EU-RISE
EUROPEAN ROBOTICS FOR SPACE ECOSYSTEMS

EXPLORE THE FUTURE OF SPACE INNOVATION WITH EU-RISE

TOWARDS MODULAR SPACECRAFTS
A Paradigm Shift in Space Industries

INTRODUCTION:

EU-RISE contributes to Europe's positioning as a leader in the global space industry. The establishment of a **European ISAM capacity** and defining the future space ecosystem will have a significant impact.

By developing and implementing these new capabilities, Europe can maintain its competitiveness on the global stage, create new jobs, and drive **economic growth** through increased investment in the space industry.

Furthermore, the development of a sustainable space ecosystem will have a positive impact on the environment, reducing the amount of waste and pollution in space and contributing to a more **sustainable and cleaner space environment**.
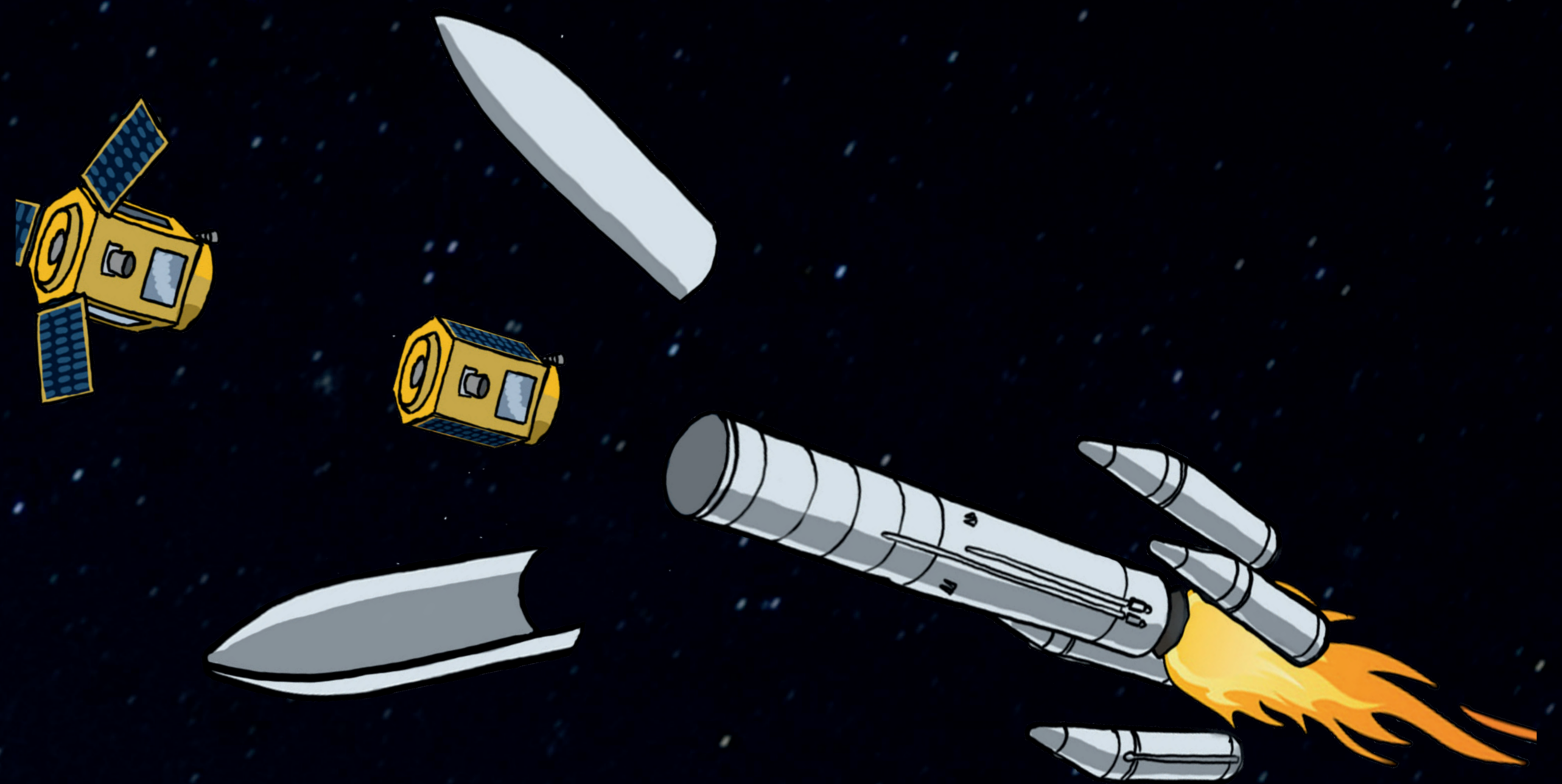
TODAY

+ limited size
+ high qualification costs
+ time to market
+ no cots
+ custom design
+ expensive deployable structures
+ oversized for launch
+ over quality spacecraft
+ no repair
+ no re-use

FUTURE SPACE ECO-SYSTEM

1 **Market assessment** to identify important services, the competitive landscape and the market volume

2 Assessment of needed **capabilities** to provide these services

3 Definition of a system concept's composed of **existing elements to realize** the capabilities

4 Definition of a **open source approach** to strengthen the european capabilities

EU-RISE

+ recycling
+ manufacturing and assembly
+ robotics
+ transportation
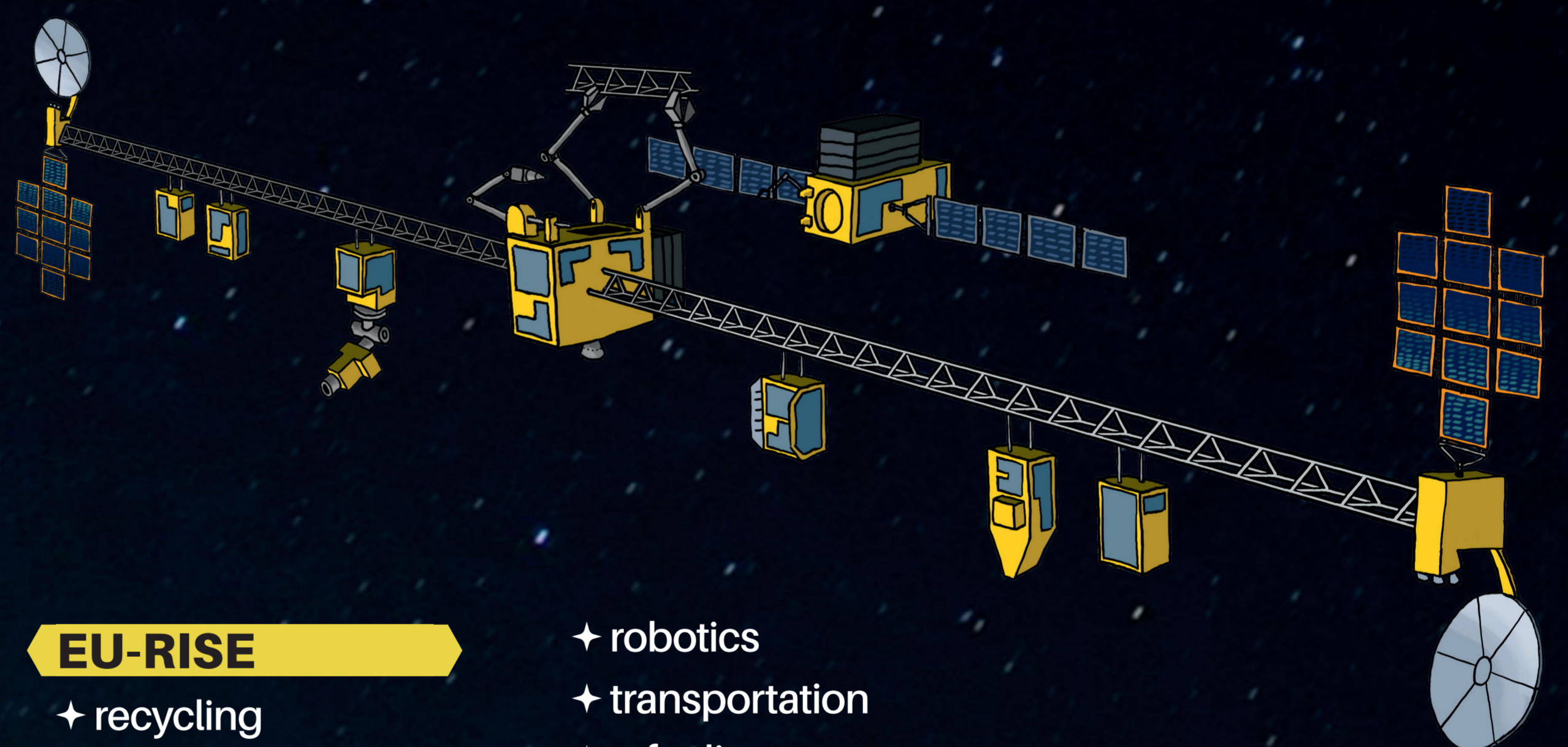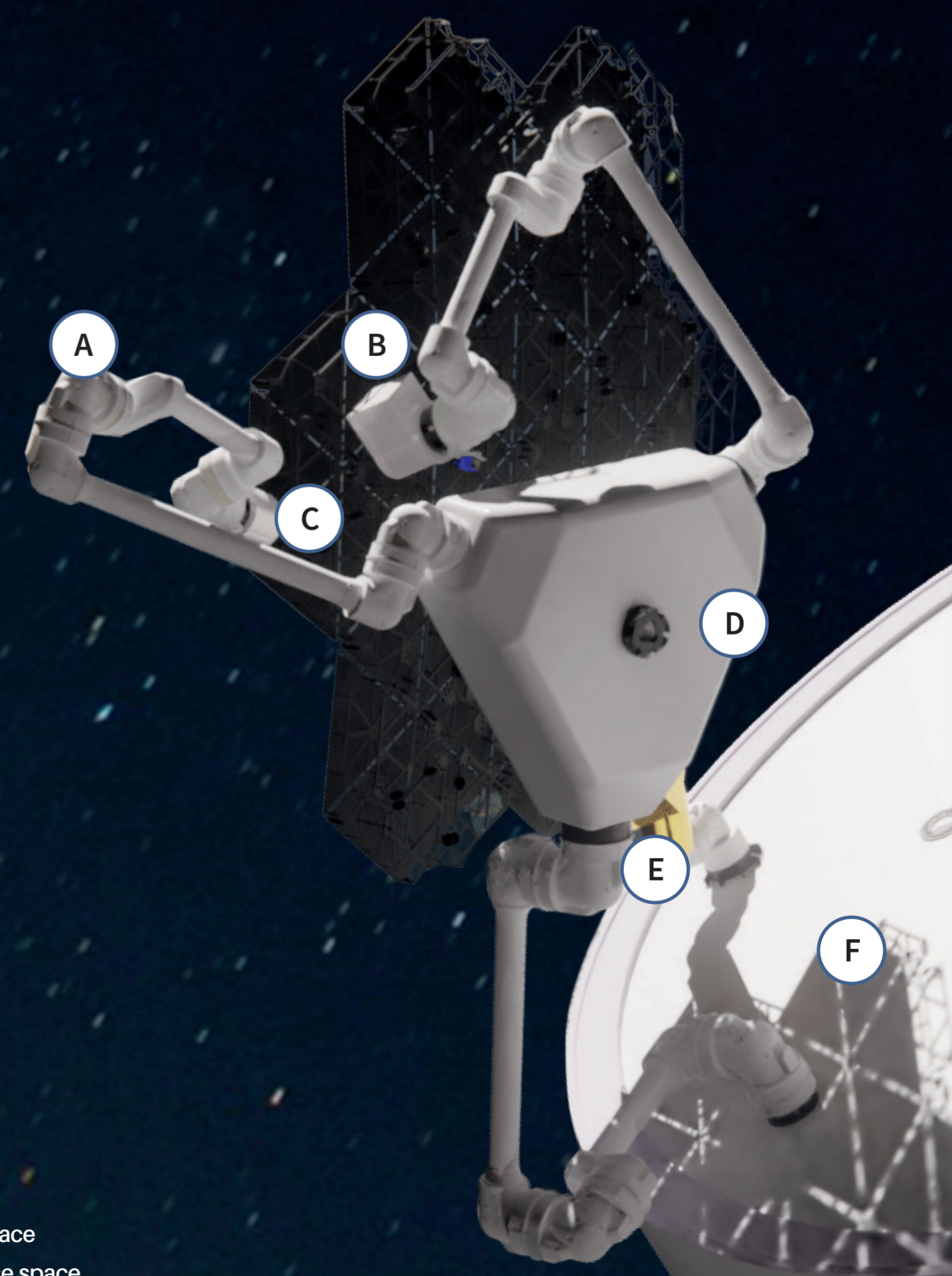+ refueling
+ modularity

ENABLING TECHNOLOGIES

5 Definition of requirements and **system architecture** for the a **End2End demonstrator**

6 Adaptation and maturation of building blocks to **meet the demonstration needs**

7 **Integration of all building blocks** into the End2End demonstration

8 **Verification** of functionalities and **validation** on a realistic assembly and reconfiguration task

Robot in use (image right):
EU-RISE is creating an end-to-end demonstrator to integrate and test various European software and hardware components in a realistic robotic mission.

A Robotic manipulators

B Vision system

C Robotic tools

D Robotic control unit

E Workbench

F Standard interfaces