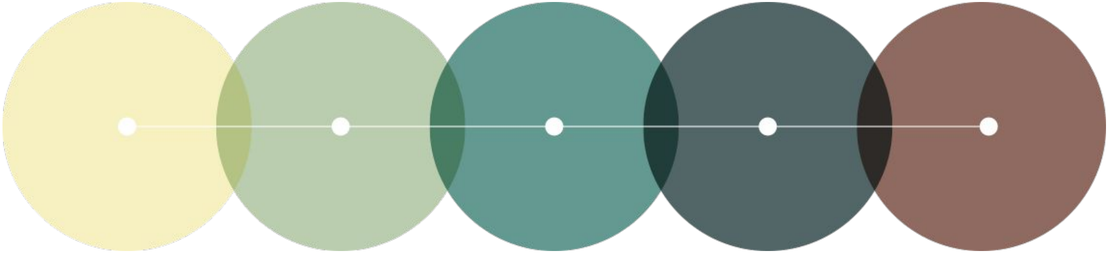
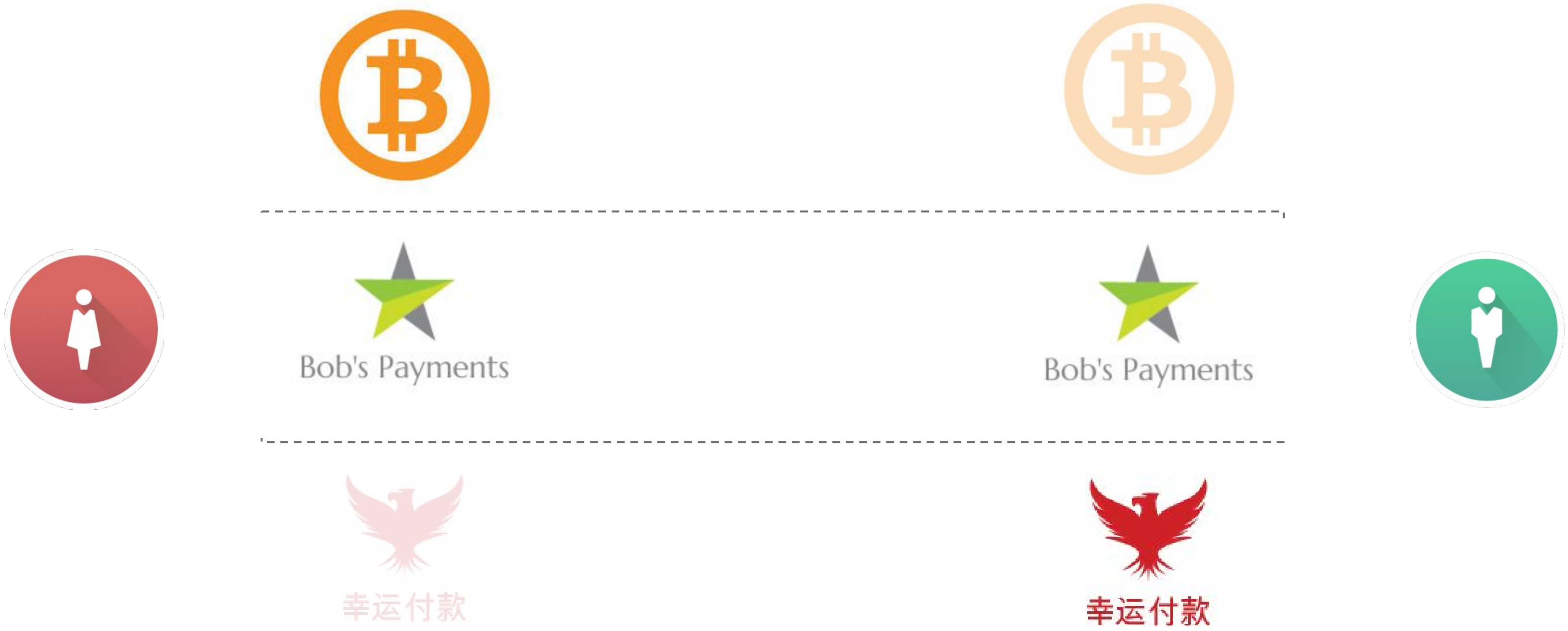


Interledger

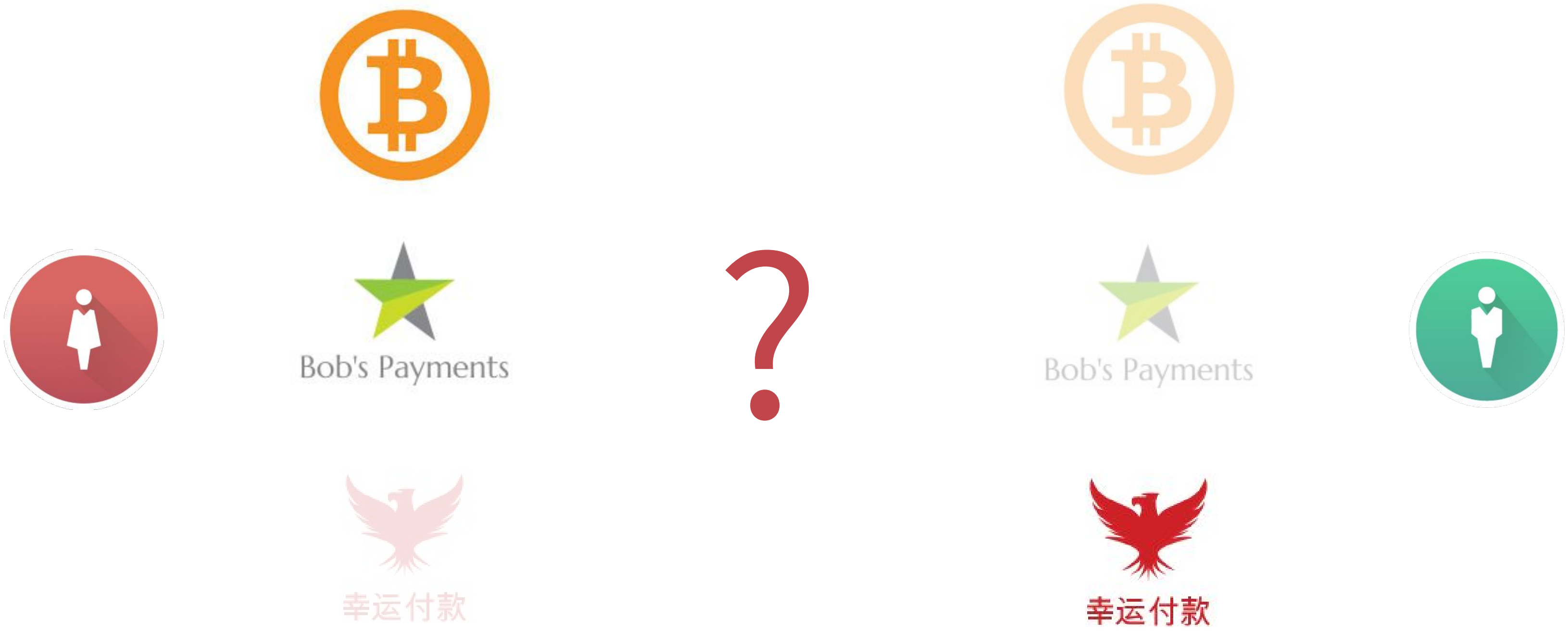
Universal Payments on the Web

Nov 2nd • Adrian Hope-Bailie • @ahopebailie

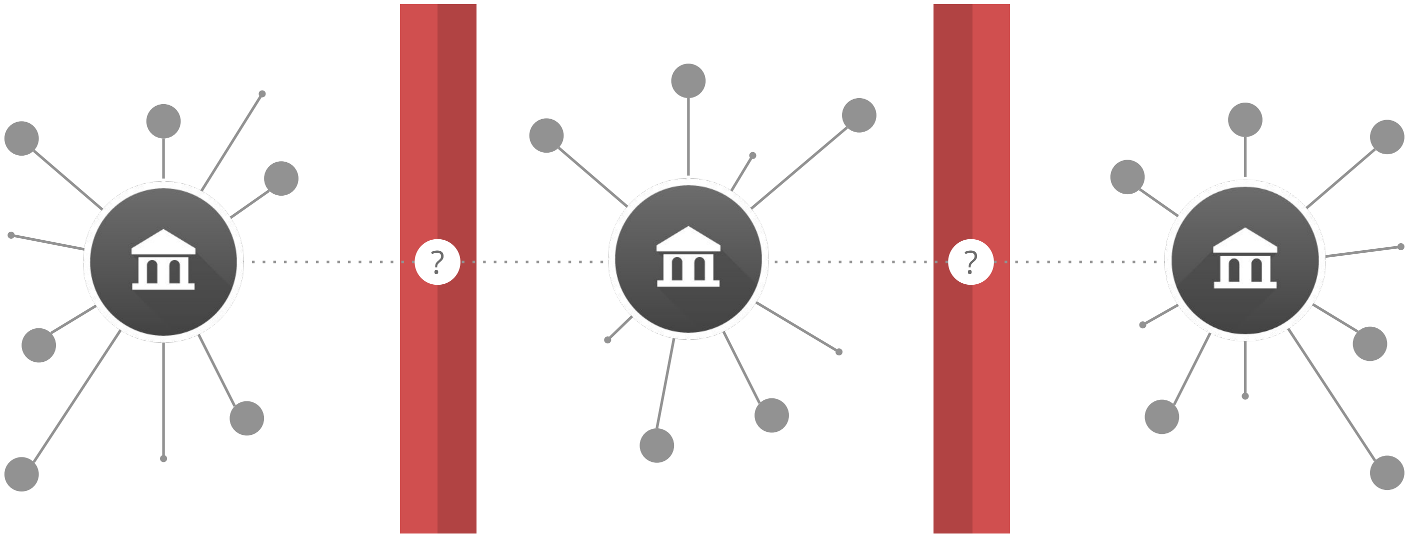
Web Payment APIs Identify Common Instrument



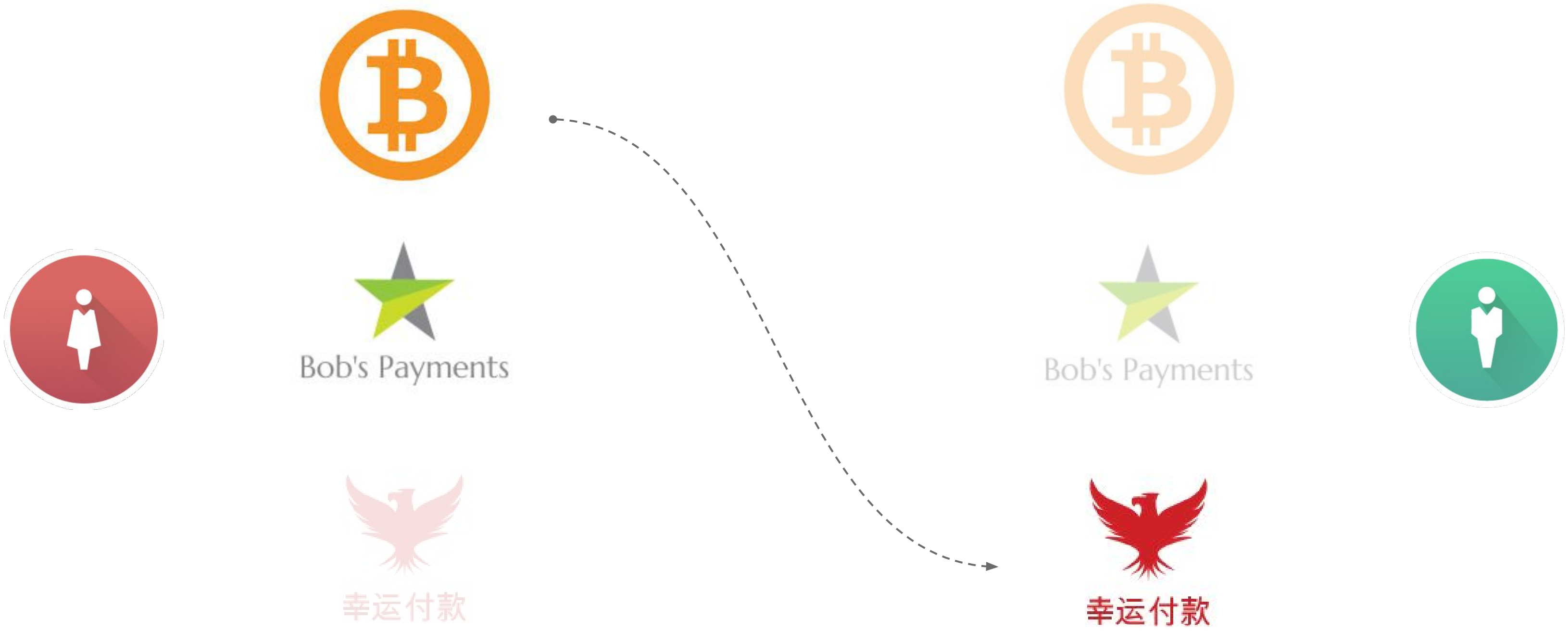
But What If There Is No Common Instrument?

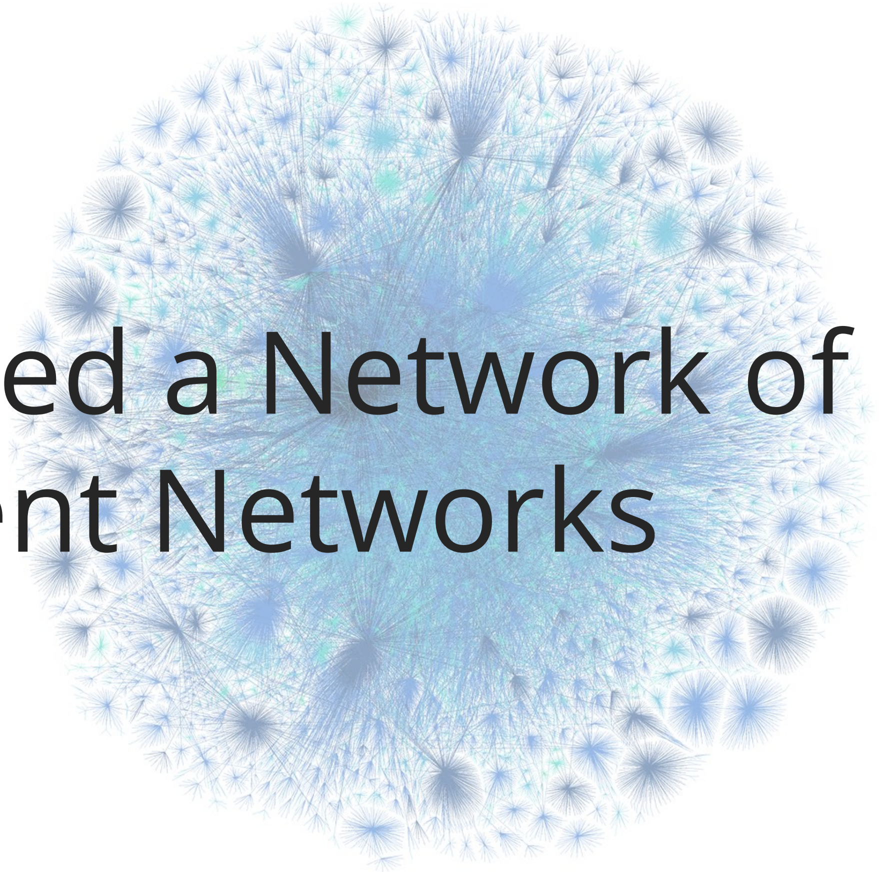


Payment Networks Are Disconnected



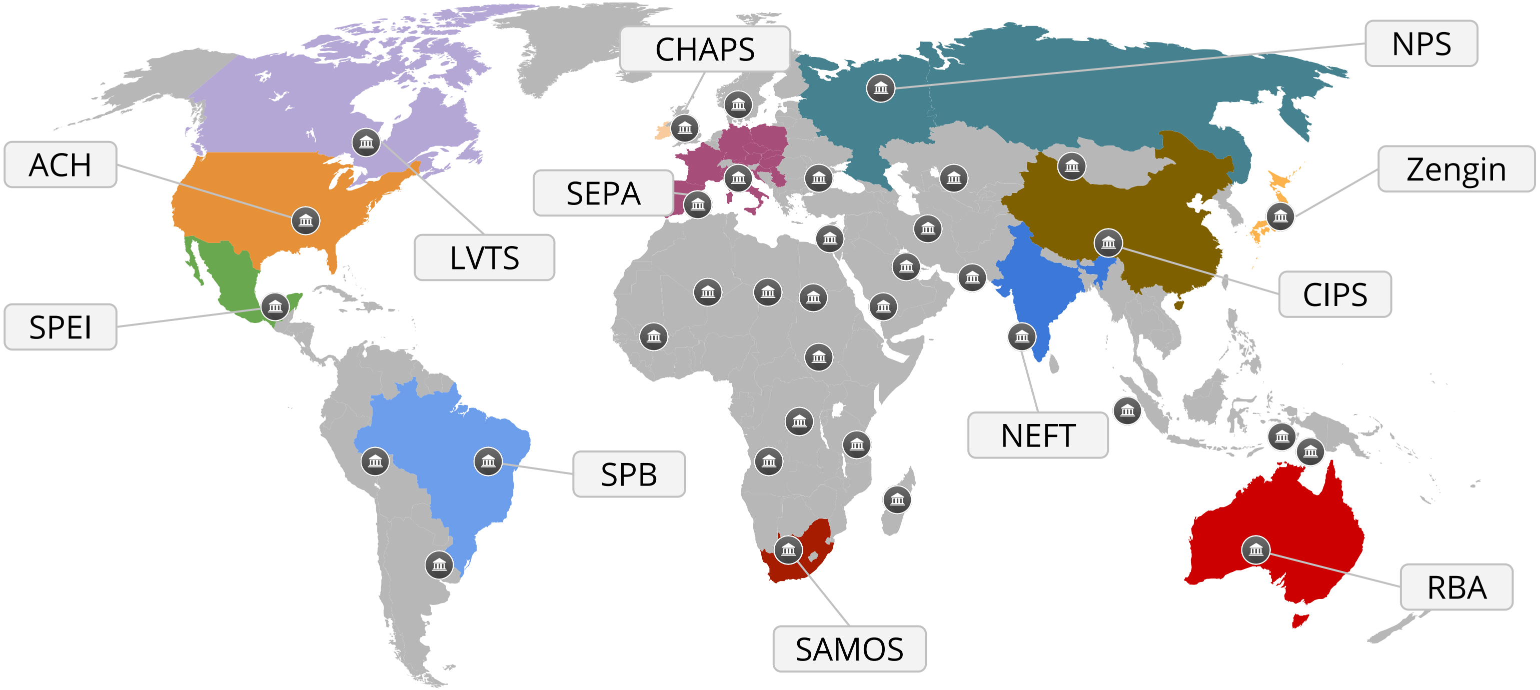
What If You Could Pay Across Networks?





We Need a Network of Payment Networks

Correspondent Banking



Can We Do The Same?

Standards for **relaying** and **routing**

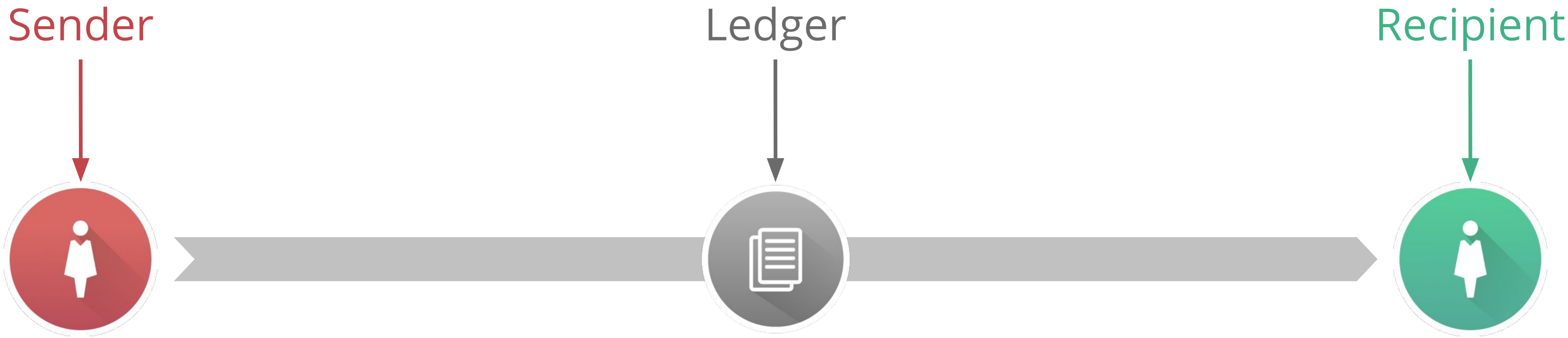
INTERLEDGER

Payments across payment networks

How does it work?

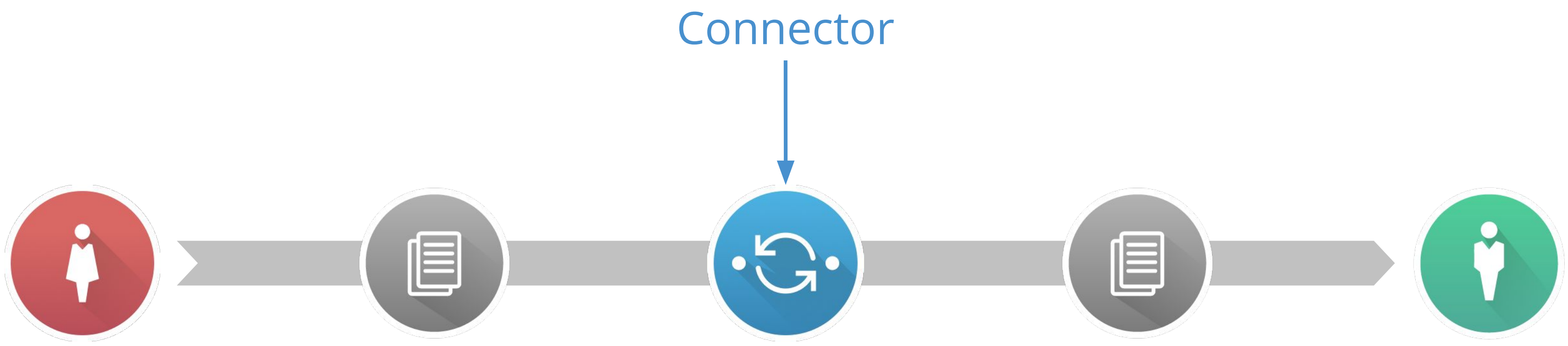
Ledgers Track Accounts and Balances

Banks, Cryptocurrencies, Telcos, Merchants Operate Ledgers

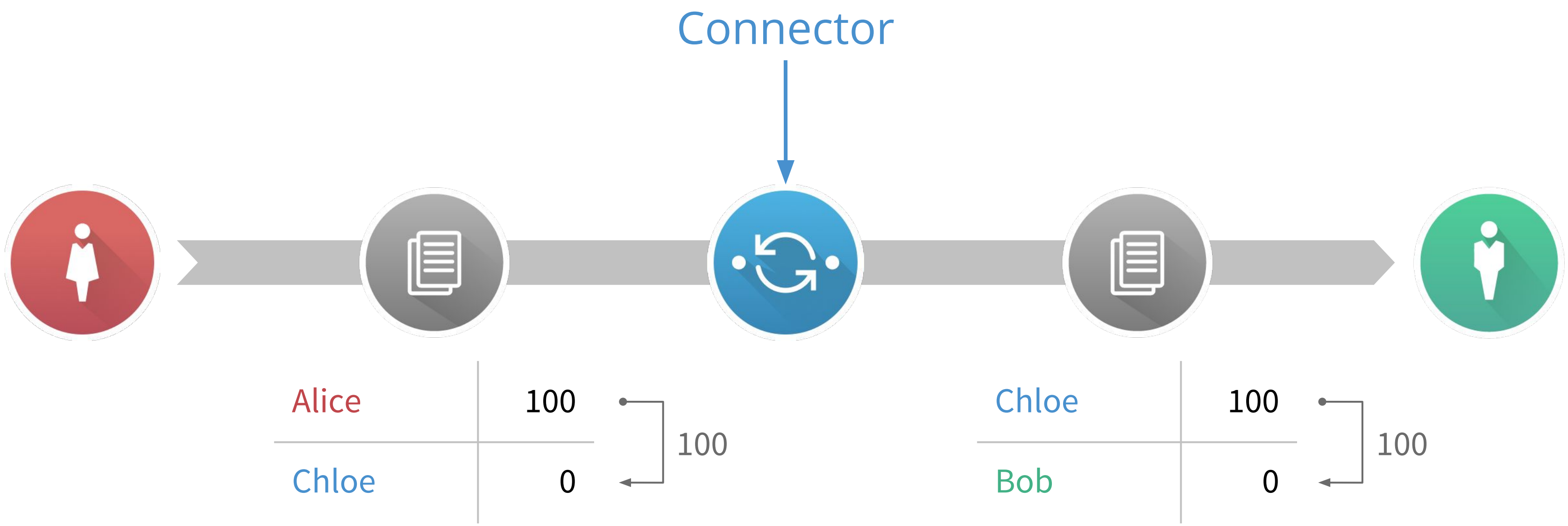


Not Everyone Is on the Same Ledger

Connectors Relay Money

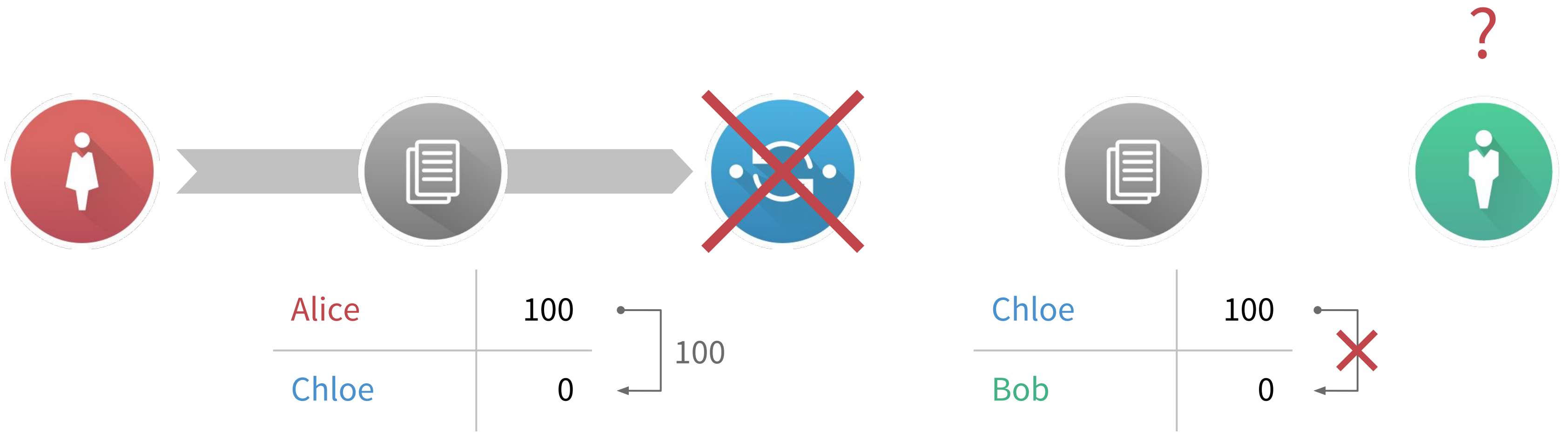


Connectors Correlate Transfers on 2+ Ledgers



What if the
connector **drops** it?

Money Would Be Lost



We need **Atomicity**

Either Both Transactions Execute...

Alice	100
Chloe	0

100

Chloe	100
Bob	0

100

…Or Neither of Them Do

Alice	100
Chloe	0

Chloe	100
Bob	0

We use **escrow** and strict **order of execution** to provide atomicity

Universal Payments

Ledger-Provided Escrow Protects Participants from Risk

Alice	100
Escrow	0
Chloe	0

Chloe	100
Escrow	0
Bob	0

In the **Preparation** Phase, the sender and connectors escrow funds

Universal Payments

Preparation Phase

Alice	100
Escrow	0
Chloe	0

Chloe	100
Escrow	0
Bob	0

Universal Payments

Funds Are Escrowed By Sender and Connectors

Alice	0
Escrow	100
Chloe	0

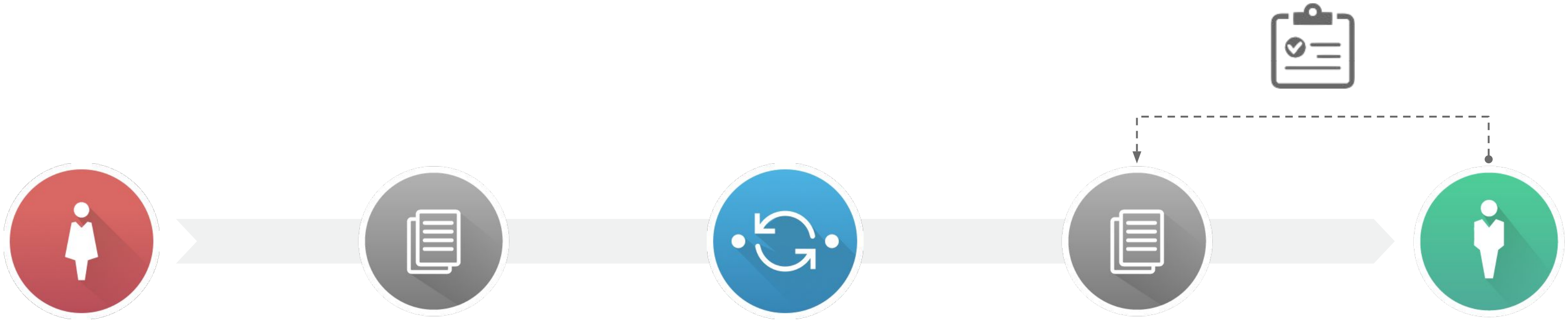
Chloe	1
Escrow	99
Bob	0

Connector may earn a fee

In the **Execution** Phase,
a receipt from the recipient
unlocks escrowed funds

Universal Payments

Recipient Signs Receipt

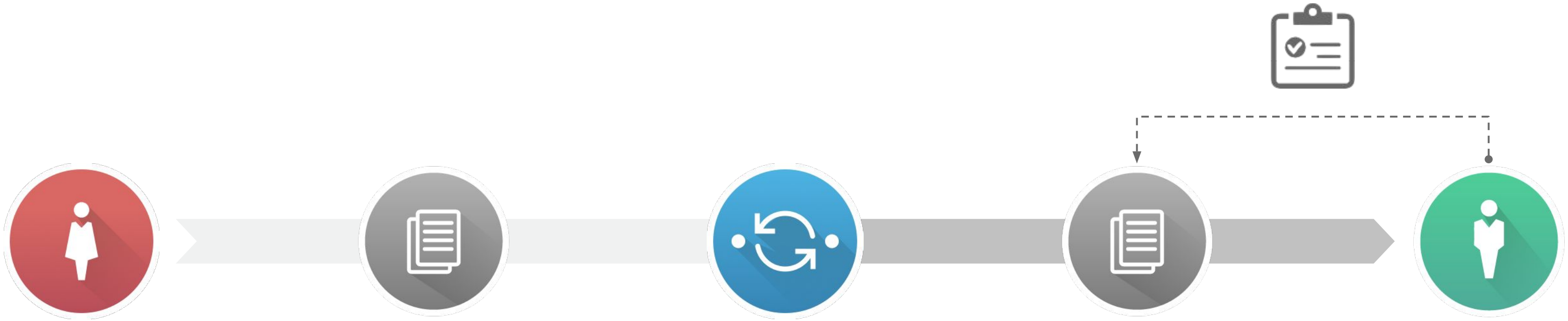


Alice	0
Escrow	100
Chloe	0

Chloe	1
Escrow	99
Bob	0

Universal Payments

Recipient Receives Money



Alice	0
Escrow	100
Chloe	0

Chloe	1
Escrow	99
Bob	0

99

Universal Payments

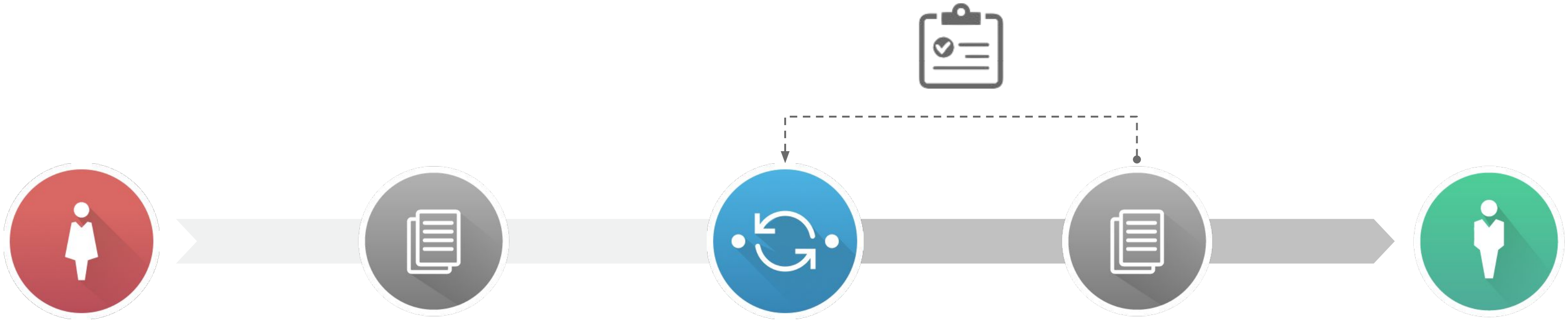
How Does Connector Get Reimbursed?

Alice	0
Escrow	100
Chloe	0

Chloe	1
Escrow	0
Bob	99

Universal Payments

Connector Gets Receipt

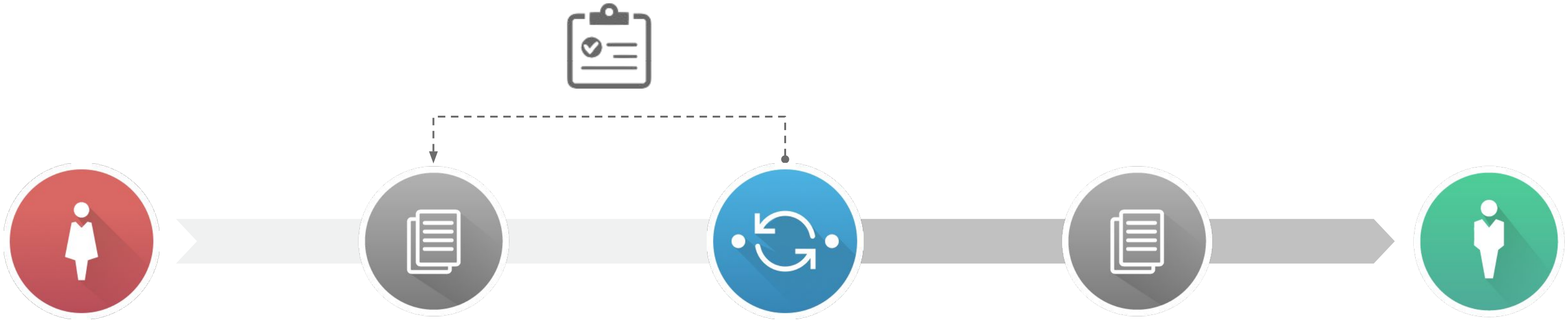


Alice	0
Escrow	100
Chloe	0

Chloe	1
Escrow	0
Bob	99

Universal Payments

Connector Passes the Receipt On

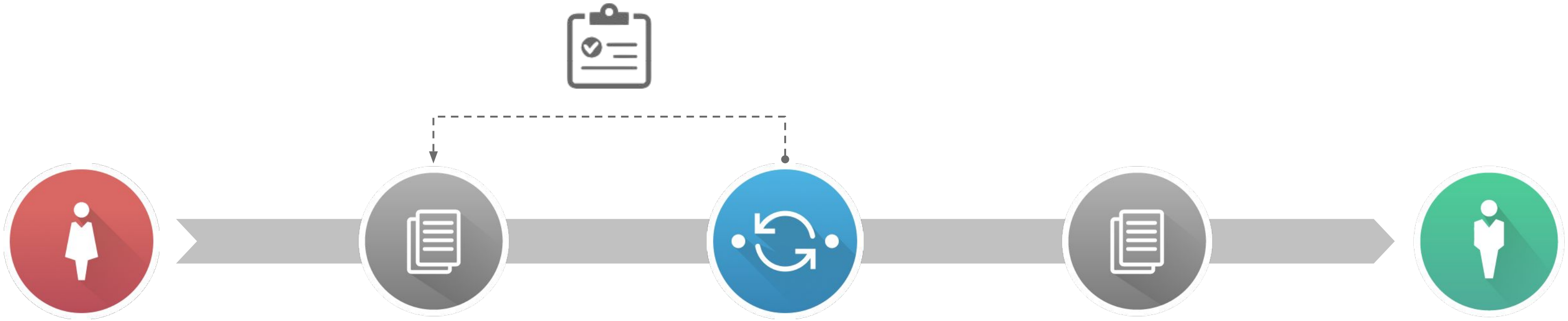


Alice	0
Escrow	100
Chloe	0

Chloe	1
Escrow	0
Bob	99

Universal Payments

Connector Gets Paid



Alice	0
Escrow	100
Chloe	0

100

Chloe	1
Escrow	0
Bob	99

Universal Payments

Payment Is Complete

Alice	0
Escrow	0
Chloe	100

Chloe	1
Escrow	0
Bob	99

Universal Payments

Fees may be paid by sender or receiver

Alice	0
Escrow	101
Chloe	0

Connector charges sender a fee

Chloe	0
Escrow	100
Bob	0

This Enables Money to be Securely Relayed

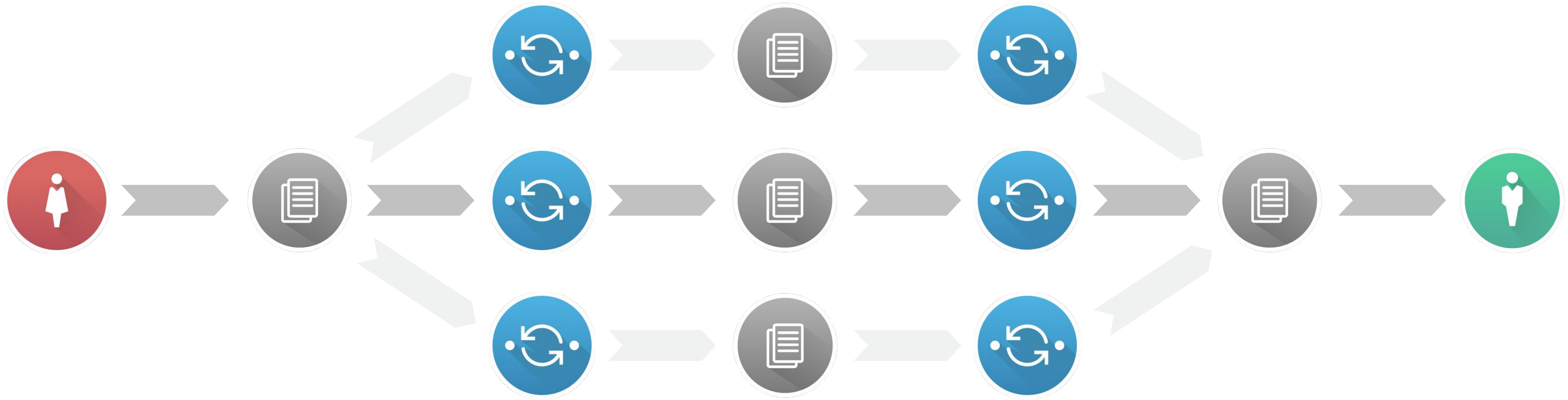
Chained Payments

From Any Sender to Any Recipient

Risk-Free for Sender and Recipient

Limitlessly Scalable

Connectors and Ledgers Can Be Added to Handle More Payments

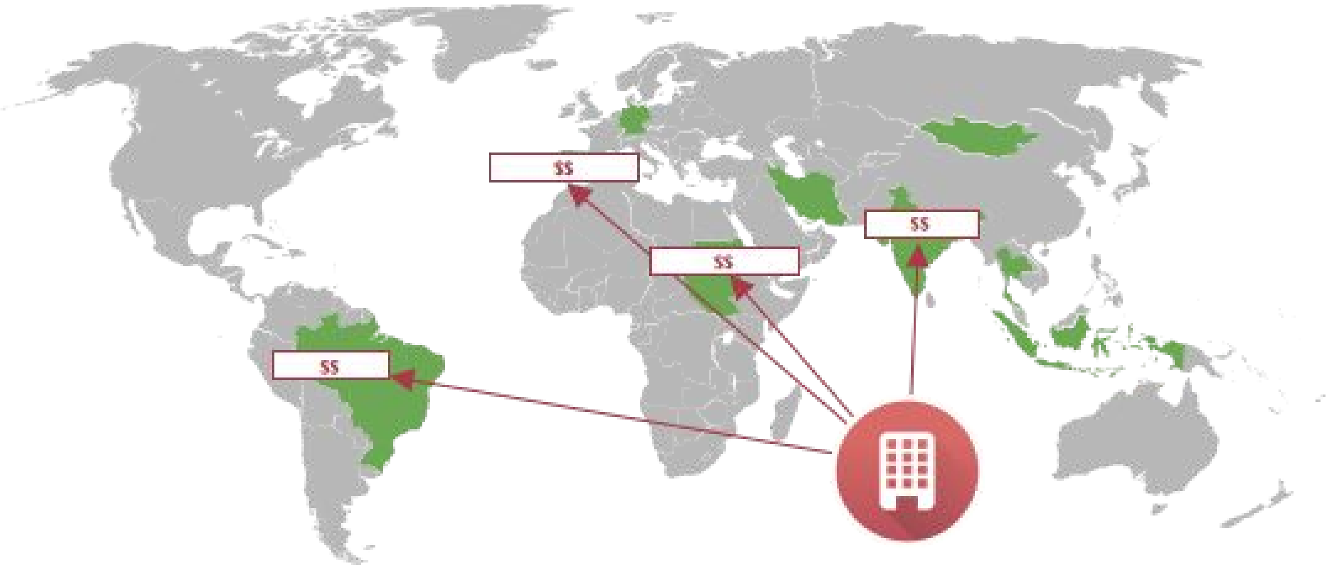


Connecting Disparate Systems

Minimal Standard to Link Banks, Cryptocurrencies, Telcos, etc

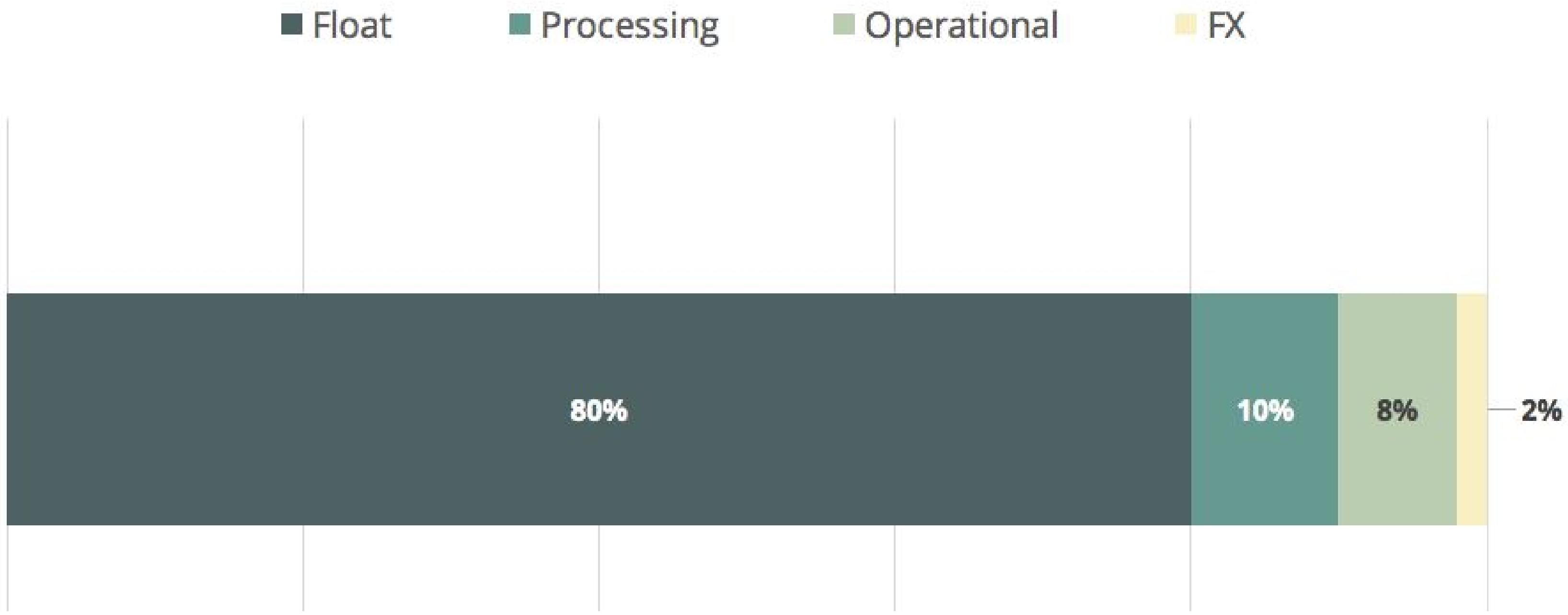
Corporations Tie Up Cash in Foreign Bank Accounts to Pay Vendors on Time

Cash outlaid or in transit is unavailable – an opportunity cost



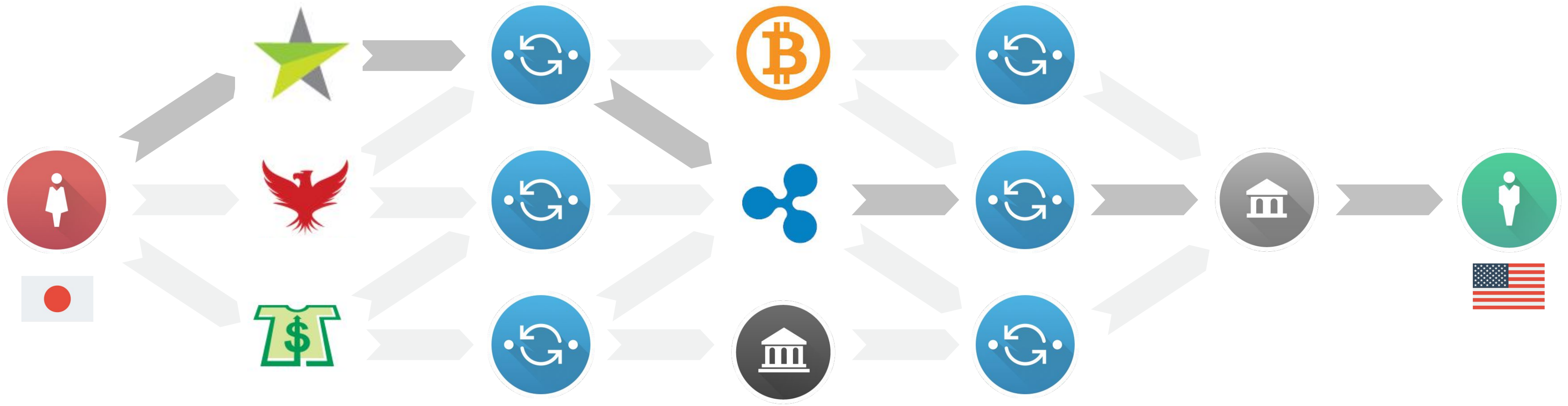
Float is the Bulk Cost of Corporate Payments

Most value to be gained by reducing float requirements



Global Cash Marketplace

Unlocking liquidity from multiple sources to lower capital costs



Join the Interledger Community Group

Interledger.org

Open Source Reference Implementation:

https://github.com/interledger