

14TH IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND  
DEVELOPMENT (D3)Strategies & Architectures as the Framework for Future Building Blocks in Space Exploration and  
Development (1)

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## STEPS TOWARDS A MOON INFRASTRUCTURE

**Abstract**

Lunar exploration is one of the strategic objectives of the Global Exploration Roadmap (GER) discussed among the major space-faring countries within the International Space Exploration Coordination Group (ISECG). The Moon, in fact, beside the scientific relevance for the understanding of the terrestrial geological history, can play an important role for the validation of the enabling technologies required for the further exploration of our solar system, Mars and the Near-Earth Objects.

A number of robotic precursor missions have been scheduled and performed by the major Space Agencies to better understand the lunar environment and the eventual presence of water ice to be exploited during manned missions.

A Cis-lunar infrastructure is being studied by Agencies and Industry as the outpost for proving enabling technologies for deep space and supporting initial robotic and human missions on the Moon surface in the path for the potential future colonization of the satellite.

The Private Sector is also looking at the Moon as an interesting site with potential commercial value due to its in-situ resources, and different commercial initiatives are flourishing.

In the last years, Thales Alenia Space has been working in the scenarios, building blocks elements and key enabling technologies and capabilities required to stepping towards a Moon infrastructure where human settlements can be established.