

Swedish pilot study: Block chain technology to trace metals in sustainable value chains

Our modern green society is very dependent on metals, such as copper, cobalt and lithium. So far, it has been very difficult to know where and how sustainably metals are produced. The solution could be a brand new, Swedish developed, traceability system.

Your new electric car has zero emissions when transporting you from point A to point B. But what if the 70 kilograms of copper wires in the car, making this fossil free trip possible, come with a not so green footprint from where the copper once was extracted?

In order to address this challenge, the Swedish mining industry has taken the initiative to a new pilot project on traceability for metals.

- It is extremely positive that Sweden can take the lead, the question is highly relevant, says **Maria Sunér Fleming**, CEO of Svemin, Swedish Association of Mines, Mineral and Metal Producers, the owner of the project.

The origin of metals in consumer products plays an increasingly important role for both consumers and producers. The importance of being able to trace the constituents of the product in a clear and transparent way is driven by an increased awareness of the climate change and the strive to reach Agenda 2030 and contribute to the UN's global sustainability goals.

Svemin's project is named **TraceMet - Traceability for sustainable metals and minerals**. The purpose is to develop a simplified, but fully functional, IT-system to follow certified metals along the whole value chain. The pilot project will include one value chain for copper, from mine to use in high-voltage lines, as well as one for steel, from mine to steel in trucks.

There are currently several parallel projects in the world on certification and traceability of metals and minerals. That's of no threat to the Svemin project, says Maria Sunér Fleming.

- It just shows what a tremendous pressure it is to come forward on this issue. But this project is, as far as we know, the only initiative involving stakeholders from the entire value chains, she says.

TraceMet has several strategic partners in the mining cluster, including LKAB and Boliden, and key stakeholders such as Volvo Group, Scania, Elektrokoppar, SSAB and ABB.

This one-year pilot project started in December 2019 and is managed by the IVL Swedish Environmental Research Institute.

- The idea is to make it possible, via block chain technology, to trace both the carbon footprint for the metal and how much recycled material it contains, says the project manager **Erik Lindblom**, IVL.



The pilot study is largely funded by the Swedish strategic innovation program SIP STRIM.

- It is important to get a traceability system in place as soon as possible. Svemin's feasibility study from spring 2019, which was also funded by SIP STRIM, showed that blockchains are a conceivable way forward, says **Jenny Greberg**, program director at SIP STRIM.

Contact information

SIP STRIM: Jenny Greberg, program director, jenny.greberg@sipstrim.se, +46 70641 28 40

IVL Swedish Environmental Research Institute: Erik Lindblom, project manager, erik.lindblom@ivl.se, +46 10 788 65 71

Svemin: Lars-Åke Lindahl, chairman of TraceMet, lars-ake.lindahl@svemin.se, +46 70588 81 48

More information about SIP STRIM

SIP STRIM is the Swedish strategic innovation program for the mining and metal mining industry. SIP STRIM is part of a joint investment in strategic innovation areas by Vinnova, Formas and the Swedish Energy Agency.