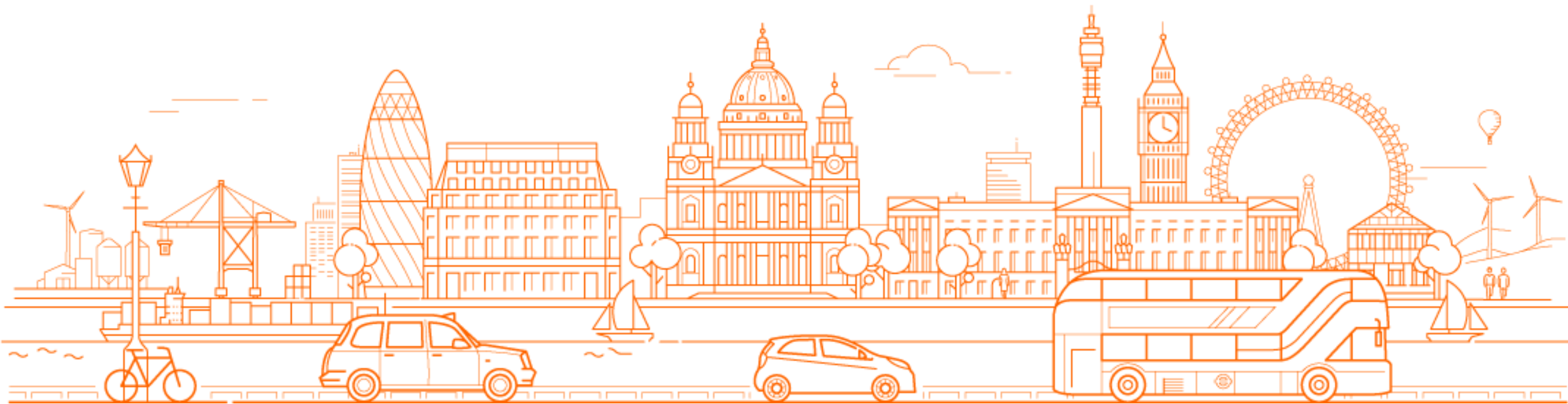
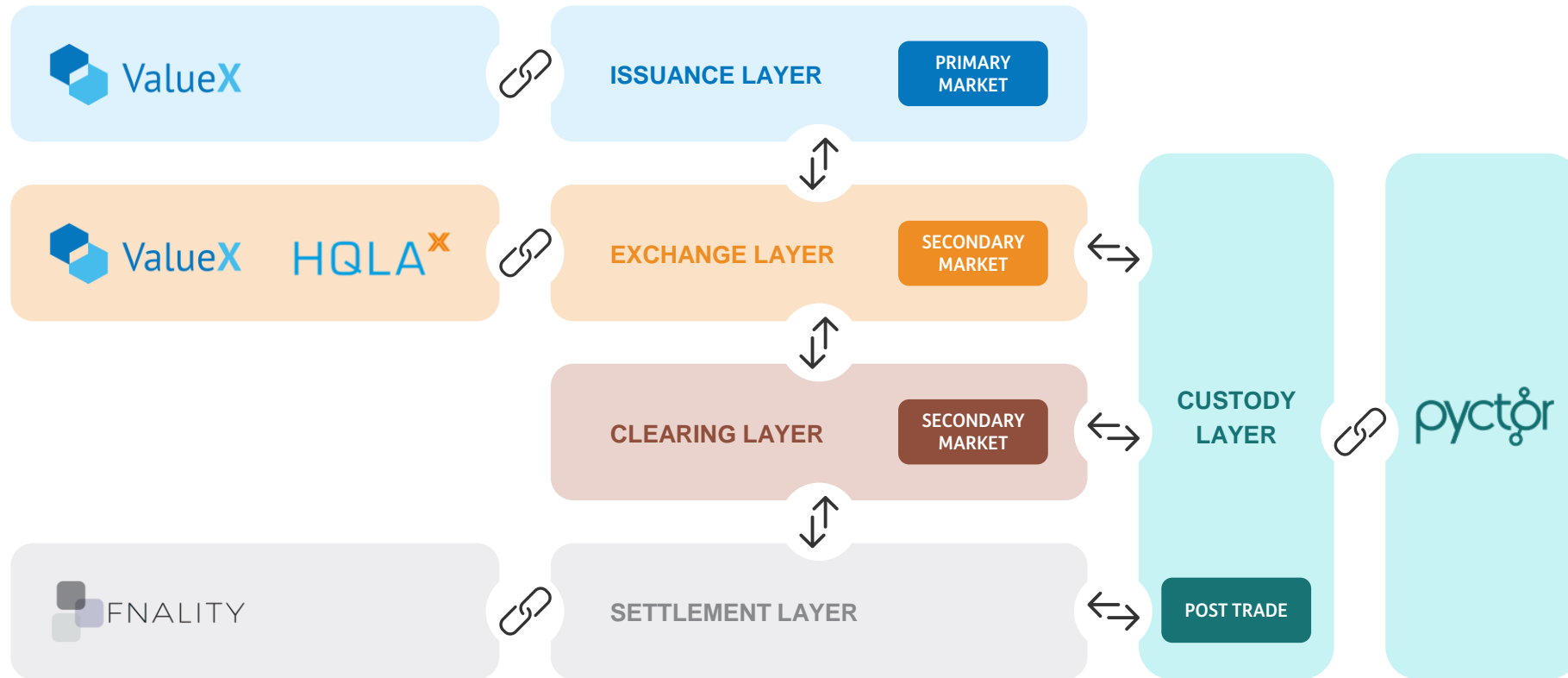


DLT Interoperability challenges in financial market infrastructure

Fintech Connect 2019 – 3rd December



Ecosystem Overview



Challenges



Regulation



Interoperability



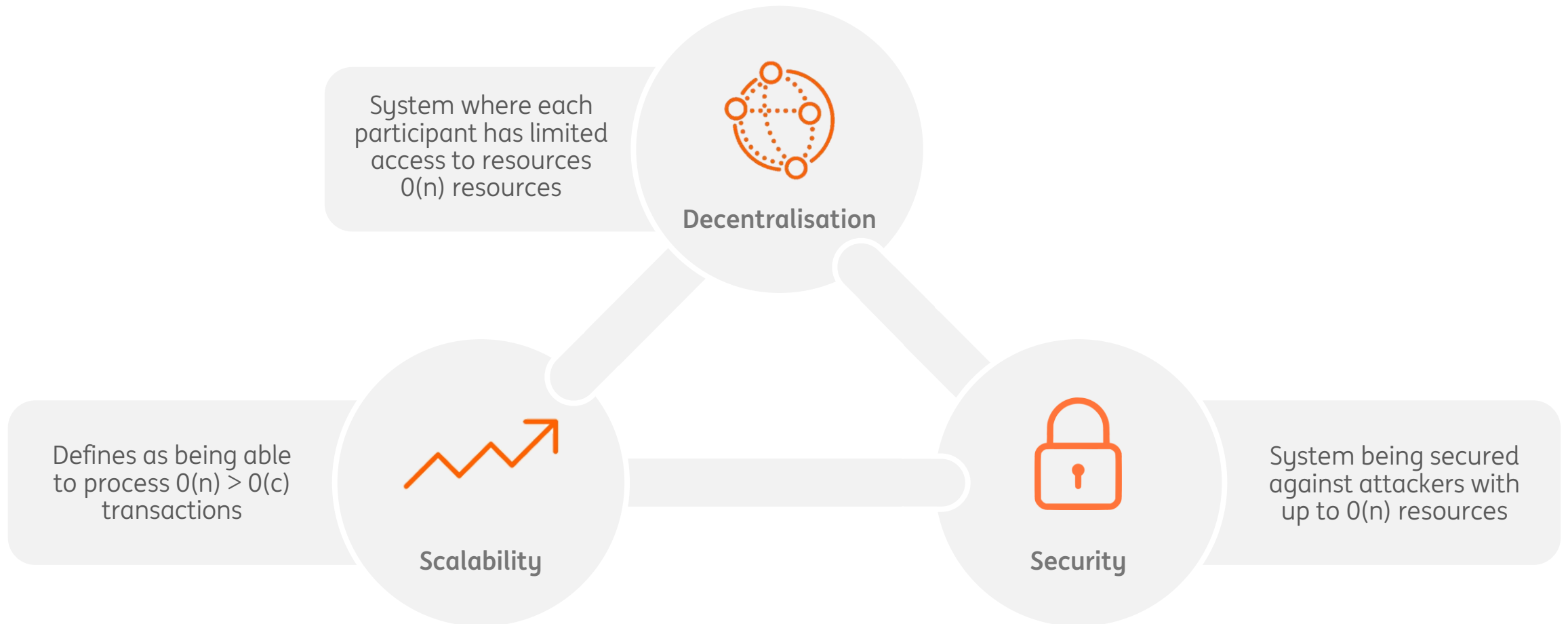
Privacy



Scalability

Trilemma

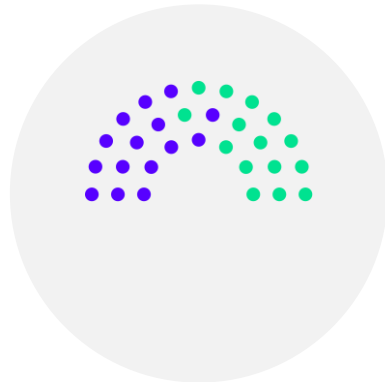
Until now, distributed ledgers can only at most have two of the following three properties



Why does Interoperability matter?

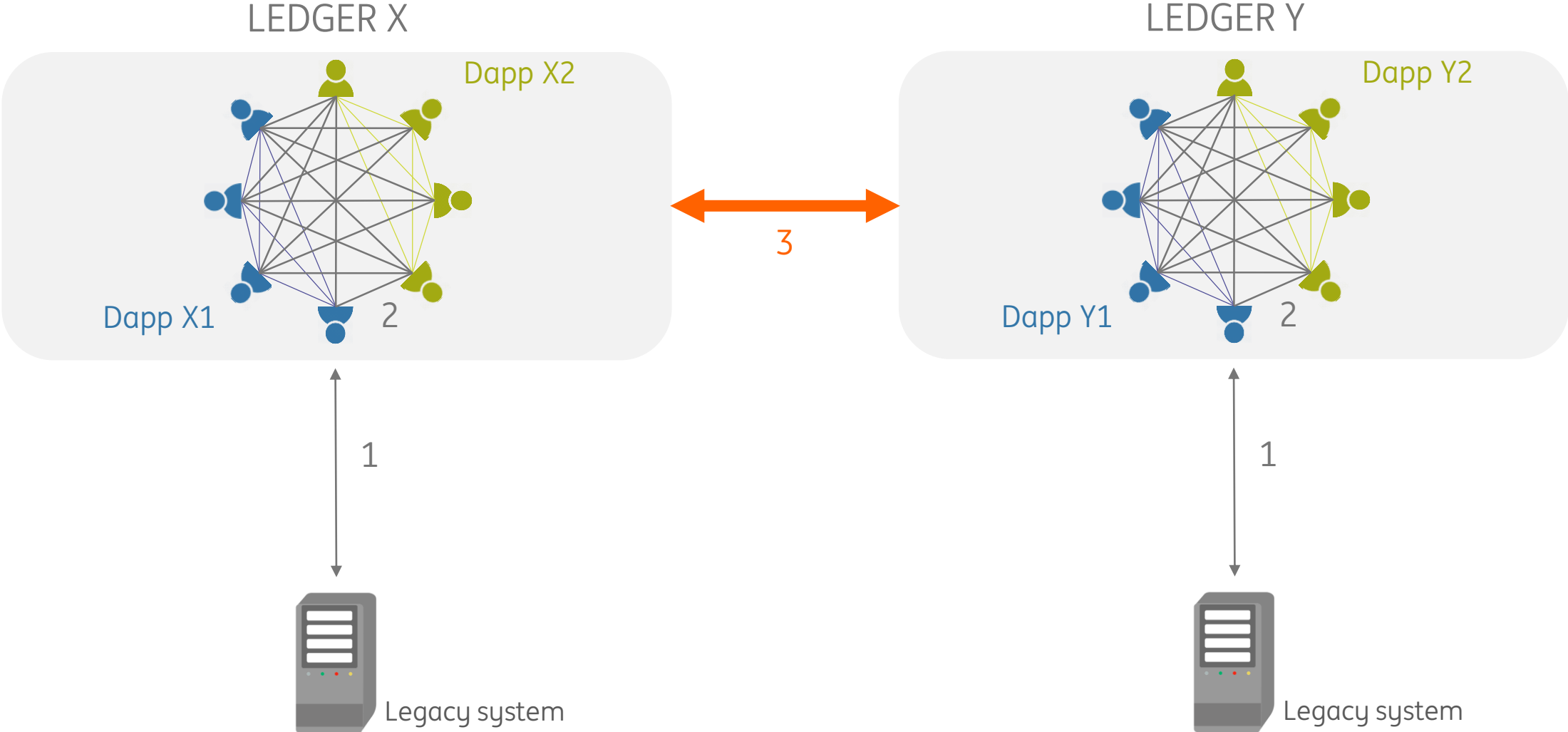
Interoperability is the ability of different information systems, devices or applications to connect and exchange together

Current DLT platforms are siloed



Three types of Interoperability

- 1: Distributed ledger to legacy system interoperability
- 2: Dapp to Dapp interoperability
- 3: Distributed ledger to distributed ledger interoperability

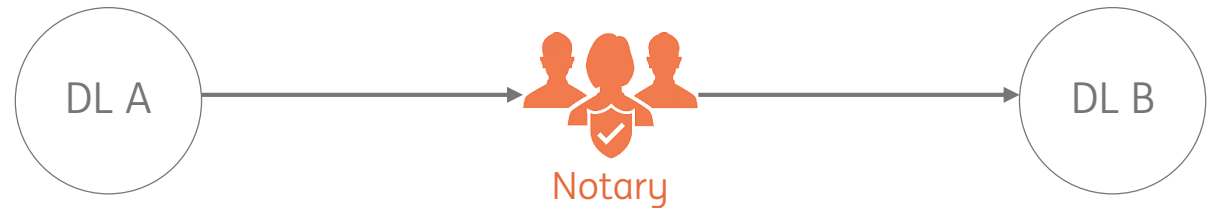


Kinds of Interoperability

3 possible solutions to achieve interoperability between distributed ledgers

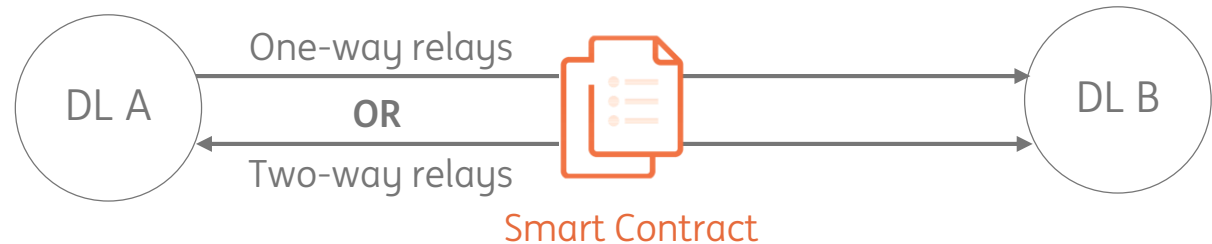
Notary schemes

Notaries execute an action on ledger A when a specific event takes place on ledger B



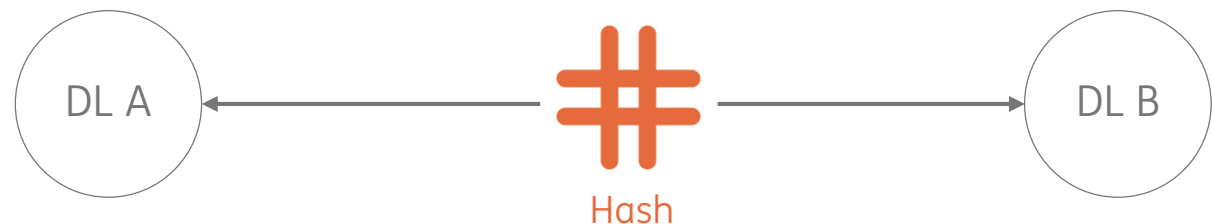
Relay schemes

A smart contract act upon events from another ledger



Hash locking

Operations on ledger A and ledger B have the same trigger



Properties to discriminate kinds of interoperability

1. What kind of interoperability I need?

Third party dependency

Reach

Scope

Scalability

2. On the technical side, what solution do I chose?

Update function

Cost

Native token

Semantic

Syntactic

Technology development

3. Do external factors influence my solution?

Regulation

Functionalities offered

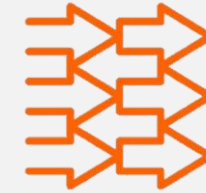
Challenges towards interoperability of solutions



Architectural
landscape
(including
interoperability)



Unknown costs of
infrastructure



Zone-spend attack

Thank you