# Postcoin

## The future of postal payments?

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**PostExpo 2017**

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# Blockchain – A new kind of institution

| Institutions keep and maintain centralized databases | Blockchains are decentralized databases |
| --- | --- |
| Consensus by authority | Distributed consensus secured by cryptography |
| Intermediation | Potentially open to users without intermediaries |
| Need for trust | No need for trust |
| Single points of failure (fraud, censorship) | No single point of failure |
| Delayed settlement | Prompt settlement |

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# Blockchain – Application levels

**Level 3: Smart Contracts**

Decentralized execution of applications and contracts

**Level 2: Smart Property / Tokenization**

Documentation and transfer of tokens that represent other assets (electronic vouchers)

**Level 1: Cryptocurrencies (e.g. Bitcoin)**

Documentation and transfer of tokens

# Advantages and challenges of cryptocurrencies

**Advantages**

No intermediaries

Permissionless

Possibly limited supply

Fast settlement

Irreversibility (for merchants)

**Challenges**

Volatile exchange rate

Limited acceptance

Compliance

Irreversibility (for customers)

# Opportunities for postal services

**Advantages for electronic commerce by financial inclusion, simplified cross-border transactions and shift of payment risks**

**Services in existing cryptocurrencies**

- Cryptocurrency accounts and conversion to local currency
- Unified platform for payment and shipping information
- Use the blockchain as a decentralized database for timestamping, track and trace, registered mail

**Issuance of a postal currency «Postcoin»**

- Backed by other assets
- Possibly restricted access to the ledger

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# Postcoin

**Postcoin**

Issued by network of postal operators
Variable supply, backed by «something else» (SDR, Gold,…) → Fixed exchange rate
Option for reversible transactions
Conversion to local currency through posts

**Layer 2: Currency**

**Existing Blockchain (e.g. Bitcoin, Ethereum)**

Peer to peer transactions
Distributed ledger
Consensus through proof of work
Resilience through large size of the network

**Specific Postcoin-Blockchain**

Consortium of postal operators
Consensus through trusted institutions

**Layer 1: Protocol**
**(two implementation options)**

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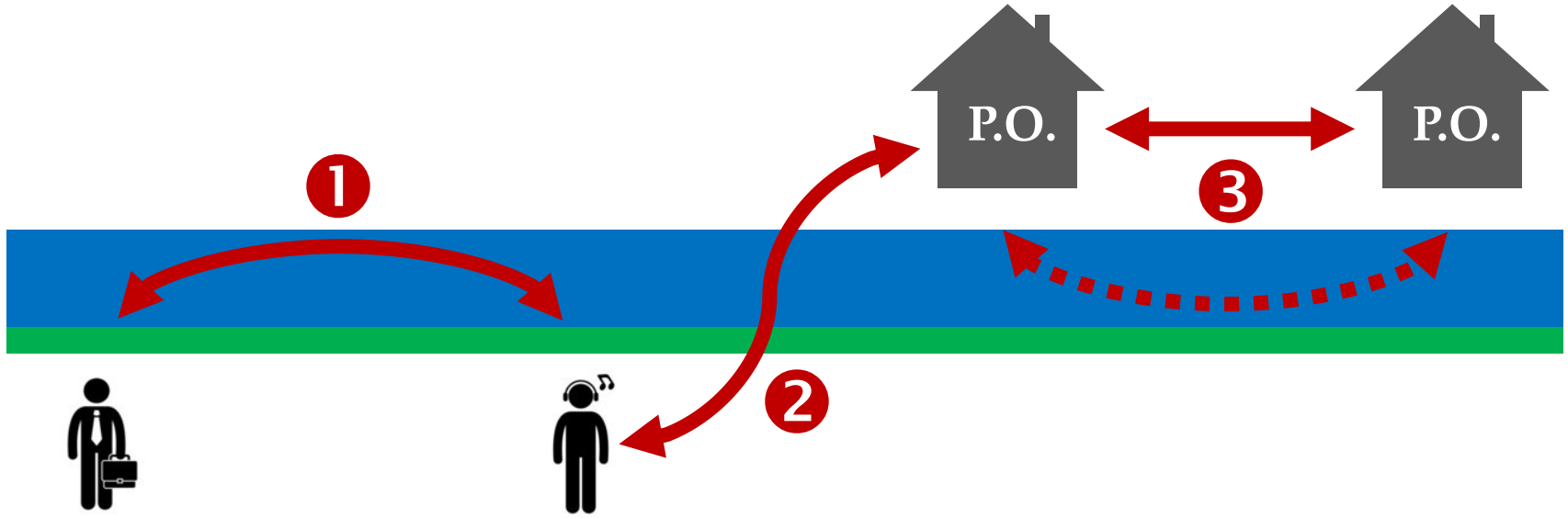
# Postcoin transactions

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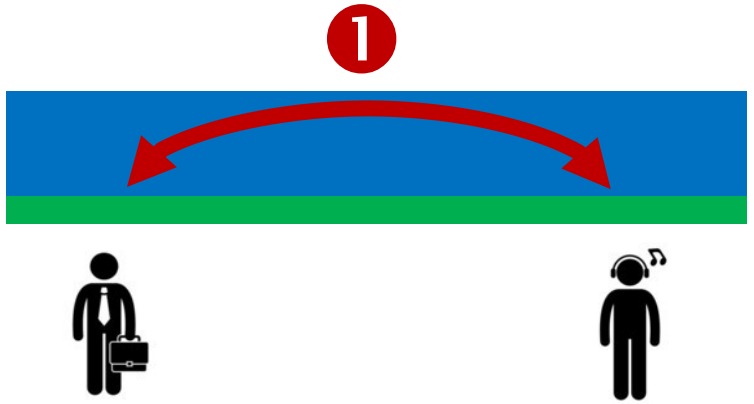
# ❶ Peer to peer Postcoin transaction




**Transaction in Postcoin**
**No postal operator involved**
**«Fixed» value of the transaction**

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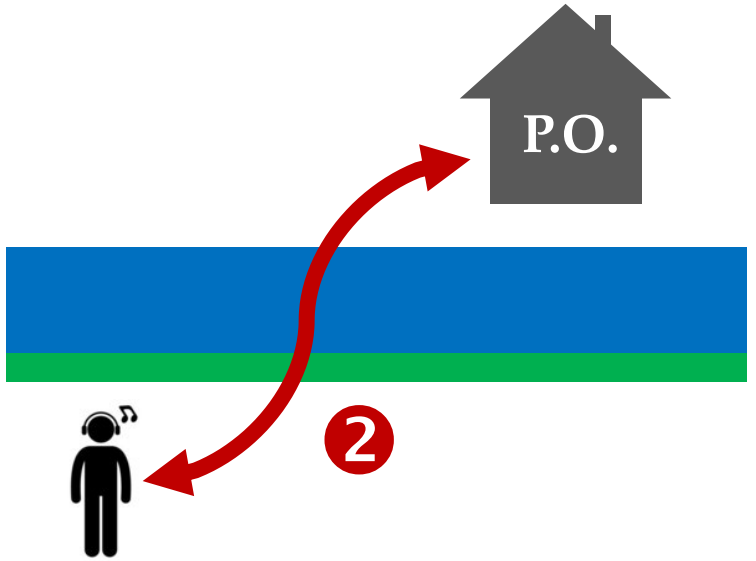
## ❷ Currency exchange




**Exchange Postcoin for local currency at «fixed» rate**
**Keep Postcoin on account or withdraw to own wallet**

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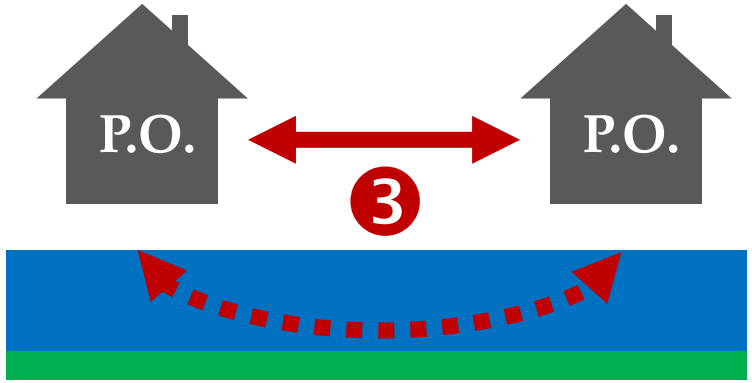
## ❸ Post to post transaction




**Transaction in Postcoin between postal operators on customers' behalf**
**Transaction on the underlying blockchain**
**Transaction off the blockchain, directly between posts**

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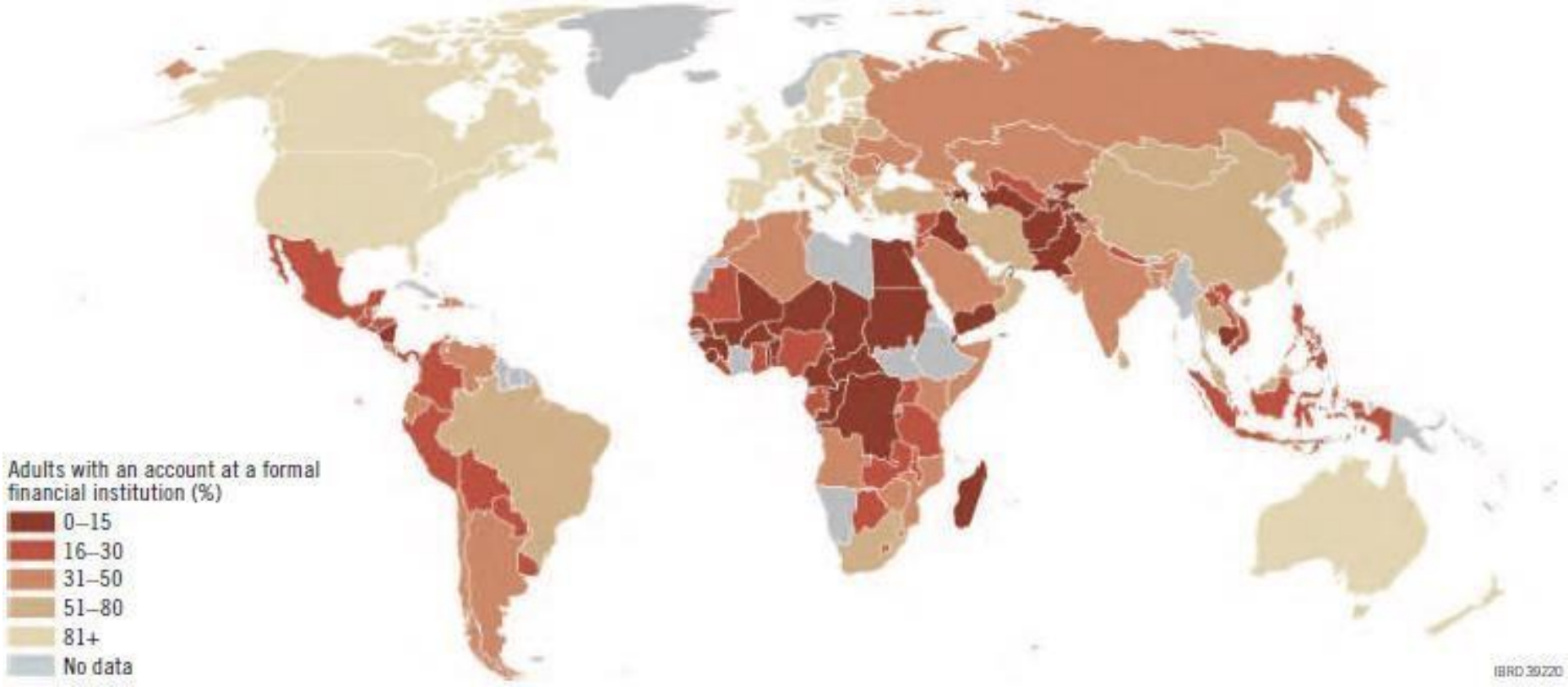
# Conclusion

- Blockchains do not need institutions. However, there is a role for trusted parties.

- Posts could fill this role as an interface between virtual currencies and the physical world by leveraging their local presence and their global network:
  → exchange cryptocurrencies for local currency over their counters or online
  → safely storing cryptocurrencies

- Posts could also issue a Postcoin by leveraging their reputation and using their existing regulatory status
  → enable international payments at low price by connecting with each other
  → enhance worldwide financial inclusion

# Worldwide access to financial institutions

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