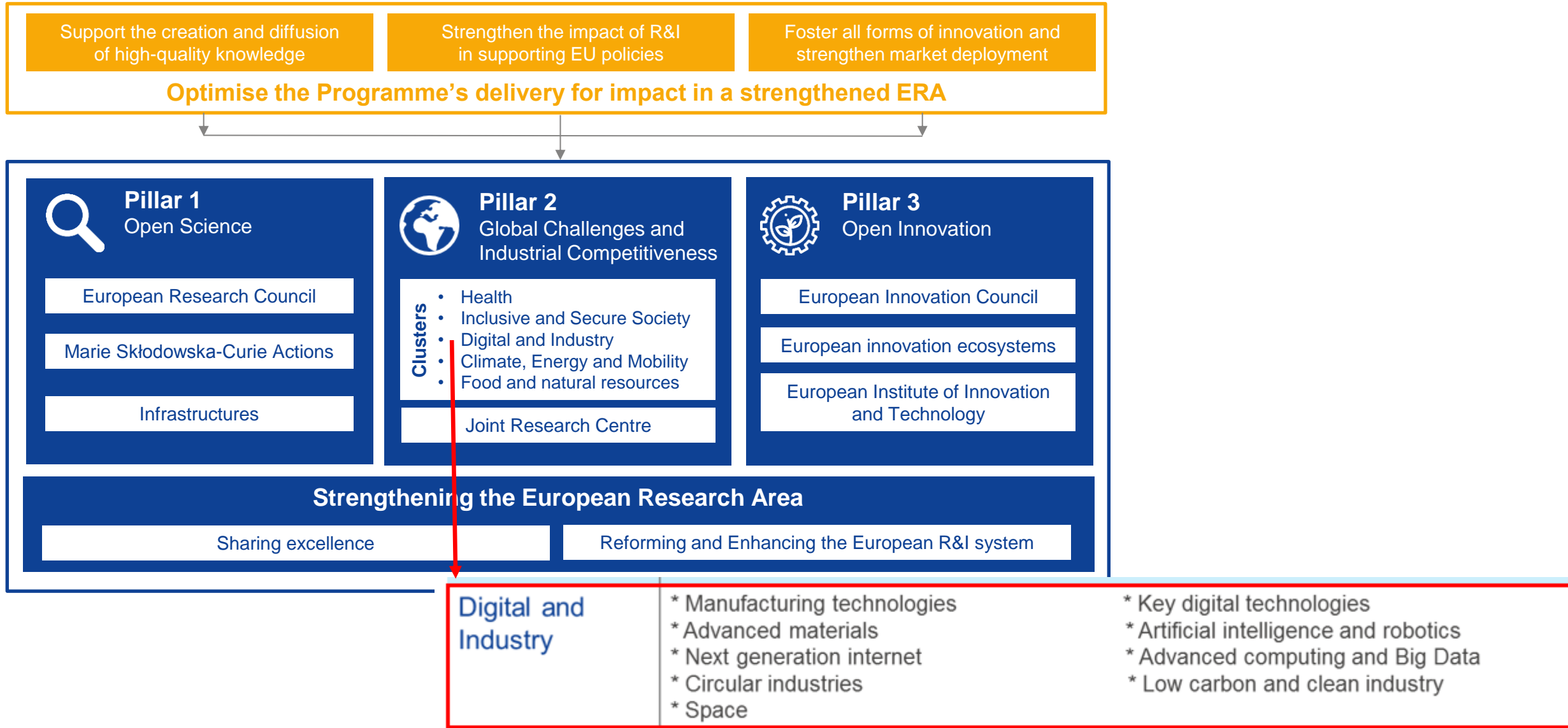
DG GROW

Unit I1 Space policy and research

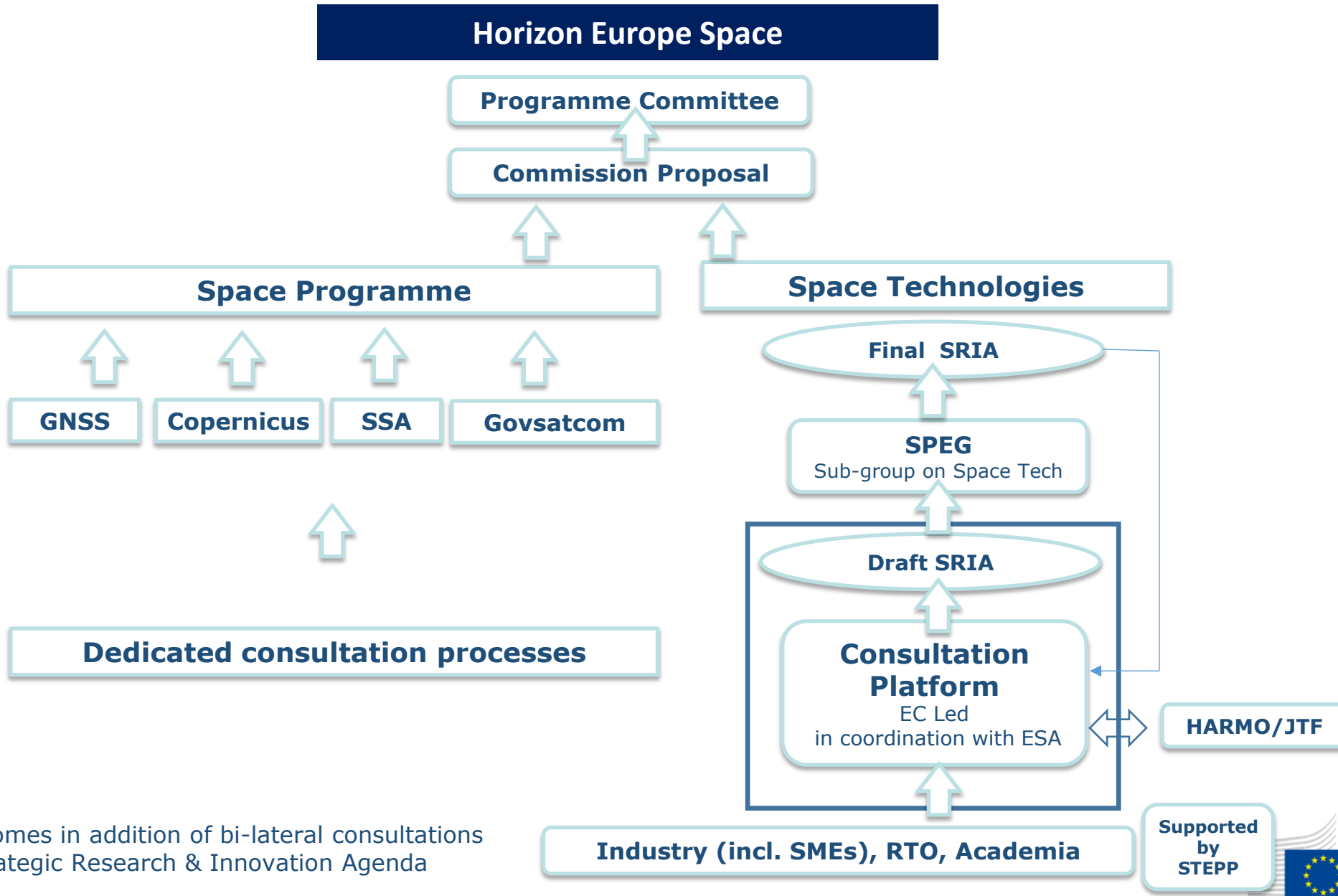


Space under Horizon Europe

Specific objectives of the Programme



Space R&I under Horizon Europe - Draft

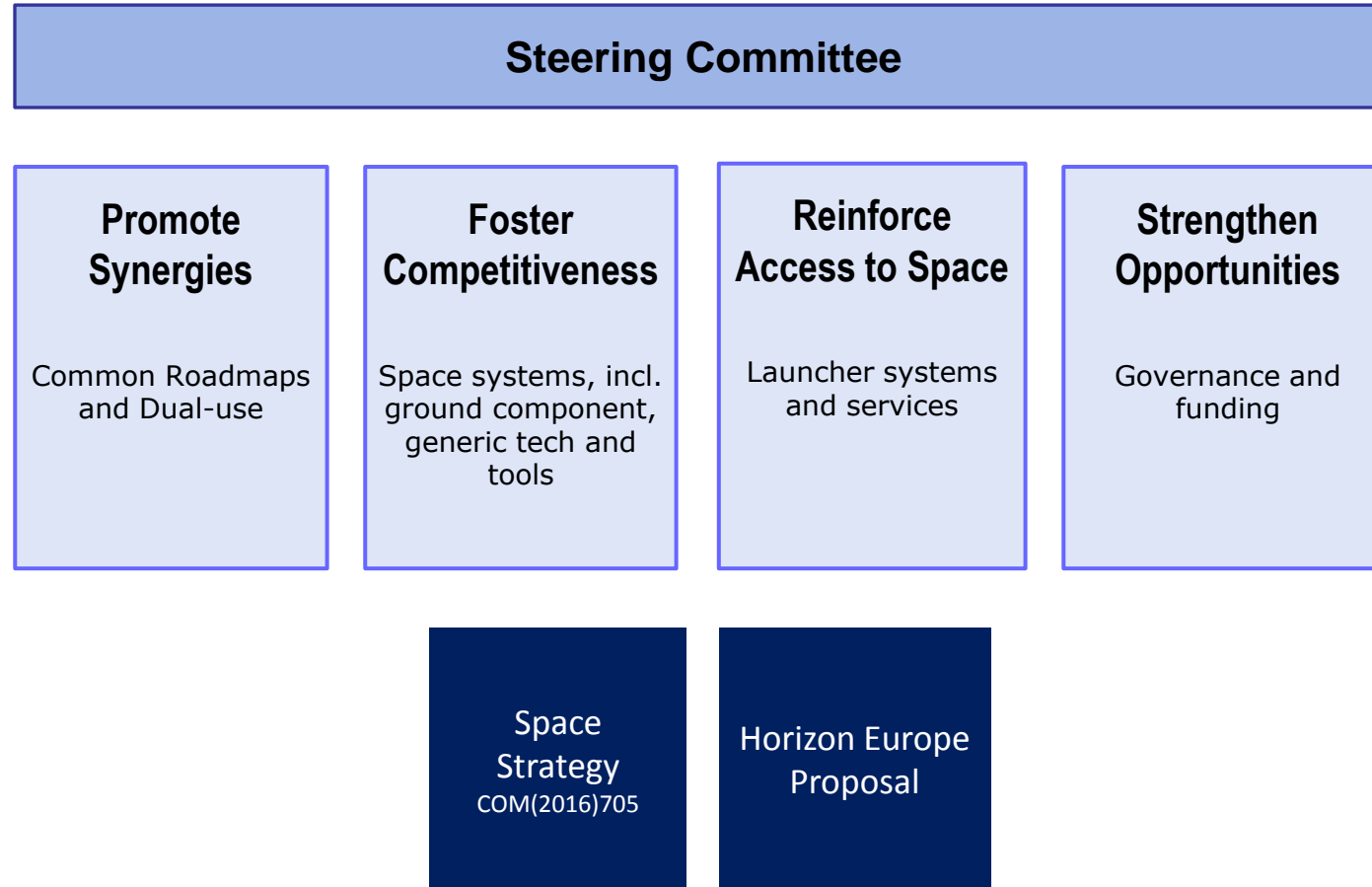


This process comes in addition of bi-lateral consultations
SRIA: Strategic Research & Innovation Agenda



European
Commission

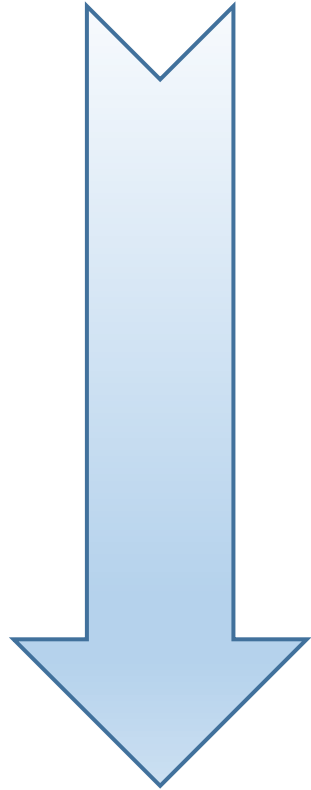
Space TEC Consultation Platform



Stakeholders in the platform:

Manufacturing industry and SMEs - Innovation Actors - Research and Technology Organisations – Academia - Space agencies

Next Steps



- March: Endorsement of the SRIA Outline
- 26-27th: Platform meeting
- 1 iteration before the summer break (platform + SPEG)
- 1 iteration after the summer break (platform + SPEG)
- October: Directors level + high level SPEG meeting
- November: Final SRIA endorsed
- November start of the work on the first Horizon Europe Work Programme
- 2020: Publication of the first Call
- 2021: First grants signed



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Introduction

Contribution of Space to the EU policy and the EU citizens

- Maximize benefits for EU society and economy
 - Global competitive and innovative sector
- Reinforce autonomy in accessing and using space
 - Strengthen Europe as a global actor
- GNSS for transport
- Earth monitoring for land, marine, atmosphere and climate

Space
Strategy

Importance of the sector

- Launch and satellite manufacturing: 43 000 jobs
 - Estimated total EU space economy: 230 000 professionals
- In 2017: 1/3 of the mass was launched for private customers ww
- Over the last 7 years: 43% of spacecraft launched are below 10kg

Strategic Research and Innovation Agenda

- Guidance and recommendations for Horizon Europe
- Consultation of a broad base of stakeholders

Vision

- Foster competitiveness of space systems
 - Reinforce access to space
- Recommendations for synergies, instruments for implementation and funding opportunities

Foster Competitiveness

Foster Competitiveness of end to end systems and new services

Top-Down, application driven, 3 to 5 years to market

- Telecommunication Systems
 - Earth Observation
 - Ground Segment
 - Data Chain

Future space ecosystems: on-orbit operations, new system concepts

Preparing the future, 3 to 15 years to market

- New services incl. de-orbiting, active debris removal
 - On-Orbit servicing, assembly, manufacturing
- New systems concepts incl. modularity



New industrial processes and production tools

- Digitalisation and automation
 - MAIT at larger scale
- Lean qualification processes

(MAIT: Manufacturing, Assembly, Integration and Testing)

Enabling technologies

Cross mission, space and ground, bottom-up

- Disruptive technologies and concepts
- Technology Maturation in the view of qualification
- In-orbit demonstration and validation

Contribution to space science

- Exploitation of mission and science data
- Cutting-edge scientific instrumentation in support of missions
 - Early development work for potential scientific missions

Reinforce Access to Space

Innovation for competitiveness, targeting initial operational capability by 2030

- Reusability concepts including required technologies
- New or optimized low cost, high performance and green propulsion concepts, technologies and propellants
 - Smart technologies

Disruptive concepts for access to space

From low TRL to TRL5/6
Bottom up

Fostering and enabling new commercial space transportation solutions

- New space transportation services and concepts
- New technologies for improved versatility cost reduction and flexibility
 - Standardisation
- Promoting the use of Commercial Off-The-Shelf (COTS) components

Modern, flexible and efficient European test, production and launch facilities, means and tools

- Digitalisation and advanced data management
 - Innovations in existing Europe's spaceport
- Flexibility and configurability of launch systems
- Promote the use of existing facilities for new actors and concepts.



Promote synergies

Technology non-dependence

- Coordinated long-term road mapping and end-to-end development plans
 - Market and needs observatories
 - Supply chain sustainability

Dual use and synergies with defence

Technology transfer

- Spin-in
- Spin-off
- Synergies
- Proof of concept project based on demonstrators and from labs to industry approach

Building on common technology roadmaps

- SRIA-driven high-level roadmaps
- Harmonisation roadmaps at technology level

Standardisation and certification approaches

- Support uptake and enhancement of space standards
- Qualification and certification mechanisms



Strengthen Opportunities

Governance schemes to increase cooperation within the space sector

- Collaborative research and innovation
- Roadmap-based research and innovation
- European Partnership Initiatives
 - Co-funded Partnerships
 - Co-Programmed Partnerships
 - Institutionalised Partnerships
 - Joint Undertaking
 - Knowledge and Innovation Community (KIC)



Exploiting different sources of funding at EU and national levels and leveraging on private investments

Forms of funding

- Grants
 - Innovation procurement schemes
 - Public Procurement of Innovative solutions (PPI)
 - Pre-Commercial Procurement (PCP)
- Prize
- Financial instruments
 - Equity or quasi-equity investments, loans and guarantees, blending opportunities
 - Financial intermediaries (e.g. EIB, EIF, VC funds)
 - Cover different type of entities (start-ups, SMES, large companies)
 - Different phases of business readiness.

Programmes

Synergies with ESIF, InvestEU, Space Programme

