FutureBridge

What is?

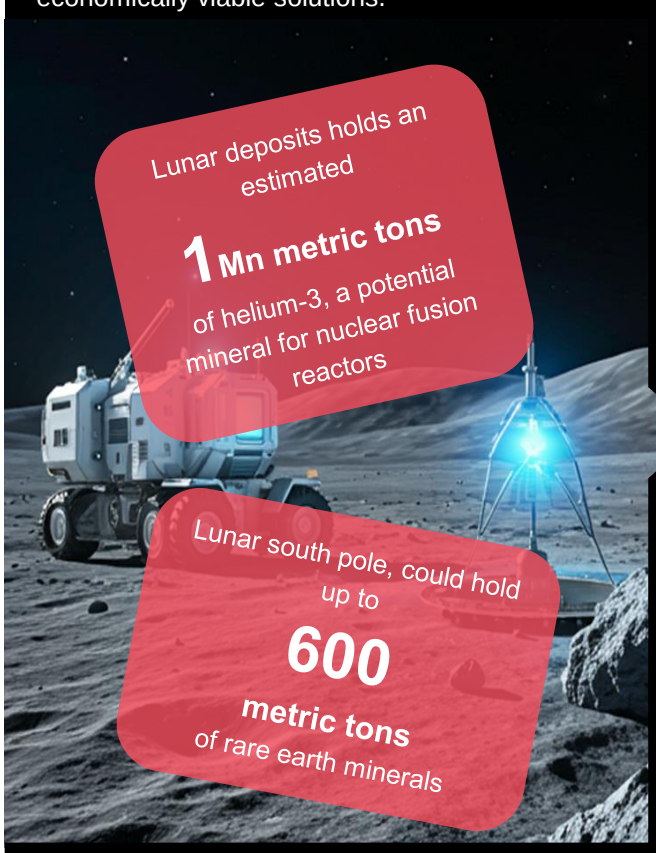
Dwindling Critical Minerals: Is Lunar Mining the Answer to Earth's Mineral Crisis?

Critical minerals such as Rare Earth Metals and Platinum Group Metals (PGMs) are vital building blocks for many industrial electronic applications.

As per IEA, by 2040, total mineral demand from clean energy technologies could double or even quadruple.

Degrading environmental impact of traditional mineral exploration is driving the demand for lunar mining.

These challenges are driving governments, space agencies and private companies to explore lunar resources, where valuable minerals such as Helium-3, and rare earth elements could offer economically viable solutions.



What if?

The Final Frontier of Mining is the Potential Lifeline for Earth's Depleting Resources

In August 2024 iSpace, a pioneering lunar exploration company, and Komatsu, a global leader in construction and mining equipment have announced a strategic consulting agreement to jointly develop construction equipment for lunar operations.

Private companies, such as Blue Origin, SpaceX, and iSpace, are developing lunar landers and rovers that could serve as the foundation for commercial lunar mining operations.

In-Progress:
Caterpillar's autonomous and remote-controlled mining equipment are supporting NASA to mine the moon and build a lunar base. As a part of NASA's commercial lunar payload services initiative.

What now?

The BIG questions

If the turnover from the lunar mining goods and services potentially reaches US$ 170 Bn by 2040, then…

- Which countries are at the forefront of commercializing lunar mining?
- What are some of the technological enablers that would drive lunar mining?
- What will be the role of equipment OEMs in lunar mining operations, including power systems, extraction and transportation?
- What disruptions are expected in the mining equipment value chain? What will be the role of space exploration companies in the future?

About FutureBridge

FutureBridge is a techno-commercial consulting and advisory company. We track and advise on the future of industries from a 1-to-25-year perspective to keep you ahead of the technology curve, propel your growth, Identify new opportunities, markets and business models, answer your unknowns, and facilitate best-fit solutions and partnerships using our platforms, programs, and access to global ecosystems and players.