

Blockchain can trace carbon emissions for mining, metals companies

The World Economic Forum's Mining and Metals Blockchain Initiative (MMBI) has released a proof of concept that uses distributed ledger technology to track embedded greenhouse gas emissions.



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A collaboration between seven leading industry players and the World Economic Forum (WEF), the initiative has hit an important stage of development following its launch in October 2019.

The successful completion of the proof of concept, named the COT, a carbon tracing platform will be critical in helping to ensure traceability of emissions from mine to the final product. With a focus on end-to-end traceability, the COT platform uses distributed ledger technology to track CO₂ emissions.

The founding members of the MMBI – Anglo American, Antofagasta Minerals, Eurasian Resources Group, Glencore, Klöckner & Co, Minsur, and Tata Steel joined forces in October 2019 to design and explore blockchain solutions to accelerate responsible sourcing in the industry. By pooling resources and costs, the mining and metals companies aim to accelerate future adoption of a solution for supply chain visibility and ESG requirements.

Technological feasibility

Developed in collaboration with industry experts, supported by the Dutch blockchain champion Kryha and consortium advisor Susan Joseph, it not only tests the technological feasibility of the solution, but also explores the complexities of the supply chain dynamics and sets requirements for future data utilisation. In doing so, the proof of concept responds to demands from stakeholders to create “mine to market” visibility and accountability.

"There is an increasing demand for metals and minerals, and an increasing demand for sustainable and responsible and traceable supply chains. There is a potential to create a full value chain view with downstream visibility, and in partnering with regulators and aligning our work with robust ESG standards, sustainability certification schemes and assurance frameworks," said Jörgen Sandström, head of mining and metals industry, World Economic Forum.

This work lays the foundation for the next phase of the development and reinforces comprehensive feedback sessions with stakeholders. It also supports the MMBI vision to enable emissions traceability throughout complex supply chains and to create "mine to market" visibility and accountability.

"The distributed nature of blockchain technology enables cross-enterprise collaboration and makes it the ultimate networked technology. This opens exciting new possibilities that organizations otherwise would not have the capability to deliver on their own," said Nadia Hewett, blockchain project lead, World Economic Forum.

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