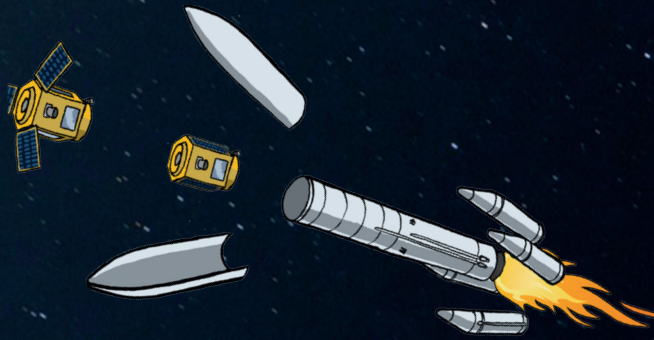# TOWARDS MODULAR SPACECRAFTS

A Paradigm Shift in Space Industries

TODAY

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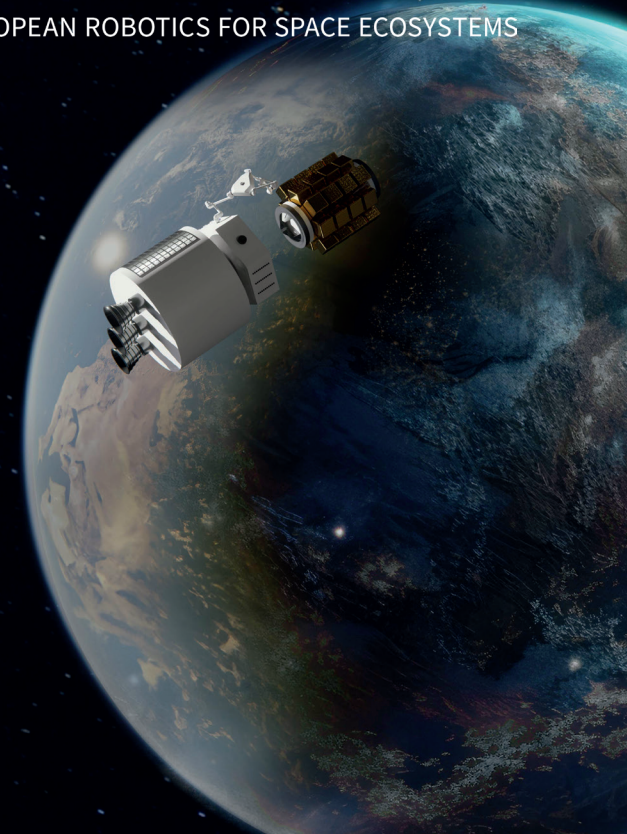- ✦ over quality spacecraft
- ✦ no repair
- ✦ no re-use

EU-RISE

- ✦ recycling
- ✦ manufacturing and assembly
- ✦ robotics
- ✦ transportation
- ✦ refueling
- ✦ modularity

- ✦ **WEBSITE** | www.eu-rise.space
- ✦ **CONTACT** | contact@eu-rise.space
- ✦ **SOCIAL** | www.linkedin.com/company/eu-rise

THE EU-RISE PARTNERSHIP

AIRBUS

magellium artal group

OIKOPLUS

Libre Space Foundation

sener

The Exploration Company

dfki ai

Funded by the European Union

EU-RISE

EUROPEAN ROBOTICS FOR SPACE ECOSYSTEMS

EXPLORE THE FUTURE OF SPACE INNOVATION WITH EU-RISE

EU-RISE
EUROPEAN ROBOTICS FOR SPACE ECOSYSTEMS

EXPLORE THE FUTURE OF SPACE INNOVATION WITH EU-RISE

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**.

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

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

E Workbench

D Robotic control unit

F Standard interfaces

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