



A new medium for assets

Energias de Portugal

MAY 2017

- A blockchain is a database for financial assets (value)
- Unlike a traditional database, the owners of the assets recorded on a blockchain directly control those assets
- Electronic records then behave like bearer instruments
- “Digital bearer instruments” move efficiently, directly, and securely across entities

Blockchain technology = Market technology

Agenda

Chain introduction

What are blockchains for?

Why are financial institutions & enterprises launching blockchains?

What opportunities should financial institutions & enterprises pursue?

Energy – areas for exploration

Chain's mission:

To partner with leading organizations
to transform markets with
blockchain technology

Select customers



Company overview

2014

Year Chain was founded

45mm

Amount of funding raised

2

Offices, in SF and NYC

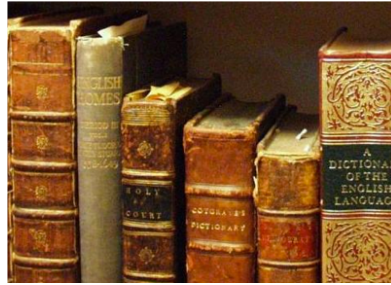
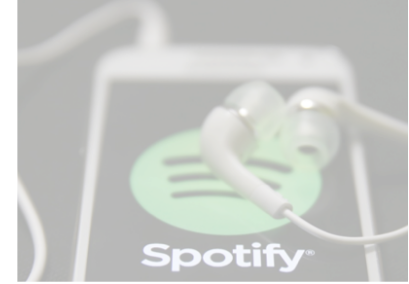
What are Blockchains for?

A Blockchain creates a new medium for assets

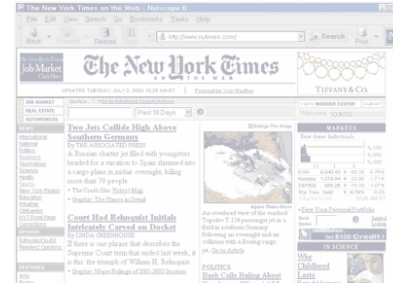
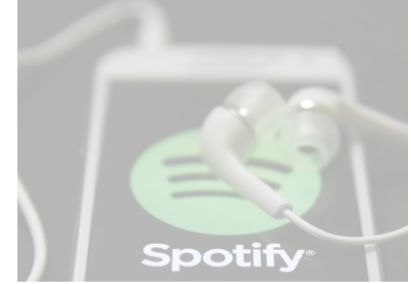
(New mediums typically disrupt market structure)



MUSIC



PUBLISHING



COMMUNICATION

Metal



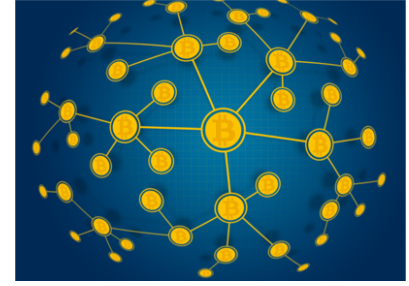
Paper



Ledgers

	Assets, Cash	Accounts Receivable	Office Supplies	Equipment	Liabilities, Accounts Payable	Owner's Equity, Capital
(1)	+10,000 (debit)					+50,000 (credit)
Bal.	50,000					50,000
(2)	-20,000 (credit)			+20,000 (debit)		
Bal.	30,000			20,000		50,000
(3)			+500 (debit)		+500 (credit)	
Bal.	30,000		500	20,000	500	50,000
(4)	+5,500 (debit)					+5,500 (credit)
Bal.	35,500		500	20,000	500	55,000
(5)		+3,000 (debit)				+3,000 (credit)
Bal.	35,500	3,000	500	20,000	500	58,500
(6)	-2,700 (credit)					-1,100 (debit)
						-1,200 (debit)
						-400 (debit)
Bal.	32,800	3,000	500	20,000	500	55,800
(7)	-400 (credit)				-400 (debit)	
Bal.	32,400	3,000	500	20,000	100	55,800
(8)	+1,000 (debit)	-1,000 (credit)				
Bal.	33,400	2,000	500	20,000	100	55,800
(9)	+6,000 (debit)			-6,000 (credit)		
Bal.	39,400	2,000	500	14,000	100	55,800
(10)	-2,100 (credit)					-2,100 (debit)
Bal.	37,300	2,000	500	14,000	100	53,700

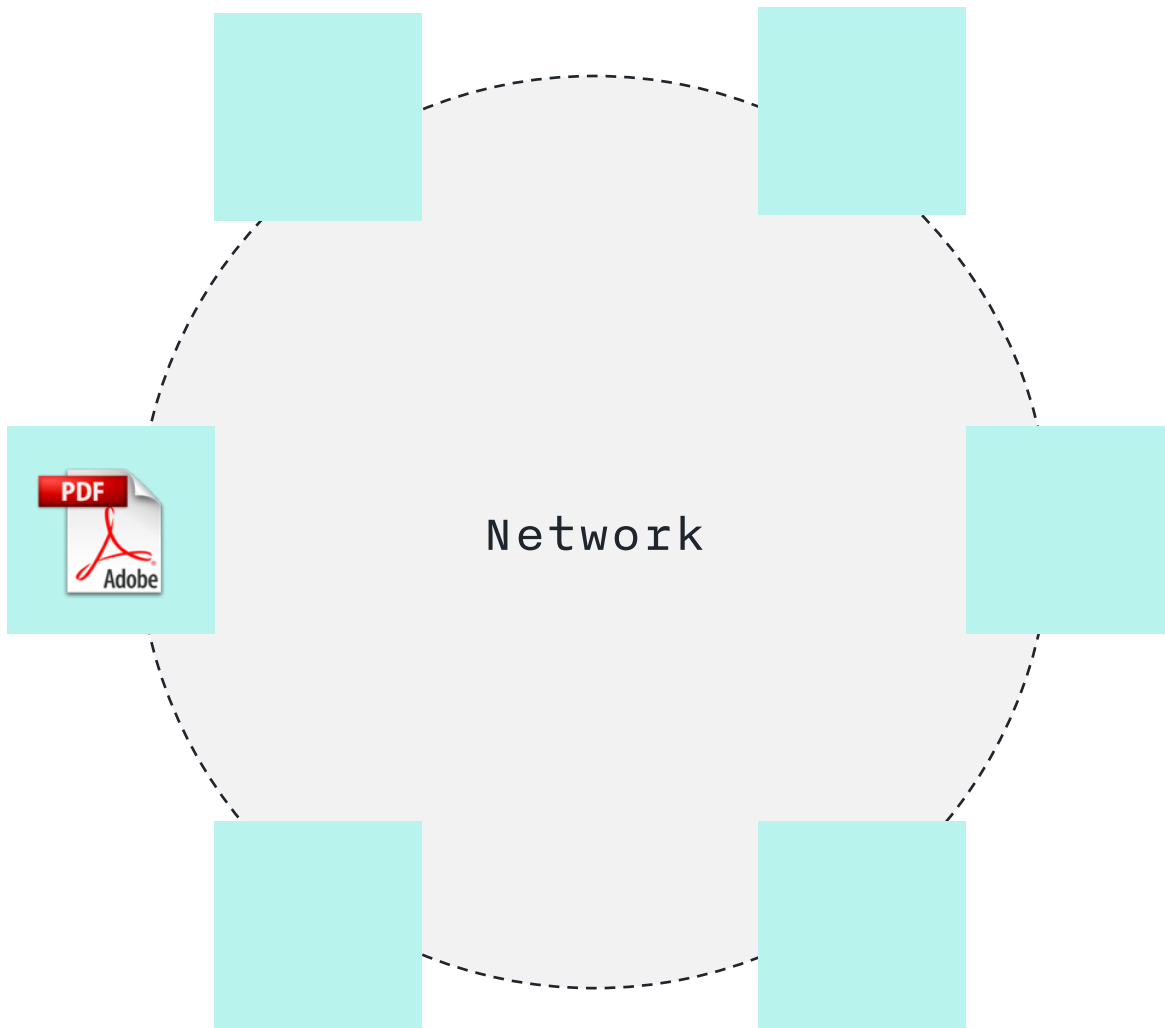
Blockchain

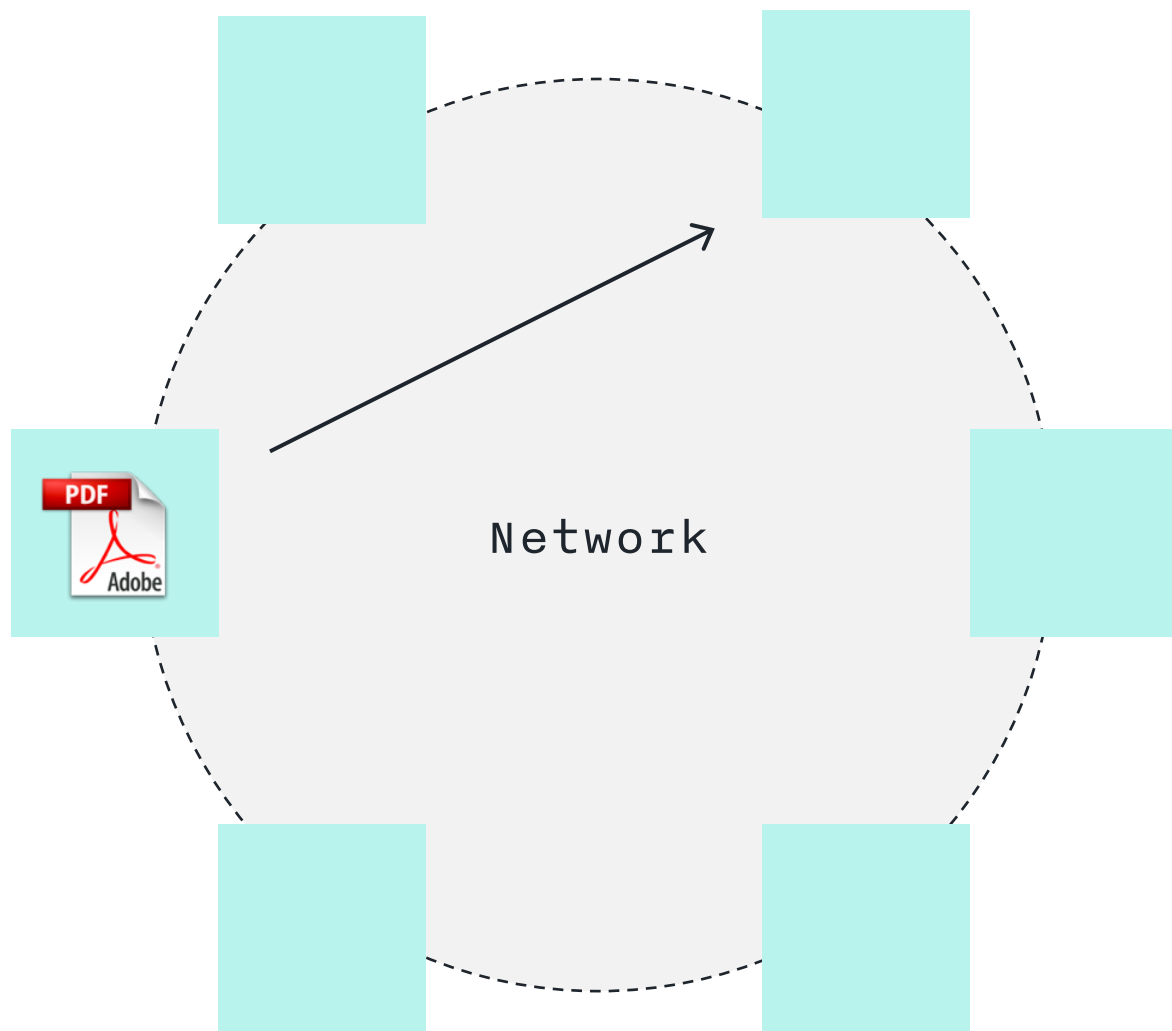


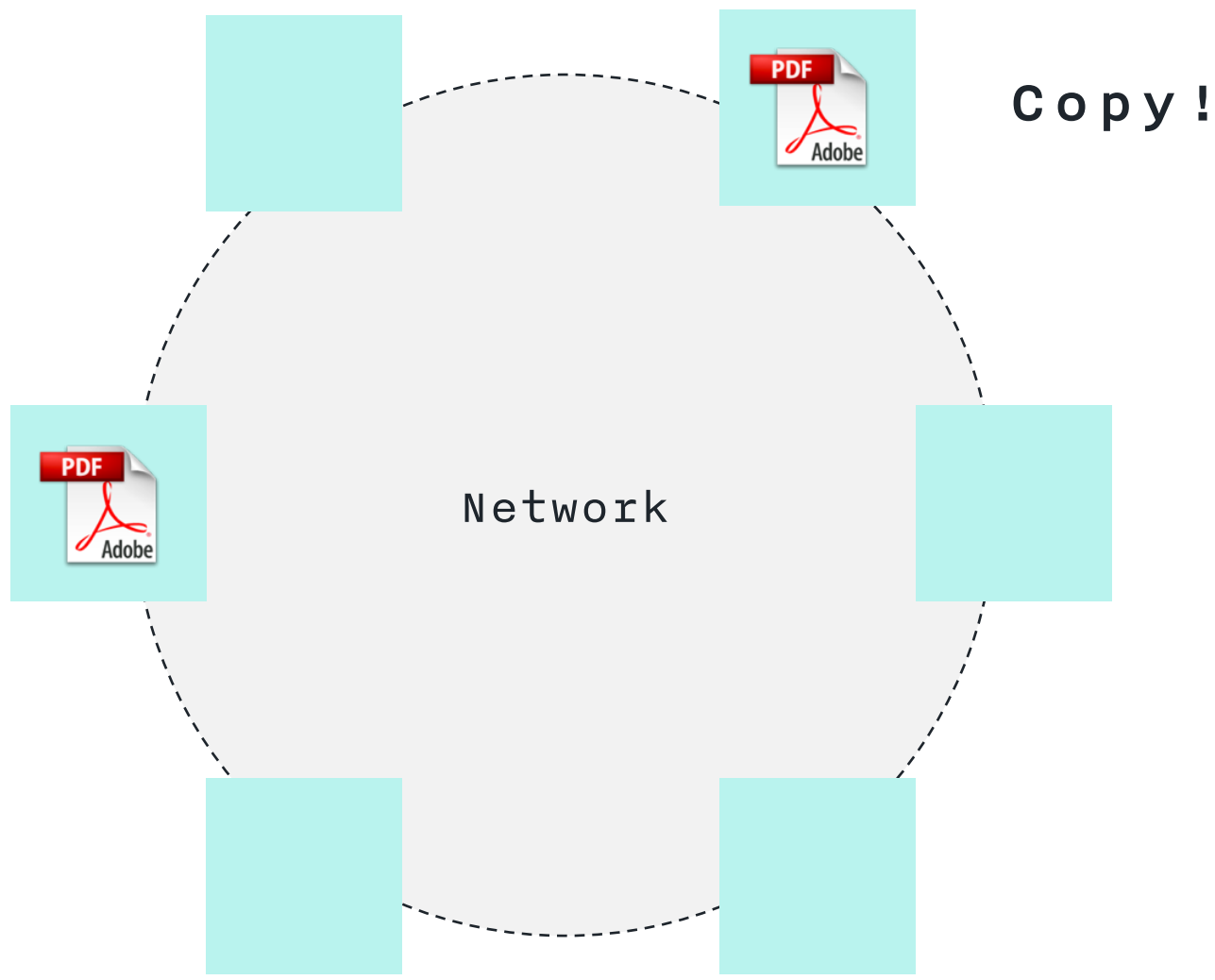
MONEY

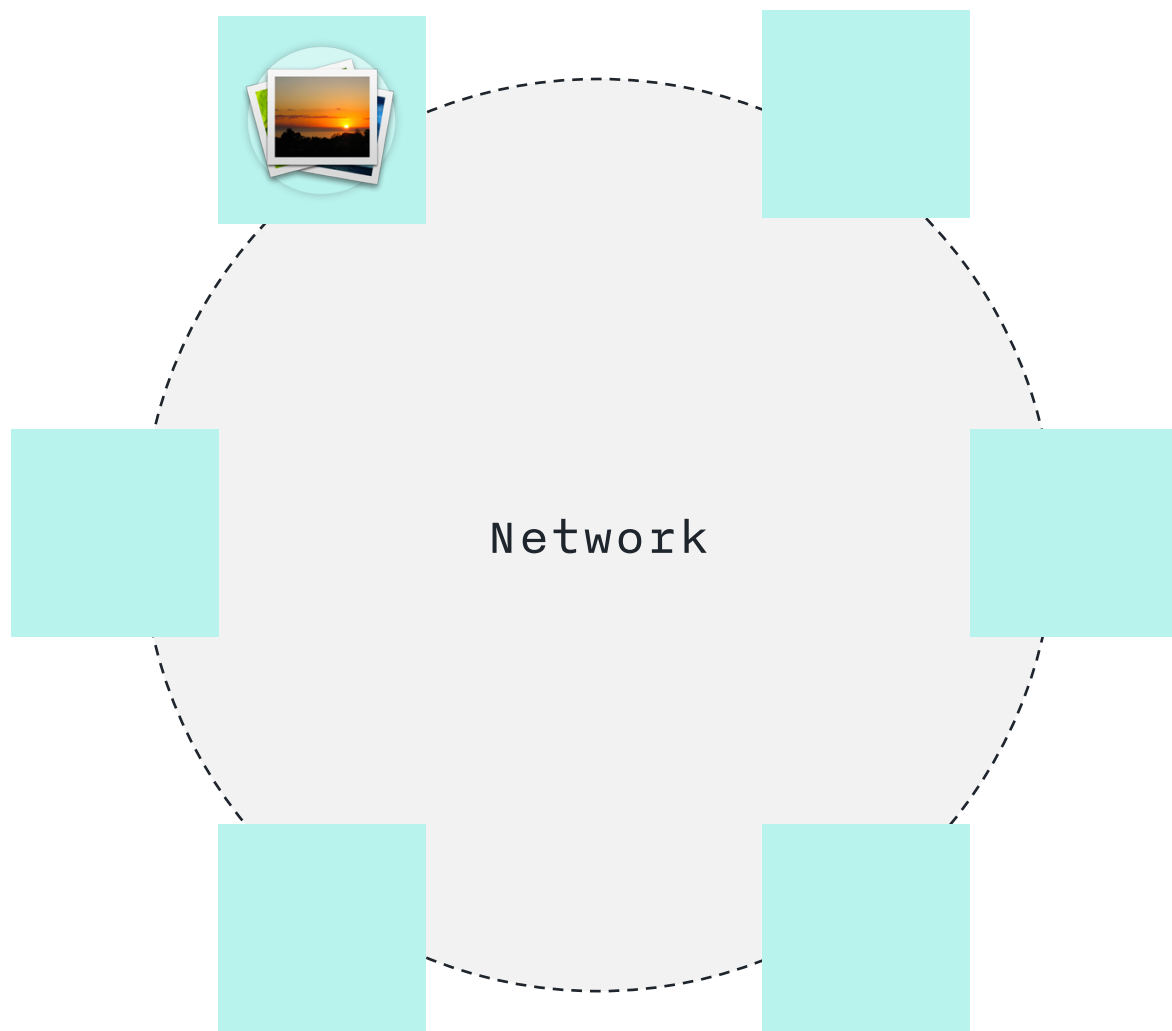
One idea makes this possible

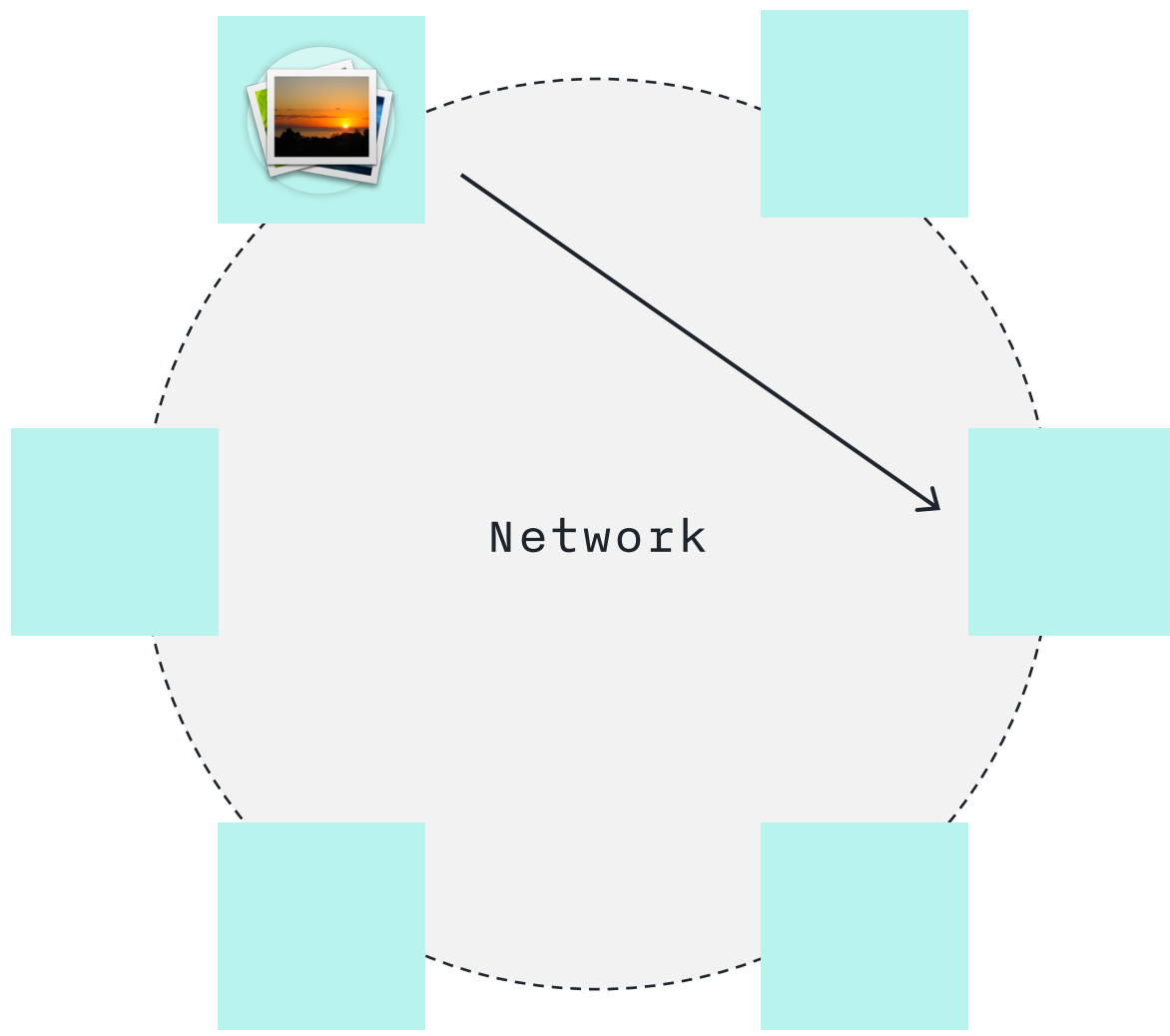
Digital transfer without copying

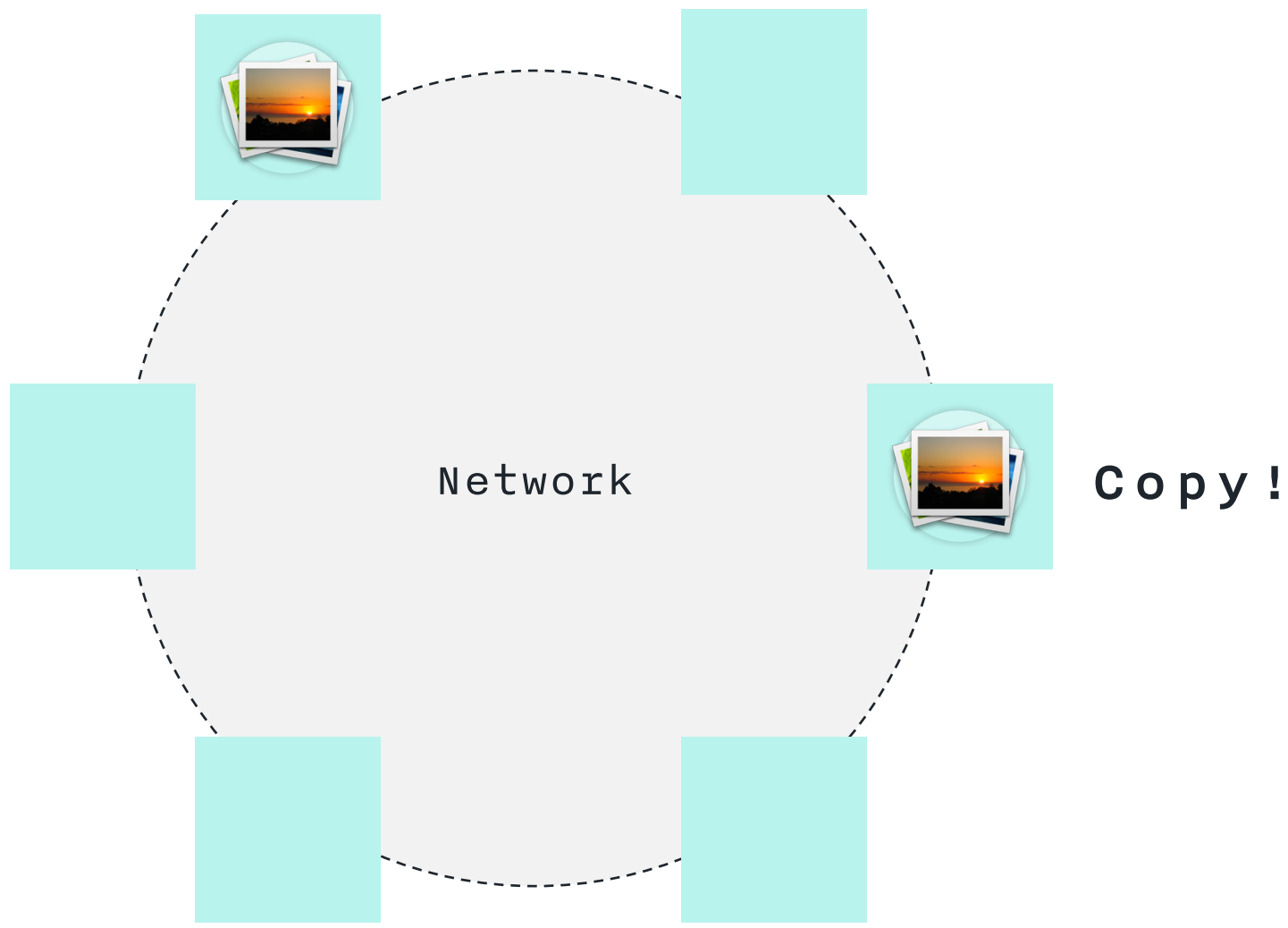


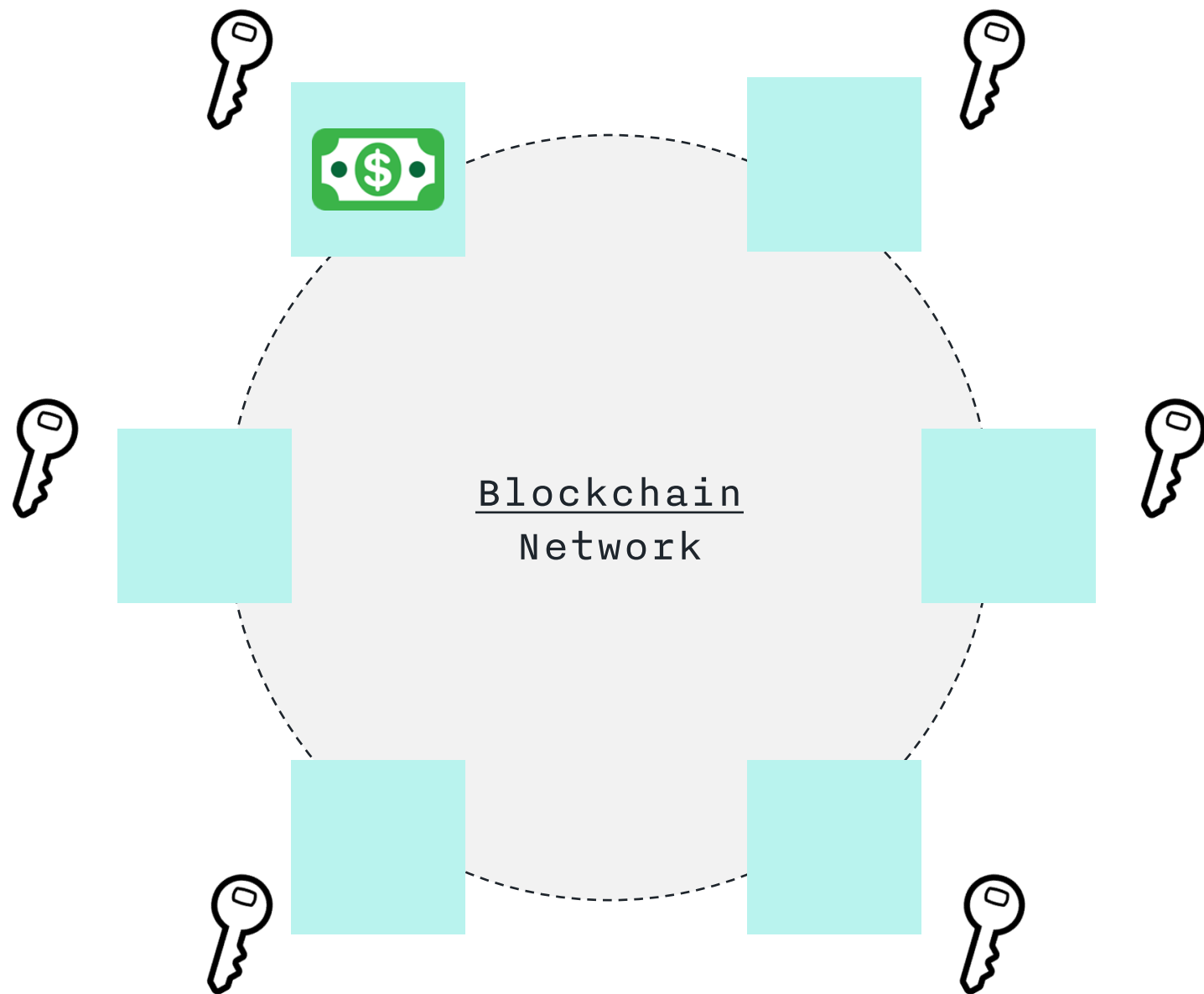


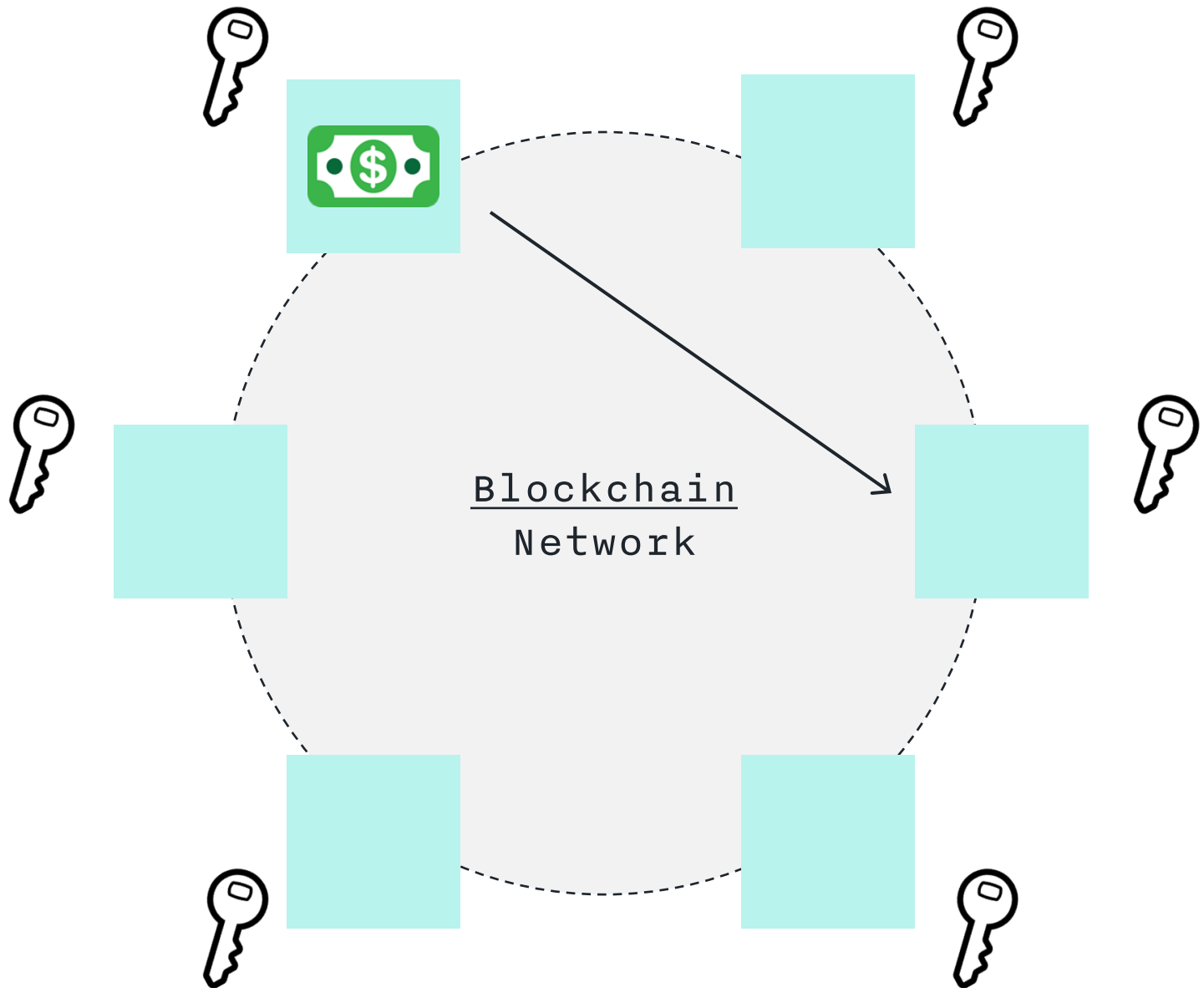


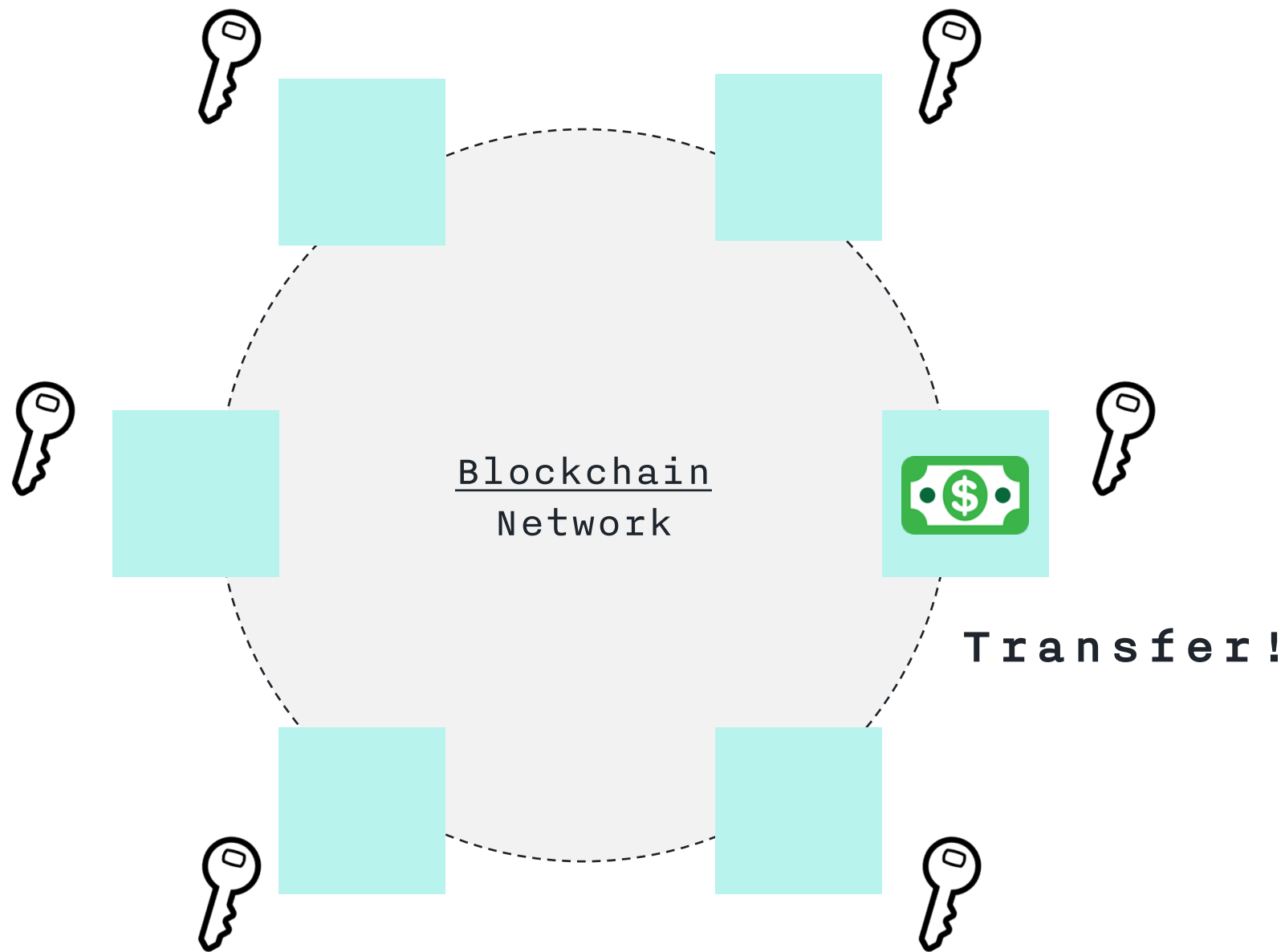


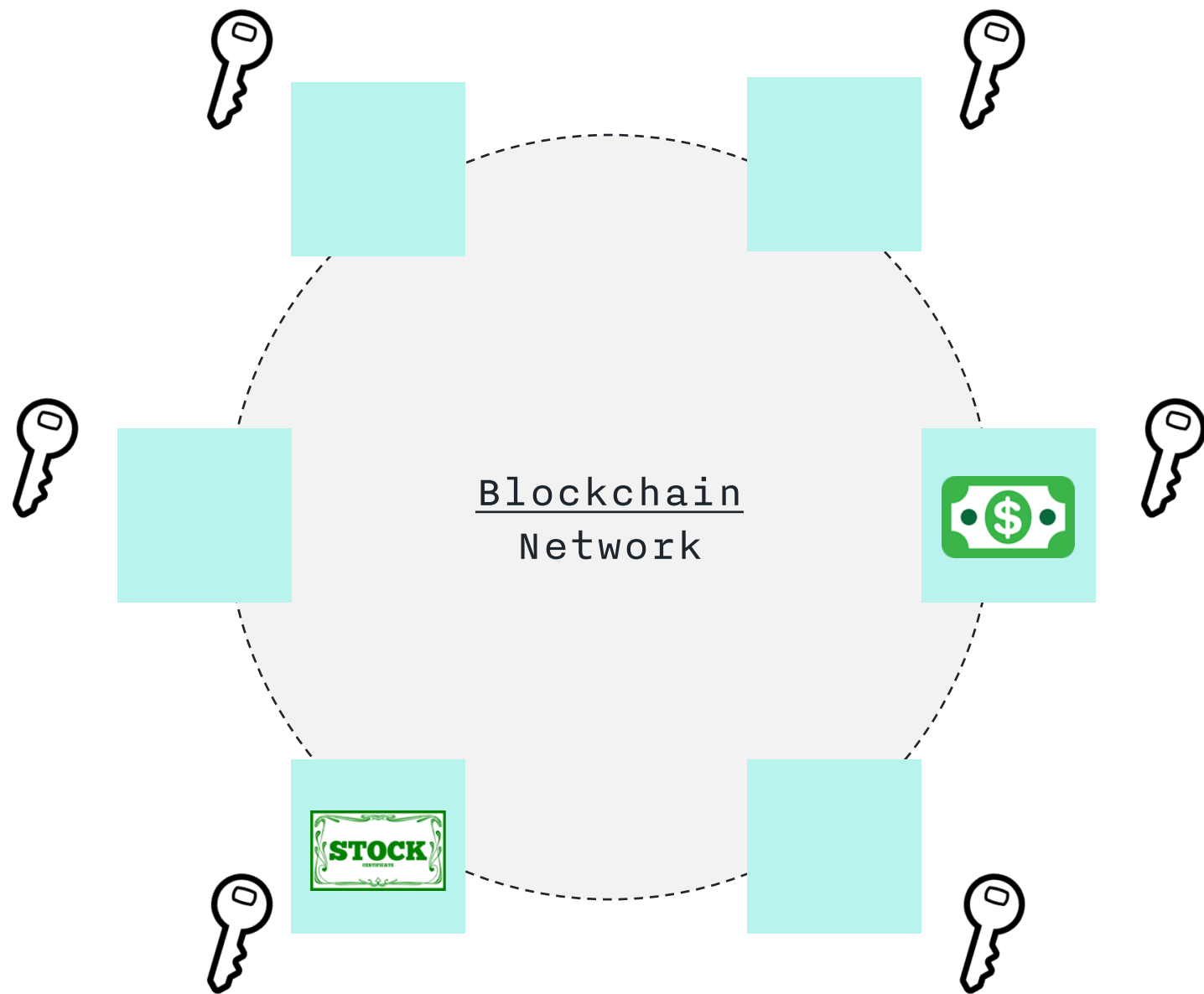


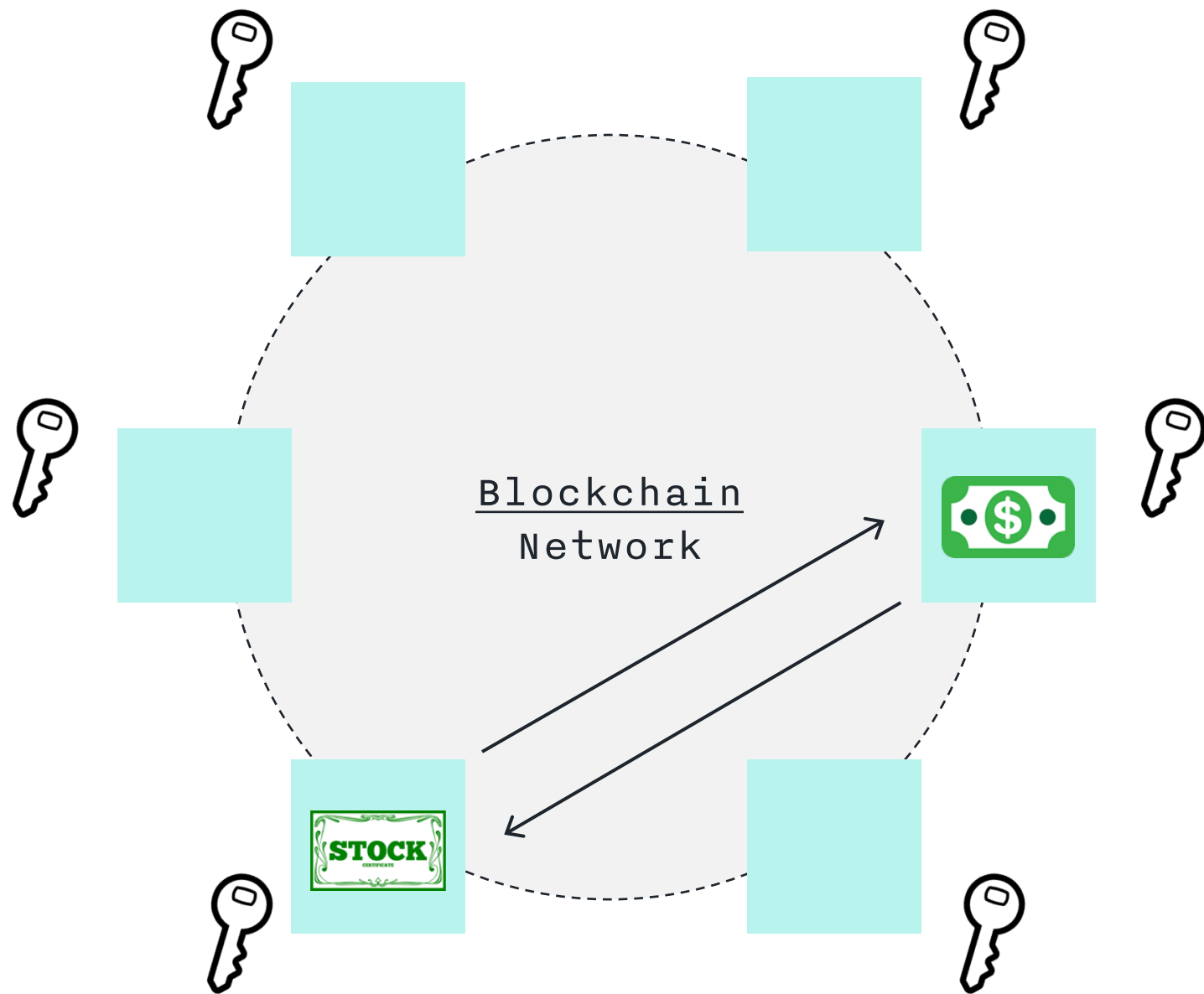


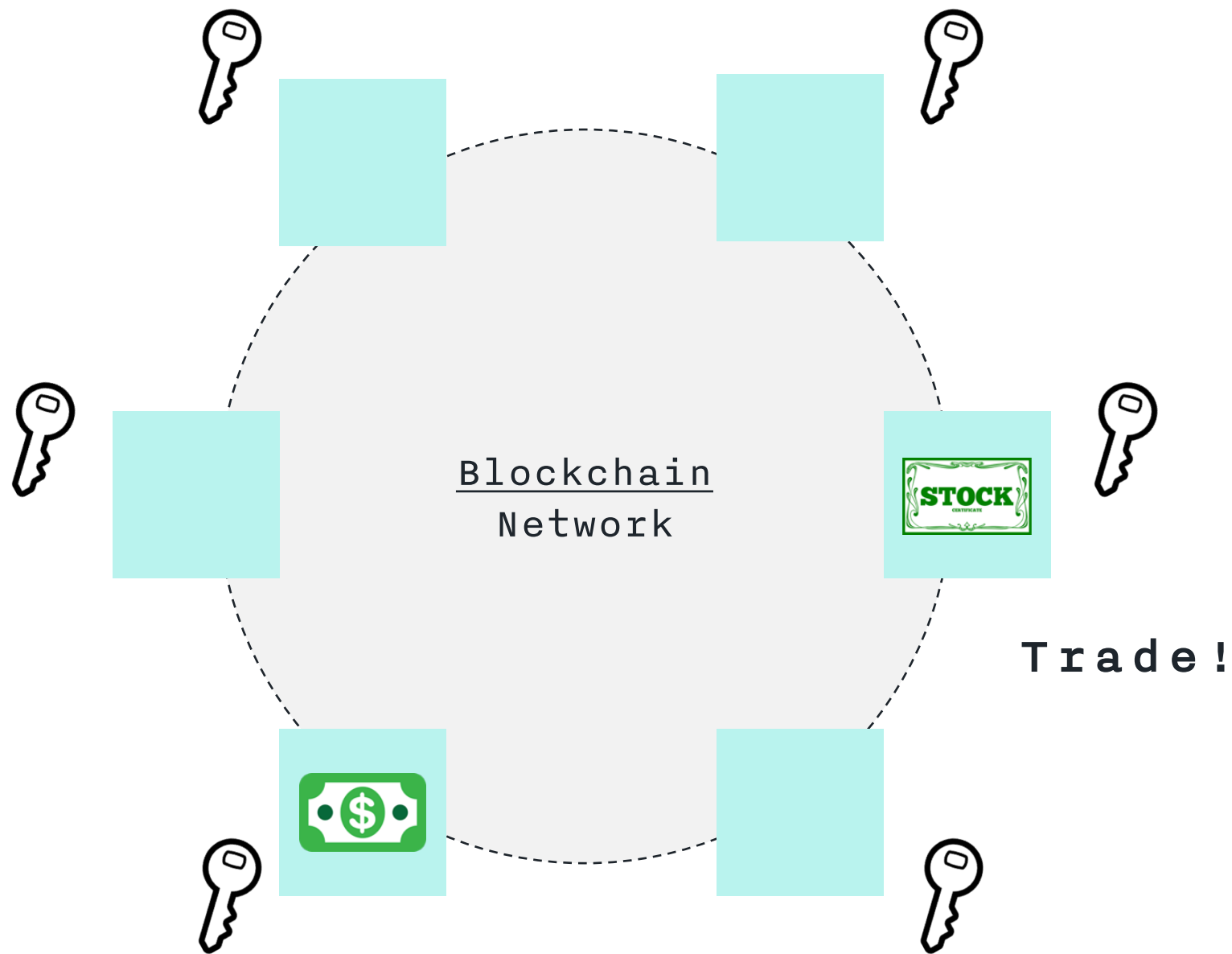






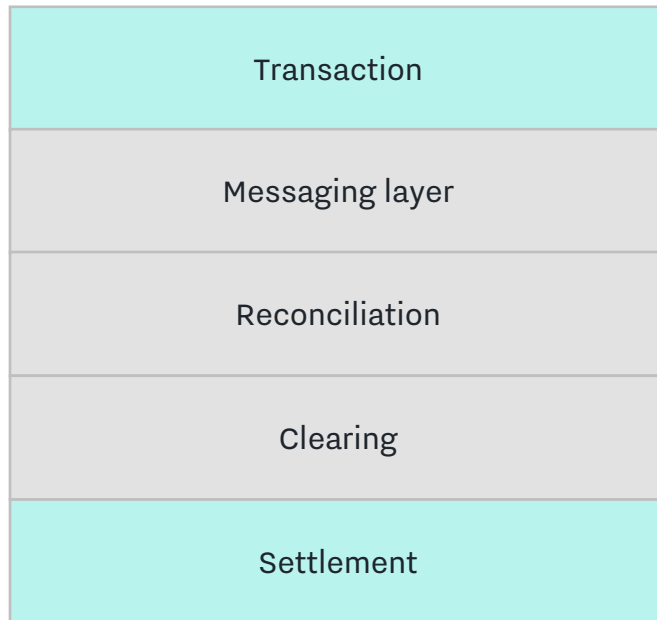




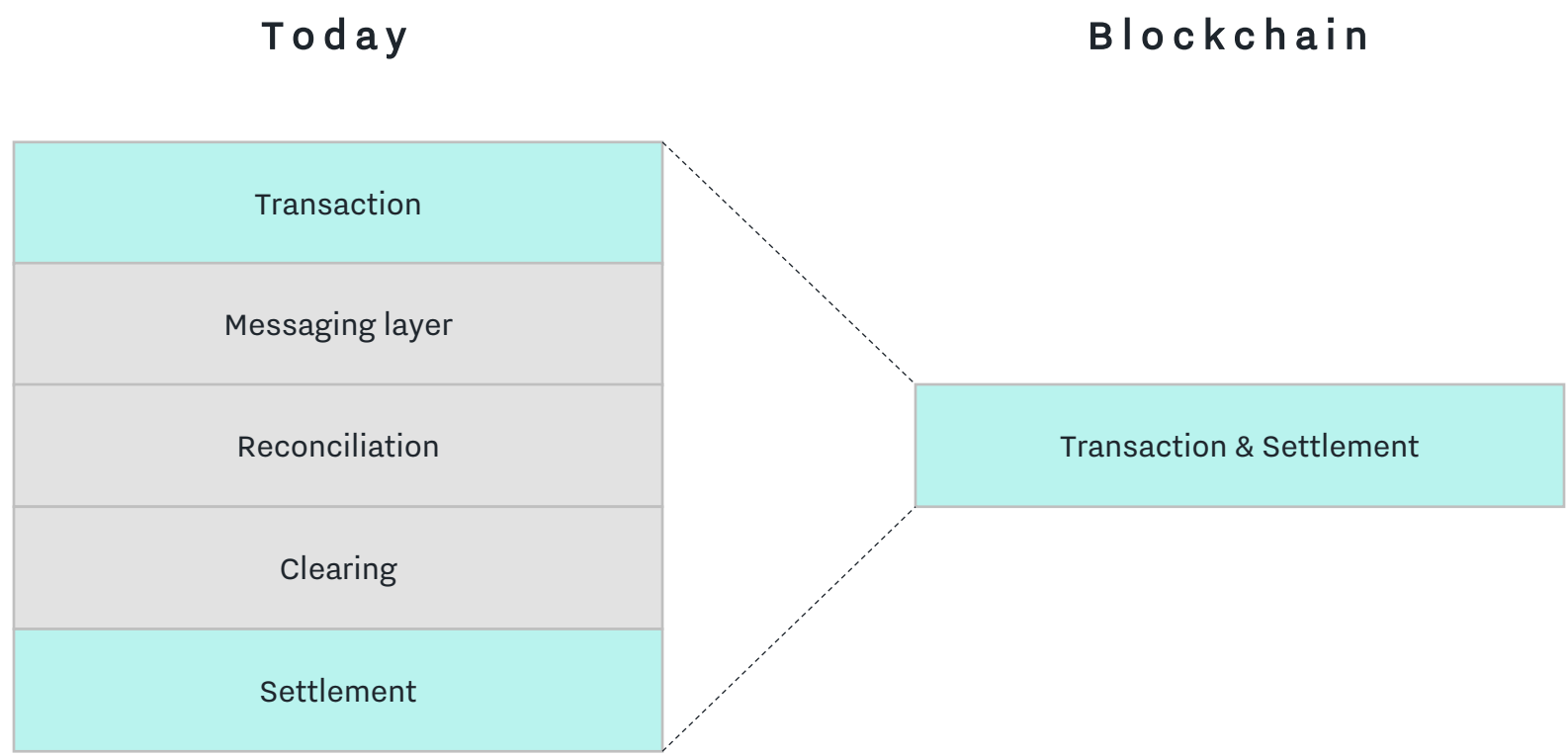


A digital format for financial assets

Today



A digital format for financial assets



When Blockchain is the Medium

Payment = Settlement

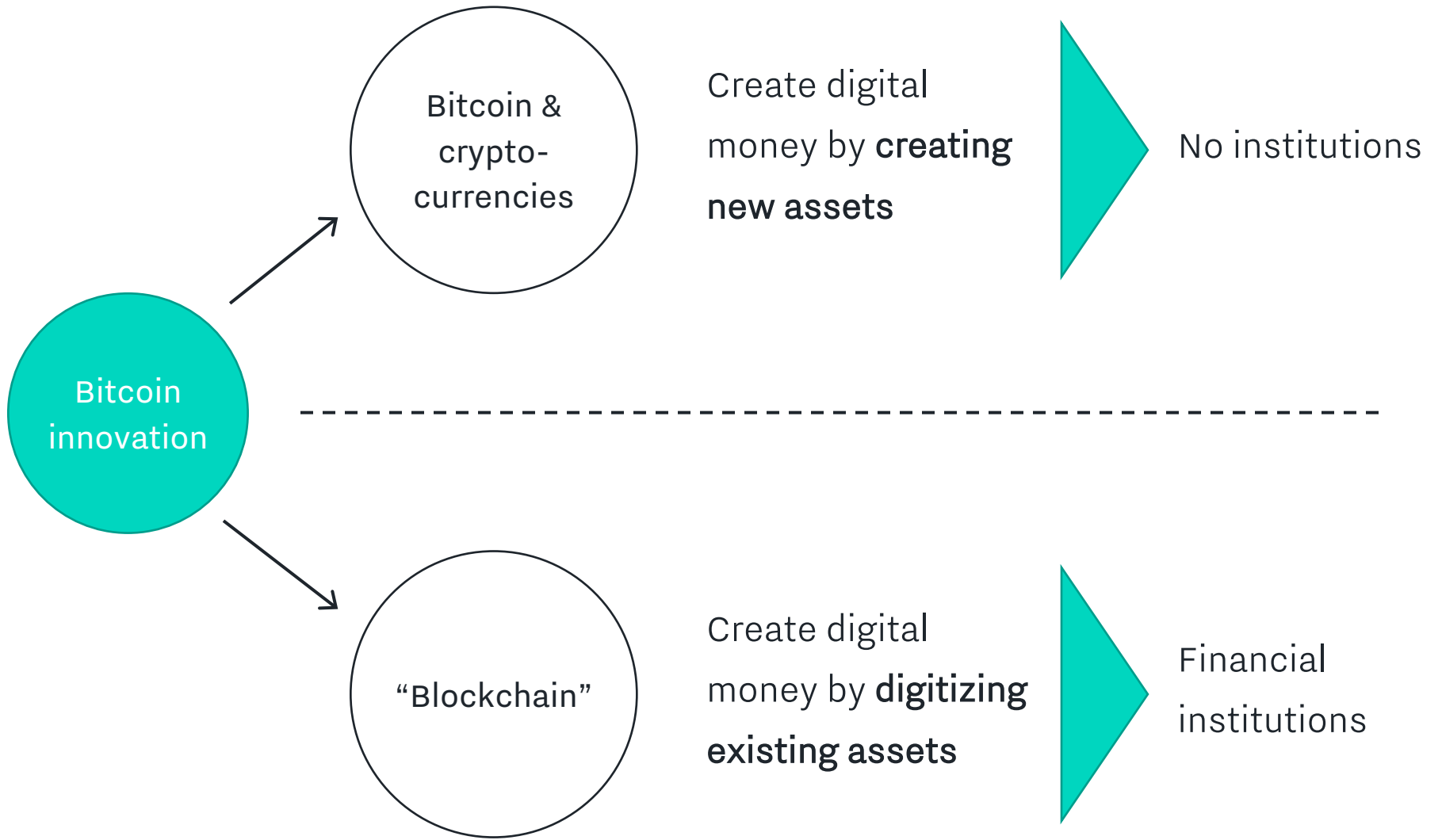
Real-time asset movement

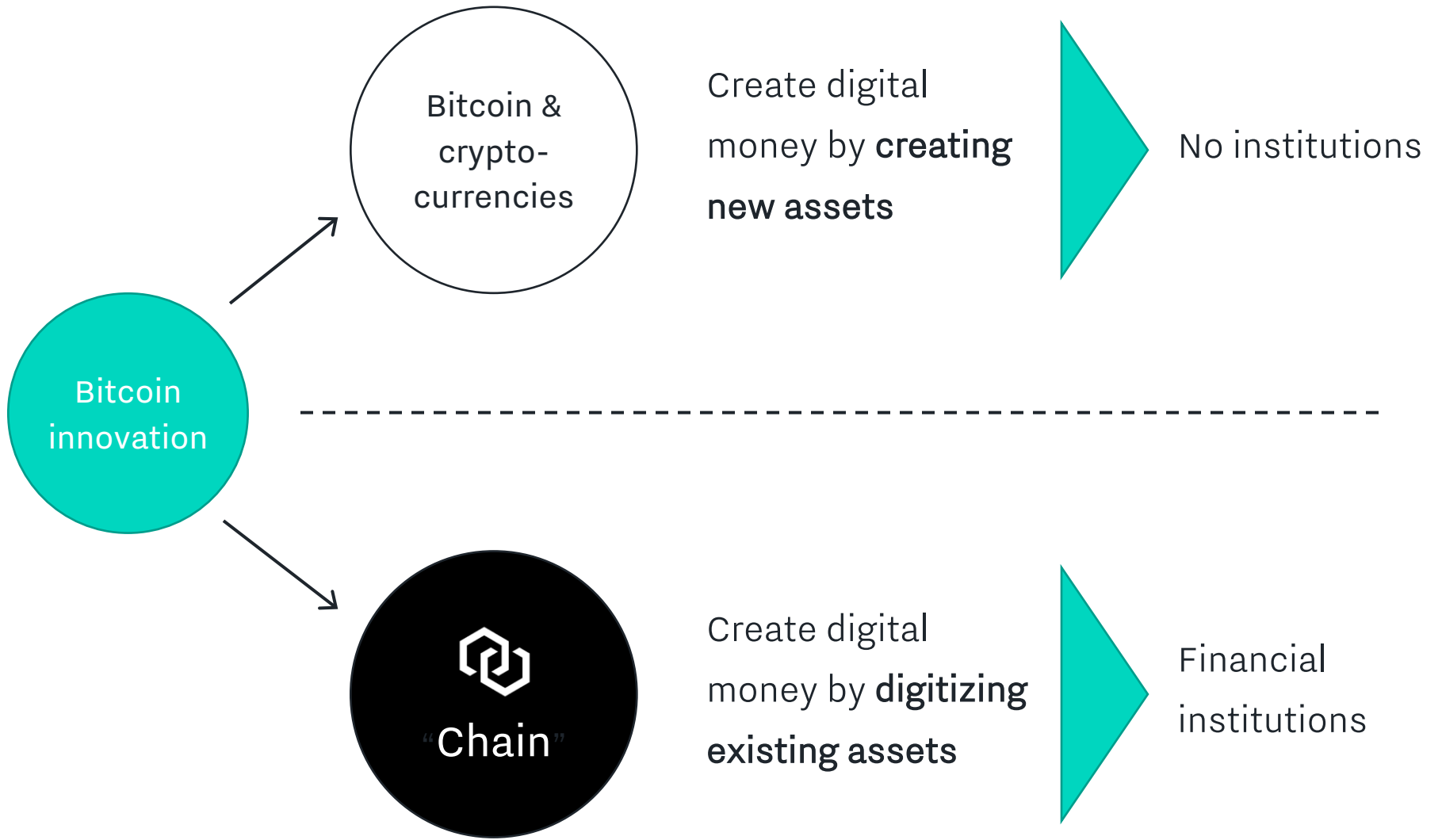
Single, shared ledger

Simple, lower cost infrastructure

Platform for innovation + security

Why work with financial institutions &
enterprises?





Financial institutions can digitize assets

(i.e. issue them in a new medium)

Central bank



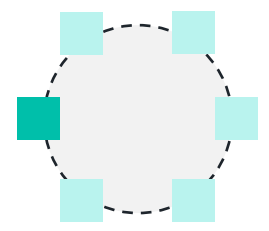
Issue



"Native assets"



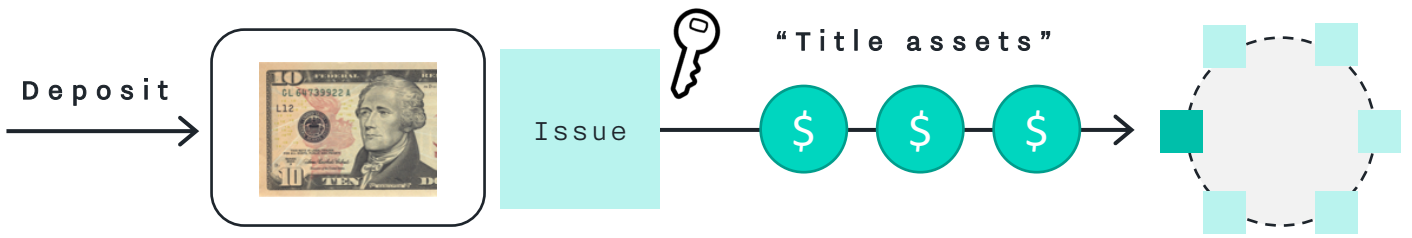
Blockchain



Central bank

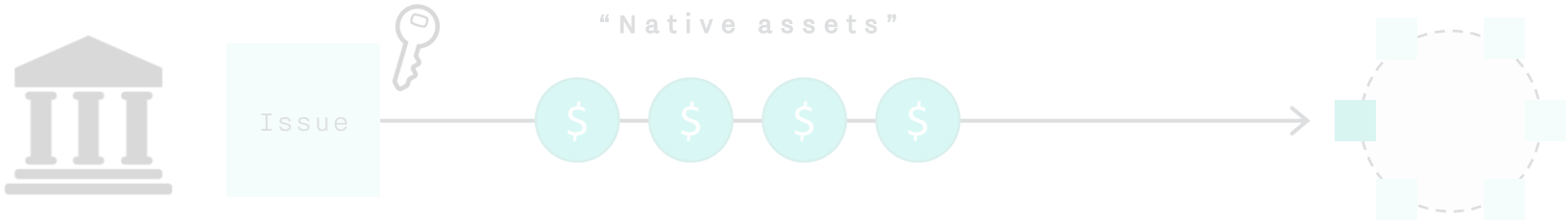


Institutions



Central bank

Blockchain



Institutions

Blockchain



Institutions

Blockchain



Federal Reserve



What opportunities should financial
institutions & enterprises pursue?

Blockchain = Modern financial database

Assets (not information)

Assets that are moving (not sitting in one place)

Asset classes and their characteristics

Examples

Currencies

Securities

Gift cards

Loyalty points

Energy certificates

Votes

Characteristics

Standardized vs. Bespoke

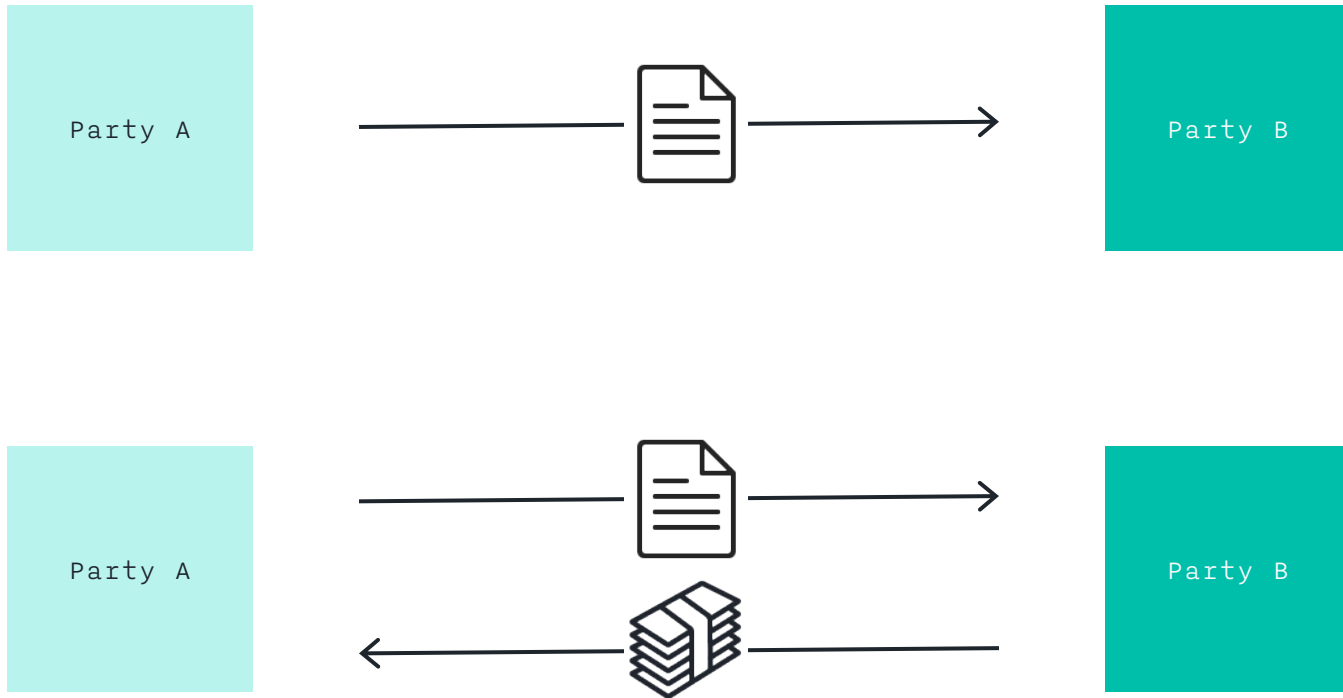
Exchange vs. OTC

Vanilla vs. Derivative

New vs. Existing

Single issuer vs. Multi issuers

Value of single vs. multi asset networks



Strategic mindset

Existing medium

Incremental

Profitability

Market share

New medium

Disruptive

Cannibalization

Market structure

Value proposition

Use-case specific

Unlocking new market

Cost (direct or indirect)

Speed

Risk

Transparency

Accountability

Long-term

Platform to drive digital transformation

Potential roles

Rolls to fill

Issuers

Network operators

Custodians

Observers

Users

Key success factors

Ability to issue asset(s)

Market access / Network

Time to market

Brand

Energy – areas for exploration

- Settlement of charges in transmission & distribution
- Company network ledger: generation to usage
- Issuance and trading of renewable energy certificates, e.g. Wind power

