

BEST IN CLASS

LAUNCH AND DEPLOYMENT SOLUTIONS

MADE IN GERMANY



EXOLAUNCH

Georgian Artificial Intelligence Networking and Twinning Initiative (GAIN)
HORIZON EUROPE - WIDERA-2021-ACCESS-03 (Twinning)

Kick-Off Meeting
Tbilisi, Georgia
October 18, 2022

EXOLAUNCH

KEY FACTS

EXOLAUNCH GmbH is an independent company, established in 2011 as a spin-off from the department of Aeronautics at the Technical University of Berlin.

Germany-based leader in launch services and separation systems. We provide regular access to space for small satellites. In cooperation with global launch vehicle providers, we successfully deployed into orbit nearly 200 multinational small satellites to date.

EXOLAUNCH is made up of a highly skilled international team covering various specialized disciplines. These disciplines cover the areas of space engineering and scientific testing to launch services and operations.

The educational department of EXOLAUNCH, takes part in the projects related to international research and education activities (ERASMUS+, TEMPUS, HORIZON 2020) and conducts professional trainings.



EXOLAUNCH (up to 2019: ECM space technologies) received a Certificate of Distinction from the Technical University of Berlin as an excellent TU Berlin start-up in 2014

1

Access to space
for small satellites

Rideshare
launch services



2

Separation
systems

Launch
hardware

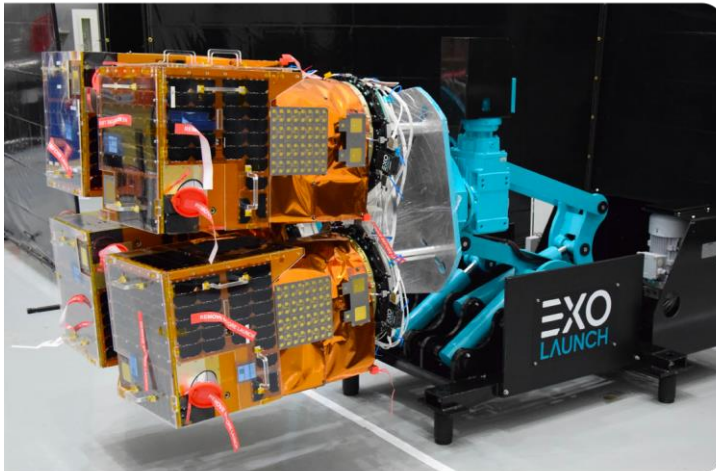


3

Mission
management

Integration
services

Environmental
testing



4

Orbital transfer
vehicles

In-space
logistics



EXOLAUNCH

AT A GLANCE

A global leader in rideshare launch, in-space transportation, deployment systems, integration and mission management services for the NewSpace economy

SPACE. LET US
TAKE YOU THERE



EXCEPTIONAL FLIGHT HERITAGE

230+ satellites launched
on 16 missions to date.

100+

Satellites manifested
for launch in 2022.

A-LIST CUSTOMER PORTFOLIO

40+ global customers served, including Spire Global, Planet, ICEYE, Kepler, NanoAvionics, Satellogic, NASA, Thales Alenia Space, Loft Orbital, Hemeria, Sen, Omnispace, Unseenlabs, DLR, UAE Space Agency.

RELIANT ORBITAL TRANSFER VEHICLE

Provides last mile delivery of satellites into custom orbits and is capable of performing on-demand debris removal. The first Reliant launch is slated for 2023.

WORLD-LEADING TECHNOLOGIES

Expanding product portfolio of iconic cutting-edge deployment technologies for the smoothest satellite separations in space.

OPERATING GLOBALLY

Based in Germany, expanded into the US, operating globally.

SECTOR-LEADING PARTNERSHIPS

With all major launch vehicle providers, including SpaceX, Arianespace, HyImpulse, Isar Aerospace, Virgin Orbit, ISRO's NewSpace India, Firefly Aerospace, RFA, Gilmour Space Technologies.

RECORD-BREAKING RIDESHARE MISSIONS

100+ customer satellites launched by ExoLaunch on SpaceX's record-breaking dedicated rideshare missions in January and June 2021, and in January, April and May 2022 with more missions to follow.



CUSTOMERS: COMMERCIAL, GOVERNMENT AND ACADEMIA

230+ satellites launched
on 16 missions
for 40+ customers



وكالة الإمارات للفضاء
UAE SPACE AGENCY

هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority



ICEYE

SATELLOGIC



LUNASONDE



20%
GOVERNMENT
AND ACADEMIA

SPACE. LET US
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80%
COMMERCIAL

EXECUTION HISTORY

WE ARE THE FASTEST GROWING LAUNCH SERVICES PROVIDER
SUCCESSFULLY DELIVERING WHAT OTHERS ONLY PROMISE

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LAUNCH SERVICES

8 YEARS

2013

Launched the first cubesat on Soyuz to prove rideshare concept

2015

Signed a multi-launch agreement with Roscosmos

2017

Launched the first rideshare cluster of 17 satellites on Soyuz

2018

Multiple regular missions on Soyuz

2019

Completed a record-breaking rideshare launch for German satellites

2020

Signed a multi-launch agreement with SpaceX

Fully manifested a Soyuz mission with 15 smallsats

2021

Launched 60 smallsats on two record-breaking SpaceX missions

H1 2022

Launched 62 smallsats from 4 continents and 20+ countries on SpaceX missions

LAUNCH HARDWARE

6 YEARS

2015

Kicked-off the EXOpod cubesat deployer development

2017

EXOpod's first commercial launch on Soyuz to deploy satellites for industry leaders

2018

Kicked-off the CarboNIX microsat separation system development

2019

CarboNIX acquired successful flight heritage on Soyuz

2020

CarboNIX successfully deployed six Planet SkySat satellites on SpaceX missions

Kicked-off the EXOpod multi-satellite adapter development

2021

CarboNIX, EXOpod, EXOpod successfully deployed 60 smallsats on two Falcon 9 missions

H1 2022

CarboNIX, EXOpod, EXOpod successfully deployed 17 microsats and 26 cubesats on Falcon 9 missions.

Successful maiden flight of new-gen cubesat deployer EXOpod Nova

IN-SPACE LOGISTICS

2 YEARS

2021

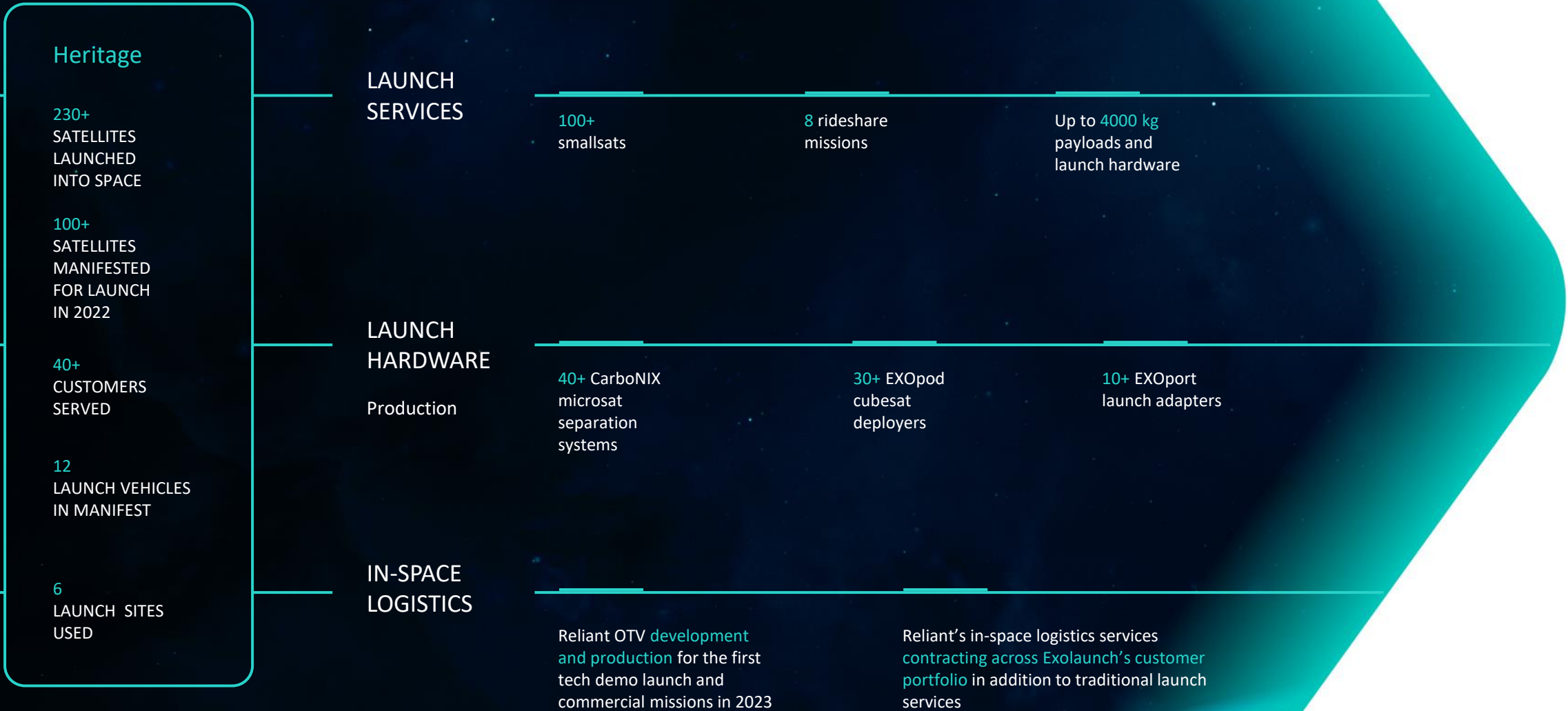
Kicked-off ExoLaunch's orbital transfer vehicle Reliant development to provide the last mile delivery services for smallsats

H1 2023

ExoLaunch's orbital transfer vehicle Reliant is scheduled for launch with SpaceX Falcon 9



EXOLAUNCH'S FORECAST FOR 2022:



CarboNIX

FLIGHT HERITAGE
SINCE 2019

9
missions
flown

39
microsats
deployed

Scalable microsatellite
separation system



CarboNIX 8"



CarboNIX 15"



CarboNIX 24"



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CarboNIX has some other unique advantages

SHOCK-FREE DEPLOYMENT

Completely shock-free linear
deployment with an average
tumbling rate of less than 1°/s after
release.

FLEXIBLE

Available in sizes 8", 15", 18.25" and
24" CarboNIX can be adapted to any
launch vehicle and any microsat
base plate.

FAST RESET TIME

The whole system can be triggered
and reset in minutes.

ITAR-FREE

The system is not subject to export
restrictions of any kind.

LIGHTWEIGHT

CarboNIX 15" weighs 2.6 kg
with a flyaway mass of only 330 g.

FLIGHT HERITAGE

CarboNIX has successful flight
heritage on Falcon 9 and Soyuz.
Flown on 9 missions, deployed 39
microsats.

CLUSTER COMPATIBLE

As an in-house development by
Exolaunch, CarboNIX can easily
be adapted to a large cluster
launch configurations.

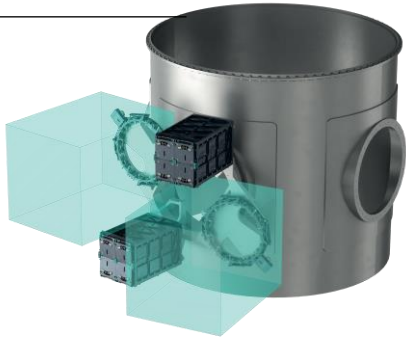
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EXOport

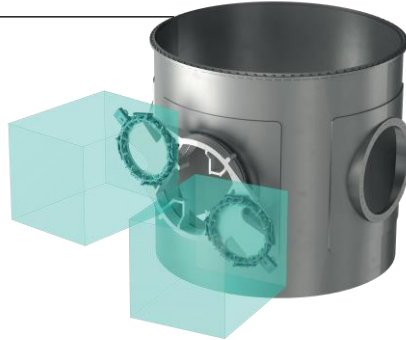
FLIGHT HERITAGE
SINCE JANUARY 2021

Multi-port adapter

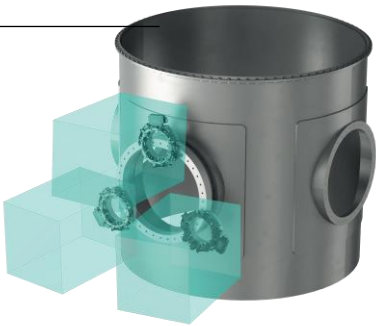
2x CarboNIX 15" 2x
EXOports



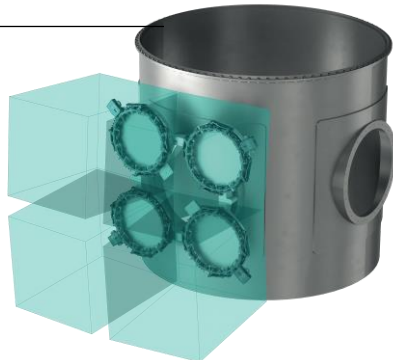
2x CarboNIX 15"



3x CarboNIX 8"



4x CarboNIX 15"



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The advantages of flying
with an **EXOport** are numerous

FLIGHT HERITAGE

EXOports have flown on every SpaceX Transporter mission. To date, thirteen adapters of six configurations have been successfully launched, with eight more manifested later this year.

COMPATIBILITY

EXOport has a configuration for every Exolaunch separation system and can be adapted to your launch needs. From design to verification to launch, you can trust Exolaunch to deliver quality EXOports that meet all launch vehicle provider requirements.

VALUE

Make the most of every kilo. Whether you are a 0.25U cubesat or a 200 kg microsat, EXOport is the best solution to optimize the mass and volume utilized on your port.

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EXOpod

FLIGHT HERITAGE
SINCE 2017

13
missions
flown

157
cubesats
deployed

Cubesat deployer



EXOpod has
some other unique
advantages

COMPATIBLE

Easily adaptable to any launch vehicle.

CLAMPING MECHANISM

Cubesats inside EXOpods are secured in the deployer's launch slot once the doors are locked offering a smoother ride to orbit.

FLEXIBLE

EXOpods have been used for deploying the cubesats ranging from 0.25U to 16U.

FAST RESET TIME

EXOpod can be deployed and locked again in minutes.

INCREASED AVAILABLE MASS

Cubesats in EXOpods can be heavier and larger than CDS limits.

ACCESS WINDOWS

Windows on two sides of the deployer provide access to the cubesat within, useful for inspection, testing and RBF pin removal after integration.

FLIGHT HERITAGE

EXOpods have been used on 13 missions, to launch and deploy 157 cubesats since 2017. No other system has the same heritage for launching 12U and 16U cubesats.

ITAR-FREE

The system is not subject to export restrictions of any kind.

MADE IN GERMANY



RELIANT

OTV to enable commercial
space infrastructure

SPACE. LET US
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1

LAST-MILE DELIVERY

Reliant Standard – a guaranteed delivery of satellites to custom altitudes on rideshare missions.

Reliant Pro – constellation deployment into custom inclinations, LTANs and satellite phasing.

PROVIDING CUSTOM ORBITS
AND KEEPING SPACE CLEAN
ARE OUR PRIORITIES

2

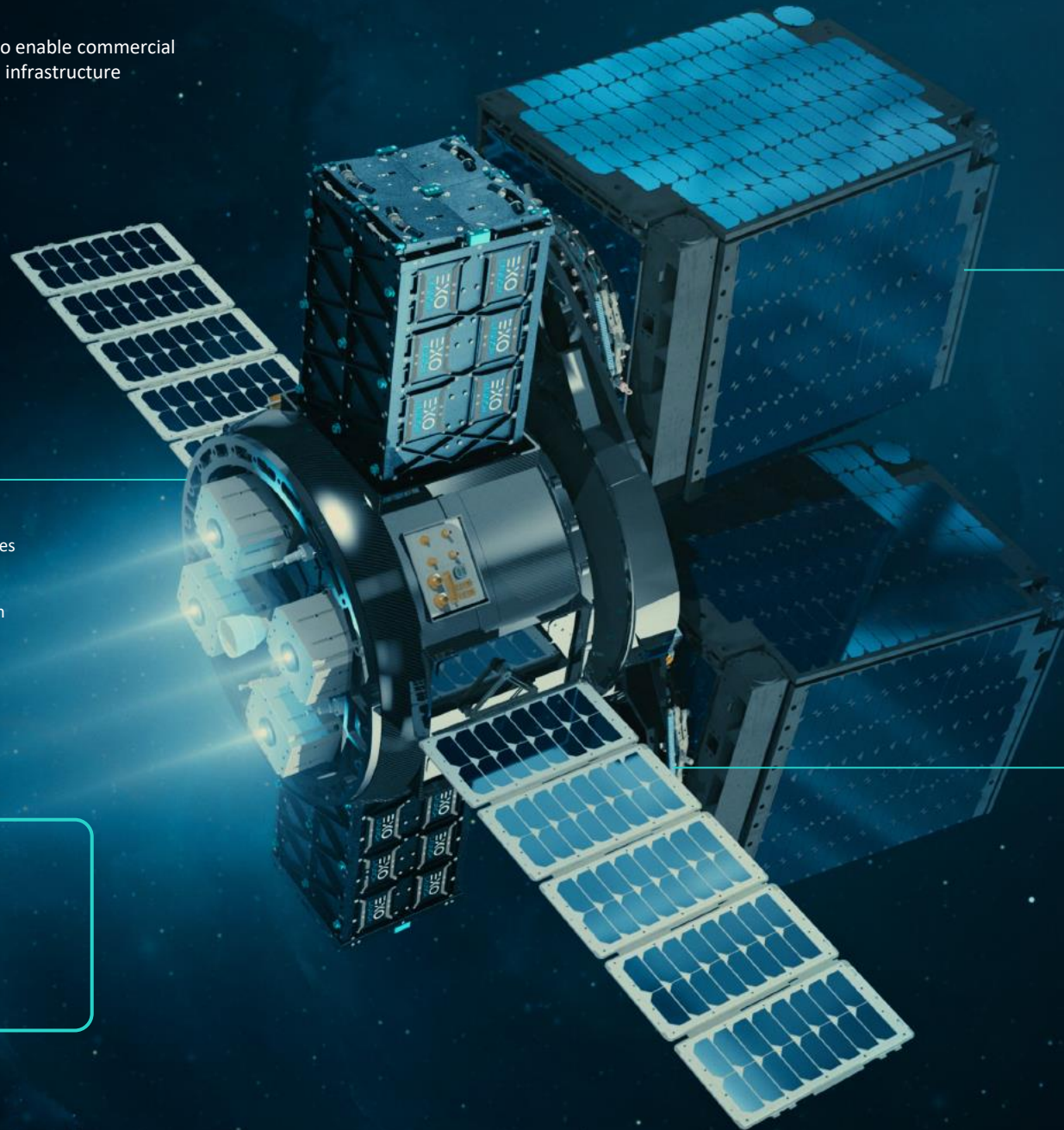
GUARANTEED DEORBITING

Reliant is the only orbital transfer vehicle guaranteed to deorbit upon completion of its mission in order to minimize the risks of space collisions and to reduce space debris.

3

WE CARE ABOUT KEEPINGSPACE CLEAN

Reliant Pro can be equipped with an active module to remove space debris. A service coming into high demand from space agencies and later on by private actors, once the practice is established.



OUR VISION IS TO ENABLE A VIABLE COMMERCIAL SPACE INFRASTRUCTURE



2013–Present	T+1-5 Years	T+3-7 Years	T+5-10+ Years
ACCESS <ul style="list-style-type: none">> Launch> Deployment> Integration Mission Management	LOGISTICS <ul style="list-style-type: none">> Orbital Transport and Transfer> Hosted Payloads> Retrieval, Collection and Reuse Pre- and Re-Programmed Mission Management	SUSTAINABILITY <ul style="list-style-type: none">> Life Extension and Service> EoL Management> Debris Collection Piloted and Semi Autonomous Mission Implementation	INFRASTRUCTURE <ul style="list-style-type: none">> Resource Collection and Mgmt> Manufacturing in Space> Robotics Automation Autonomous and Adaptive Mission Execution

- EXOLAUNCH as a small-medium enterprise (SME) is actively involved in European Union education and research programs;
- Support of international research and education activities;
- Expertise in Quality Assurance of the projects;
- Professional trainings for various target groups;
- Developed new mechanism for stimulating the cooperation between academia and enterprises.



Erasmus+



European
Research Area

EU research and International education projects
(participated in 23 European educational
and research projects: 7 TEMPUS, 10
Erasmus+, 1 Erasmus Mundus and 5 FP7)



Tempus

EDUCATION & RESEARCH PROJECTS

ERASMUS+: SELECTION RESULTS 2016-2020



ERASMUS+ "GEOCLIC" Selection results 2020	New Courses in Geospatial Engineering for Climate Change Adaptation of Coastal Ecosystems
ERASMUS+ "ECOVEM" Selection results 2020	European Centre of Vocational Excellence in Microelectronics
ERASMUS+ "DERECKA"	The Development of Doctoral Education and Research Capacities of Kyrgyzstani Academia
ERASMUS+ "SPACECOM"	New study program in space systems and communications engineering
ERASMUS+ "CUPAGIS"	New Curricula in Precision Agriculture Using GIS Technologies and Sensing Data
ERASMUS+ "NICOPA"	New and Innovative Courses for Precision Agriculture
ERASMUS+ "CRENG"	Crisis and Risks Engineering for Transport Services
ERASMUS+ "APPLE"	Applied curricula in space exploration and intelligent robotic systems
ERASMUS+ "TUTORIAL"	Strengthening Network Education, Research and Innovation in Environmental Health in Asia

Work package 3 Leader: EXOLAUNCH will contribute to building Innovation and Research Management Capacity at MICM.

The project will design and deliver the training workshops, tentative titles are the following:

- IPR protection and marketing: European best practice;
- Technology transfer and funding of innovation;
- Research fundraising.

Web-based training on European innovation tools will be delivered to address such innovation related issues as:

- Design of Innovation projects;
- Handling innovation and exploitation activities in Research and Innovation Projects, and special EU Programs as e.g., EIT, EIC, etc.

EXOLAUNCH will utilize its practical project experiences, as well as experiences of similar training activities the company was involved in earlier.

Strong support of Exploitation and Sustainability Planning.



LAUNCH SERVICES
SEPARATION SYSTEMS
IN-SPACE LOGISTICS
EDUCATION

EXOLAUNCH

EXOLAUNCH.COM