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Directorate of Space Transportation

ISD2026, ESTEC, 16-17 September 2026

Geraldine Naja
Director of Space Transportation

16 September 2026

EUROPEAN SPACE AGENCY

Director Personal Introduction

- Took up role of Director of Space Transportation (D/STS) based at ESA Headquarters in Paris on 1 April 2026
- 30-year experience in the European space sector in managerial and strategy development positions:
  - Joined ESA in 1987 as a Payload Operations Engineer in the Space Station Directorate
  - Various corporate and programmatic functions across the Agency between 1993 and 2015
  - Previously led the Directorate of Commercialisation, Industry and Competitiveness (D/CIC), now evolved into the Directorate of Commercialisation and Industry Partnership (D/CIP, currently as acting Director)

Space Transportation – Programme pillars

Pillar 01

Guaranteeing Europe's autonomous and resilient access to space

- Ramp up the cadence of Ariane 6 and Vega-C to satisfy Europe's institutional needs and compete on commercial markets
- Product Adaptations of Ariane 6 & Vega
- Reduce public support to exploitation

Pillar 02

Preparing future space transportation systems

- Future Launchers Preparatory Programme (FLPP)
- Space Rider
- High thrust engines
- Assess feasibility of European human access to space
- Technical support to European Launcher Challenge (ELC)

Pillar 03

Maintaining and enhancing space transportation ground segment infrastructure

- Europe’s Spaceport in French Guiana (CSG)
- Strategic Infrastructure, including test facilities
- Assess the impact and potential exploitation schemes of new European spaceports

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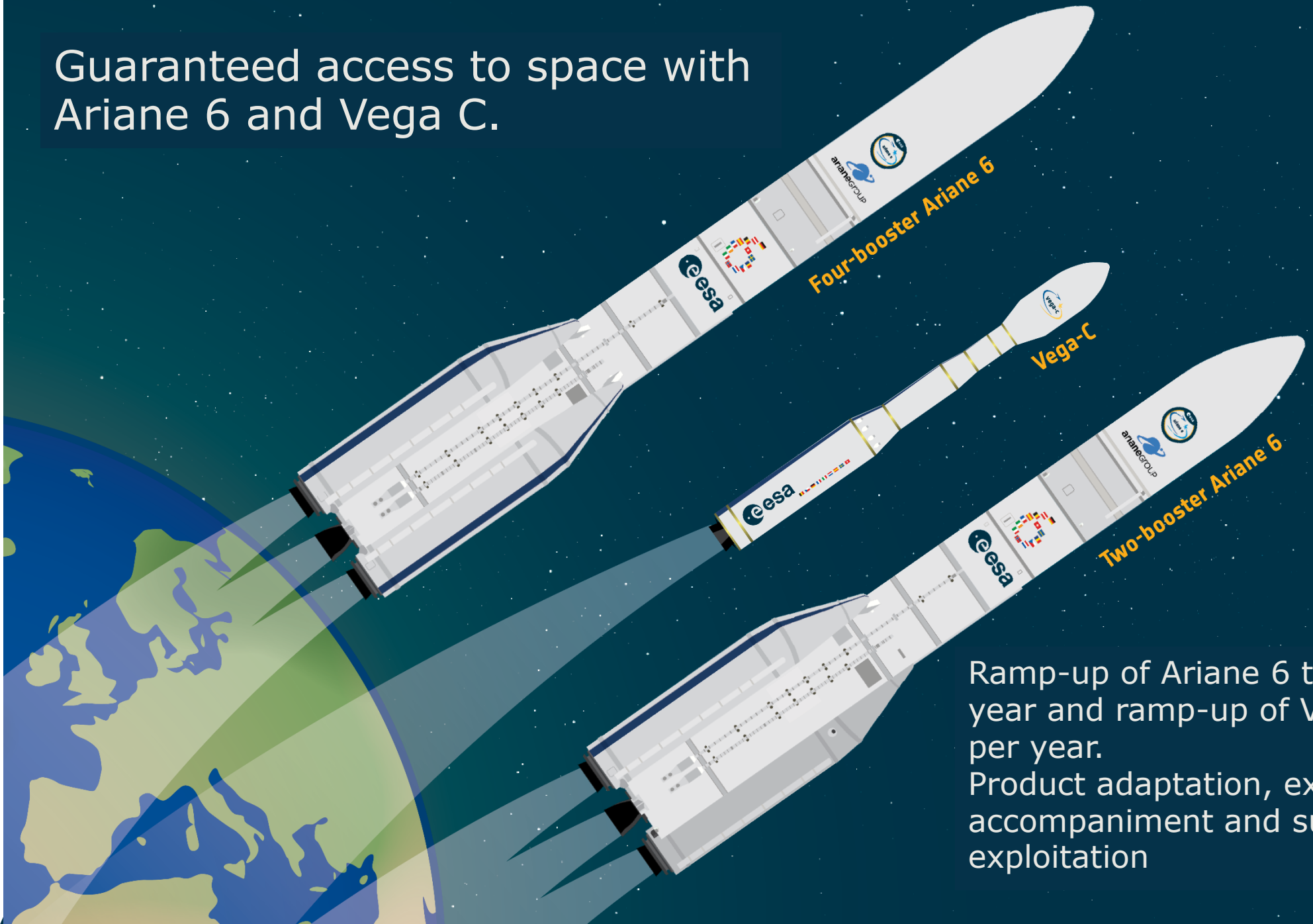
Guaranteed access to space with Ariane 6 and Vega C.



Ramp-up of Ariane 6 to 9-10 launches per year and ramp-up of Vega to 6 launches per year.
Product adaptation, exploitation accompaniment and support to stabilised exploitation

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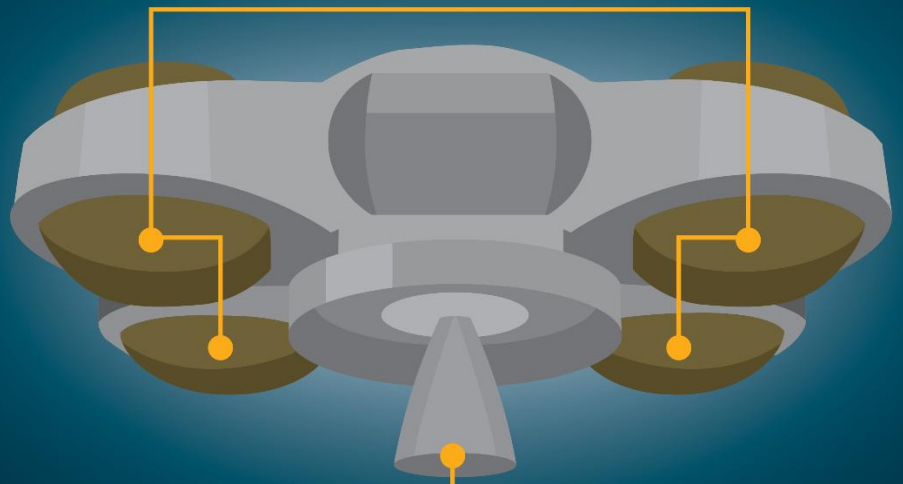
SPACE TRANSPORTATION

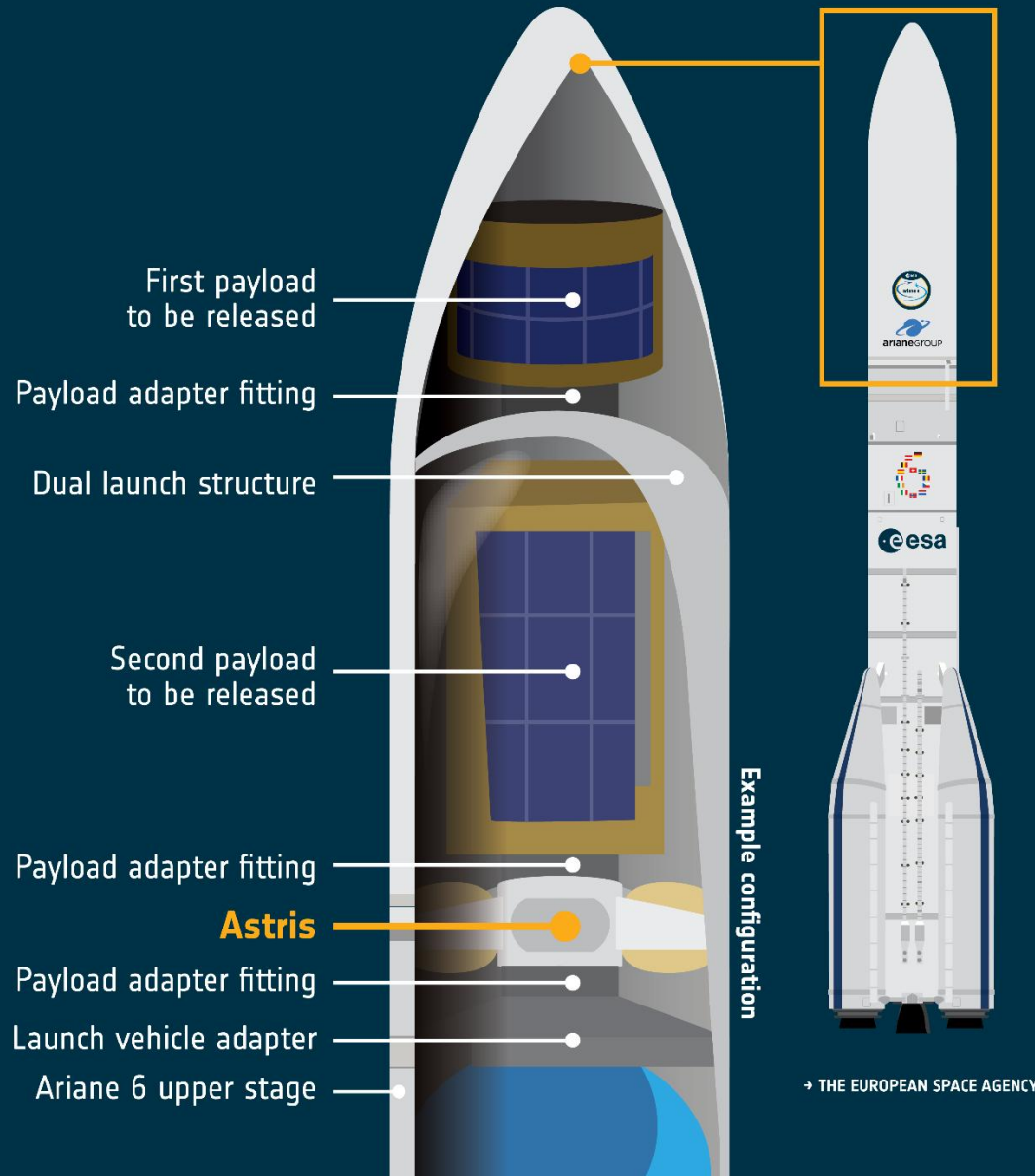
Astris

Astris is an **orbital transfer vehicle** for Ariane 6 that will transport payloads between orbits and increase its versatility, by allowing it to **reach a wider variety of destinations**. Astris takes up little space, can be **reignited many times** and has a long mission lifetime.

Four **adjustable tanks** depending on propellant needed for each mission



Steerable, reignitable engine that burns storable propellant



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ASTRIS: from launcher versatility to space mobility

YESTERDAY

- Ariane 6 kick-stage

2029

- European Orbital Transfer Vehicle
- First operational mobility services

2030+

- High-energy transportation
- In-space operations
- Lunar logistics

END-STATE

- European mobility infrastructure
- From Earth orbit to cislunar space and beyond

A scalable growth path creating new industrial and commercial opportunities at every step.

MOBILITY | SECURITY | EXPLORATION

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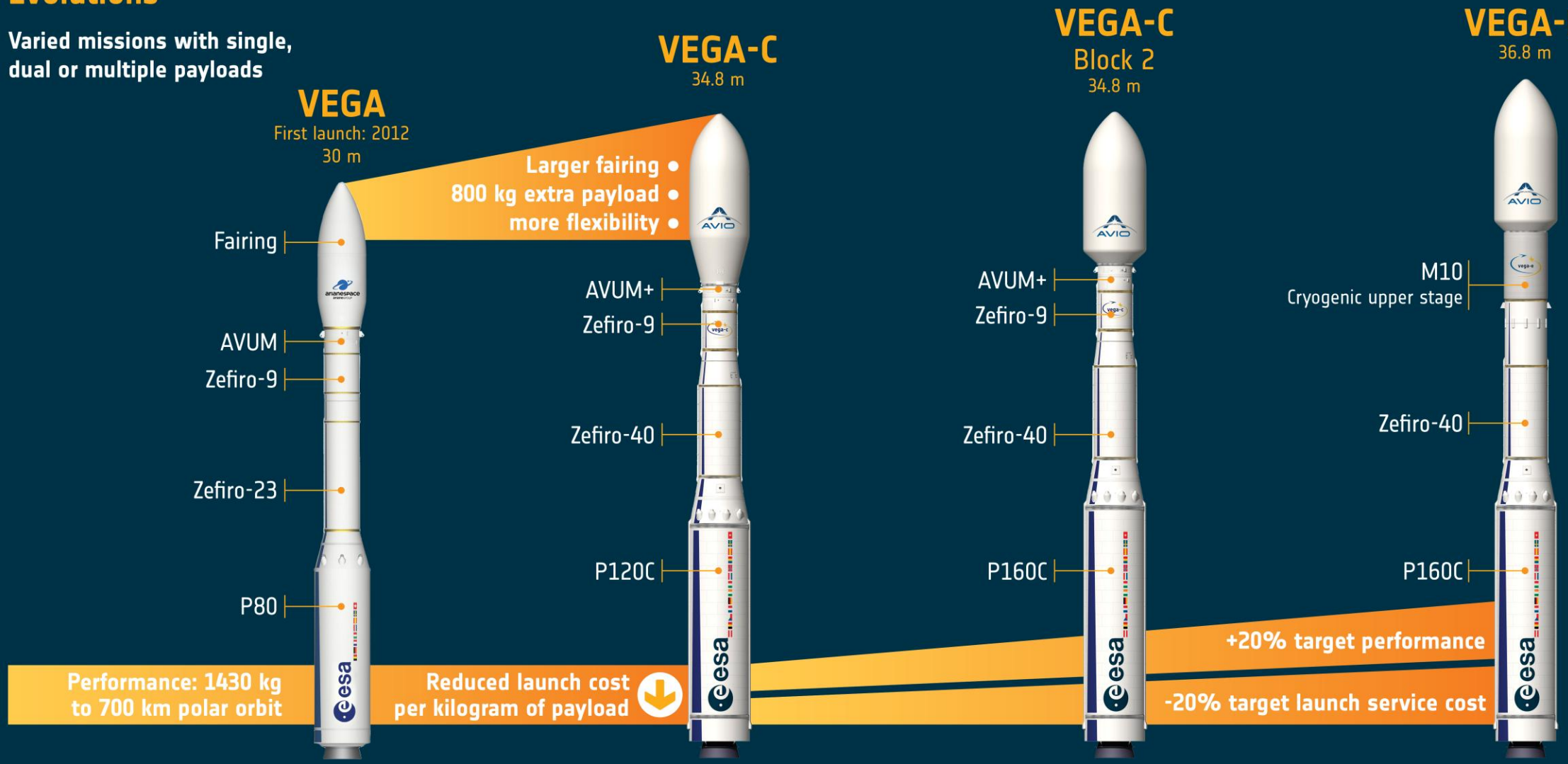
VEGA FAMILY

Evolutions

Varied missions with single, dual or multiple payloads



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Future Launchers Preparatory Programme (FLPP)

Derisking technology development for European industry technologies, systems, and partnerships for a modular, reusable and commercial space transportation ecosystem.

FIRST!

Future Innovation Research in Space Transportation

BEST!

Boosters for European Space Transportation

THRUST!

Technologies for High-thrust Re-Usable Space Transportation

InSPoC

In-Space Proof-of-Concepts of in-orbit interfaces (rendezvous, docking, refilling)

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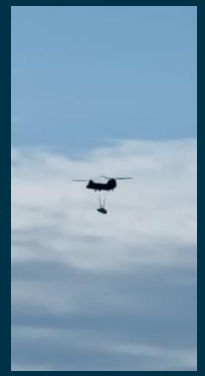
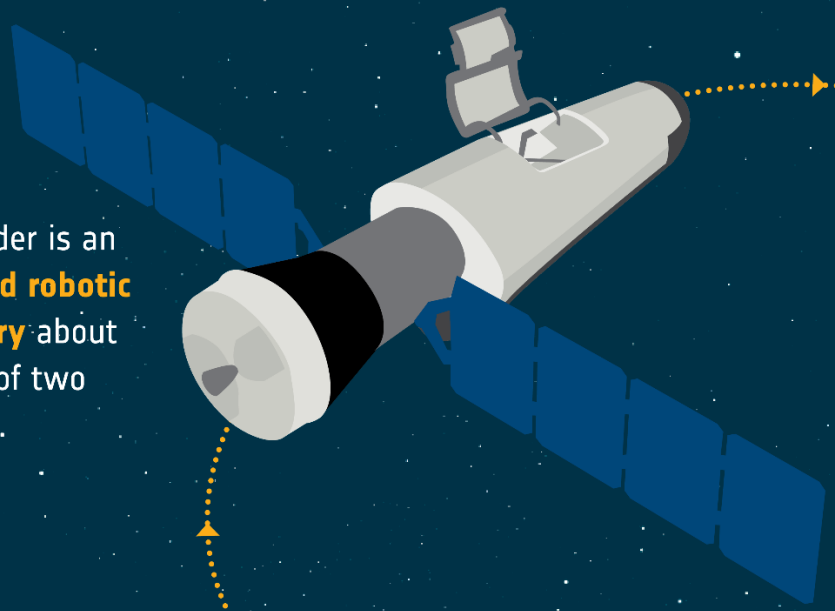
SPACE TRANSPORTATION

Space Rider

Europe's first reusable space transportation system



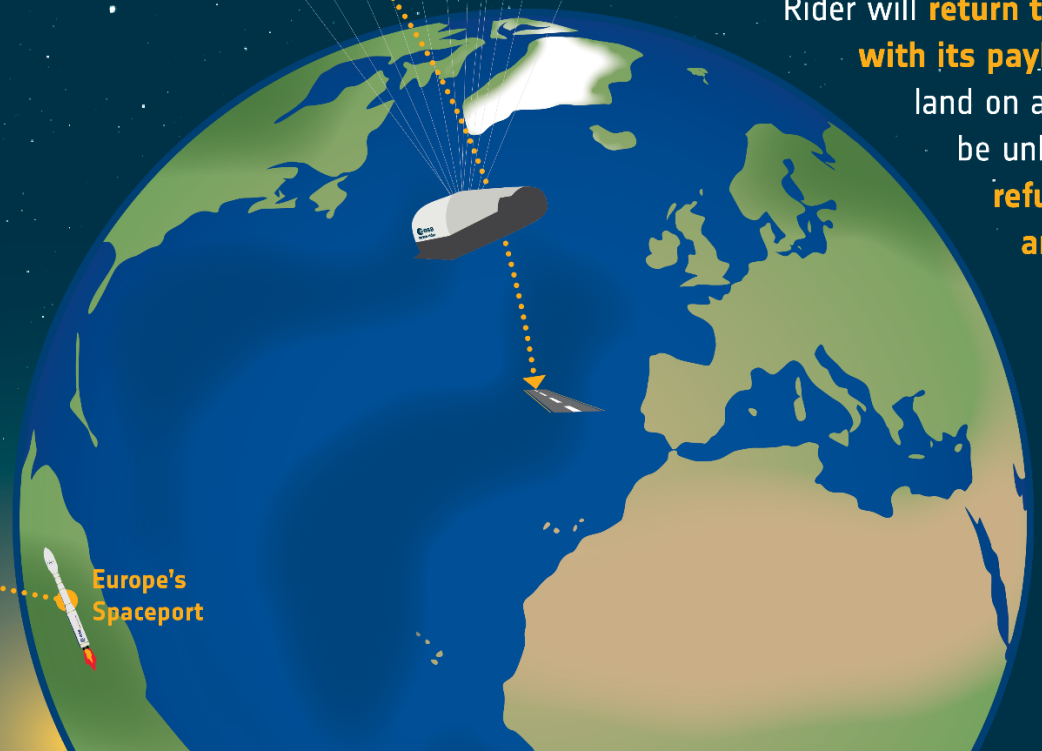
- Consolidation for reusability and preparation for following flights
- Transition to commercialisation



Space Rider is an **uncrewed robotic laboratory** about the size of two minivans.

At the end of its mission, Space Rider will **return to Earth with its payloads** and land on a runway to be unloaded and **refurbished for another flight**

After launch on Vega-C it will stay in low orbit for about two months. **Experiments inside its cargo bay** will allow technology demonstration and benefit research in **pharmaceutics, biomedicine, biology and physical science.**



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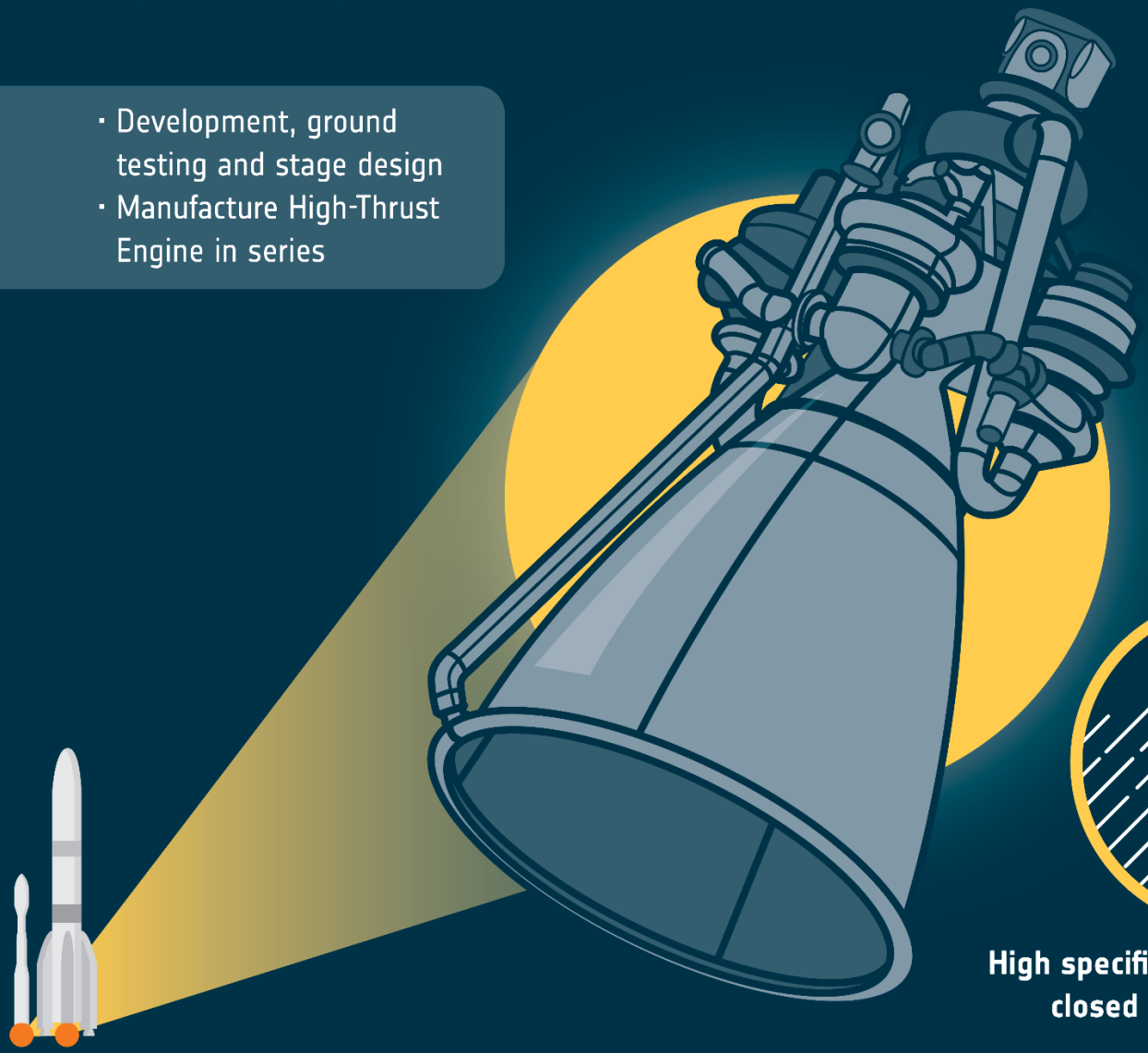
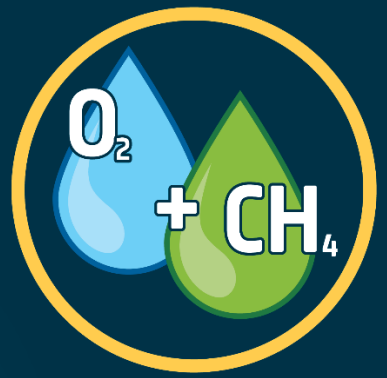
High-Thrust Engine development

- Development, ground testing and stage design
- Manufacture High-Thrust Engine in series





Using liquid oxygen/methane

Reuseable for over five missions

Potential applications on both Ariane and Vega class launch systems

High specific impulse, high pressure closed cycle type of engine

Thrust class: 600 kN

CSG Industry Days 2026 – Registration Open!

The **2026 CSG Industry Days** event aims:

1. To foster the participation of European industry for CSG activities.
2. To provide European industry with detailed information on activities to be carried out at CSG in the coming years.
3. To promote cooperation among companies, newcomers and already established as well as local companies with the aim of improving synergies, better satisfying geographical return requirements & taking maximum advantage of industrial expertise.

An introductory presentation of the **CSG** & **CSG Industry Days** will be held during ISD to inform and invite industry participation. 16/09, 14h30 – 14h55, Conference Hall B, Opportunities for Industry at Europe's Spaceport

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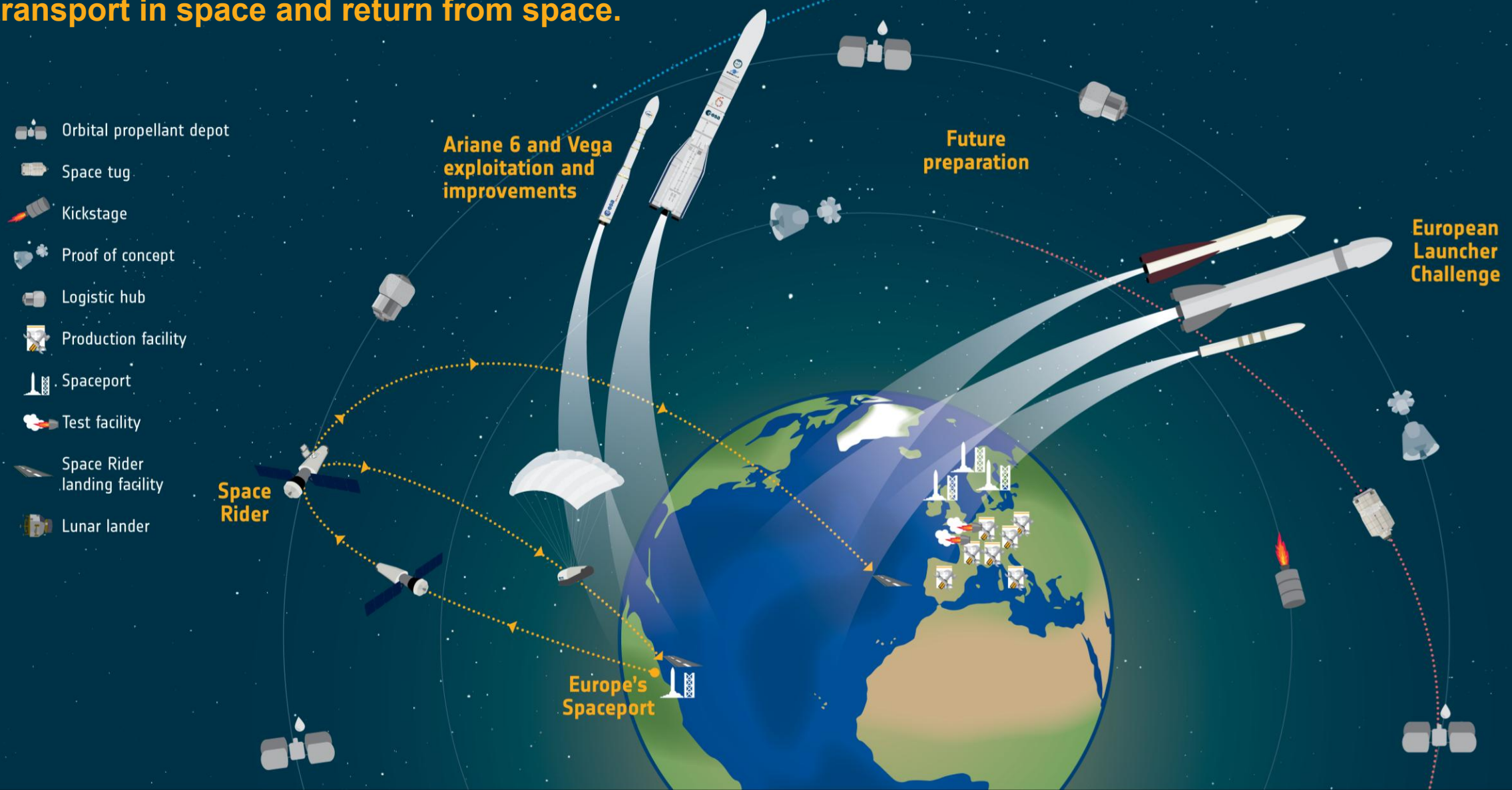
European Space Transportation, today and tomorrow

Ensuring Europe's independent access to space, transport in space and return from space.



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THANK YOU!

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