KERI: Facilitating secure data flows in an auditable supply chain

Robert Mitwicki

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Robert Mitwicki

Stem Cell, The Human Colossus Foundation

Head of the Technical Council
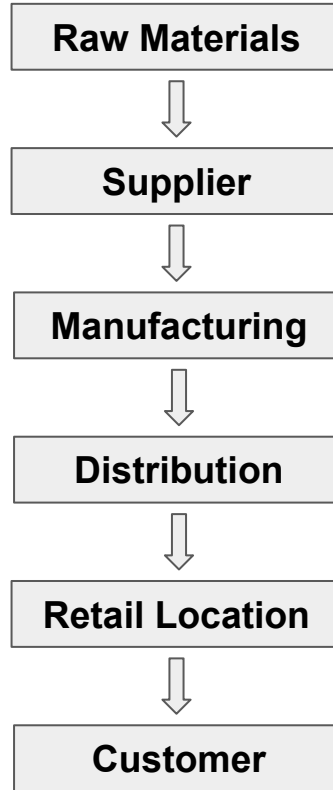
Data is like electricity it has value when it flows.

Supply Chain - Overview

Raw Materials

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Supplier

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Manufacturing

↓

Distribution

↓

Retail Location

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Customer

Supply Chain - Benefits

1. Manage demand

2. Carry the right amount of inventory

3. Deal with disruptions

4. Keep costs to a minimum and meets customer demand in the most

   effective way possible

5. Feedback loop on every step of the chain

Supply Chain and why you need Blockchain

- Time-stamping, tracking, and automating transactions, so that events can be audited in real time
- Minimizing the involvement of intermediaries such as bankers, insurers, and brokers
- Setting up a wide range of self-executing contracts to automate repetitive processes such as billing and shipping
- Establishing proof of quality, provenance, payment, and performance to minimize counterfeiting and fraud
- Making it easier, faster, and cheaper to onboard new vendors and partners by assigning digital IDs

Supply Chain and why you DON'T want Blockchain

- Lack of Interoperability - *my ledger vs someone else ledger*, how to bridge it and navigate
- Problem with Governance Framework - who decided who can join?
- Scaling
- Privacy

KERI

https://keri.one/

Truly Decentralized Identity

KERI is the first truly decentralized identity system. It is ledger-less which means it doesn't need to use a ledger at all or ledger-portable which means that its identifiers are not locked to any given ledger and may switch as needed. In other words KERI identifiers are truly portable.

GDPR friendly

KERI is inherently GDPR (general data protection regulation) friendly. KERI provides non-intertwined identifier trust bases which means that a given identifier's data may be truly forgotten.

Self-Certifying Identifiers

KERI has a decentralized secure root-of-trust based on cryptographic self-certifying identifiers. It uses hash chained data structures called Key Event Logs that enable ambient cryptographic verifiability. In other words, any log may be verified anywhere at anytime by anybody. It has separable control over shared data which means each entity is truly self-sovereign over their identifiers.

Scalability

KERI is designed for high performance and scalability. It is compatible with data intensive event streaming and event sourcing applications.

Key Management Infrastructure

One useful way of describing KERI is that it is a decentralized key management infrastructure based on key change events that supports both attestable key events and consensus based verification of key events.
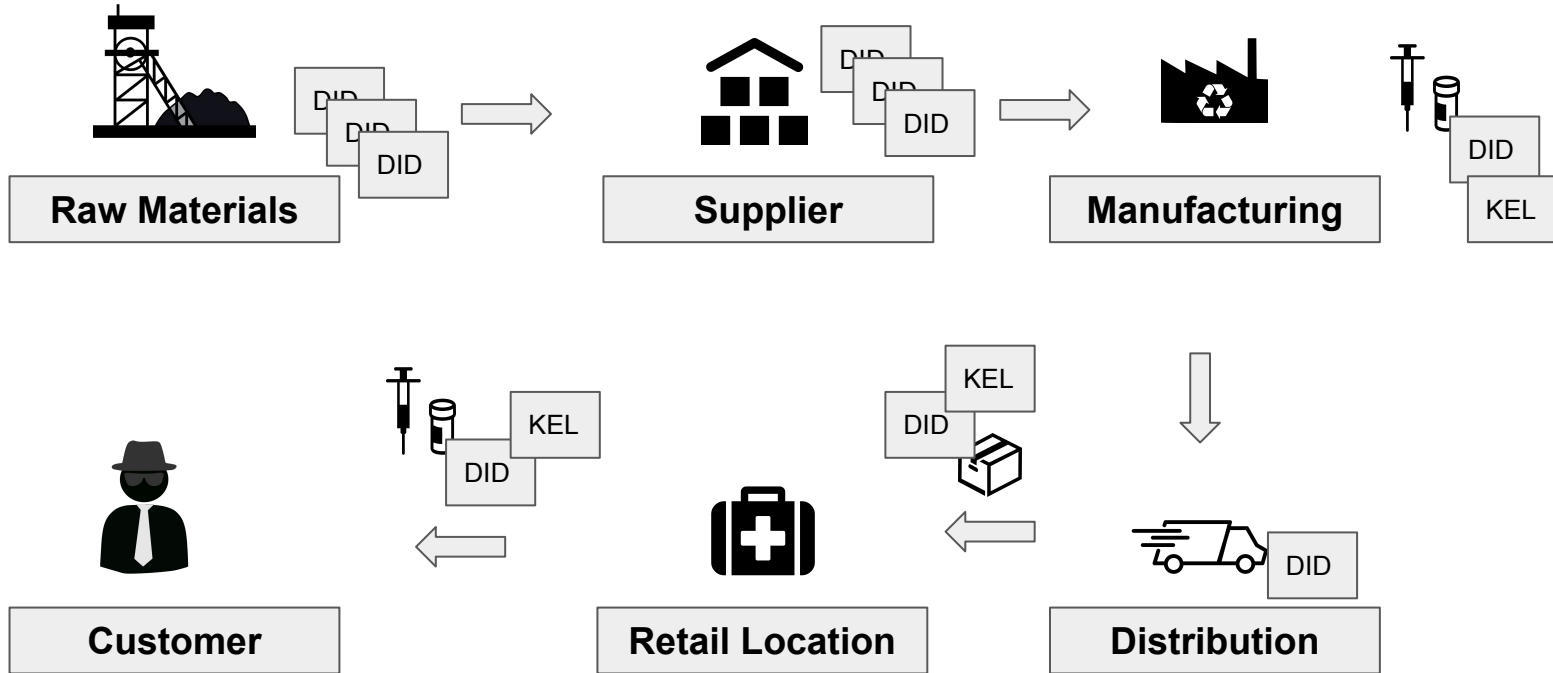
Open Apache2

Best of all KERI is open Apache2. It is a project hosted by the Decentralized Identity Foundation which operates under the umbrella of the Linux Foundation.

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Microledger approach - KERI

Questions?