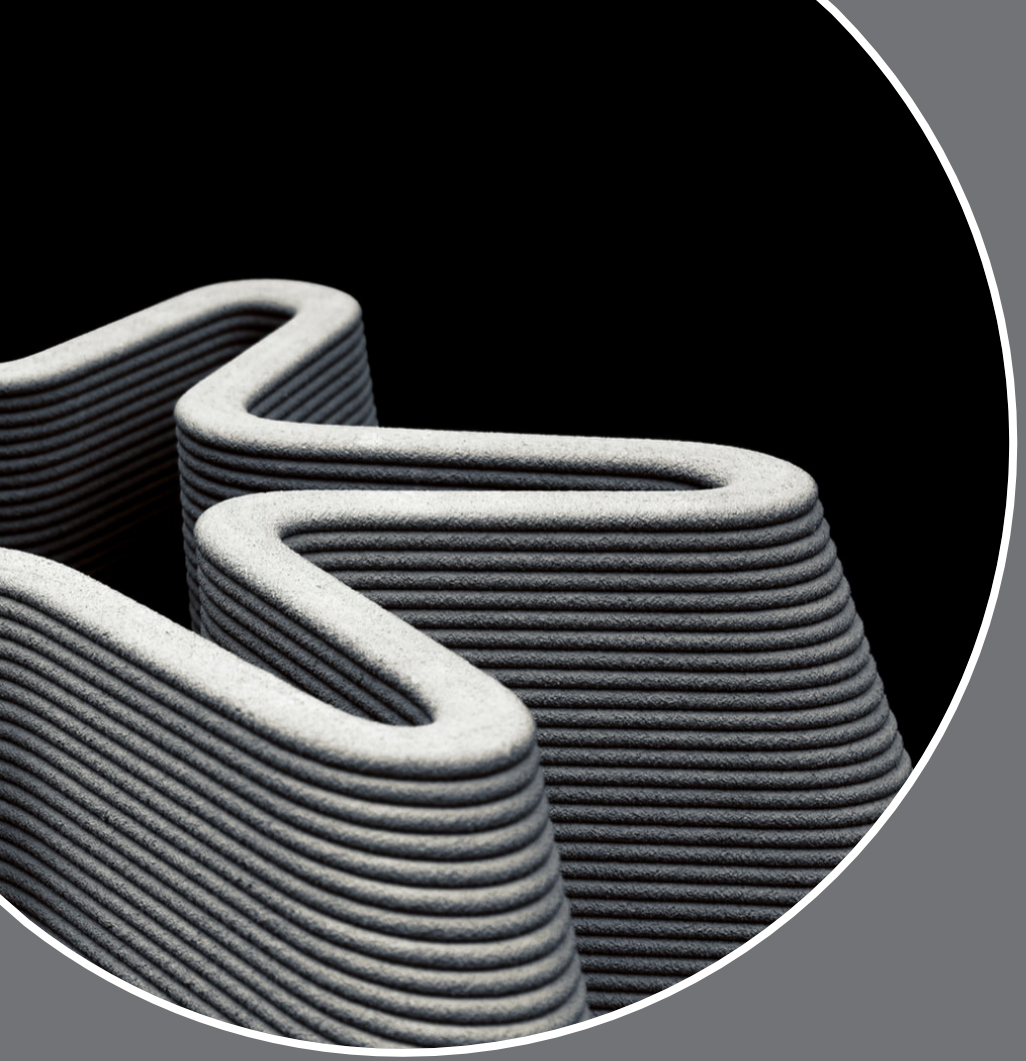
"What the internet did for communications,
I think blockchain will do for trusted transactions."

IBM CEO Ginni Rometty

Enterprise Blockchain Tech Additive Technologies



What is the context?

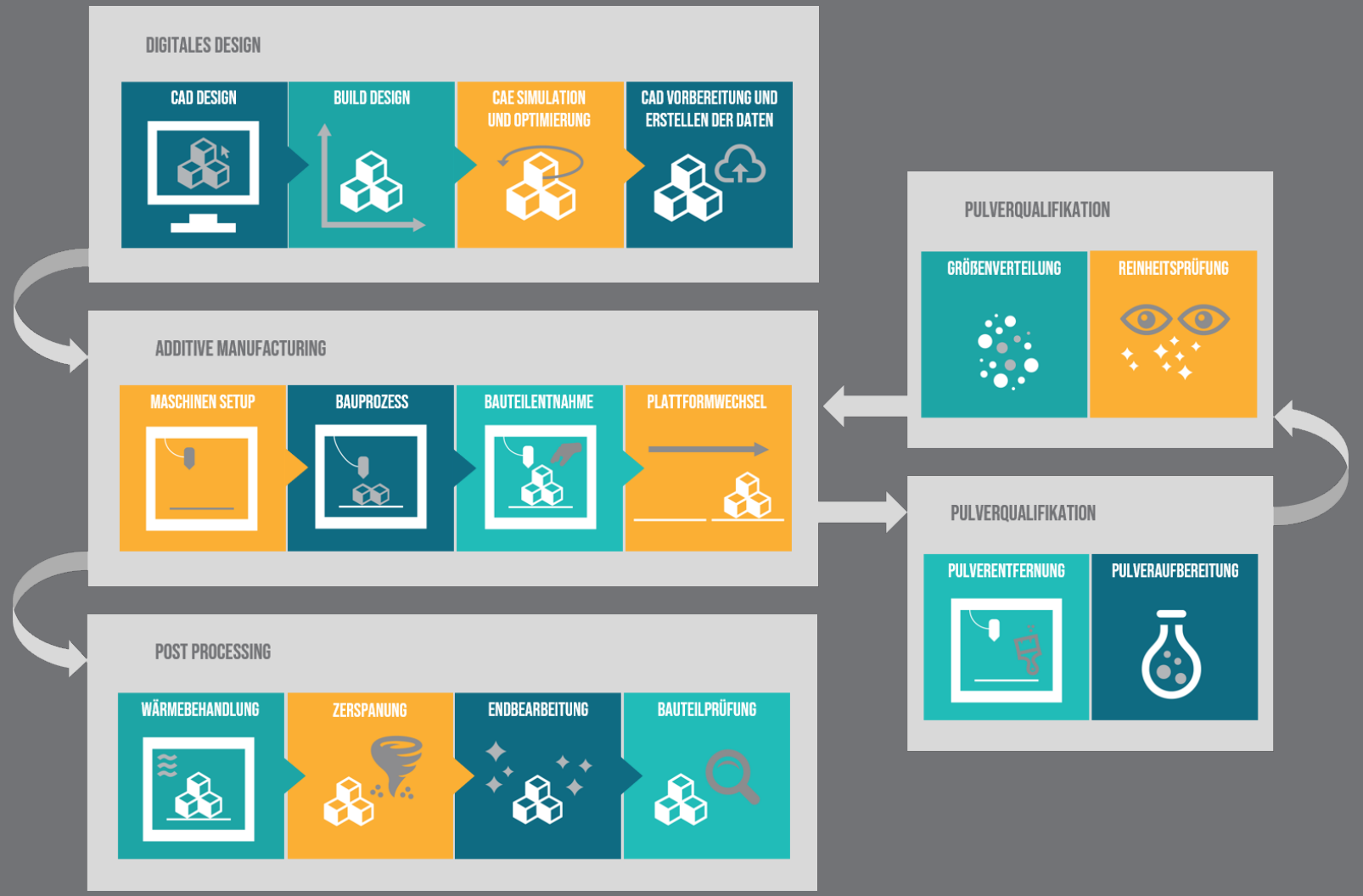
- Analyze the value of using blockchain technology in the additive manufacturing
- Explain the principles of blockchain technology
- Discuss use cases with industry experts

Trust in digitization thanks to blockchain technology

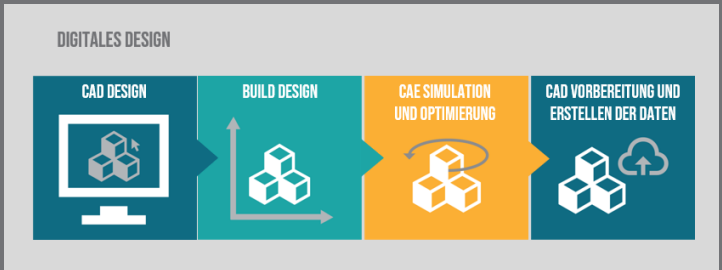
5 Blockchain principles

1. **Robust and decentralized**
   Information is stored into a distributed network
2. **Trust**
   The integrity of information is ensured through consensus
3. **Transparency**
   Information signed, secured and visible
4. **Predictability**
   Smart contracts are describing the collaboration in the ecosystem algorithmically
5. **Safety**
   Highly complex, proved algorithms control the blockchain and sign information

Digitize the additive manufacturing process

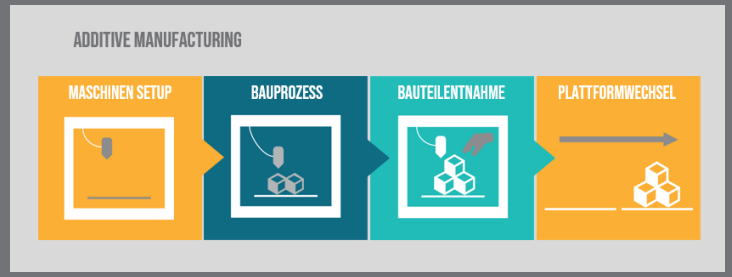


Digital platform for additive manufacturing – use cases



Design phase

- How can I ensure that nobody change or misuse my design when we are working in a group?
- Is there a way to offer only design of sup components to other designers?
- How can I ensure that the data for the manufacturing are not corrupted?
- How can I ensure that I'm not accountable, when the manufacture process deviate from my design?
- How can I protect my intellectual property?
- How can I provide a secure licensing for the usage of my designs?



Manufacturing phase

- We want be sure that the conditions in the manufacturing process are within the specifications, how can we notify any aberration in temperature, vibration or other conditions?
- How to manage a shared manufacturing environment to ensure that same parameters are used for all prints.
- How to manage a shared manufacturing environment; how can I ensure they pay what they print?
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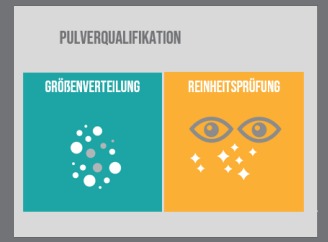
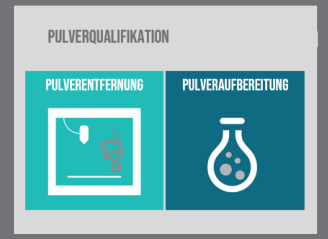
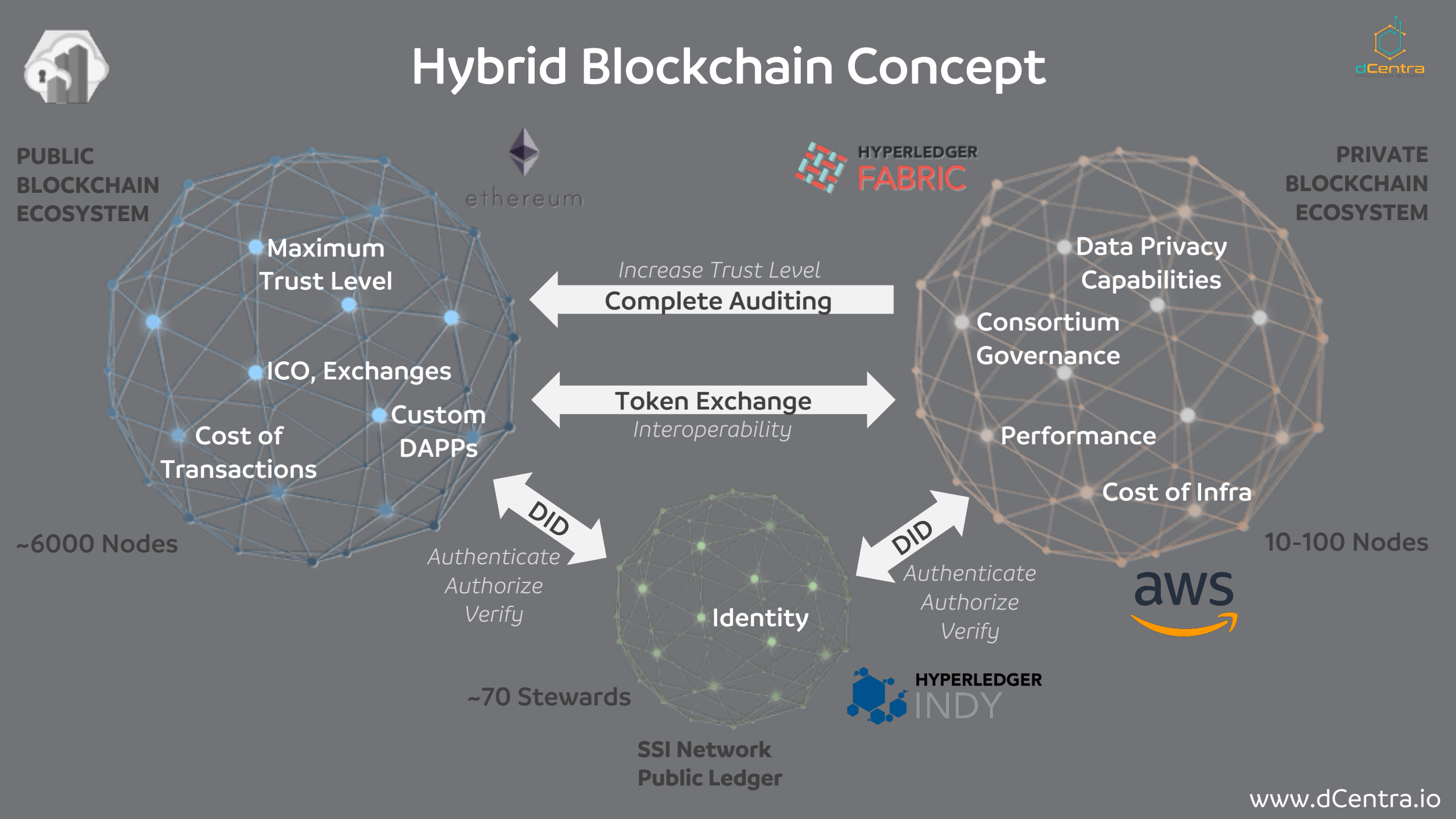




Material mix

We guaranty the quality of the object when the manufacture use our powder, how can we check this?

Hybrid Blockchain Concept