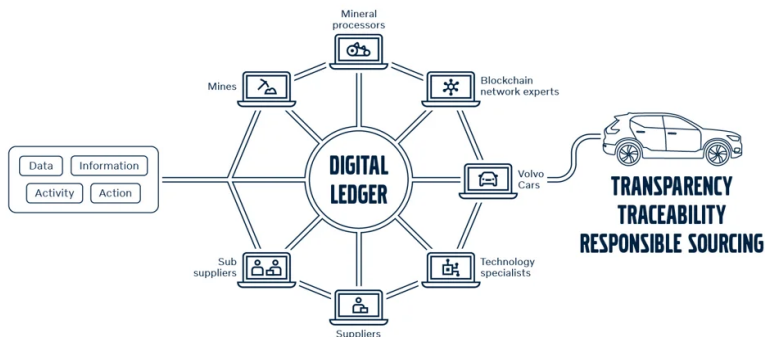


IMPACT_CASE

BATTERY MATERIALS TRACEABILITY



CASE / PROBLEM

For producing lithium-ion batteries, minerals such as cobalt, lithium, mica or nickel are used. It has potential adverse social and environmental impacts. Volvo recognized this challenge and the fact that increasing legislative and consumer demands for greater transparency in the provenance of raw materials required a more innovative and effective solution to prove that materials used in their supply chain had indeed been responsibly sourced.

In 2019 Circular was commissioned for a traceability solution, aiming to manage the risk and demonstrate with as much certainty as possible that no material that wasn't responsibly sourced entered the supply chain at any point.

SOLUTION

- Mapping the production flow of materials with a blockchain-based system, and with further support of machine learning, it identifies data anomalies to target compliance and due diligence.
- Tracing recycled cobalt in its various physical transformations throughout the manufacturing process across the battery supply chain.
- Validating integrity of traceability - with proof of time, duration, location and mass balance of input and output.

RESULTS

- Winning the Responsible Business Alliance 2019 - Compass Award for Innovation.
- Getting a program extension to another battery supplier for tracking freshly mined cobalt.
- Starting also to track Phlogopite (Mica), used as fire barriers in EV battery packs.

COLLABORATION



INNOVATION AREA

REGULATORY TECHNOLOGY

COST SAVING

75% cost savings
in the OEM's supply chain

IMPACT VISION 2030

- supply chain transparency
- responsible sourcing