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Space Resources, the Enabler of the Earth-Moon Econosphere (5)

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MAJOR RESULTS OF THE SECOND MINING SPACE SUMMIT

Abstract

On 9th of October 2019, the Luxembourg Space Agency (LSA) organized the second Mining Space Summit in Luxembourg City, as part of the Luxembourg Space Resources Week (7th to 11th October), which was organized in collaboration with the European Space Agency, the International Space University and the Colorado School of Mines. More than 180 participants from 24 countries working in different industries (e.g. oil gas, terrestrial mining, space, finance, and government) joined the one-day workshop. This paper highlights a 'best practice' on how the forward leaning space resources community can learn from the existing successful terrestrial resources community, and vice versa.

The workshop consisted of a plenary session in the morning with eight keynote presentations designed to provide attendees with background information on space resources utilization, business models, technological approaches, and operations. In the afternoon, there were six topic-specific parallel breakout sessions for participants to engage directly and develop ideas and approaches on how the space and terrestrial resources communities can collaborate and learn from one another. A concluding plenary and an evening reception rounded out the day.

The breakouts focused on two broad themes: (1) business models and (2) critical technologies and operations. The three business oriented sessions and three technical oriented sessions are listed below with a short summary of their primary discussion topics, which built on the results of the first Summit in 2018:

- *Market and Dynamics*; understanding space resources supply and demand dynamics by considering their use cases, prices, associated costs, and other factors.
- *Investment and Financial Planning*; financing space mining projects and terrestrial ventures, and understanding potential financing models for projects in innovative and high-risk fields.
- *Role of Government and Regulators*; enabling the growth of a nascent industry through public policy and regulatory actions.
- *Prospecting – Proving Value*; finding, identifying, analyzing and reporting resources to prove their value and justify mining operations.

- *Extraction – Creating Value*; establishing and operating mines in extreme and remote conditions and generating value from a mine in space in a sustainable way.
- *Enablers – Optimizing Value*; increasing mine efficiency by leveraging critical support services, technologies and processes, such as logistics, communication services, and power distribution.

This summary paper provides the major results of those discussions, which will set the foundation for future work. The 2019 summit was a further huge step forward in the long-term process to identify areas of collaboration between the space and terrestrial resources sectors.