

# LÚNASA

ADVANCING SPACE INFRASTRUCTURE

Space Tech Expo - Europe

Nov 2024

# COMPANY



Founder & CEO

**Amin Chabi**

## Mission

Accelerate space sustainability through affordable and quick advanced testbeds on ground and in space.

HEADQUARTERED IN  
**LONDON, MAR-2021**

HIGHLY EXPERIENCED TEAM OF  
**11 EMPLOYEES**

SCHEDULED TO LAUNCH  
**THE FIRST UK-BUILT  
COMMERCIAL RPO  
MISSION IN 2025**

# ***SPACE INFRASTRUCTURE TECHNOLOGIES ARE RAPIDLY ADVANCING***

## ***Emerging Businesses:***

*In-Space Manufacturing*

*Debris Removal*

*Satellite Life Extension*

*On-orbit Assembly*

*Satellite Refuelling*

*Inspection*

*Space Data Centre*

*Space Based Solar Power*

*Material Testing*

*And ...*



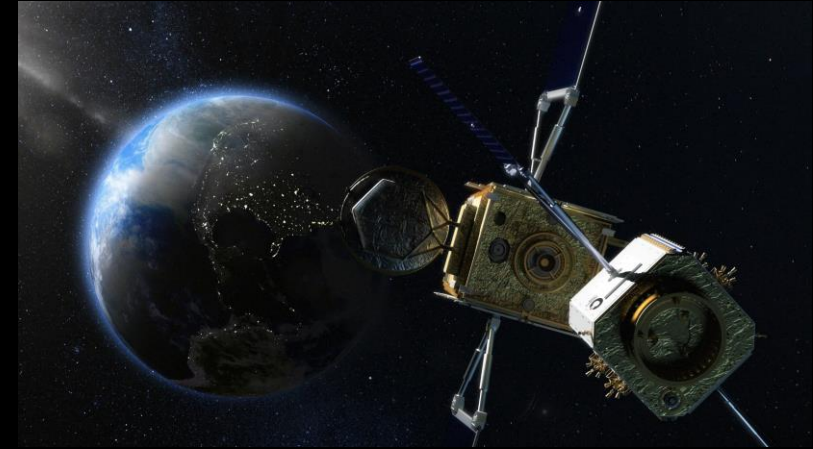
# However, its **Challenging and Expensive** to Achieve Space Qualification for Advanced Technologies



NO RIDESHARE OPTIONS ARE  
AVAILABLE



SAFETY CONCERNS



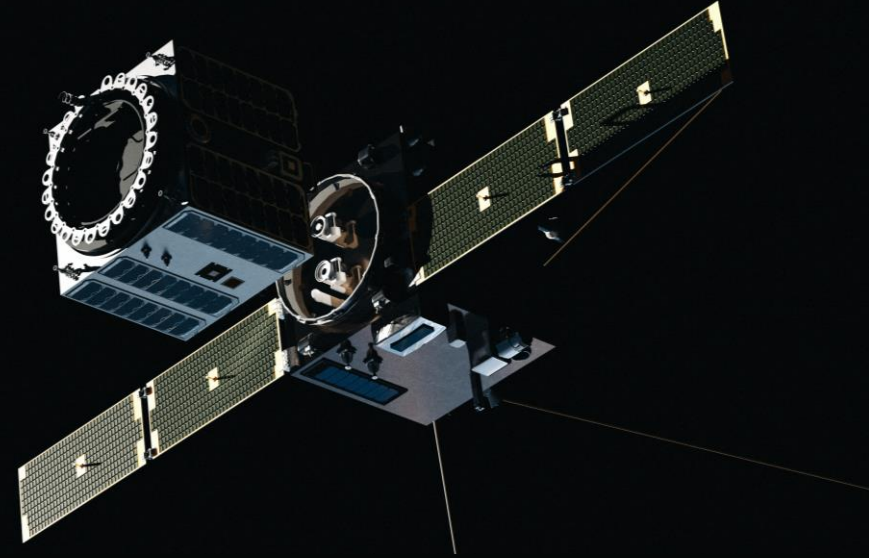
CAPITAL INTENSIVE



# Services

## **Cosmic Labs:** **Hosting and Ridesharing Advanced Payloads for Complex Missions**

BACKED BY:



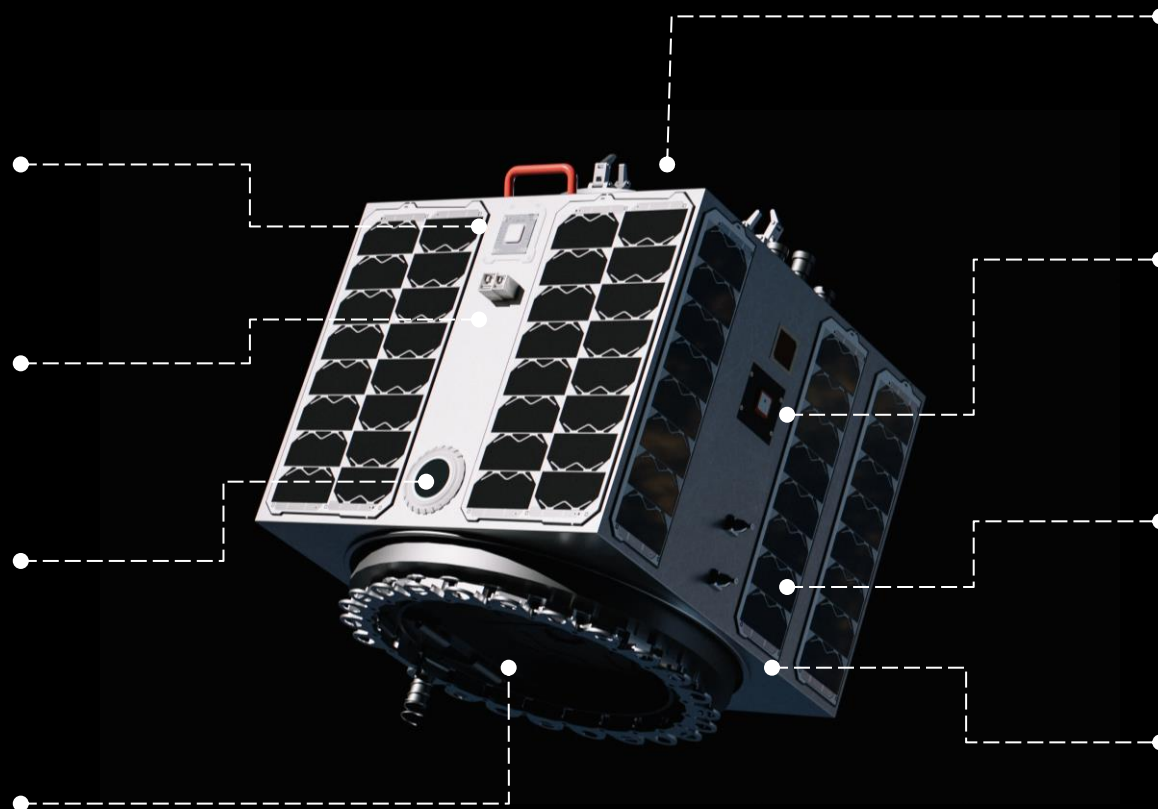
# Building **Advanced Platforms** for Advanced Payload Rideshare Missions

*Optical  
InterSatellite Link*

*RPO Algorithms*

*AI/ML Computers*

*6 Degree of Freedom  
Propulsion*



*Multi-vision System*

*Secure Comms*

*High Power*

*Advanced Navigation*

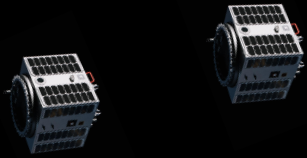
# Concept of Operations

## Launch

SSO ~520 km



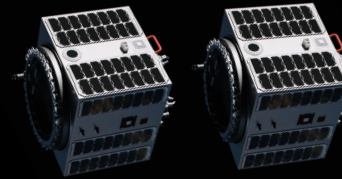
**Separation &  
Commissioning**



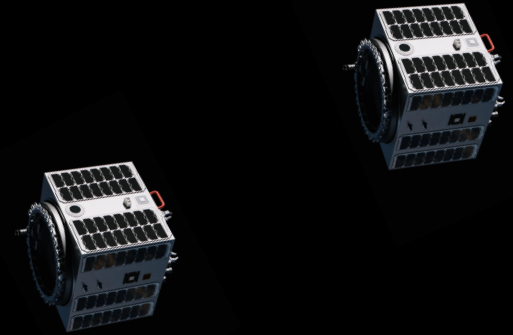
**Rendezvous phase**



**Docking/Capturing  
Operations**



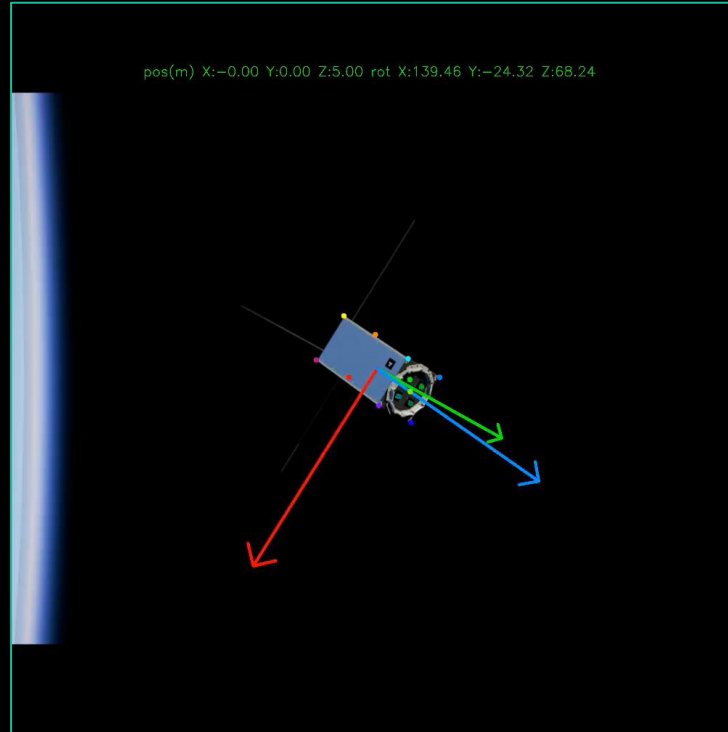
**Divorce  
Manoeuvre**



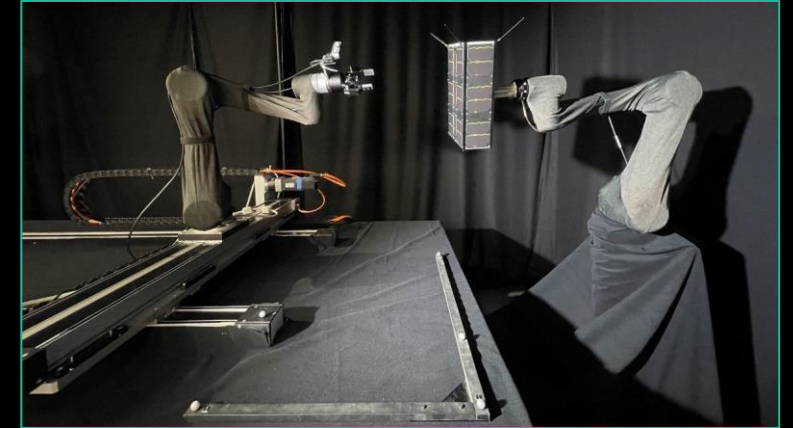
# Products



**RPO Kit** containing AI/ML algorithms for pose estimation, advanced GNC algorithms, edge computing, and cameras



**Advanced Digital Twins & simulators** to develop and validate RPO and docking operations



**Robotic dark room testbed** for Hardware-in-the-loop testing, dataset generation, and algorithms validation



# LÚNASA



Contact info:

[info@lunasaspace.com](mailto:info@lunasaspace.com)

[www.lunasaspace.com](http://www.lunasaspace.com)