



# Kann Blockchain Herausforderungen der Content-Wirtschaft lösen?

// wolfgang senges

2. WebXpert Tagung  
OpenText Web Solutions UserGroup e.V.,  
München, 07.06.2018

**Content**Sphere



# overview

- (1) What's difficult in understanding Blockchain?**
  - (2) How does Blockchain work?**
  - (3) Which are the Pros & Cons?**
- (4) Why is Content Industry's role important?**
  - (5) What are the challenges of applying Blockchain to Content Industry?**



prelude

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Blockchain is a **concept**, not a technology.

Blockchain comes **not bundled** with a  
cryptocurrency.



prelude

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Blockchain is a **neutral architecture**  
underlying industries.

Enthusiastic **visions** vs.  
rarely **rational** evaluation.



**Now, what  
IS  
Blockchain?**



Well...

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# Where to start?



Well?

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# Distributed Ledgers

# Crowd-sourced Consensus

# P2P-Networks



Well?

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Encryption  
Tokens  
Transactions  
Rule-based Processing





two reasons for complexity

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The sheer **diversity of technologies** involved.

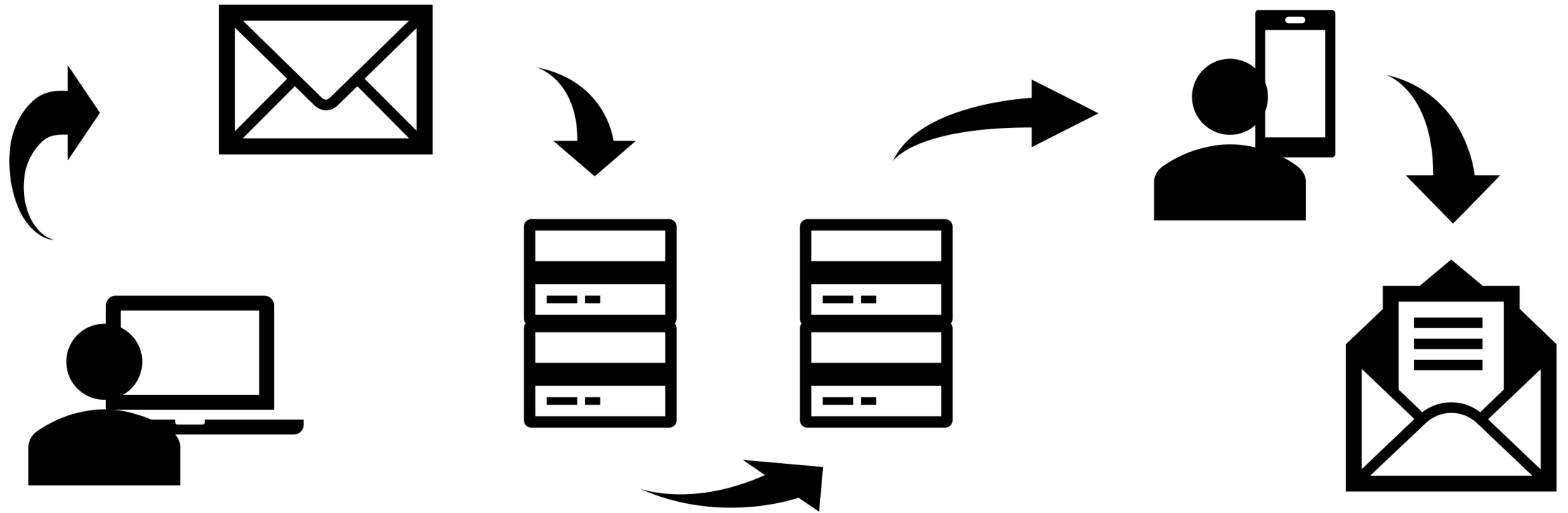
The **variety of contexts** that Blockchain is squeezed into.



**An Example.**



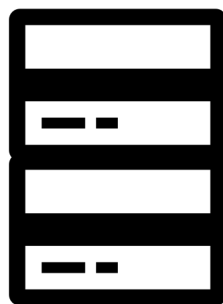
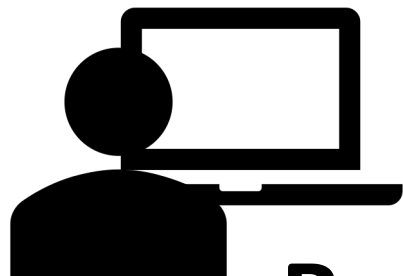
# email



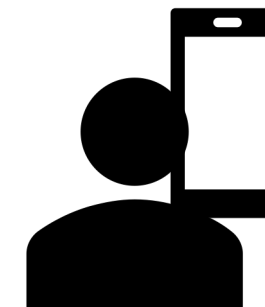


email

**Password?**



**Spam?**



**Password?**



**Recipient ok?**





# email in a blockchain context

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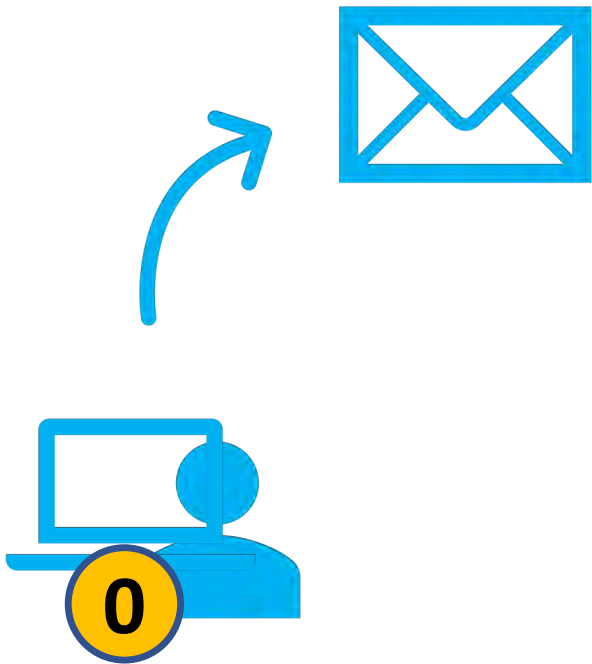
Mmmkay, but why?

Email works fine as it is, doesn't it?!?



# email: added value by blockchain

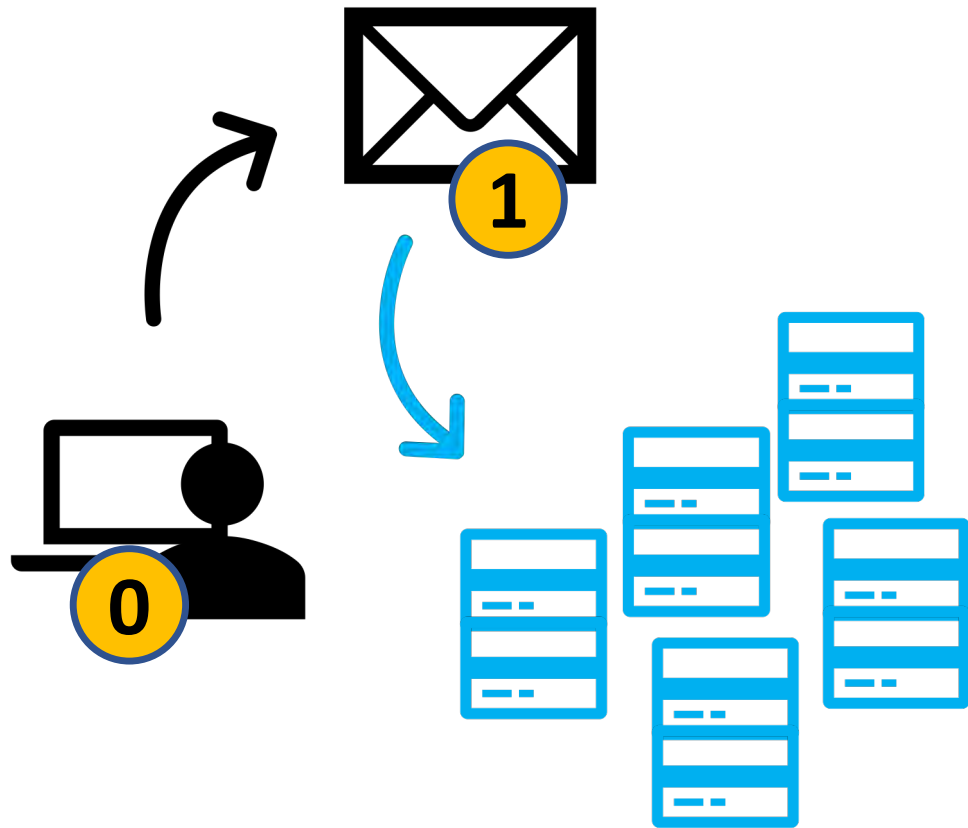
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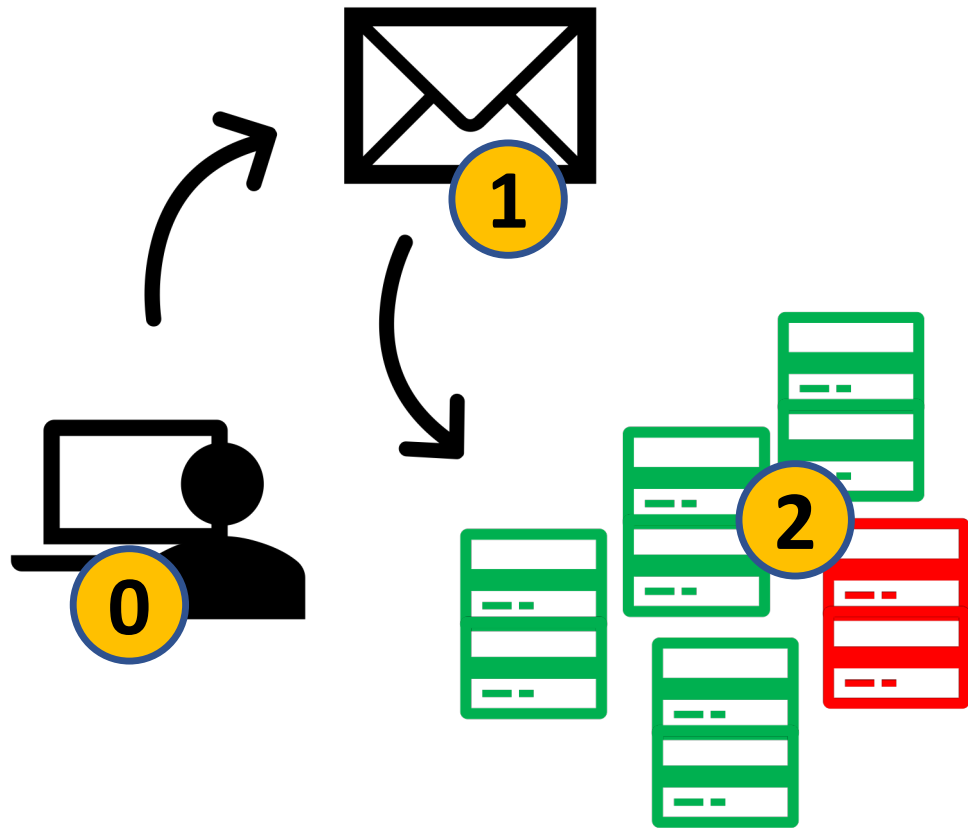
# email: added value by blockchain

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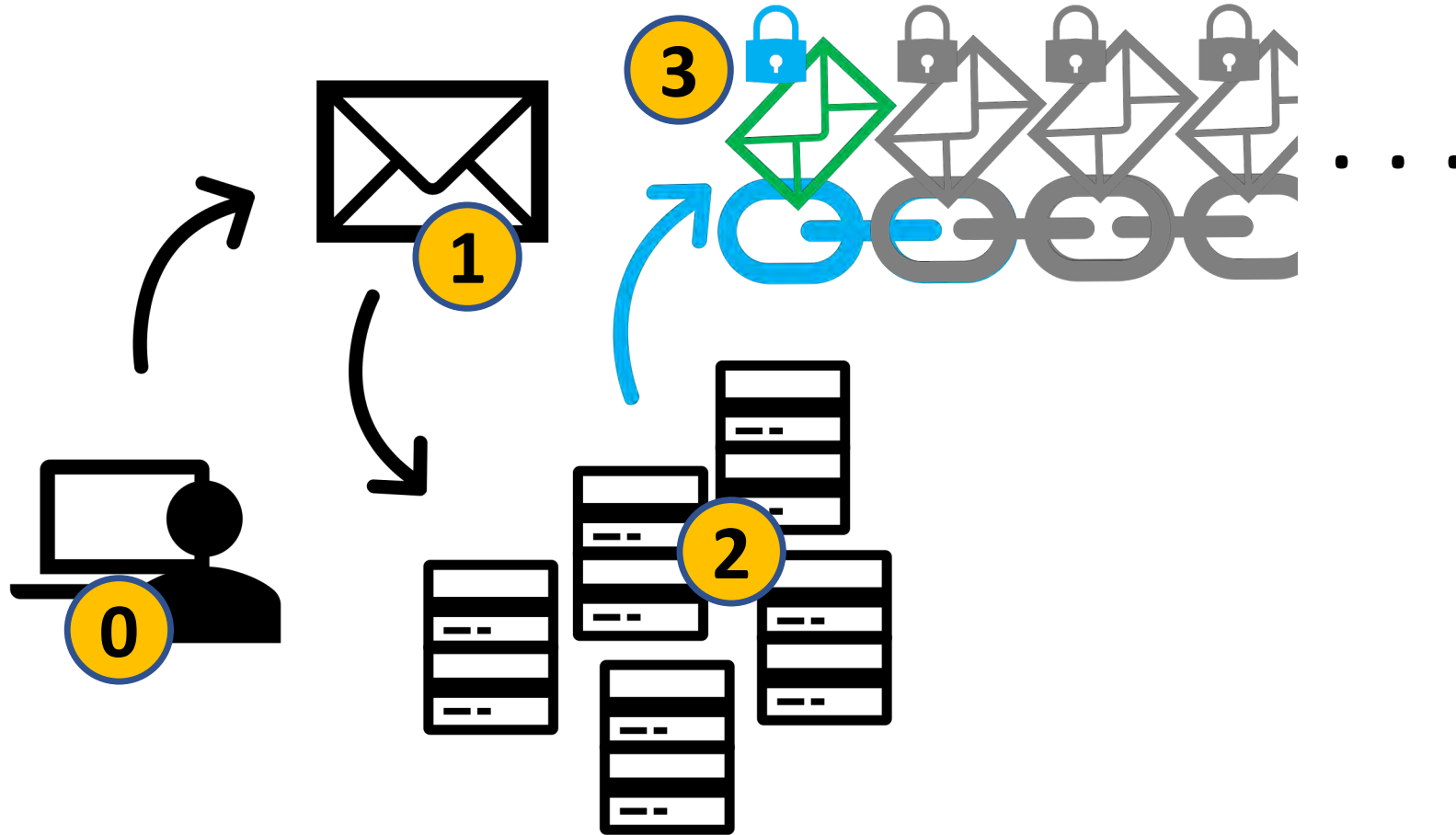
# email: added value by blockchain





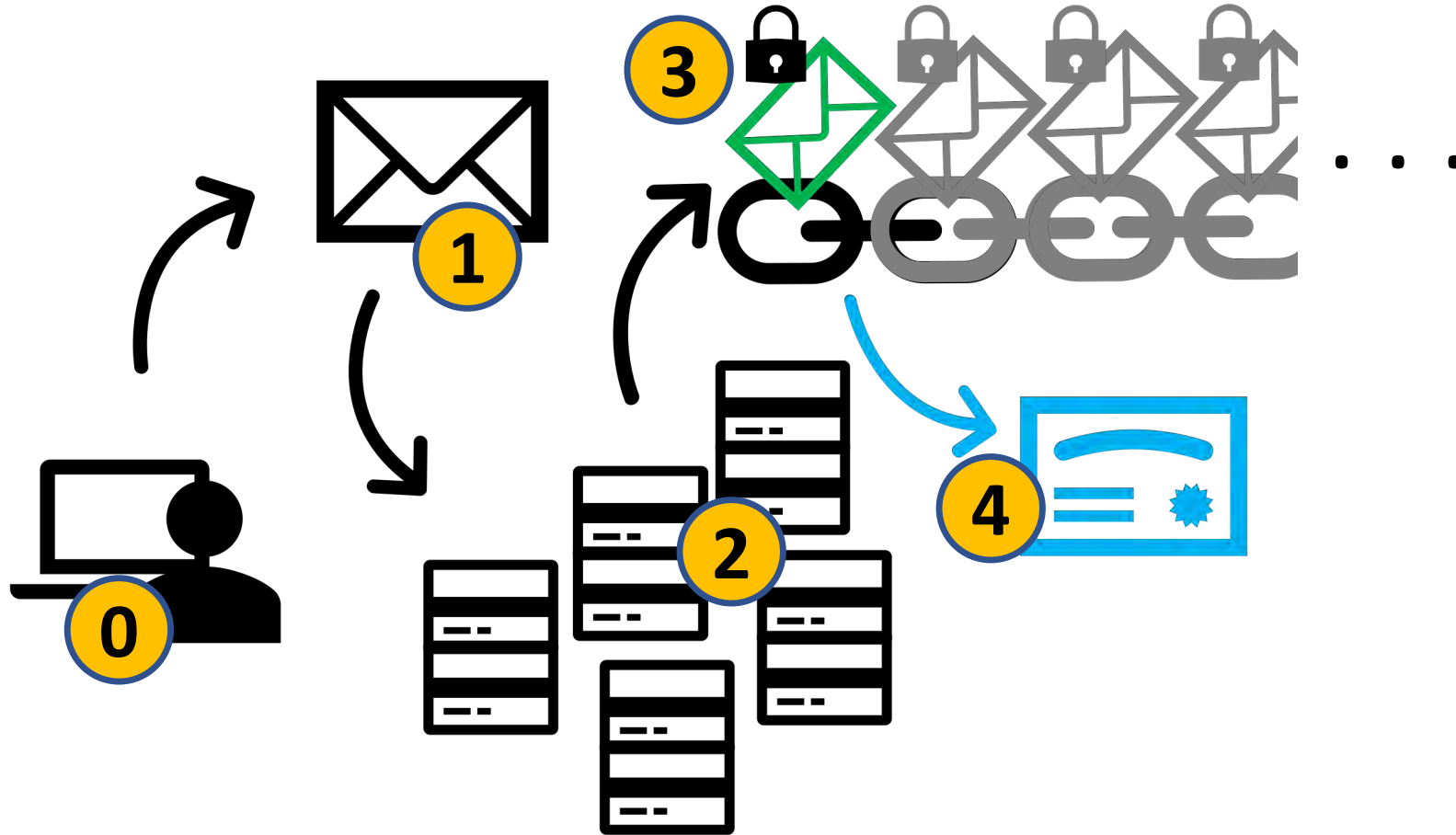


# email: added value by blockchain



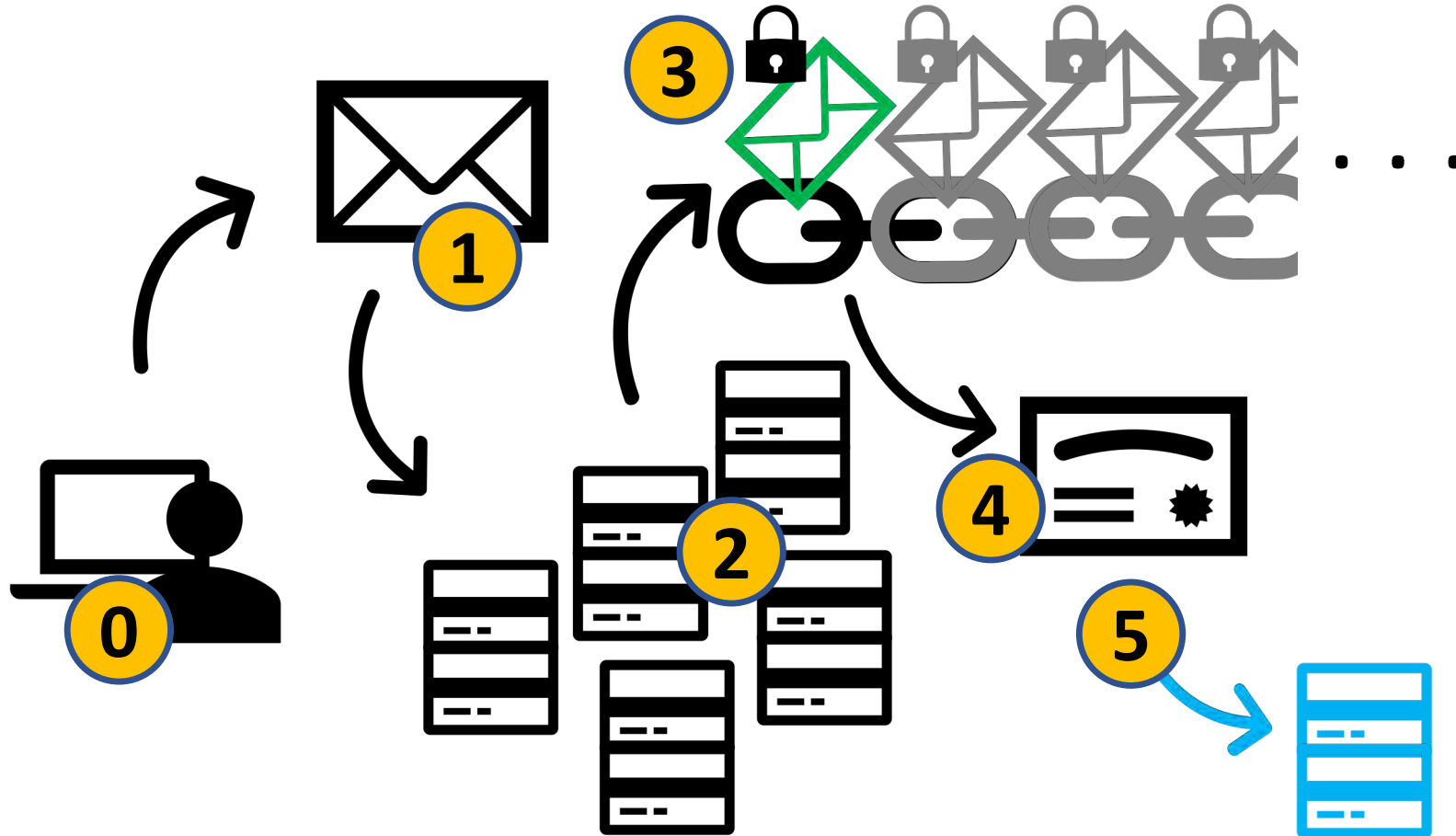


# email: added value by blockchain



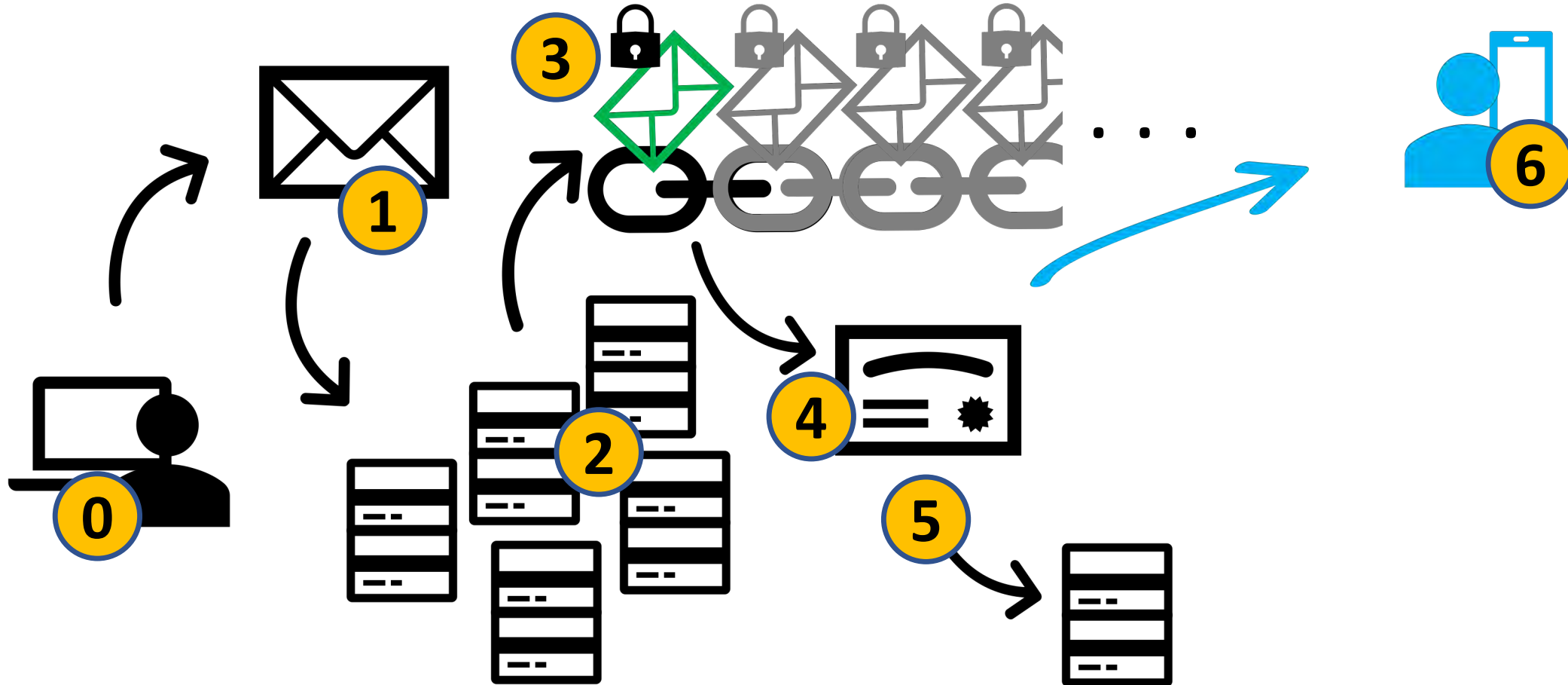


# email: added value by blockchain



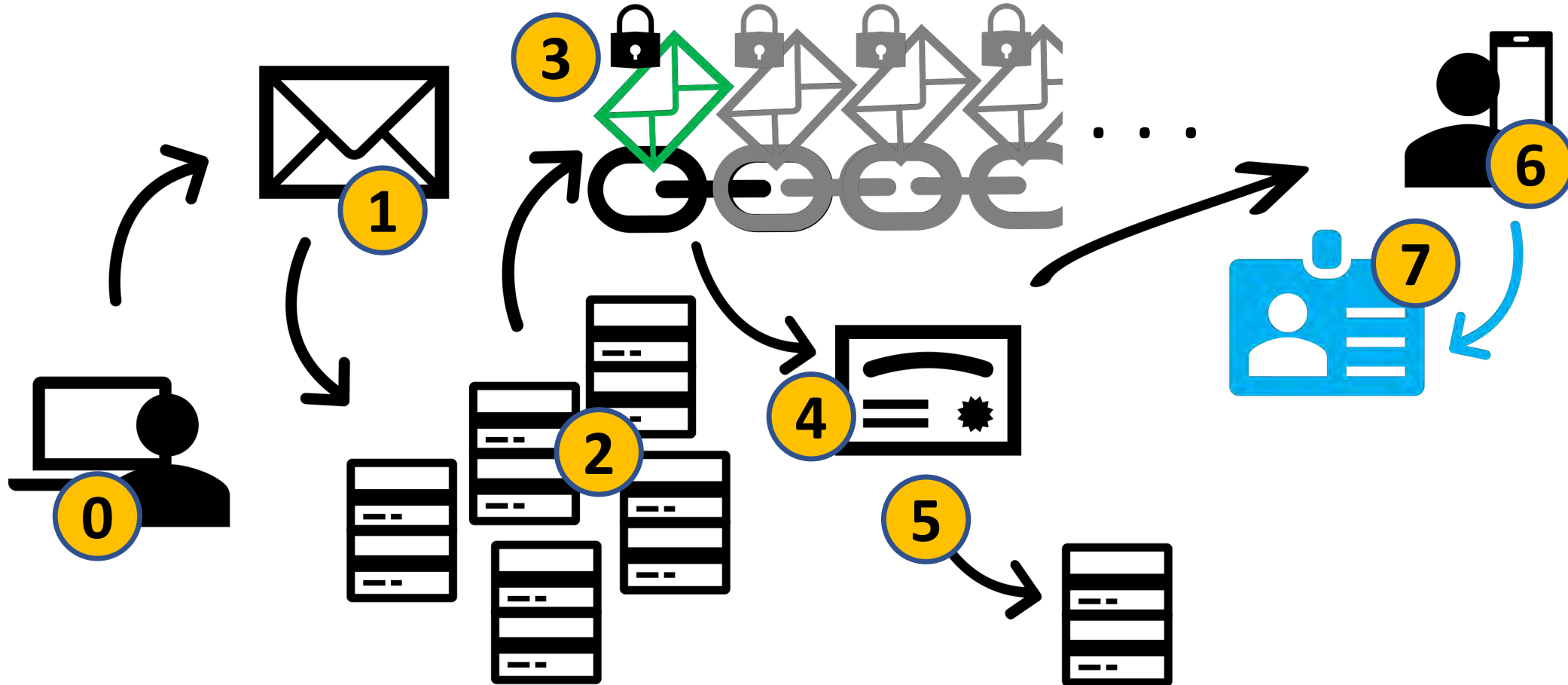


# email: added value by blockchain



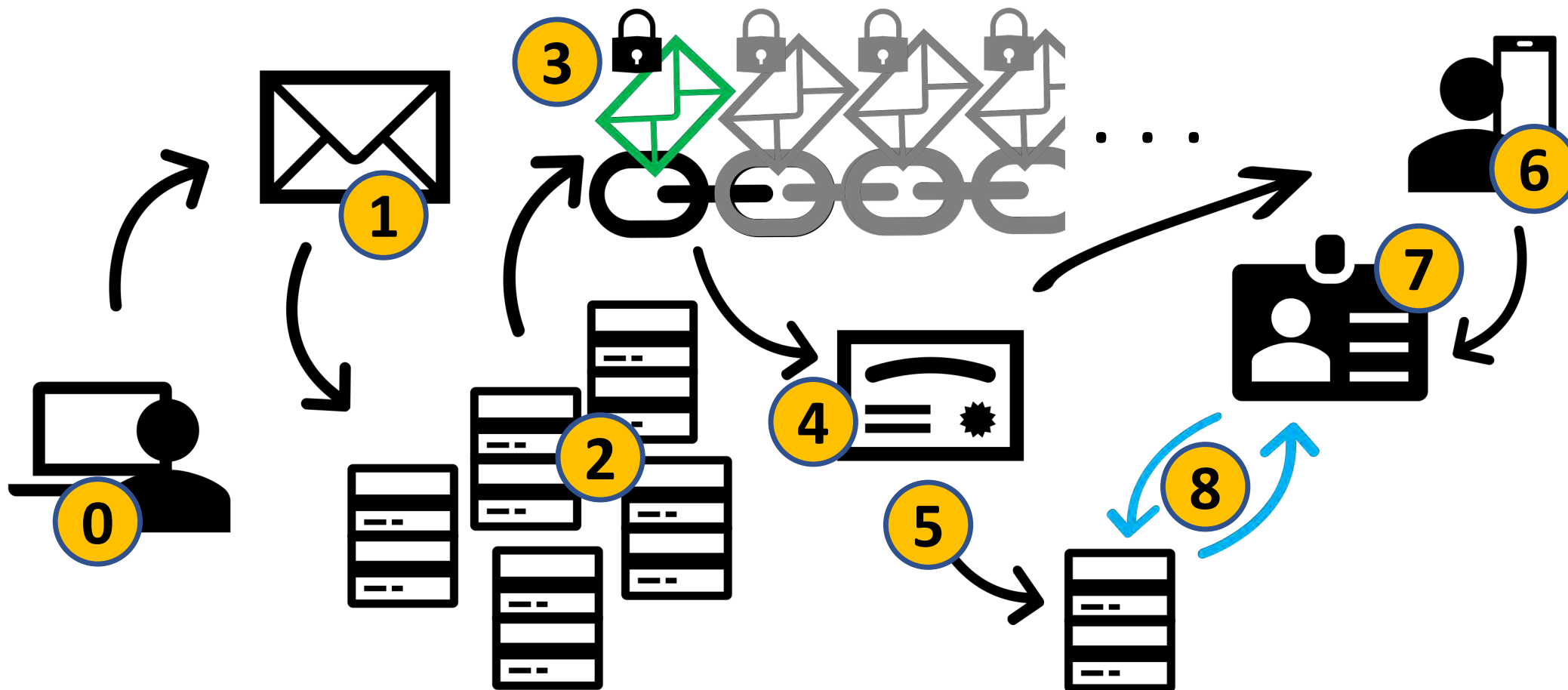


# email: added value by blockchain



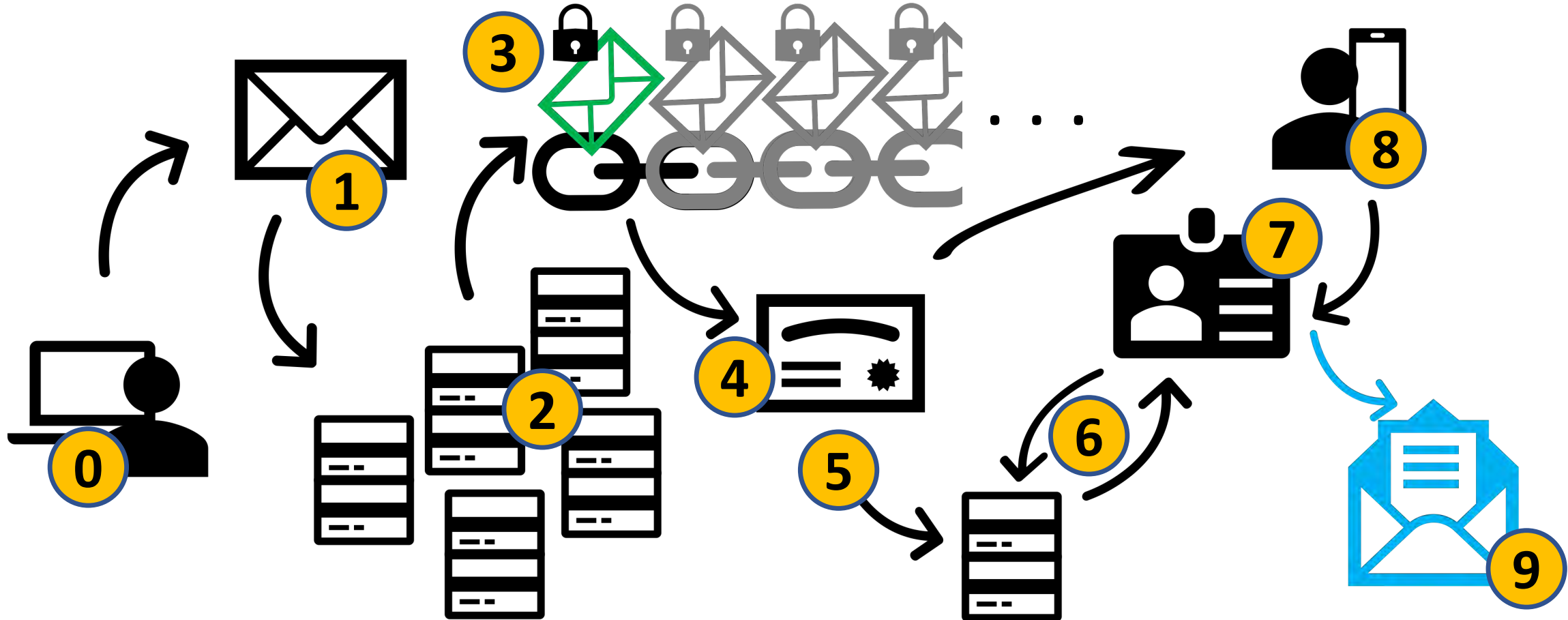


# email: added value by blockchain





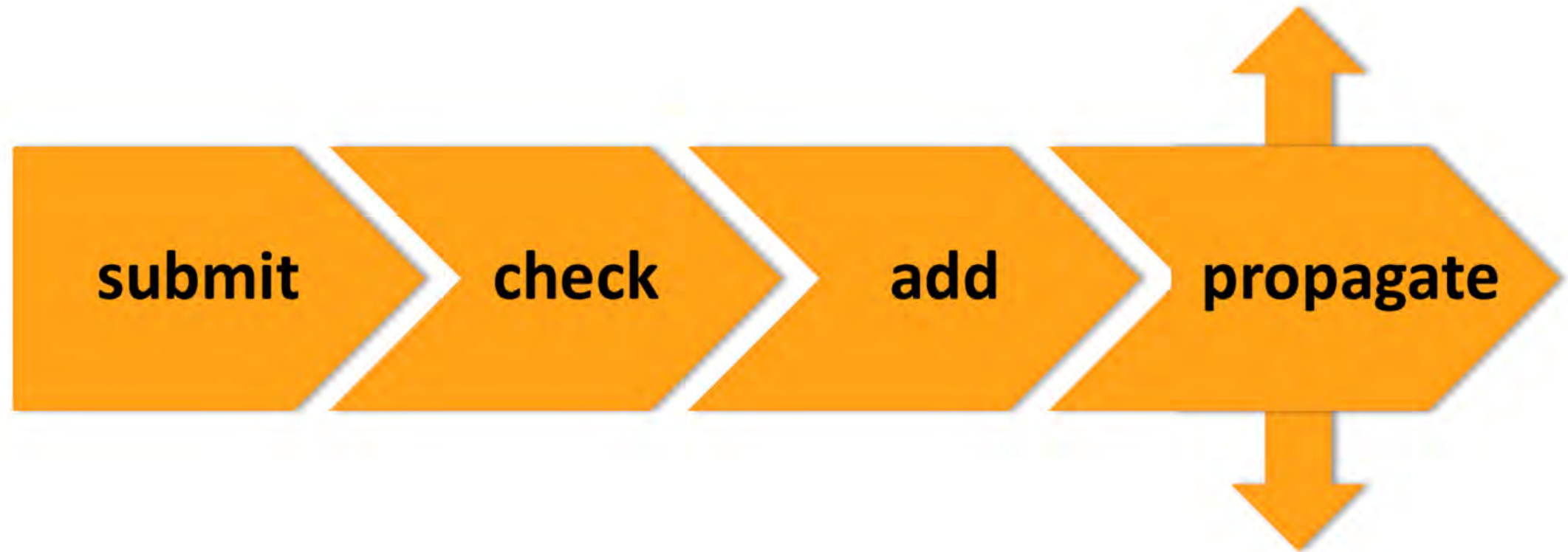
# email: added value by blockchain





# blockchain workflow

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# Pros & Cons.



# pros & cons



**Good:**  
**No property is a bad one by nature.**

**Bad:**  
**Each one on its own can turn into a nightmare.**

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# advantages

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**+ Immutability.**

**+ Crowd-based data validation.**

**+ Authentication.**



# advantages

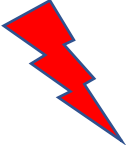
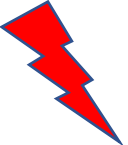
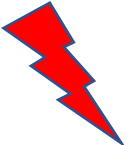
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- + Propagated **synchronization** via P2P.
- + **Automatized** validation & transactions.



# disadvantages

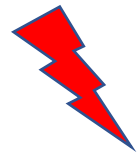
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-  **Data security – no deletion of data.**
-  **Ambiguity of transparency.**
-  **Challenge of scalability.**

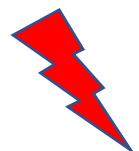


disadvantages

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 **Security leaks by referrers to external data.**

 **Smart contracts as a source of failure.**

 **Secure encryption – for the time being.**



questions

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# Can Blockchain really bring a worthwhile advantage?



**Focus on  
Content / Music Industry.**





content industry

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Representative for any industry  
that is based on  
**intellectual property.**



content industry

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Core issue:

**Revenue is based on licensing,  
Licensing is based on metadata.**



content industry

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**Vast number of parties involved.**  
**Highly complex contractual obligations.**  
**Storage capacity for raw product data.**  
**Security of product data.**



content industry

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**Hardly any industry has higher requirements than any one that is IP-based.**



# The Challenge of Evaluation and Mapping.



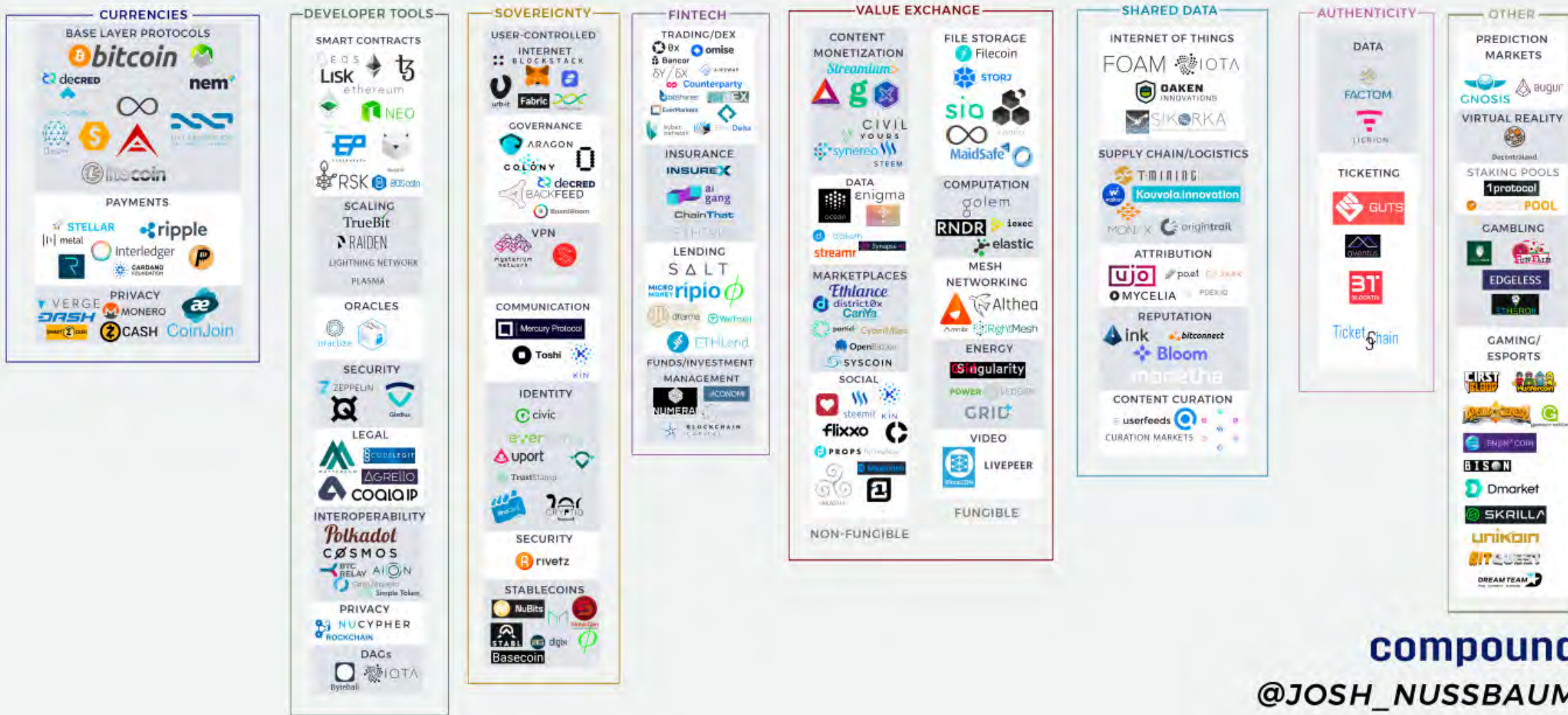
current situation

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**Few applications,  
zillions of projects.**



# BLOCKCHAIN PROJECT ECOSYSTEM





MATTEO GIANPIETRO ZAGO





diversity of requirements

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**Each industry requires  
a different mapping scheme.**



diversity of requirements

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**Take a step back.**



back to standards

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1. Identifying your **demand.**
2. Drafting your **requirements specification.**
3. **Evaluating** the technology.



**Essential questions for  
mapping Blockchain.**



# requirements

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## **Ecosystem or single player only?**



requirements

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**Ecosystem:**

**Potentially more rewarding,  
Certainly way more demanding**



requirements

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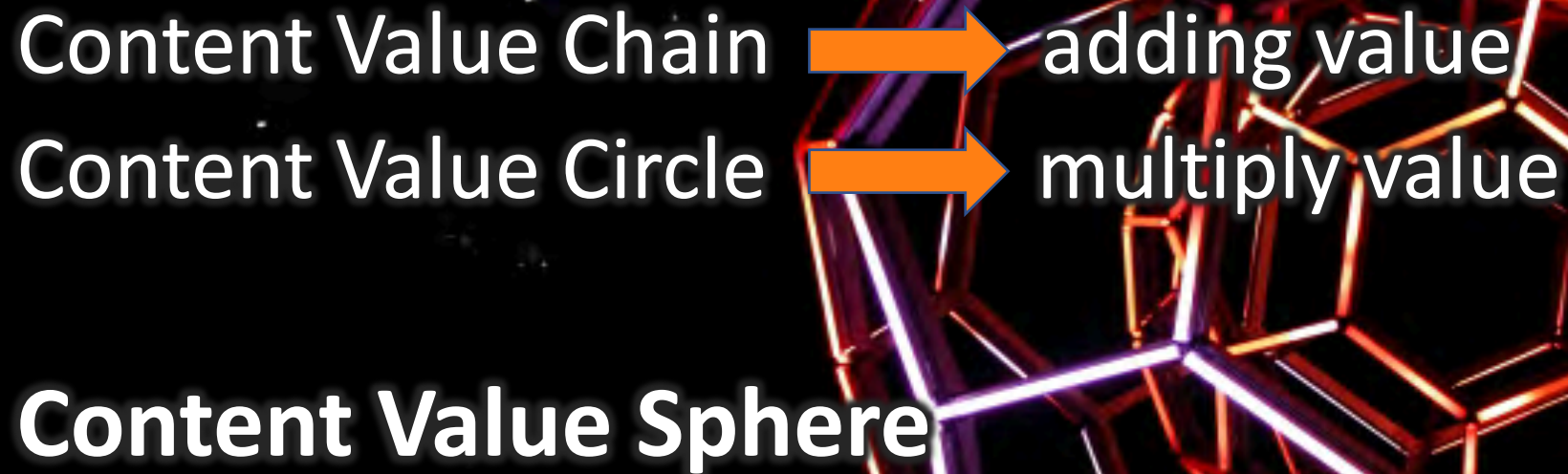
Data security:

**Data governance vs. data sharing**

**Immutability vs. GDPR**



# requirements



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requirements

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Framework for

**Managing multi-layered metadata,  
Validation & multiple authentication**



challenge of mapping

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**For an IP-based ecosystem,  
there is no scheme yet.**



challenge of mapping

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**80% mapping (at least)**

**5% evaluation**

**15% Blockchain implementation**



**Thank you!**



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# email

