ISD - HRE Programme overview

Daniel Neuenschwander

Day 1

12:25-12-50

EUROPEAN SPACE AGENCY

Agenda

- Terrae Novae Period 4 main objectives
- Repositioning Europe in LEO, Moon and Mars exploration
- Key messages and opportunities for industry

E3P4 Key objectives

LEO
- Sustain European presence and utilisation in LEO (LCRS+ISS)
- Enable transition to commercial post-ISS services

MOON
- Establish European Lunar access and logistics (Argonaut)
- Build and maintain capabilities for sustainable lunar exploration (Small missions, ESM's)

MARS
- Deliver flagship Mars exploration mission. (Rosalind Franklin Rover Mission)

EXPLORATION SCIENCE
- Maximise science return from exploration missions
- Generate knowledge for future exploration endeavours

FUTURE PREPARATION/ExPeRT
- Mature critical exploration technologies
- Strengthen European autonomy and risk reduction

Call to Boost European Space Exploration

supported by Ministers on 9 Sep 2026

- Greater European autonomous capabilities for accessing LEO for human and robotic exploration
- Stronger Europe's presence on and around the Moon by combining significant contributions to international partnerships with targeted European autonomy
- Use LEO and the Moon as proving grounds for technologies, capabilities and partnerships leading ultimately to Mars and beyond
- More competitive European space sector while remaining reliable partner in international exploration efforts

offering:

- New opportunities for Industry
- Maintain critical capabilities impacted by recent projects cancellation

Europe’s exploration ambitions

A modular ambition

LEO outpost

2030s

Crew vehicle & cislunar outpost

2040s

Mars transit & outpost

>2040s

2035/40

Moon sample return

Moon robotic outpost

2035s

Mars sample return

2040s

2028-2035

Building on a firm Baseline

LEO autonomous cargo & crew

Repeatable robotic lunar access

National contributions

High-value lunar partnership

Mars continuity

LEO Industrial Opportunities

- Continued ISS operations
- LEO Cargo Return Service Development
- Preparing for a (commercial) Post-ISS future
- Potential activities linked to autonomous European crew access to LEO*

*Pending IMM26 decision and Affordability

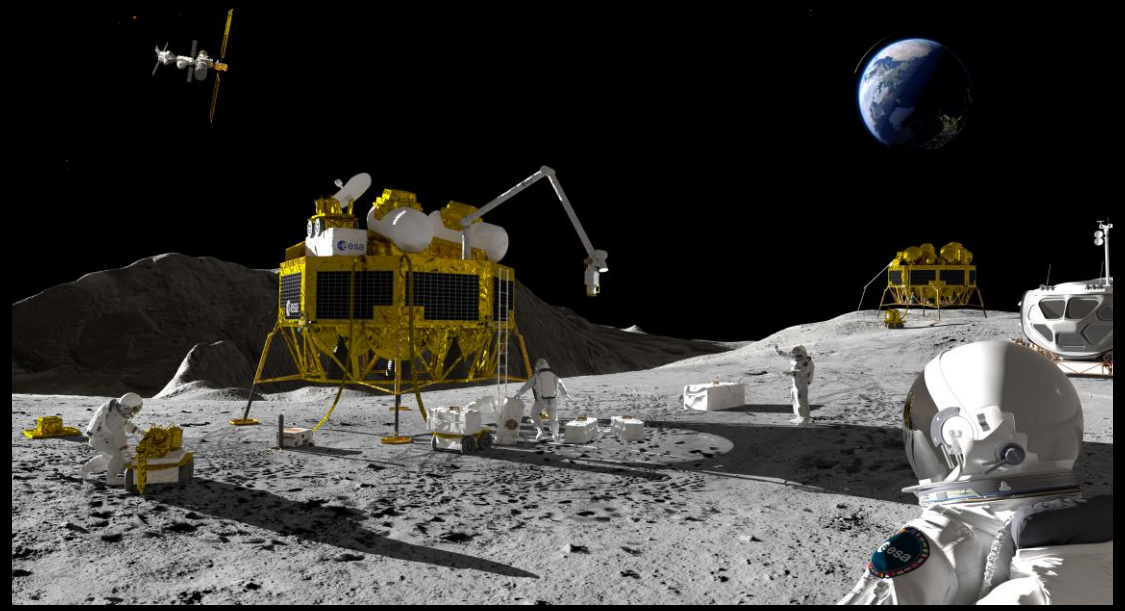
Moon Industrial Opportunities

Argonaut-1 LDE-Mk1 and payload work, Argonaut-2 study

Lunar communications studies, scientific payloads

Small Missions

ESM/ETV evolution*, Luna Bridge mission* (coop. with JAXA), Argonaut-2 acceleration*, communications implementation*, initiation of another Small Mission*, robotic mission studies*



*Pending IMM26 decision and Affordability

Exploration Science Industrial Opportunities

LEO: Uncrewed Autonomous platforms & preparation post-ISS science & commodities

Moon: Payloads & Instruments development opportunities

Mars: Maturation of Science payloads for post RFM

Future Preparation/ExPeRT Industrial Opportunities

Main new opportunities *Conditional to decisions before and at IMM26*

Delivering European strategic autonomy in exploration

One goal. Multiple paths

- **Open competition** when advantageous
- **Performance- and safety-driven**, not design prescription
- **Leverage private investment** towards market creation opportunities
- **Adapt price and risk-sharing** to maturity

European strategic control preserved throughout

Delivered through a strategic balance between **autonomy** and **international cooperation**

Europe will be a more valuable partner if it is also a more capable one

Slot day/time	Presenters	Content	Location
Day 1 12:25-12:50	Daniel Neuenschwander	Programme Overview	Plenary session
Day 1 14:05-14:30	Frank De Winne	LEO Industrial opportunities Workshop	ISD Conference Room B
Day 1 16:35-17:00	Didier Schmitt	Future preparation	Plenary session
Day 2 12:00-12:50	Sara Pastor	Lunar Industrial Opportunities Workshop	ISD Conference Room B
Day 2 13:40-14:05	Angelique Van Ombergen	Exploration Science Industrial opportunities	Plenary session
Day 2 13:40-14:30	Antonio Preden, Marco Carrano	Workshop: Human Spaceflight Document List	ISD Conference Room B

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THANK YOU!