

ESA is going to the Moon together with its international and commercial partners.

To succeed, reliable navigation and telecommunication capabilities need to be provided. Building these independently would be costly, complex and inefficient. Having an integrated system dedicated to lunar telecommunications and navigation could reduce mission cost, risk and design complexity, liberating missions to concentrate on their core operations. Moonlight is an ESA Inter-Directorate Joint Initiative to enable the delivery of Lunar Communications and Navigation Services (LCNS) that will support and inspire the current and future generations of lunar explorers.

Moonlight will enable polar and far-side missions that would otherwise have to procure their own communications relay systems. Radio astronomers could set up observatories on the far side of the Moon. Rovers could trundle over the lunar surface more safely.

Lowering the barriers to lunar exploration could boost the emerging lunar economy and empower a wider group of European and international actors to launch their own missions to the Moon. A robust lunar communications, position, navigation, and timing service can also contribute to the transparency and safety of cislunar activities.

ESA and Moonlight will help secure a peaceful, cooperative, long term presence on the Moon for the benefit of all.

Over the past years, ESA has conducted several market analysis and preliminary feasibility studies and has recently initiated two parallel Phase A/B1 fully-funded studies to assess the feasibility of a Lunar Communications and Navigation Service (LCNS) and its associated system and architecture concept.

Understanding the different lunar users and their needs is a fundamental task in the design of Moonlight's infrastructure. This first User Engagement workshop aims at facilitating this information exchange and ensuring that the future Moonlight's infrastructure and services match user expectations.

Ultimately, ESA aims at setting the foundations of a Lunar User Forum group that will allow users and Moonlight stakeholders to explore together new missions and LCNS concepts.