

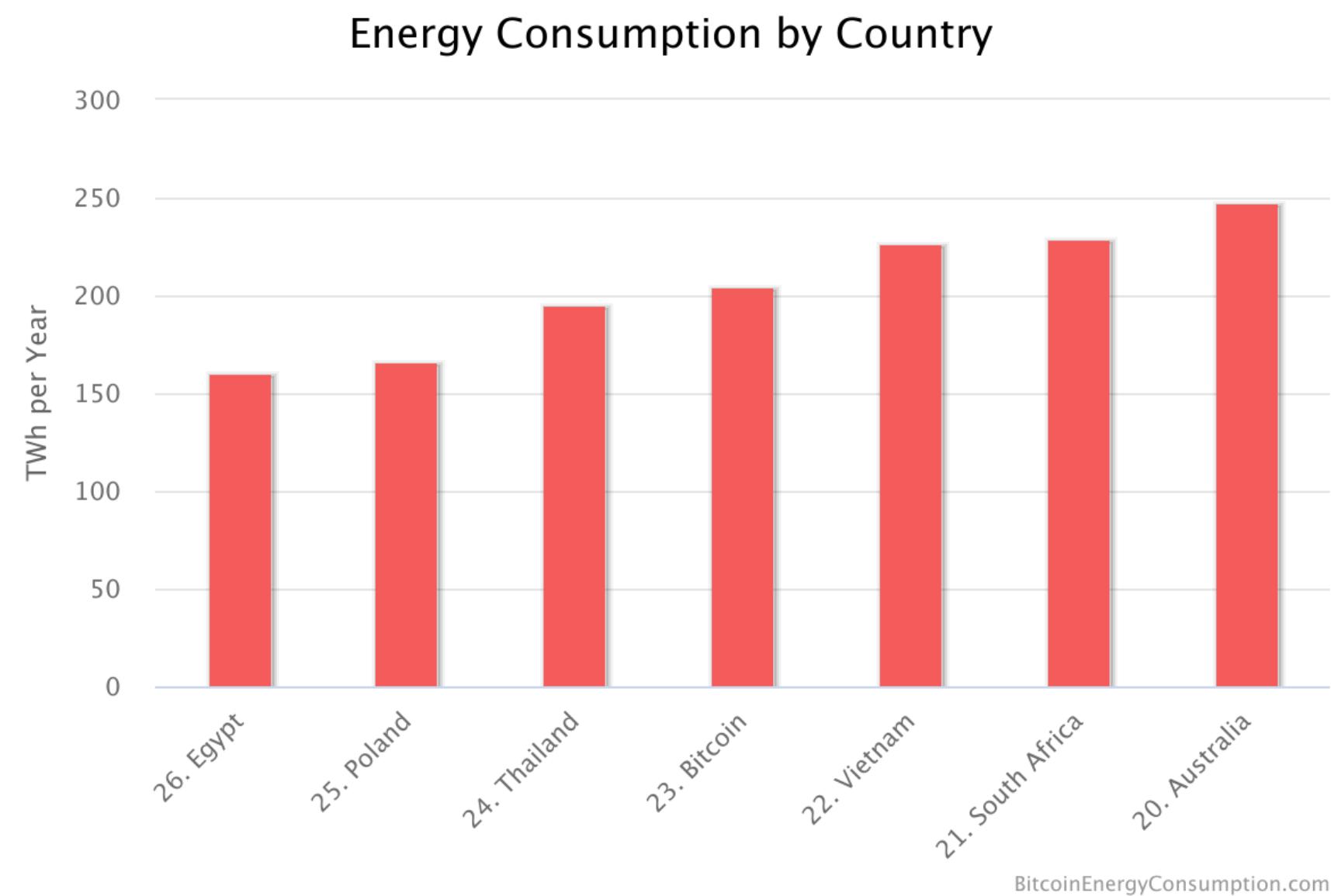
Why use blockchain?

Bitcoin Downsides

Throughput at most 7tx per second

Confirmation latency approx 1h

Enormous energy consumption



Why blockchain?

Blockchain

- No intermediary
- No single point of control
- Final settlement
- Immutability

Why blockchain?

Blockchain

- No intermediary
- No single point of control
- Final settlement
- Immutability
- Cheaper financial services
- Trust across borders
- Accountability

Payment

Blockchain payments

Blockchain



Blockchain payments

Blockchain

Pro:

- Cheaper?
- Final?
- International
- No bank account needed

Con:

- Throughput lacking
- Expensive to change



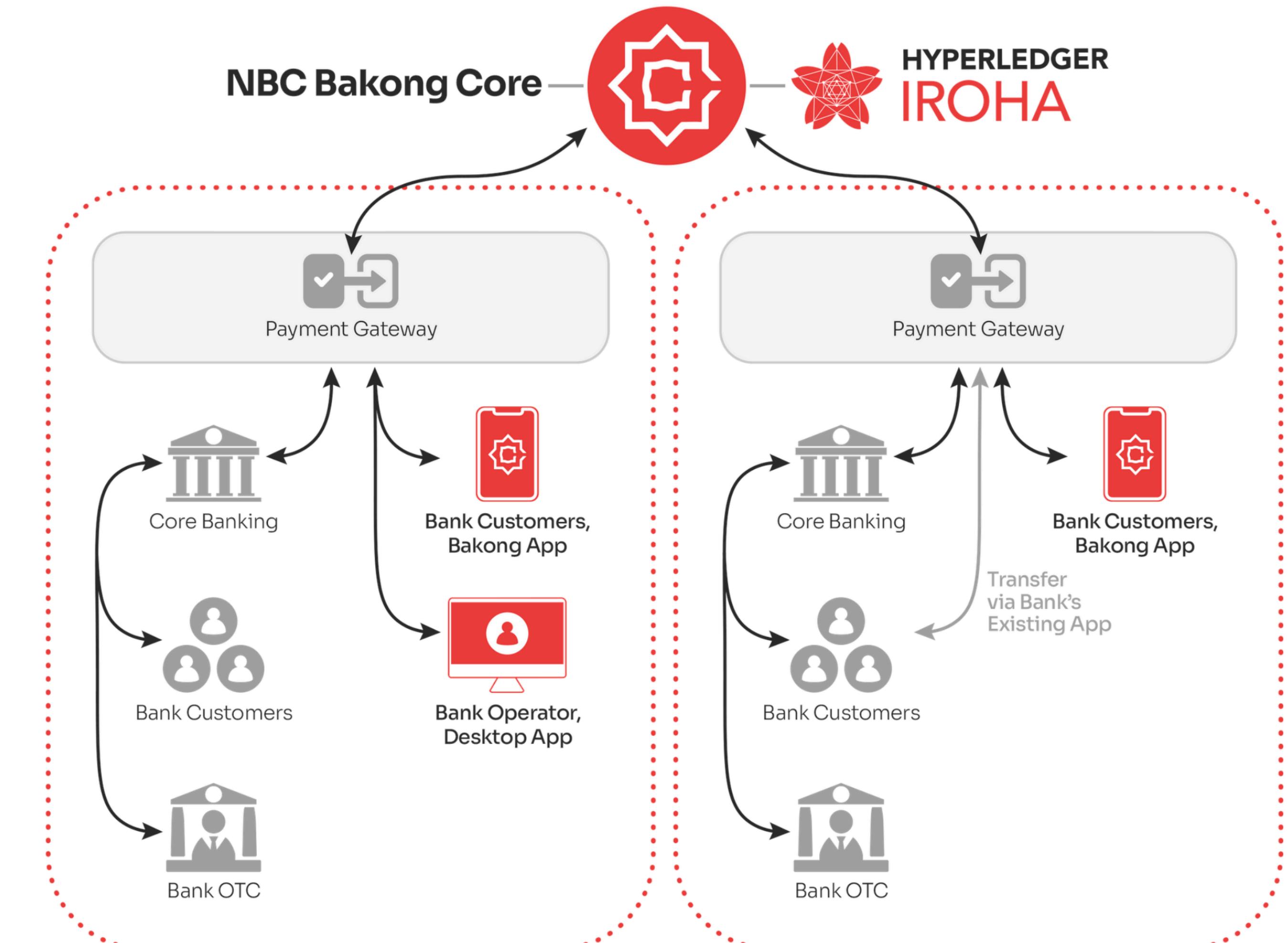
Inter bank payments

- Financial
 - International bank payments
 - Avoid long settlement
 - Not an open blockchain
(not everyone can be a miner)



Central bank digital currency

- Inter bank payments
- Inter customer payments?
- Not an open blockchain
(not everyone can be a miner)



Immutability

Use cases

Blockchain

- Accountability
 - Blockchain datastructure is used as log.
 - E.g. record data access
 - E.g. record decisions (autonomous vehicles)
 - E.g. record revocation of certificates

Use cases

Blockchain

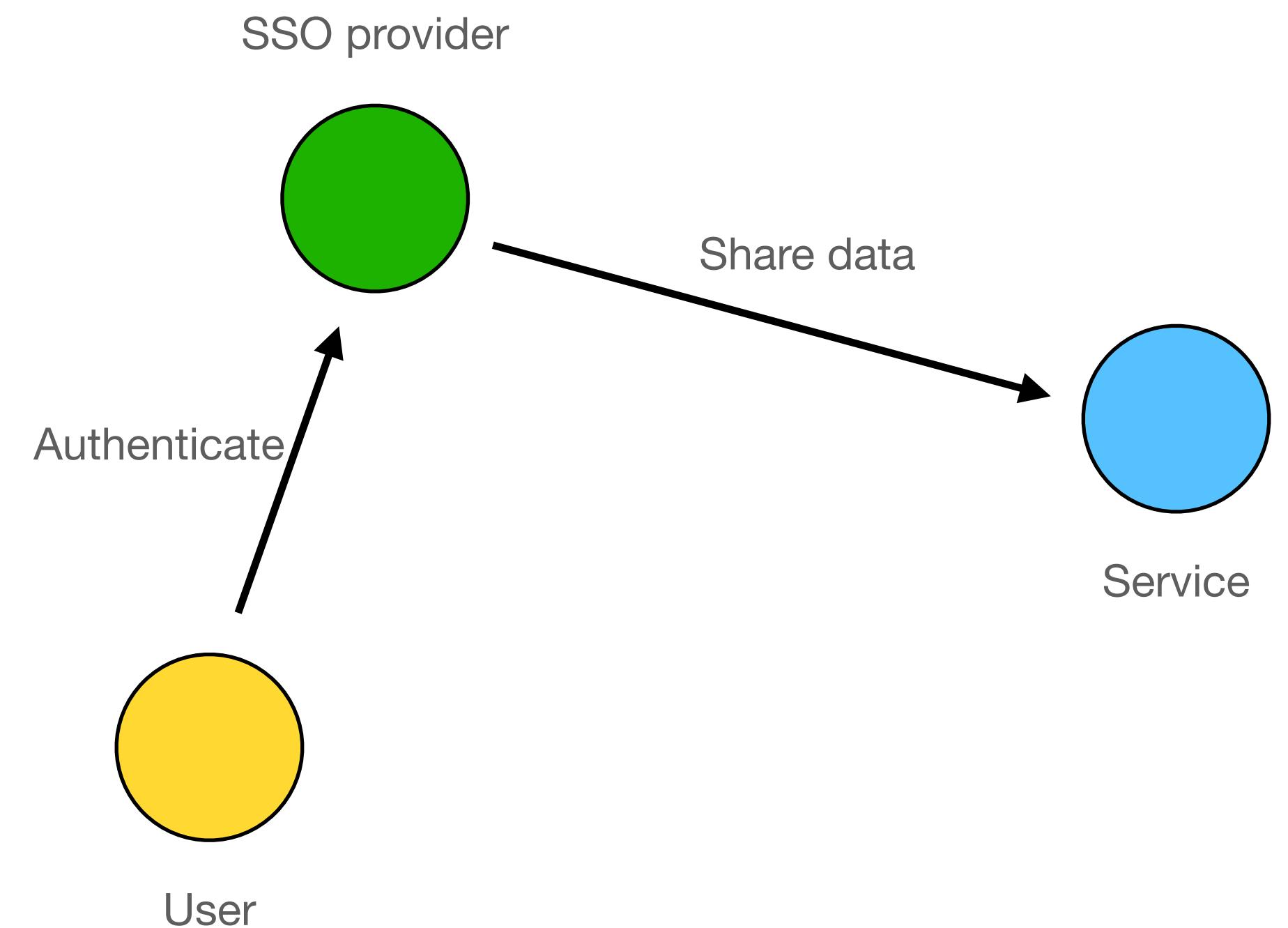
- Supply chain
 - Idea: Record each step in manufacturing on the chain.
 - Can trace faulty components
 - Can prevent fraud
 - Verify manufacturing conditions
 - Problem: Is my wine the wine certified on blockchain?

Self-souverein identity

Use cases

Self sovereign identity

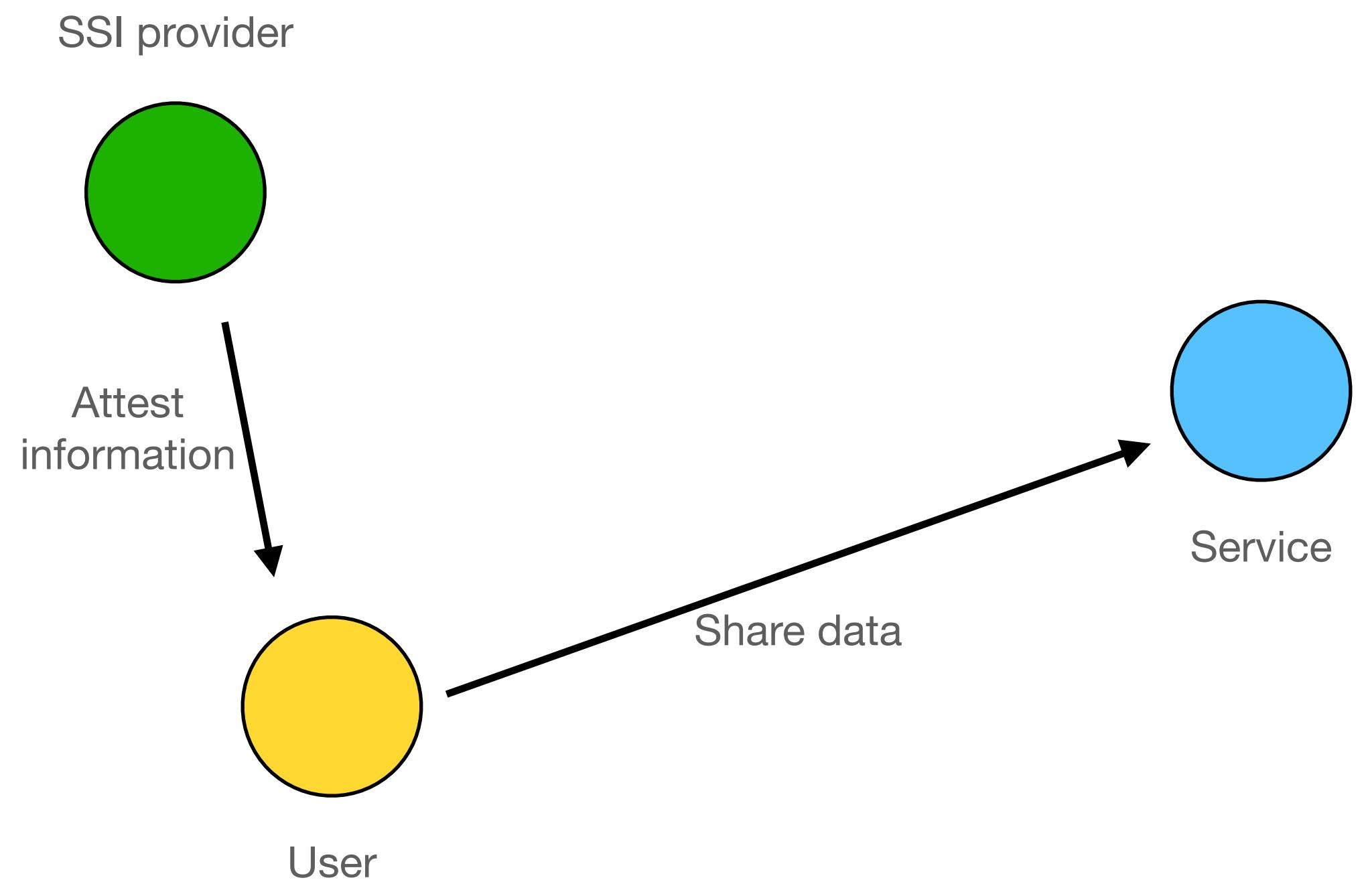
- Single sign on (SSO)
 - Authenticate to SSO provider
 - Provider shares information
 - Info stored at provider
 - Provider is always online



Use cases

Self souverain identity

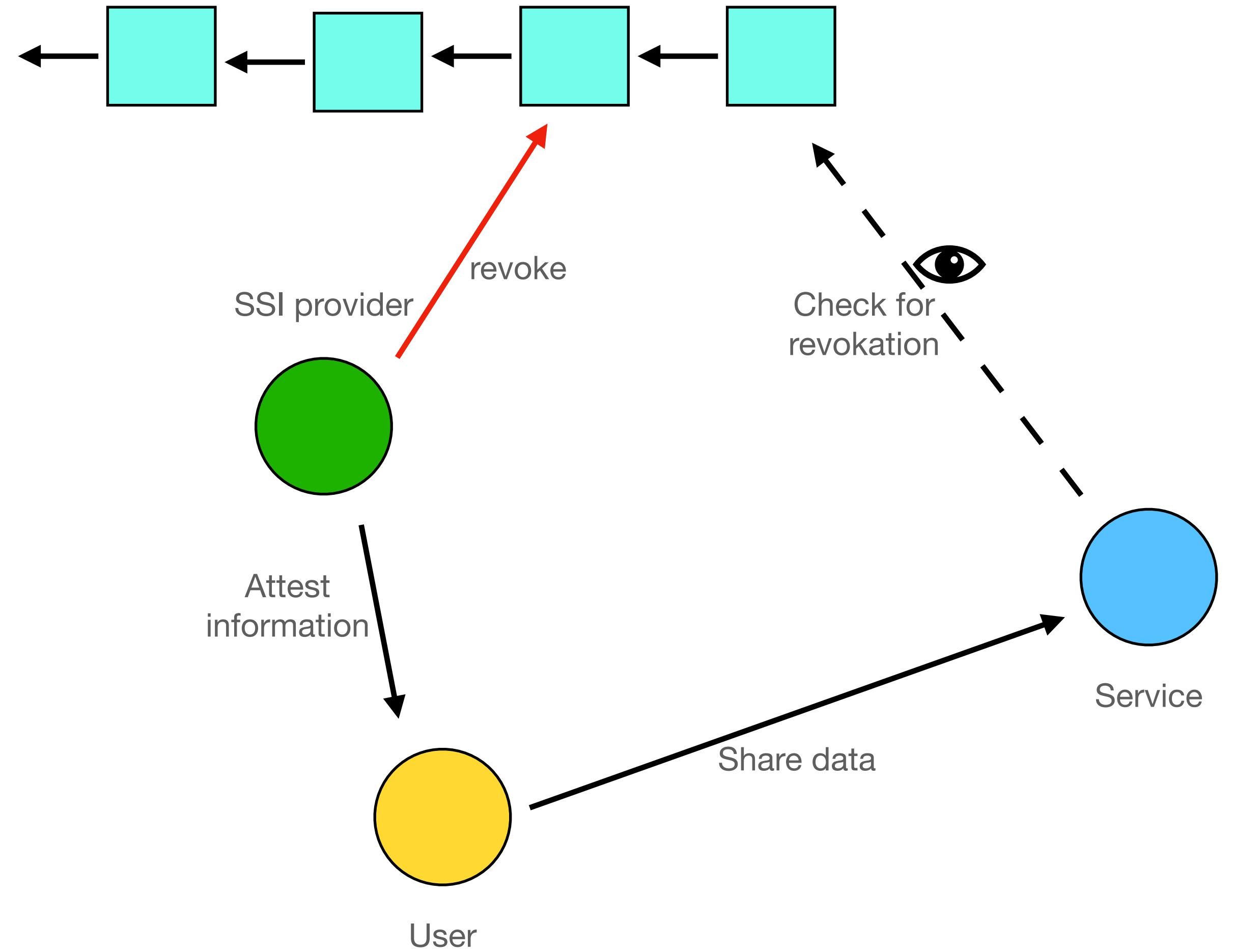
- Self souverain identity (SSI)
 - SSI provider attests information
 - User stores and shares his information
 - Authentication through digital signatures.



Use cases

Self souverain identity

- Self souverain identity (SSI)
 - SSI provider attests information
 - User stores and shares his information
 - Authentication through digital signatures
 - Service must check for revokation



Use cases

Do you need a blockchain?

