



CISLUNAR
INDUSTRIES

Enabling a Spacefaring Civilization

The Space Foundry Lab Module
Microgravity Metallurgical Research & Production

11 June 2019

THERE ARE TWO GATES

ONE

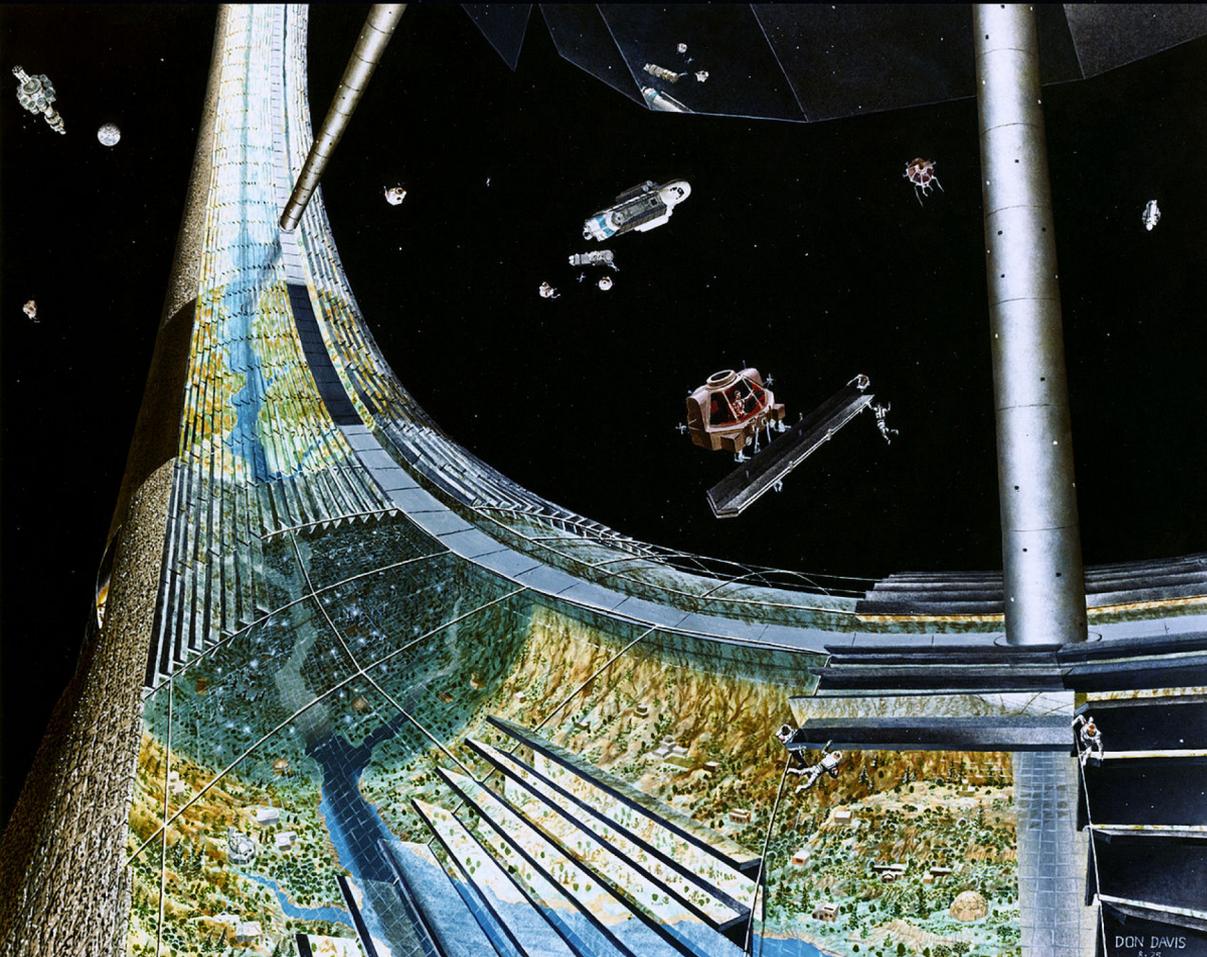
RADICAL LAUNCH
COST REDUCTION

TWO

IN-SPACE
RESOURCES

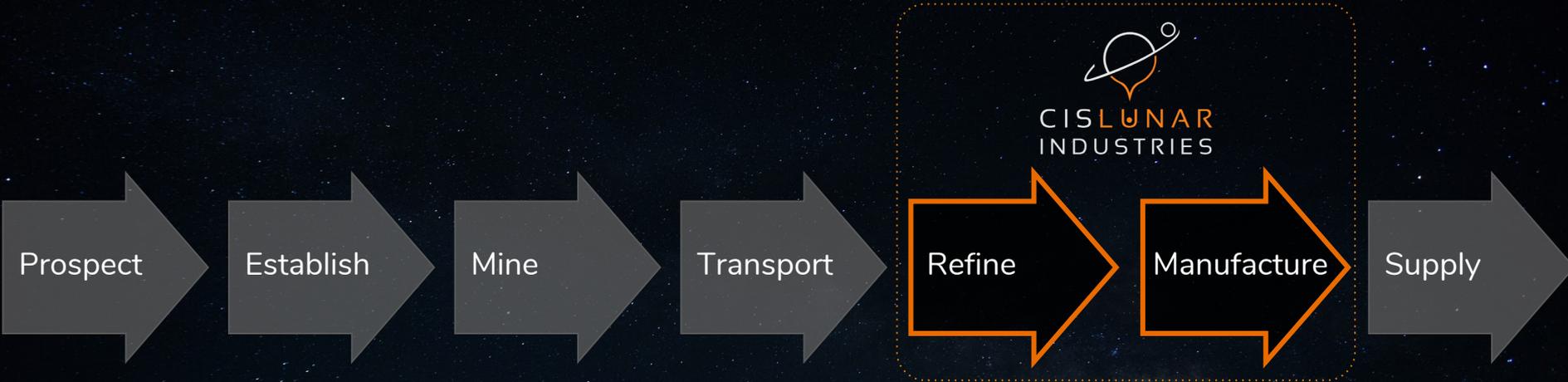


Credit: Blue Origin - 10 May 2019



Metal
resources
from space
are key to
this future

Metal Must Be Processed to Be Useful



Space Resources Value Chain

Credit: Luxembourg Space Agency

Space Debris as First Space Resource

Potential Market for Large Upper Stages

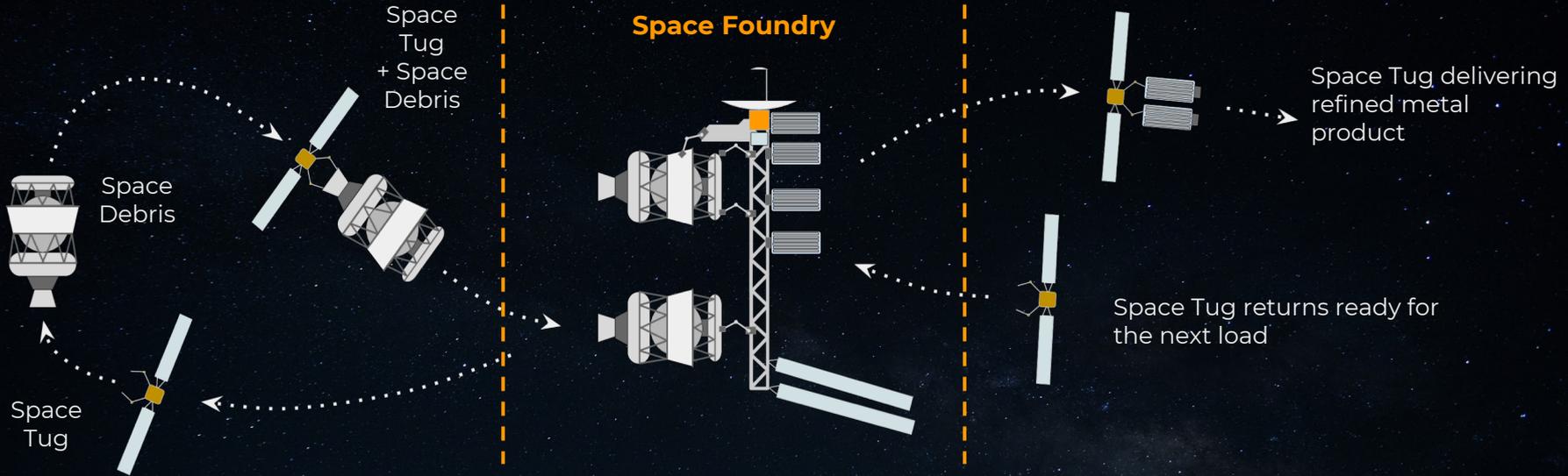
LEO

- 📍 1,200,000 kg
- 📍 821 stages
- 📍 €2B to €20B

Near-GEO

- 📍 380,000 kg
- 📍 159 stages
- 📍 €5B to €8B

Making Space Debris a Resource

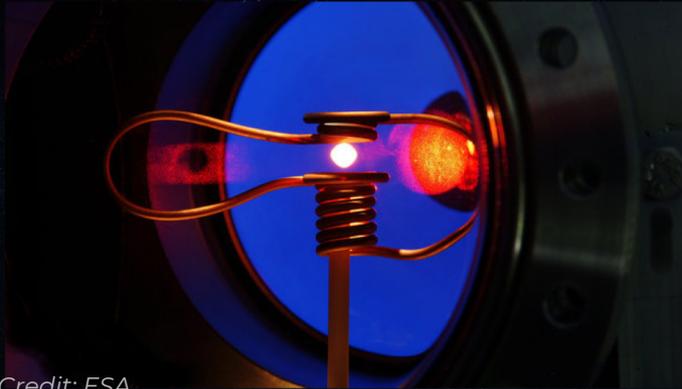


1. Debris acquired for a price

2. Debris recycled & processed into refined metal

3. Final Product Sold & Delivered

The Space Foundry - Core Technology



Credit: ESA

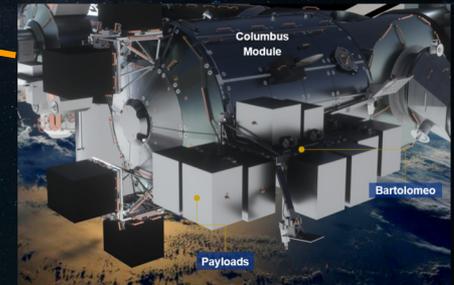
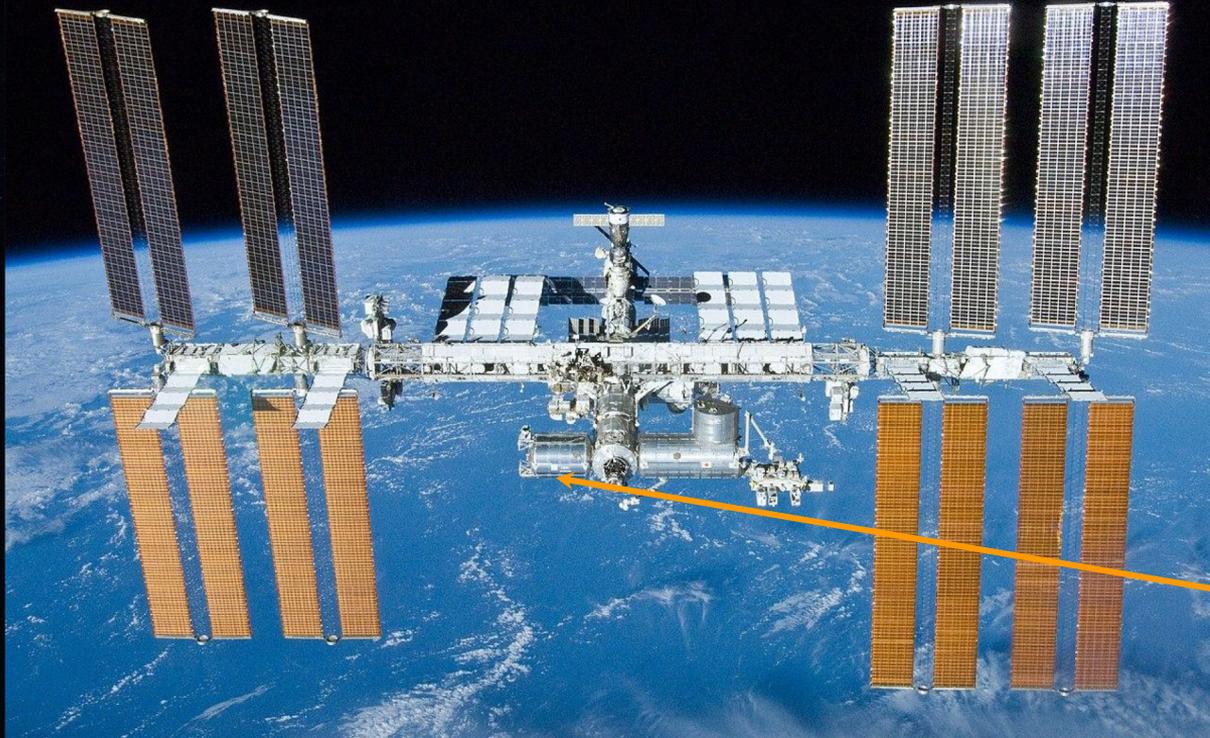
Electromagnetic Levitator
currently on the ISS



Image: DLR on Spaceflight101.com

Metal processing built on
space proven technology

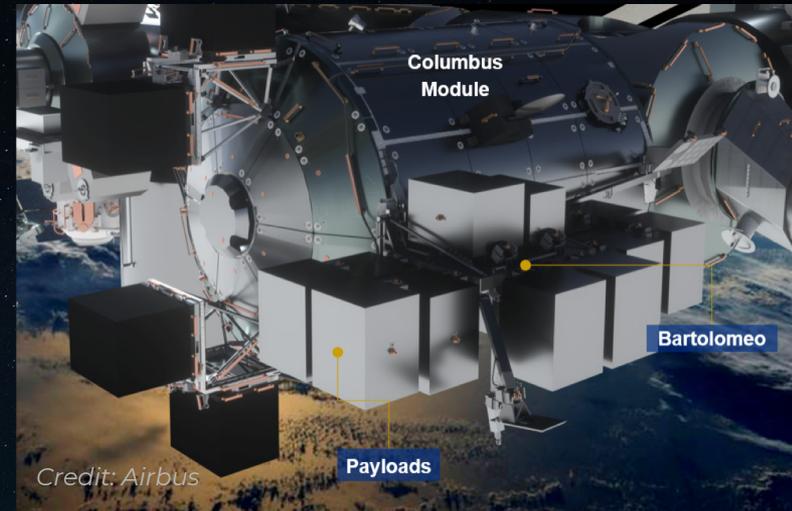
Where could we host it?



Space Foundry Proof of Concept on the ISS in 2022

- 📍 Tech Demo
- 📍 Metallurgical research
- 📍 Produce novel materials
- 📍 Revenue Generating

Space Foundry Proof of Concept Module could be hosted on the Airbus Bartolomeo Platform



Unique Features

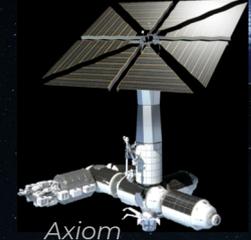
Electromagnetic Levitator
currently on the ISS



Image: DLR on Spaceflight101.com

- Built upon space proven systems
- Larger capacity (5-10 cm diameter)
- Electromagnetic extrusion capability
- Can be used for production or research

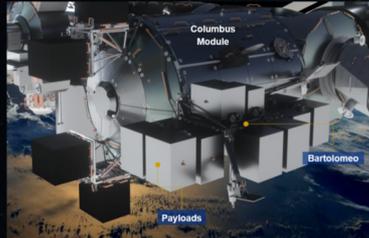
Long Term Applications



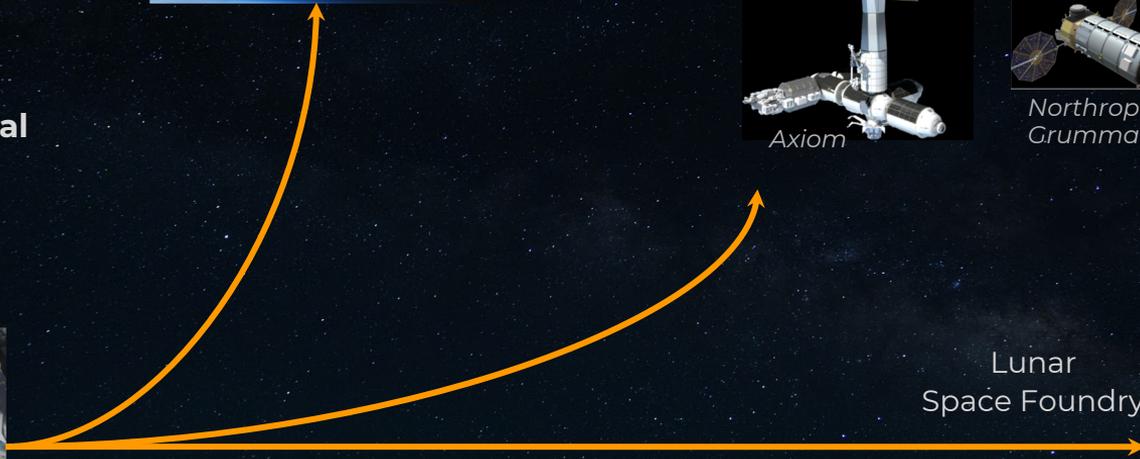
2022

**Technical & Commercial
Proof of Concept**

Space Foundry Lab
Module hosted on ISS



Lunar
Space Foundry



Which of your challenges could be solved if you had a reliable system for processing, melting, and producing metal components?

Cislunar Industries S.A.

www.CislunarIndustries.com

Primary Point of Contact:

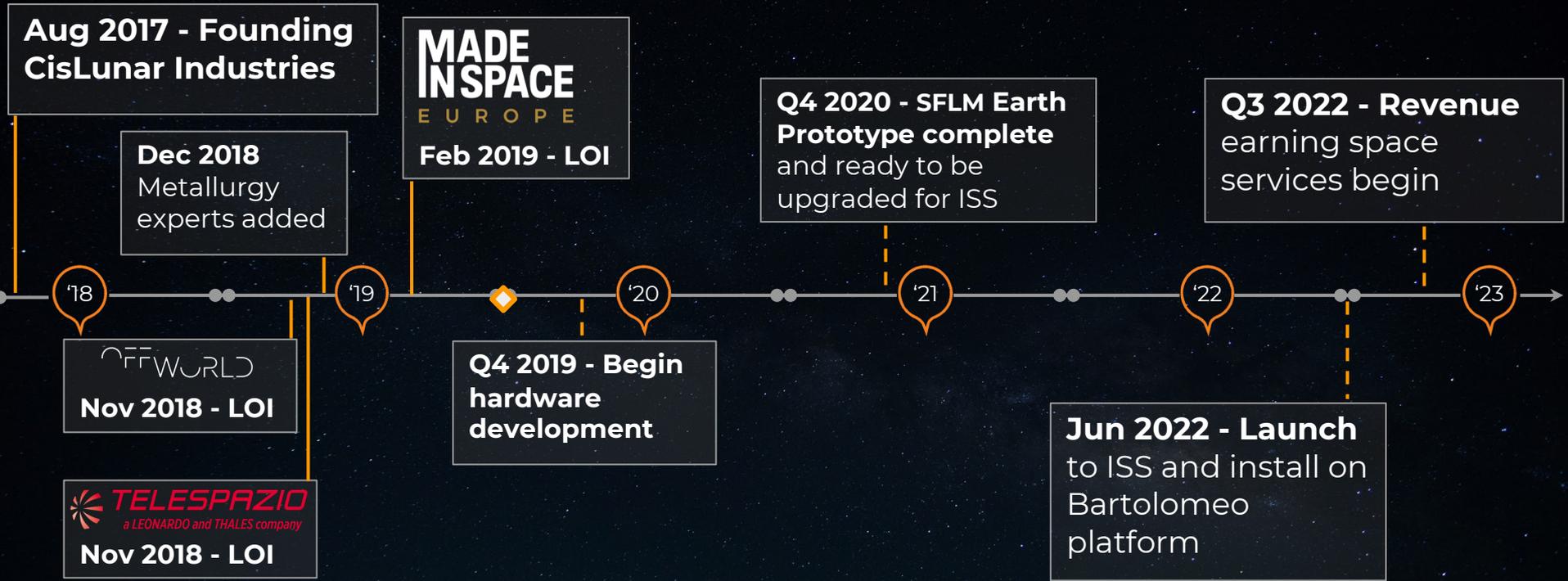
Gary Calnan, CEO, Director
+1 303 995 0733
gary@cislunarindustries.com

Luxembourg Headquarters:

Cislunar Industries S.A.
% Paul Wurth InCub
5, rue de l'Industrie,
L-1811 Luxembourg

Backup Slides

Recent Progress and Future Milestones



 **We are here**

The right team to make it happen



Gary Calnan, CFA
CEO

Experienced entrepreneur, former Director of Finance for a \$120M revenue SaaS software company where he was responsible for financial planning & analysis and M&A support



Dr. Jan Walter Schroeder, PhD
Managing Director

Serial entrepreneur, patent experience
Background in IT, electrical engineering and neuroscience and over 30 publications in space and engineering



Dr. Abdoul Aziz Bogno, PhD
Metallurgical Researcher

Direct experience with metallurgical research in sub-orbital flight and in the MSL-EML on the ISS
Designs Space Foundry core technology, develops the SFLM offering



Toby Mould, MChem (Hon), MSc
CTO

Background in materials chemistry and space engineering

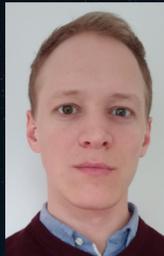
Worked directly on the world's first 'RemoveDEBRIS' Mission



Kai Staats, MSc
Director of Business Development

Serial entrepreneur with three decades experience in marketing; software, hardware, and IP portfolio development.

Visiting scientist at LIGO; Proj Lead at ASU



Romain Pecher, MSc
Materials & Process Engineer

Experience in project management, process and materials engineering

Engineers the Space Foundry core technology

Partners & Allies



Luxembourg Incubator & HQ

Member since March 2018
Engineering support, knowledge regarding metal production



Communications infrastructure

from mission control to our satellites
MOU since February 2018



Robot Arm Supplier

LOI - February 2019



Space Sector Network

Co-Founders all Alumni



Space Sector Network

Institutional Member since February 2018



Accelerator Program

Participated in the Inaugural CDL-Space Cohort
October 2018 - February 2019



Concept of Operations Validation, Mission Operations, Automated Ground Segment

LOI - November 2018



Hosting on Bartolomeo on ISS, Design Assistance, Potential Long-Range Customer

Contract proposal to secure slots beginning in 2022



Platform Robotics and AI

LOI - November 2018



Metal-Based Electric Propulsion

LOI - November 2018



Platform Component Supplier, Logistics Provider, Potential Customer

LOI - August 2018



Lunar Surface Power Supplier

LOI - May 2018



LU Institutional R&D Partner for Robotics and Technical Interns

LOI in progress



Luxembourg Institute of Science & Technology

R&D Partner - Materials, Additive Manufacturing, etc
LOI in progress

Our Vision is to
Industrialize CisLunar space
to enable the sustainable expansion
of humanity beyond Earth