



# SPACE RESOURCES ACCELERATOR

an  **ESA BSGN Industry Accelerator**

Accelerator Presentation, December 2024

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powered by LSA, ESA & LIST

The European Space Resources Innovation Centre (ESRIC) is world's first innovation centre entirely dedicated to space resources utilization, for human and robotic space exploration, as well as for a future in-space economy.

- HQ in Luxembourg
- 20 Researchers, Engineers
- 20+ R&D Projects

**AIRBUS**



## COMMERCIALIZATION ACTIVITIES

**CHALLENGE**

SUPPORT TEAMS



**INCUBATOR**

SUPPORT START-UPS

## SPACE RESOURCES ACCELERATOR

ACCOMPANY SCALE-UPS  
TARGETING THE MOON



TEASER

# SPACE RESOURCES ACCELERATOR

## VISION & MISSION

### COMPANIES

#### GEOGRAPHY:

ESA/E3P Participating States

#### MOON-COMPATIBLE/READY TECHNOLOGY:

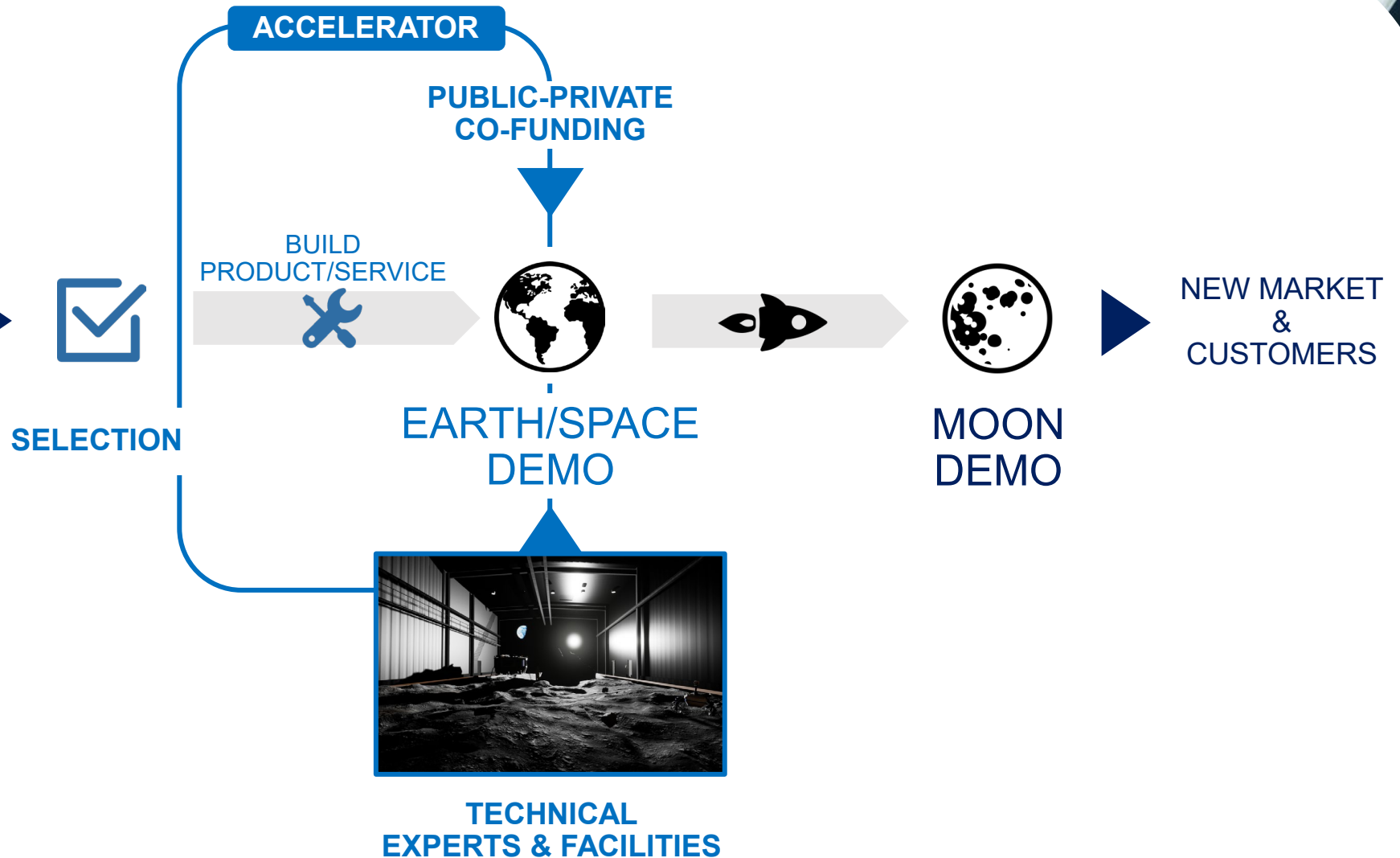
Capacity to address lunar use cases

#### INDUSTRY/MARKET AGNOSTIC:

Strong business plan foundations with terrestrial and/or in-space market(s) targeted  
Willingness to work with space agencies

#### FINANCIAL BACKING:

Ability to raise private funds and co-finance the project (third-party investment/financing, company's own cash reserves)



# SPACE RESOURCES ACCELERATOR

## LUNAR RESOURCES CHALLENGES



SPACECRAFT  
REFUELLING



LIFE  
SUPPORT



INFRASTRUCTURE  
CONSTRUCTION



EQUIPMENT  
MANUFACTURING



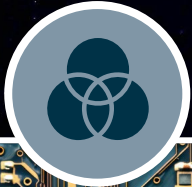
### SPACE RESOURCES

-  Water
-  Regolith
-  Metals

Source: ISECG, ISRU Technology Gap Assessment Report, 2021

# SPACE RESOURCES ACCELERATOR

## MULTI-INDUSTRY FOCUS



### DATA

#### Sensors & Instruments

high resolution imagery, spectrometers, cameras, radiation detectors, ground-penetrating radars

#### Computing & Data

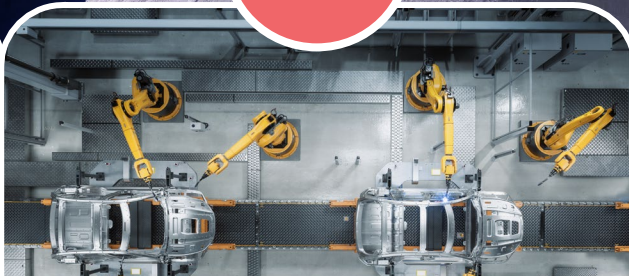
quantum computing, data storage and analysis

#### Mission Planning & Control

mission management and simulators

#### Extra Vehicular Activities Systems

wearables, visualization tools



### MOBILITY

#### Ascent/Descent Modules

high capacity/reusable landers

#### Surface Mobility

extreme terrain rovers/hoppers

#### Autonomous Navigation Systems

antennas, mission simulators



### POWER

#### Propulsion Systems

solar electric, nuclear thermal, solar sail, tether

#### Power Systems

solar cells/panels, nuclear batteries/reactors, thermal management

#### Power Transmission

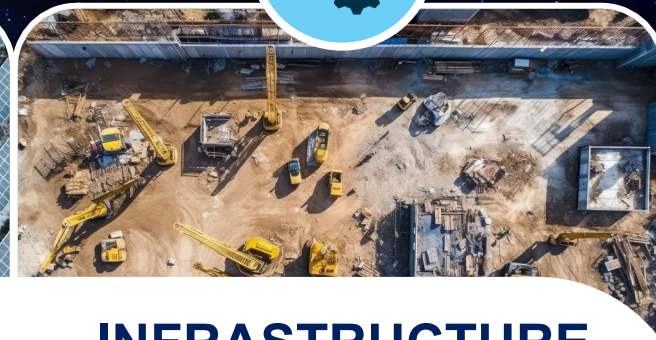
power beaming

#### Mining Operations

drills, excavators, processing plants

#### Cryogenic Fluid Management

liquefaction



### INFRASTRUCTURE

#### On-Orbit/Surface Servicing

spacecraft refueling, launch/land pads, roadways

#### Advanced Materials

radiation/meteorite/dust shielding structures, lightweight/compact/durable materials

#### Advanced Manufacturing

3D printing, melting/sintering

#### Habitation & Life Support Systems

reusable/inflatable habitat modules, air/water/waste management, controlled indoor environments

## IN-SITU RESOURCE UTILIZATION

# SPACE RESOURCES ACCELERATOR

CALL FOR APPLICATIONS



## MOON CHAMPIONS

**30+**

### COMPANIES

ventures across multiple industries with dual Earth/Space-Moon use

**14**

### COUNTRIES

from Europe & Canada (ESA/E3P)

**>2,000**

### EMPLOYEES

in space technology

**€300M+**

### PRIVATE FUNDS

raised from Pre-Seed to Series B

## MAIN APPLICATIONS

mobility (robotic platforms)  
data (imaging, analytics)  
power (power beaming, refueling)  
infrastructure (additive manufacturing, advanced materials)

## TOP 3 COUNTRIES

#1 United Kingdom  
#2 Germany  
#3 France & Canada

# SPACE RESOURCES ACCELERATOR

FIRST COHORT / PORTOFLIO OF PROJECTS



## MOON CHAMPIONS

**6**

**PROJECTS**

with a focus on

**Energy and Manufacturing & Materials**

**€250K+**

**FUNDING/PROJECT**

(50% ESA / 50% Private)

## PROJECT PROPOSALS

- ▶ Dust mitigation applications for spacecraft, landing pads, roads and other assets
- ▶ Wireless power transmission to spacecraft and other assets
- ▶ Teleoperated robotic platform refueling orbital/surface spacecraft and transferring life support consumables to habitats
- ▶ Consumable processing system supporting surface operations
- ▶ 3D printed landing pad, habitat construction

# SPACE RESOURCES ACCELERATOR

FIRST COHORT / PORTFOLIO OF PROJECTS



## MOON CHAMPIONS

FIBRECOAT  
FIBRECOAT

high-performance materials  
Series A



ORBITFAB

in-orbit refueling  
Series A



MΔΔNΔ  
ELECTR)C

ISRU/power generation  
Seed



SPACE  
POWER

power beaming  
Pre-Seed



ORBITAL  
MATTER

additive manufacturing  
Pre-Seed



VOLTA

Space Technologies  
power beaming  
Seed





# SPACE RESOURCES ACCELERATOR

## PROGRAMME OFFERING & SUPPORT



### APPLICATION

**PROPOSAL**  
(2 months)

MARKET ASSESSMENT  
SCOUTING

**CALL**  
proposal

PROPOSAL  
EVALUATION

**SELECTION GATE**  
PROJECT SELECTION

### ACCELERATION

**SUPPORT & CO-FUNDING**  
(up to 6 months)

**FINANCIAL BOOST**

- ✓ Fundraising Mentoring
- ✓ Investor Events & Matchmaking

**TECHNICAL BOOST**

- ✓ Research Experts
- ✓ Technical Equipment & Facilities

IMPLEMENTATION PLAN  
REVIEW

**DECISION GATE**  
ESA CO-FUNDING

### PROJECT

**IMPLEMENTATION**  
(up to 24 months)

**COMMERCIAL BOOST**

- ✓ Project Execution



# See you in 2025 at **Space Resources Week!**



## Alex Godlewski

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