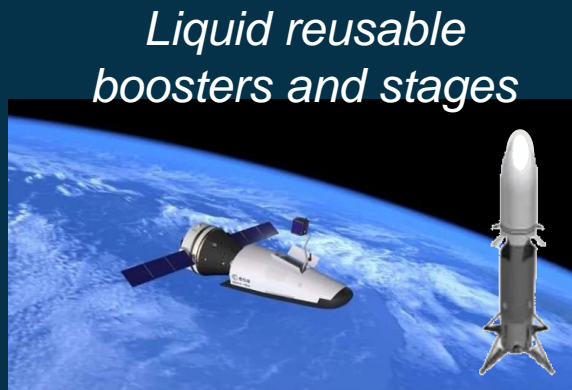


Towards a **Space Transportation ecosystem** for Europe...

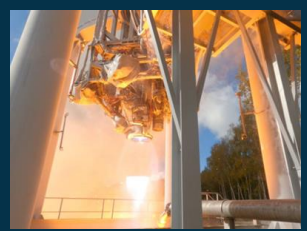


... using routine access to space with reusable launchers...

Reusable stages for modular launchers family

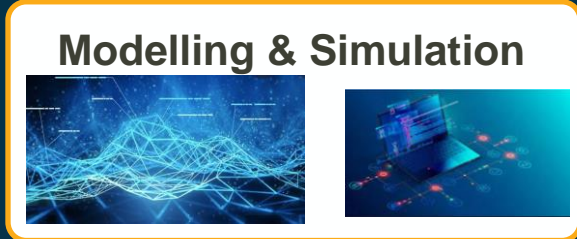
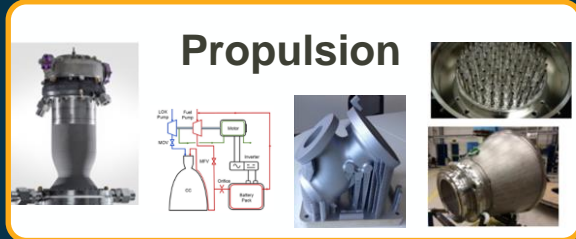
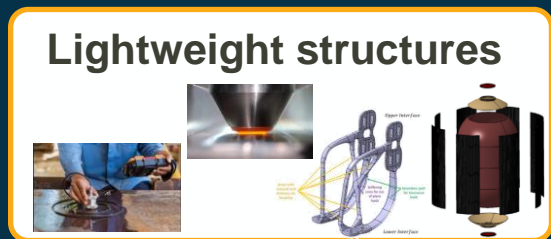


Modular liquid propulsion systems



“Coopetition” to lower entry ticket price

Advanced technologies

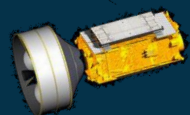


... and a fleet of In-Space Transportation Vehicles

Last-mile delivery orbital vehicles (*expendable*)



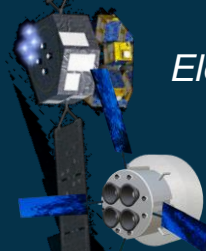
Motorised Dispensers



Kick-Stages / orbital stages



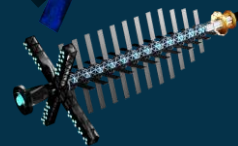
Interoperable Space-tugs (*reusable*)



Electric Transfer Vehicles



Cryogenic Transfer Vehicles



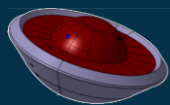
Nuclear Transfer Vehicles



Orbital propellant depot



Return to Earth vehicles



Re-entry capsules and vehicles

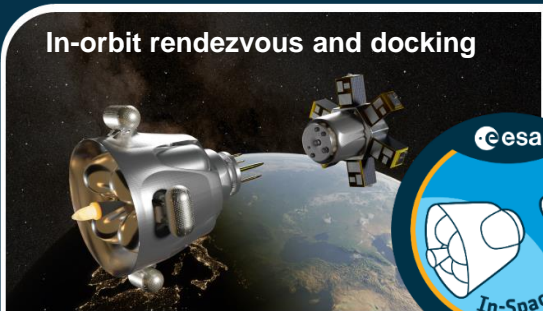


Orbital economy



Incremental flight Demonstrations to cover capability gaps

In-orbit rendezvous and docking



In-orbit refilling & propellant management



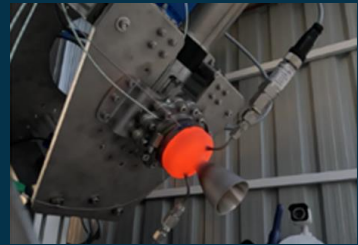
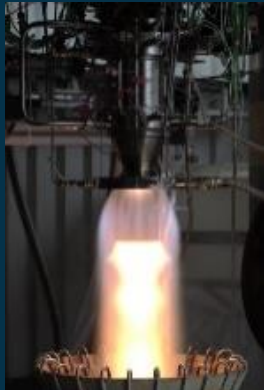
On-board & shared intelligence



Containerization & cargo transfer



Flagship Demonstrators...



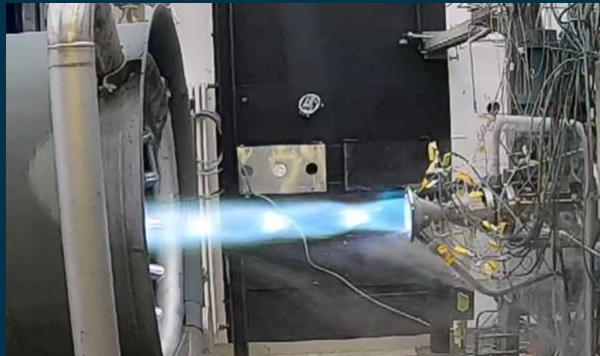
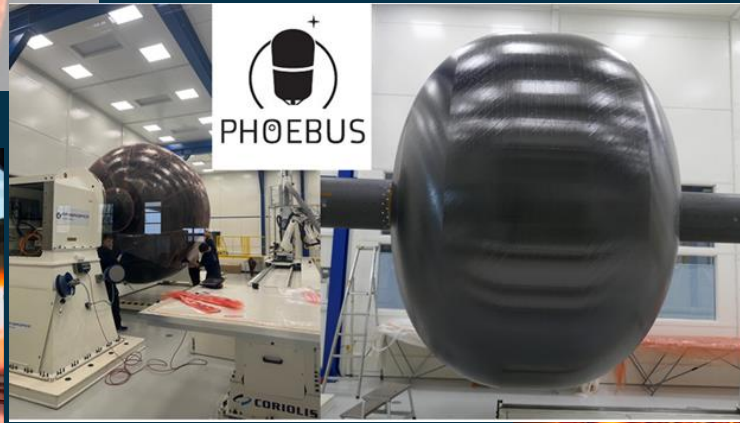
PoC-1 In-orbit rendezvous and docking for cargo transfer and payload hand-over

PoC-2

ISTV - In-Space Transportation Vehicle

System-of-systems analysis to foster interoperability. Ground maturation then In-Orbit Demonstration of building blocks:

- Operational guidelines for rendezvous and GNC-related interfaces
- Standardized Interface for rendezvous, docking and System-Interconnect
- Communication interfaces between spacecrafts



What do you get from ESA



We have a long-term vision for future end-to-end space transportation, shaped with the industry, and we unfold it with a structured & efficient roadmap, for the benefit of Europe



Links to ESA activities developing future missions, thus defining future space transportation needs



We accompany you to mature, demonstrate/develop the key enabling capabilities and transport bricks thus enabling demonstration of your value proposition for space transportation



You have access to world class knowhow and technical expertise in the domain of end-to-end space transportation



We accompany you via a structured process based on coopetition (competition and collaboration) to achieve greater goals together



Networking support with potential investors, accompaniment in development/commercialisation



We match-make needs and value propositions through pitch processes and ecosystem facilitation



Intellectual Property stays with industry

Welcome SMEs

Opportunities for SMEs

INDUSTRY SPACE DAYS

INVITATIONS TO TENDER (ESA-STAR PUBLICATION)


OPEN SPACE INNOVATION PLATFORM

PROCUREMENT DASHBOARD

ESA PROGRAMMES OF INTEREST TO SMES

LATEST BUSINESS OPPORTUNITIES FOR SMES

ESA-MATCH

 BUSINESS WITH ESA ON LINKEDIN

Training

SME TRAINING COURSES

TRAINING MATERIALS

ESA LEARNING HUB

Resources

HOW TO DO BUSINESS WITH ESA

SME DEFINITION CRITERIA


LIST OF SMES REGISTERED WITH ESA

ACCESS TO ESA FACILITIES

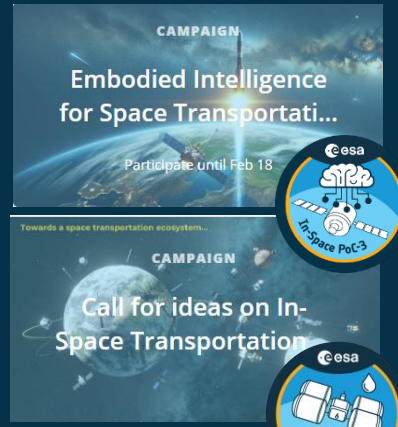
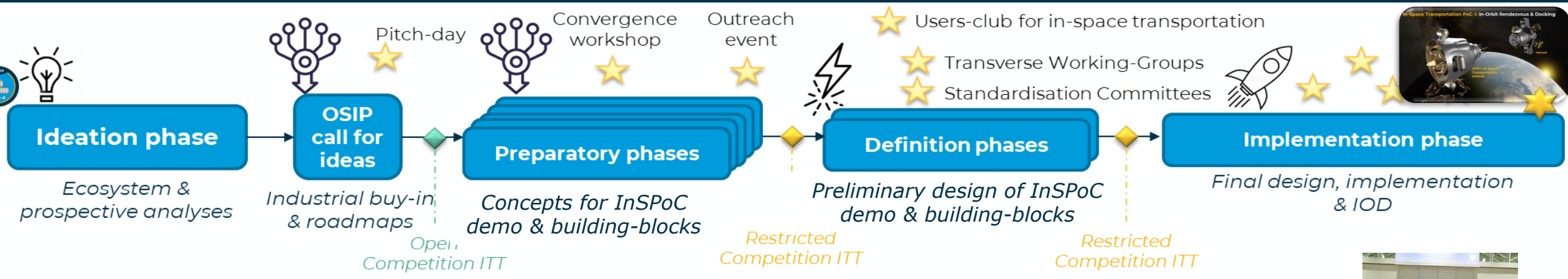
ECSS STANDARDS

CALENDAR OF ESA EVENTS

CONTACT SME OFFICE

 @ESAFORSME

Future Space Transportation de-risking flow



FIRST!-1 Materials and Processes

- ✓ 9 techno de-risking contracts awarded
- ✓ 4 techno domains



- ✓ 5 successful Preparatory studies
- Definition Phase: **On-going**
- Implementation Phase: **Afterwards**
- IOD target in **2025-2026**



Different roles, but one Space Team Europe

ESA

MEMBER-STATES

EU

PRIMES

NATIONAL AGENCIES

TECH PROVIDERS

INVESTORS

