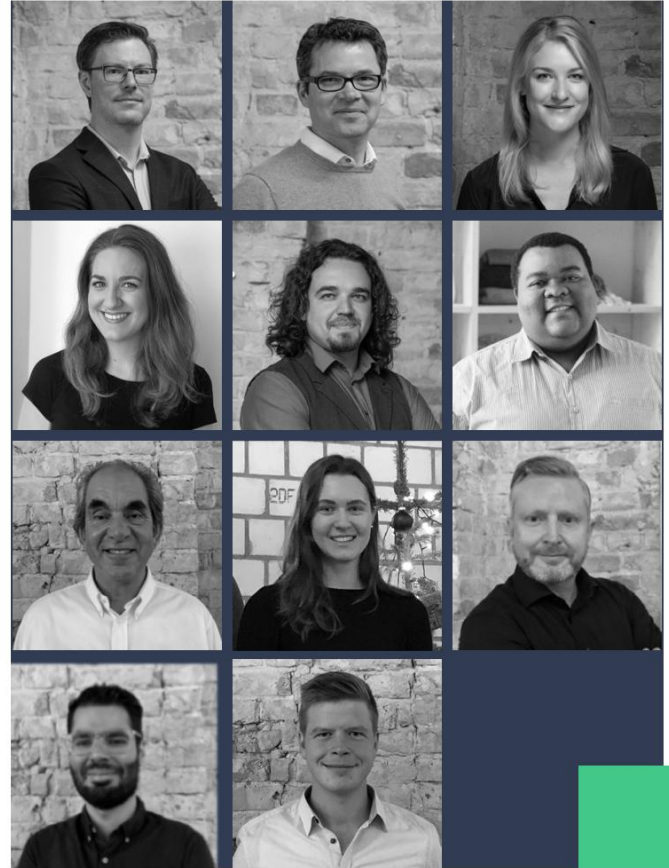




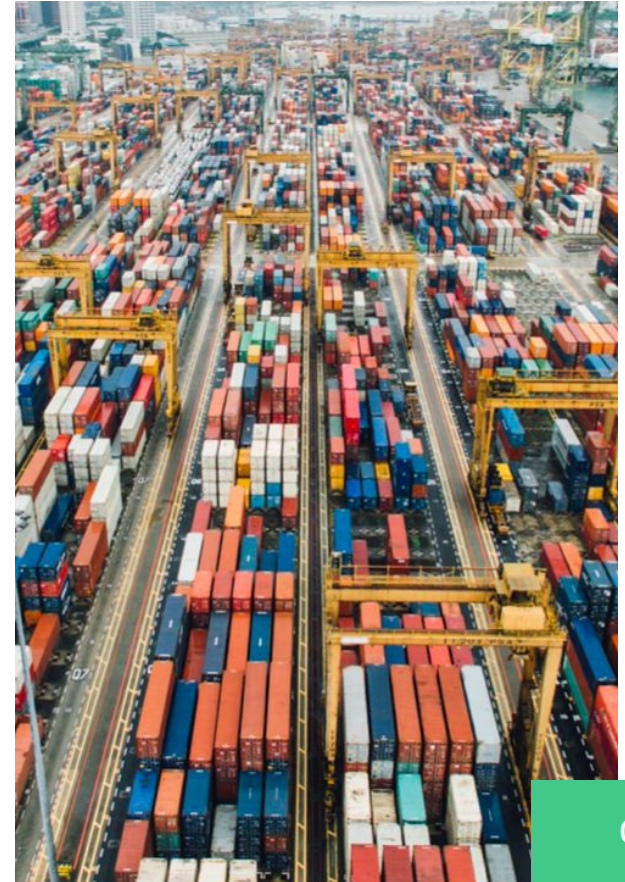
Standards and Interoperability

Insights - Learnings - Approaches



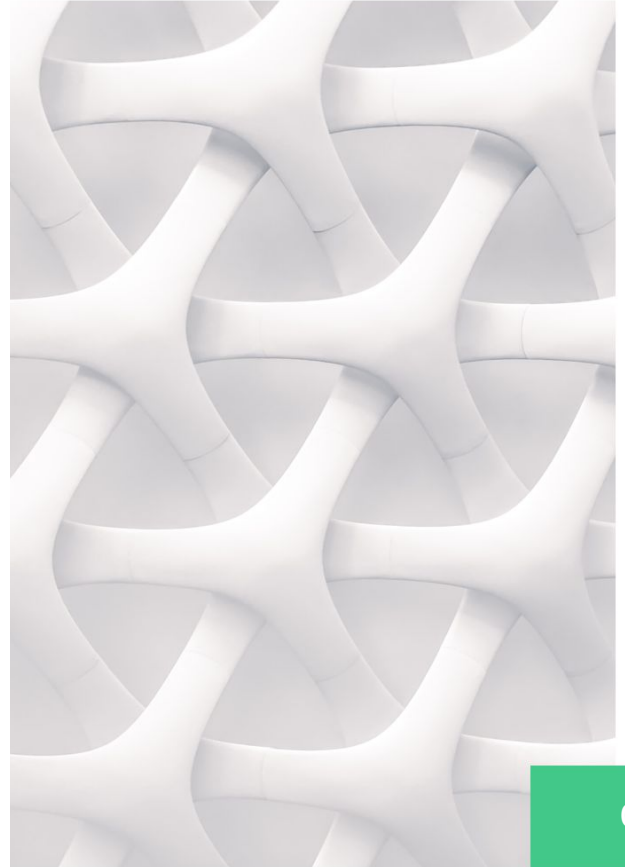
Our Insights into Supply Chains

- We analysed **more than 1000 suppliers** in supply chains from minerals (lead, tin, etc.) to products (IT, Automotive)
- What **types of businesses** are involved?
- What **kind of suppliers** are involved?
- **How transparent** are they?
- How are **materials and data** handled along supply chains?
- Which information on **sustainability** is available?
- Which **focus** on sustainability criteria and standards?
- How do suppliers **collaborate along supply chains**?



Challenges with Standards & Interoperability

- **Supply chains are often very diverse and complex**
Various companies of different sizes, backgrounds, professions work with each other or in parallel, often without realizing it
- **Usually there is no “one fits all” worldwide standard or interoperability**
But multiple jurisdictions, industries, practices and needs
- **There is no fixed status quo**
Constant change, revision and adaption required along with the processing of materials over time
- **There are often no parallel interests**
Just conflicting needs and interests and a tag along and drag along
- **There are varying levels of knowledge and focus**
Yet all have impact on the “value chains”



The Covid Impact

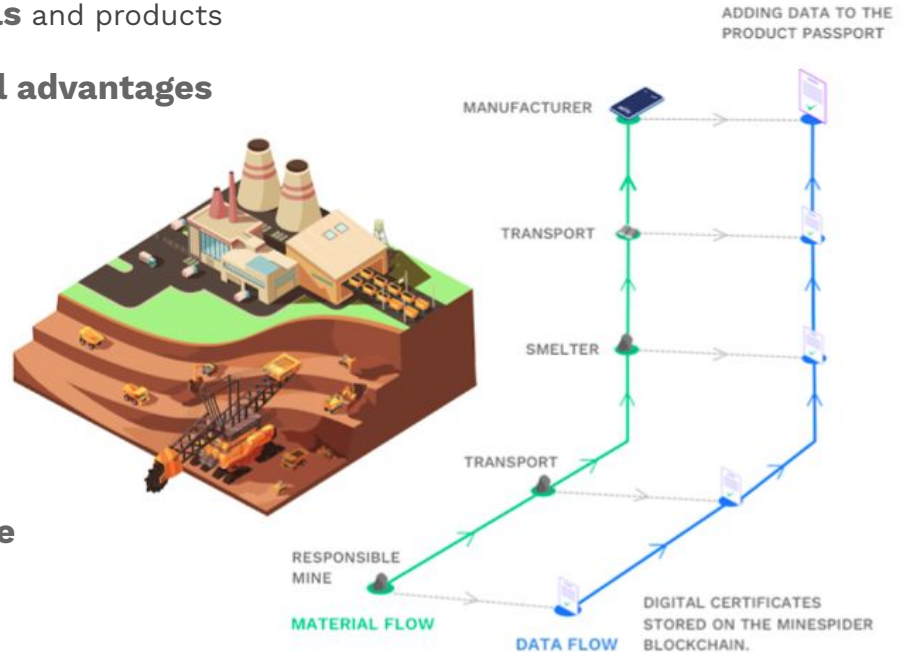
- **Asynchronous decrease**
of supplies and demand
- From local **hot-spots to markets**
domestically and internationally
- **Missing knowledge**
of alternative supplies and volumes
- **Difficult to ramp up**
from zero to business as usual
- Lot's of **uncertainty**
requires lots of communication and alignment
- Some **push sustainable supply chains**
even more, others do not



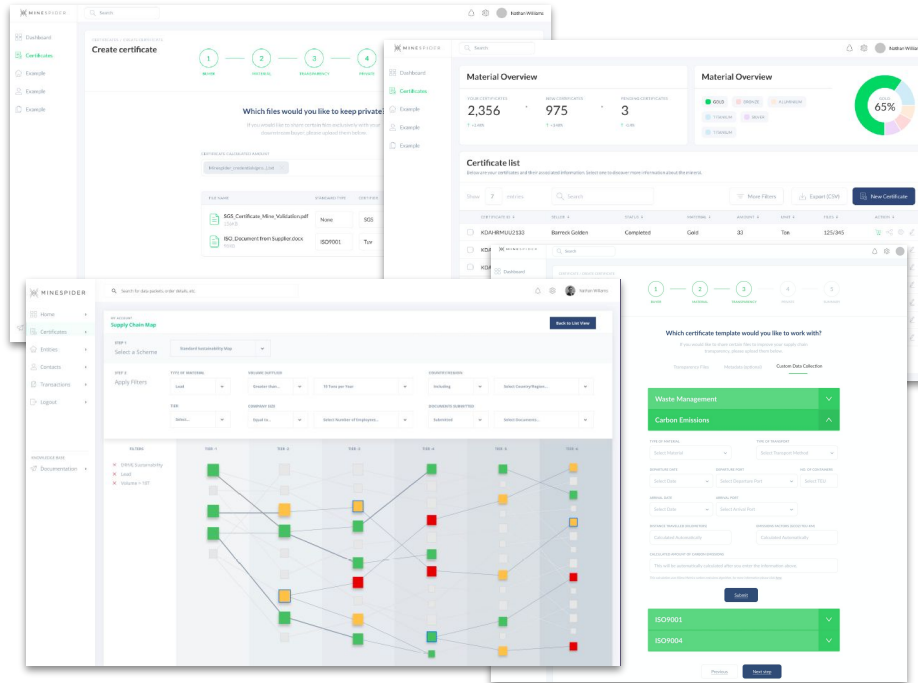
Key Learnings from our Insights



- Understand the **different types of participants**
- Think in **live-cycles of materials** and products
- Show participants their **individual advantages**
- Make it simple - **keep it simple**
- Start with **low-hanging fruit**
- **Adopt** to given workflows
- Allow **flexibility**
- Make information **digestible**
- Give easy-to-understand **guidance**



Minespider Translates Learnings into Tools



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Open Minespider Protocol

- Free and flexible to use



Balancing competing interests

- Transparency Layer
(addresses public informational needs)
- Privacy Layer
(addresses confidential information)



Immutability of data

- Minimizes risks of forgery, fraud, corruption



Allows easy sharing of information along the supply chains

- Reduces NDA efforts
- Reduces due diligence efforts
- Simplifies verification of information
- Reduces risks
- Reduces costs



Simplifies the collection and assessment of the information overload



Can model the supply chains

- Simple query tools and feedback
- Quick impact assessments
- Focused Incentives
- Preferencing and management

What can the UN/CEFACT and Experts do?



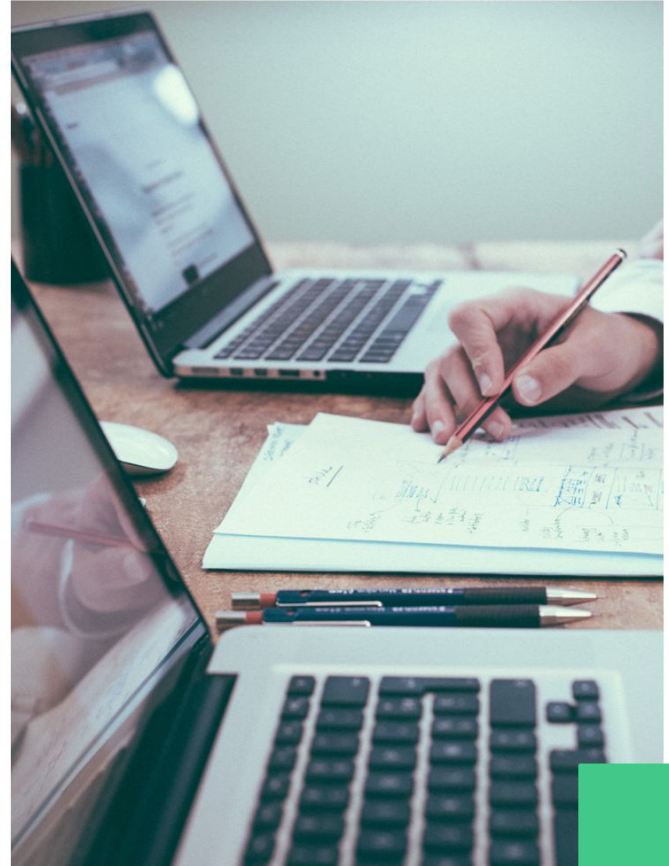
Examine the different approaches

- Challenge the status quo
- Identify best practices



Take an active role

- Join blockchain governance and consensus facilities where possible
- Support transparency
- Communicate best practices
- Invite others to participate





Thank you.
Any questions?

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