

# FutureBridge

## What is?

### Critical Mineral Shortage. The High-Stakes Gamble of Deep-Sea Mining

Critical minerals like lithium, cobalt, and nickel are vital building blocks for many green technologies.

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

Depleting land-based mineral reserves drive the demand, particularly for polymetallic nodules located on the ocean floor.

By 2030, it is projected that up to 10% of global production of minerals such as cobalt, copper, and zinc would be sourced from deep-sea mining operations.

31

Exploration contracts awarded for deep-sea mining in 2023

\$16.2 tn

Projected market value of deep-sea mineral deposits



## What if?

### Deep-sea Mining: The Next Big Disruption

Nautilus Minerals and Teledyne are developing specialized deep-sea equipment [remotely operated vehicles and digital probes].

Transocean has entered strategic alliances with Global Sea Mineral Resources (GRC), leveraging its offshore drilling experience for developing deep-sea mining equipment.

#### Its Started:

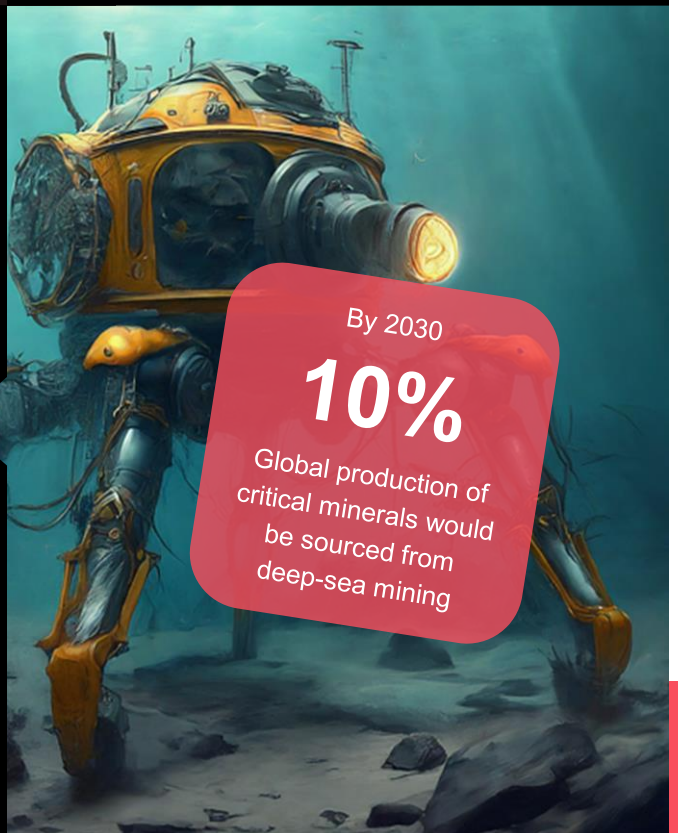
The Clarion-Clipperton Zone between Hawaii and Mexico is a hot bed for deep-sea mineral explorations. Norway has also approved deep-sea mining exploration within its Exclusive Economic Zone (EEZ)

## What now?

### The BIG Questions

If the turnover of rare earth minerals sourced from the ocean floor potentially reaches US\$11 Bn by 2030, then...

- ❖ Who will be the key players offering deep-sea mining equipment?
- ❖ Which regions will be lucrative for the mining companies?
- ❖ How will the regulatory compliances impact the growth prospects of deep-sea mining?



By 2030

10%

Global production of critical minerals would be sourced from deep-sea mining

## 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.