The Story of Minespider.

A Little Background

Minespider's story began in 2017, one year before it was officially founded. Nathan Williams, Felipe Stark, and Lee Williams had worked together for three years on a startup called Subvise. This was a dashboard and AI system for tracking the regulatory status of chemicals under the EU REACH regulation. The company had recently been sold to another company to consolidate the market, and the team started exploring other ways to apply emerging technology to industrial sourcing issues.

Launching Minespider

Around this time there was an article in the Washington Post about how technology companies were concerned that the Trump administration would roll back conflict mineral regulations. Alongside this, in 2017 the EU parliament passed the EU Conflict Minerals regulation. At the same time blockchain came into mainstream prominence with the rise of Ethereum, and we saw an opportunity to use this technology to address these emerging supply chain issues.

2017 was a year of research, where we spoke to everyone in the industry, attended events at the OECD, and learned as much as possible about the problems with supply chain traceability. We asked what had been tried, what had worked, and what some of the unintended consequences were. At the same time, Nathan launched a blockchain podcast where he interviewed nearly 100 blockchain startup founders about their projects, their challenges, and how to design systems to meet these challenges. This podcast was called Analysis in Chains and is still available on Spotify.

By the end of 2017, Nathan wrote the Minespider white paper. This white paper was the first document to describe a decentralized solution to mineral traceability and was cited by the Responsible Minerals Initiative blockchain guidelines, and used as

the basis for developments at international groups such as the OECD, the World Economic Forum, and the UN.

In 2018, Nathan Williams met Swiss business angel and impact investor, Martin Hobler and formally founded the company in Zug, Switzerland. Co-founders Ella Cullen and Volker Krümpel joined around the same time, having met the rest of the team through attending live recordings of Nathan's blockchain podcast. The group worked in the first year to build Minespider's blockchain and by the end of the year secured blockchain pilots with Google and Volkswagen.

2019 was a year of development. Minespider's team grew to 10 as we worked to onboard participants for our two high-profile pilot projects. It was clear there was a need in the market for traceability, but it was still at an early stage that needed government support. So at the end of the year we applied for a Horizon 2020 grant and were awarded it, securing €2.3 million in funding to develop the core protocol.

In 2020, the global pandemic caused major disruption to most companies globally, even as our pilot projects were wrapping up their early phases. This was a time of development and we took our learnings from these early pilots and completely redesigned the blockchain protocol in response. We designed the new system with the following properties in mind:

- Traceability should be able to start anywhere in the supply chain, not just at a mine site.
- If a company in the middle of the supply chain doesn't participate, the system should still work.
- The system should be usable by people that handle the materials, not just by experts.

- A single customer should be able to use the system and find it valuable, even without a consortium.

By Q3 of 2020, companies had adjusted to the new normal of operating during a pandemic, and many of them had a lot more interest in supply chain security issues and we received an overwhelming number of requests for projects. Our capstone project was implementing our new blockchain product, “Oresource” at LuNa Smelter in Rwanda.

Oresource’s USP was to have all of the data and documents needed to sell metal to a European customer, secured by blockchain and accessible by scanning a simple QR code on a shipment of metal. We developed this project with help from an additional grant we secured from EIT Raw Materials and tested it in December 2020. It is currently in production and every shipment of tin leaving LuNa Smelter has a Minespider QR code. To date, over 250 tons of tin have been tracked on our blockchain.

We have come a long way since the early days of Minespider, but our journey is only just beginning. 2021 will be the year of growth, and we're excited to scale this promising venture together.