Moonlight

Webinar
9 March 2022

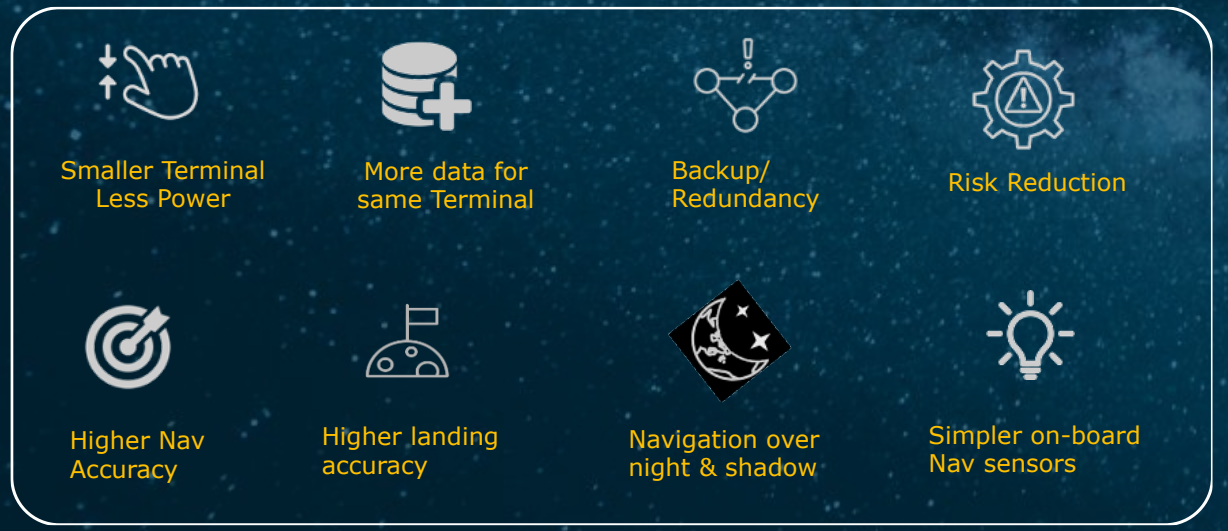
Context

We’re going back to the Moon….and stay there

Credits: BBC Science Focus Magazine

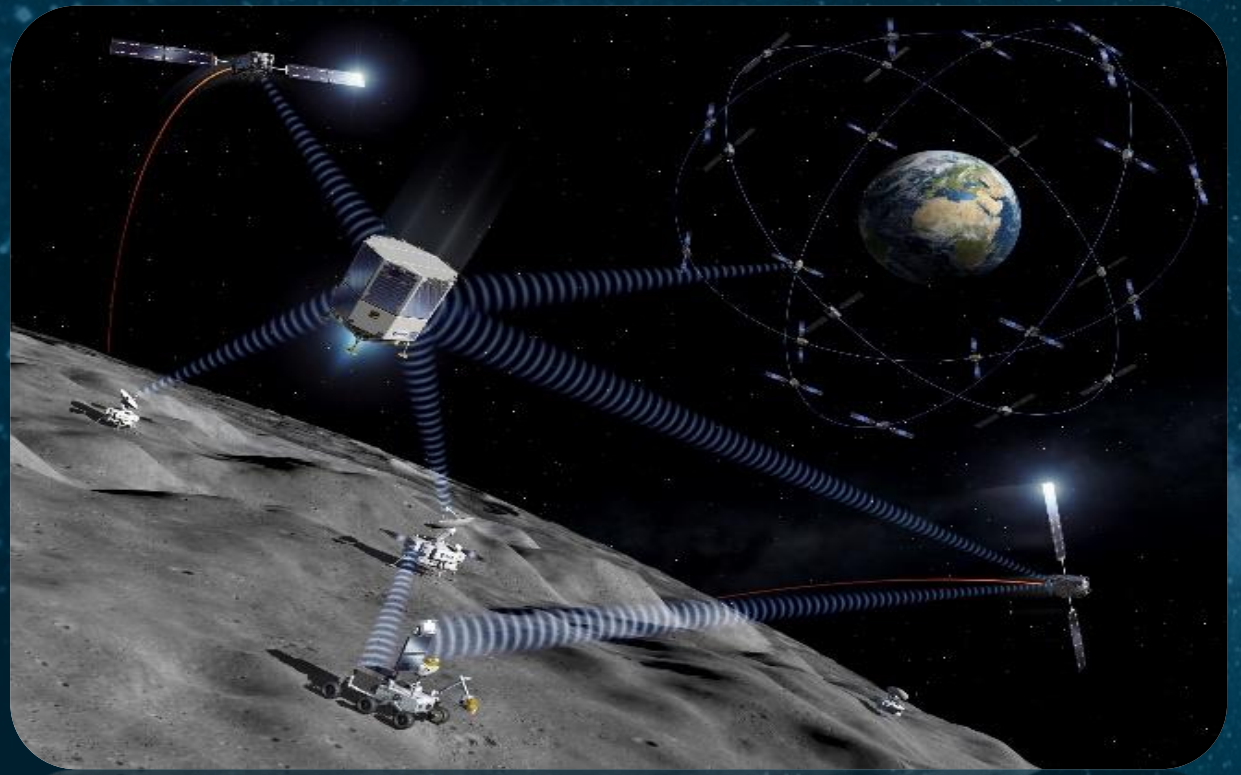
Agencies transition towards service procurements …
and foster the emergence of a lunar economy

Lunar Communications and Navigation Services



- Reducing costs and lunar access barriers for users
- Supporting new applications (mining and resources utilisation, virtual presence,)
- Enabling new type of missions with enhanced orbital, landing and surface positioning accuracies (landing on peaks of eternal lights, etc)
- Enabling new and more science (lunar seismology, lunar gravitation and reference frames, radio astronomy, fundamental physics, etc)

Service Offering



- Data transport
- Tele-operations
- Audio/Video streaming
- Alert & Information
- Search and Rescue
- Absolute Position
- Absolute Velocity
- Universal time
- Third-party payloads
- Over-the-top Services

Roadmap

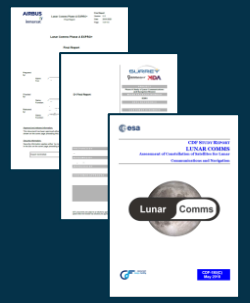
LUNAR PATHFINDER

Low-rate satellite communications service + Moon GNSS Receiver

MOONLIGHT CONSTELLATION

High-data rate satellite communications and navigation service

Service Development Plan



YOU ARE HERE

Prior Work → Phase A/B1 CFI → Phase A/B1 ITT Release → Phase A/B1 2x Studies → Phase B2/C/D/E1

TELESPAZIO
ThalesAlenia Space
argotec
Nanoracks
OHB
hispasat
inmarsat
MDA
POLITECNICO MILANO 1863
SDA Bocconi

SSTL LUNAR
AIRBUS
GMV
GMV NSL
KSAT
GOONHILLY
SES
SURREY

Service Definition / Business Development / Partnership Models

Mission Requirements Definition → Service and System Concept Development → System Architecture Development → System Detailed Definition

ESA plans to Commercial Operator for Service Provision in the frame of a Public Private Partnership

Enabling new Use Cases

Space Agencies

Private Lunar Companies

and future end users with downstream application