

Moonlight

Webinar
20 April 2022

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A strategic program for Europe

- ✓ Gaining full European autonomy for operations in the cislunar area
- ✓ ESA missions will benefit directly from Moonlight
- ✓ High synergies with other ESA lunar exploration capabilities (lander)
- ✓ A tangible contribution from ESA to the international cooperation endeavour



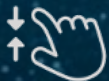







An opportunity to position a private European Service provider with European built infrastructure

- ✓ Ignition of new services to be provided by a private sector
- ✓ Medium term selfsustained infrastructure
- ✓ New up and downstream applications



Lunar Com and Navigation: towards a new paradigm

 Flexible landing site	 Higher Service Availability	 Higher Autonomy of Operations	 Faster Orbit Determination (75%)
 Longer Surface Operations	 Operational Cost Savings	 Higher Science Return (more payload/data)	 New mission concepts

 Smaller Terminal Less Power	 More data for same Terminal	 Backup/Redundancy	 Risk Reduction
 Higher Nav Accuracy	 Higher landing accuracy	 Navigation over night & shadow	 Simpler on-board Nav sensors

- A key infrastructure to boost lunar economy (lunar mining, support resources utilisation, key for a sustainable lunar presence, etc)
- Allowing new exploration missions with enhanced orbital, landing and surface positioning accuracies (landing on peaks of eternal lights, etc)
- A major enabler for new lunar scientific applications (lunar seismology, lunar gravitation and reference frames, astronomy, fundamental physics, etc)
- A new paradigm for Moon landing operations
- Enables LunaSAR and lunar emergency services
- Unlocking new downstream opportunities though increased data volumes and transfer capabilities

LUNAR PATHFINDER

Low-rate satellite communications service + Moon GNSS Receiver



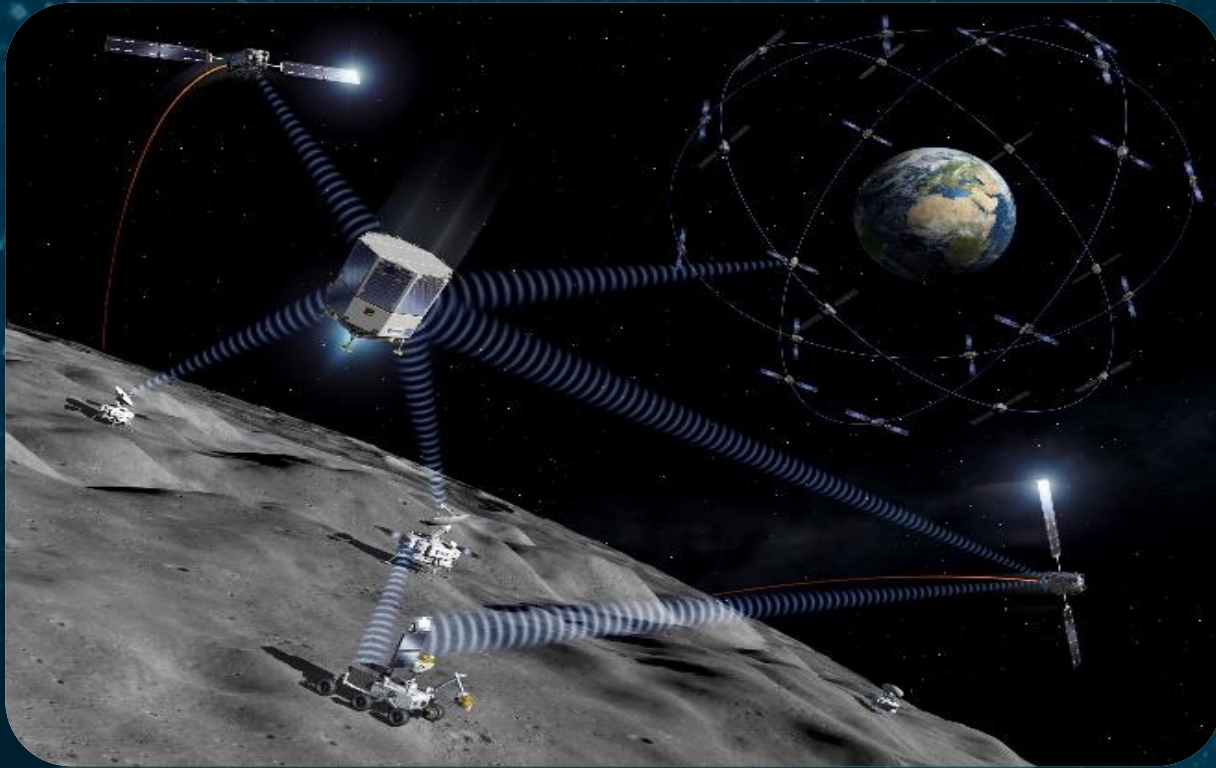
Q1 2025

MOONLIGHT CONSTELLATION

High-data rate satellite communications and navigation service



Service Offering



Data transport

Absolute Position

Tele-operations

Absolute Velocity

Audio/Video streaming

Universal time

Alert & Information

Third-party payloads

Search and Rescue

Over-the-top Services