Convegno Acri Pri.Banks

Finanza Decentralizzata e Euro Digitale

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Web3

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What happened till now

	1991 - 2000 **WEB 1**	2001 - 2020 **WEB 2**	2021 - ... **WEB 3**
HISTORY	The U.S. government's ARPANET sent its first message in 1969, but the web as we know it today didn't emerge until 1991, when HTML and URLs made it possible for users to navigate between static pages. Consider this the **read-only web**, or Web1.	In the early 2000s the internet was becoming **more interactive**; it was an era of **user-generated content**, or the **read/write web**. Socialmedia was a key feature of Web2 and Facebook, Twitter, and Tumblr came to define the experience of being online. YouTube, Wikipedia, and Google expanded our ability to **watch, learn, search, comment and communicate**. The Web2 era has been one of centralization. **Network effects** and **economies of scale** have led to clear winners. Scraping users' data and selling targeted ads against it created a huge value for the leaders. This has allowed services to be offered for "free". Web2 also created **new ways for regular people to make money**, through the **sharing economy** (drive or influencer)	In 2009, **Bitcoin was launched** in the wake of the financial crisis and partially in response to it by the pseudonymous inventor Satoshi Nakamoto. The Blockchain technology can be seen as one **computer for the entire planet** with **computing power distributed** across the globe and controlled nowhere. **Web3** though blockchain can store number of **tokens** in a wallet, the terms of a **self-executing contract**, **or** the **code for a decentralized app** (dApp). In general, coins are used as **incentives for miners to process transactions**. Whereas scale has been a key measure of a Web2 company, **engagement is a better indicator of what might succeed in Web3**. Users won't need separate log-ins for every site but will use a **centralized identity** (a crypto wallet) that carries their information
LEADERS	• Navigate: Netscape, Explorer, Safari, Chrome • Search: W3Catalog, Lycos, AOL NetFind, Google, Baidu	• Socialmedia: Facebook, Instagam, WhatUp, Linkedin,Twitter, Tumblr etc • Search, watch: YouTube, Wikipedia, and Google , etc • Buy: Amazon, etc. • Buy online: Apple etc	• "Places": Decentralend, The Sandbox
FINANCIAL	• Multichanel • **Online banking** • Trading online • Ecommerce	• **Platform** • Openfinance	• **Cripto currency**: Bitcoin, Ethereum, etc • **DLT** • **Metaverso**

What happened till now

HISTORY

LEADERS

FINANCIAL

1991 - 2000

WEB 1

On Line Banking
Trading On Line
E-commerce Payments

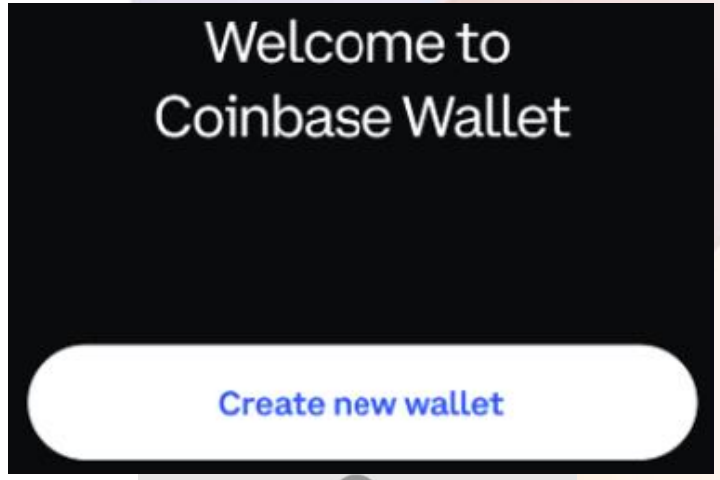
2001 - 2020

WEB 2

Piattaforme P2P
Fintech
Open Finance

2020 - ...

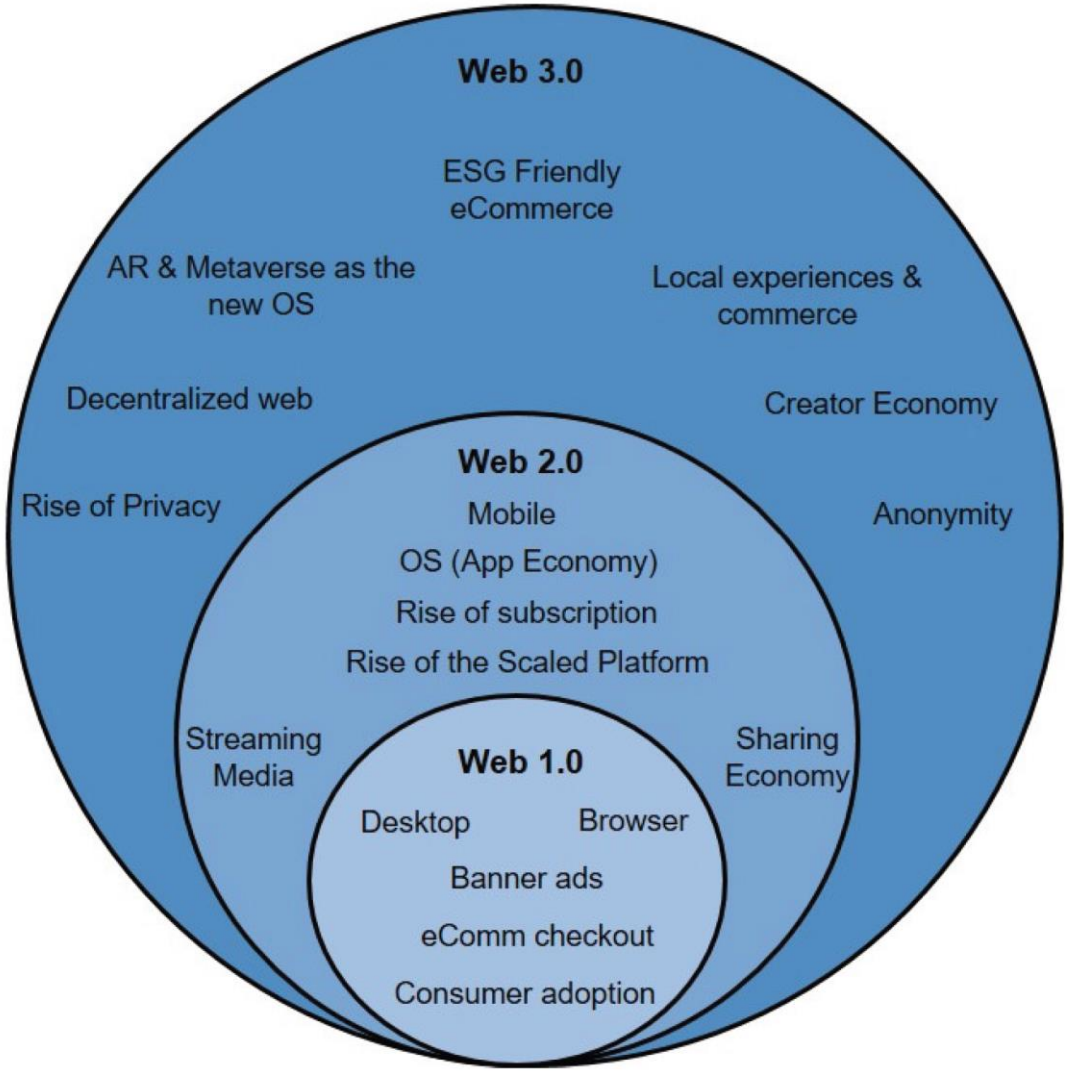
WEB 3



Crypto Asstes
DeFi

Web 3 will be a dramatic shift in industry trends

Exhibit 1: Evolution of Decentralized Web



Source: Company data, Data compiled by Goldman Sachs Global Investment Research

The defining characteristics of a **Web 2.0 "leader"** are **scale of users**, **utility-like nature** of **mobile/desktop applications/services** (if not a family or ecosystem of apps) & **low to no distribution costs** (companies have gained broad based familiarity with some turning into verbs).

There will be a dramatic shifts in the industry **trends in Web 3.0** (decentralized, more local/niche/targeted, etc) that could impact **current platform moat/strength**, industry **input costs**, possible headwinds to monetization driven by personalization and potential for **shifting media and commerce trends as we transition to Web 3.0.**

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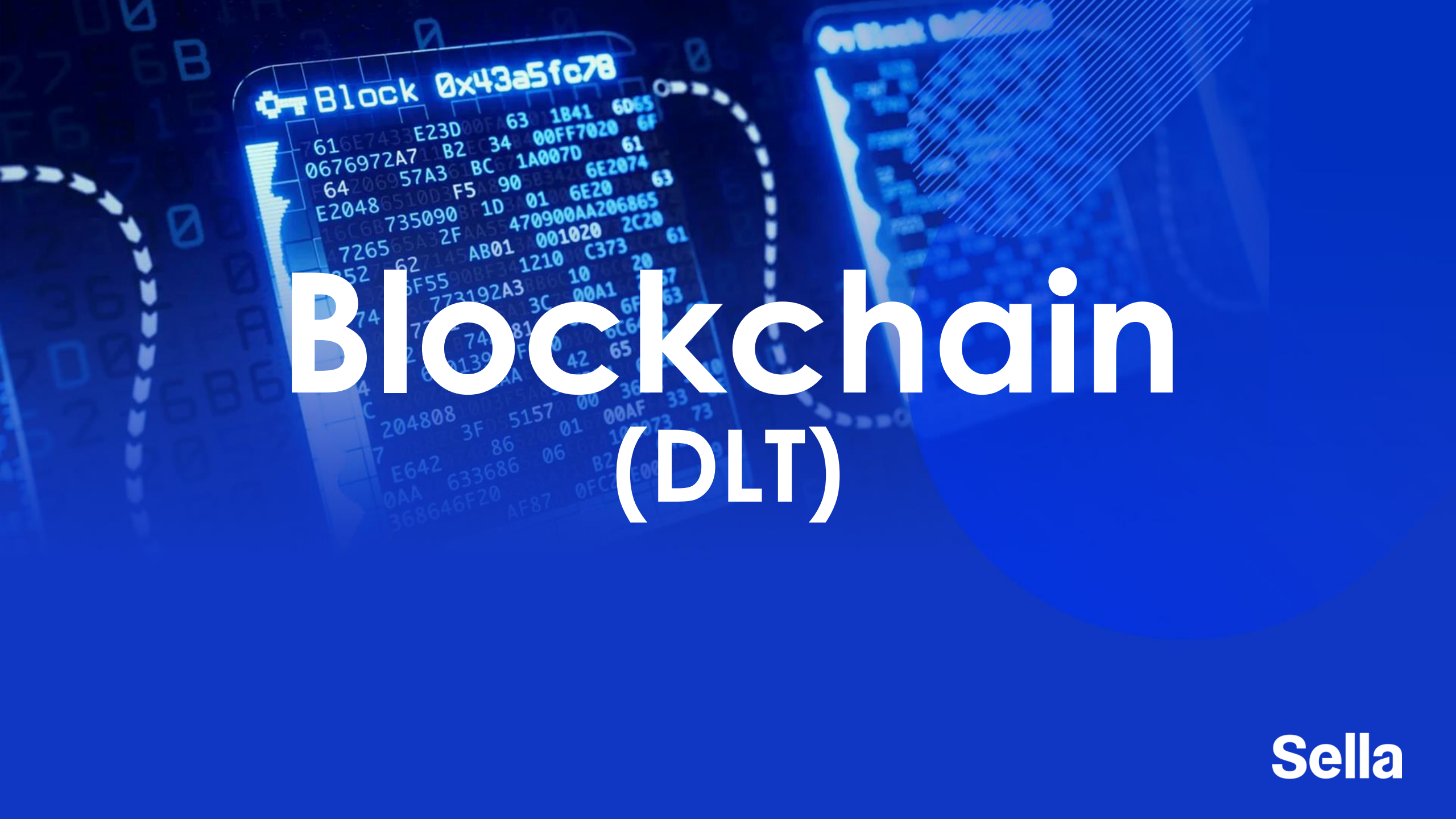

Blockchain (DLT)

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The Web 3 will be more "user friendly", decentralized and flexible

So what form might “Web 3.0” take? We lay out a few key principles:

1. Likely **more control** by the user of their **data** (including data residing on-device);
2. Likely a more micro focus - a **mean reversion on scale** (either in end market being tackled or in relationship between the platform and the user);
3. The rise of **individual** as creator and **creator monetizing their content** more directly with “fans”;
4. Increasingly **decentralized** (with the possible breakdown of the mobile operating system/app store distribution model over the next 5-10 years);
5. **Flexibility** (if not innovation) on **payment mechanisms** aimed at a mix of themes, including decentralized privacy and anti-establishment.

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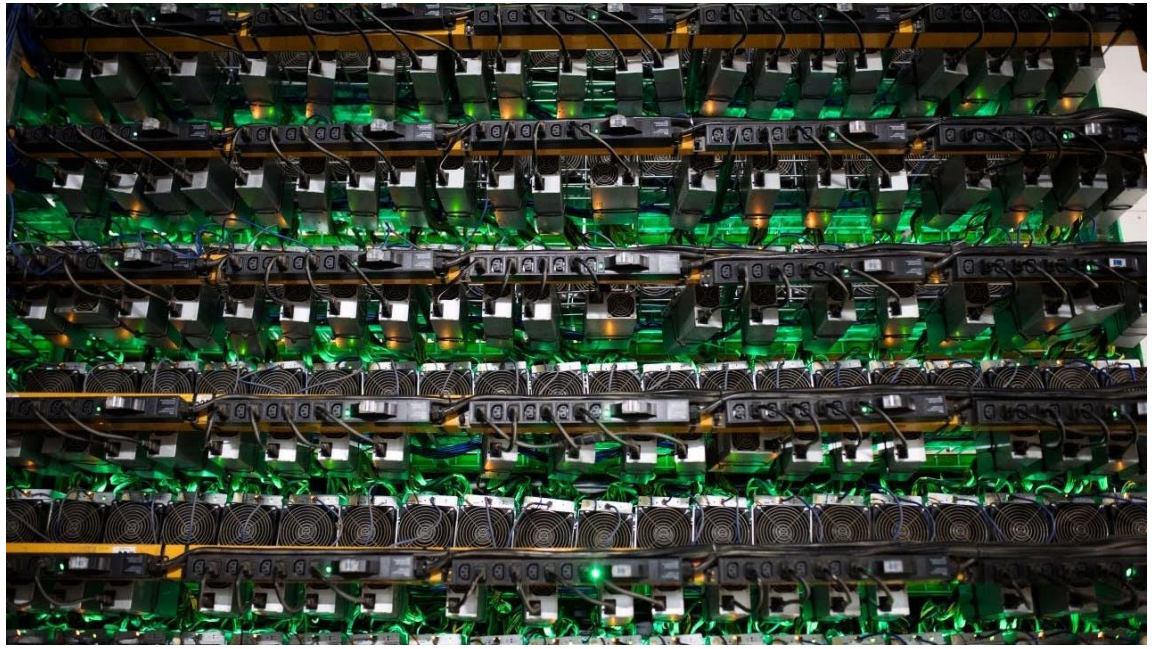
How a blockchain works

Web3 and cryptocurrencies run on what are called “permissionless” blockchains, which have no centralized control and don’t require users to trust, or even know anything about, other users to do business with them.



Not all blockchains work the same way, but in general, **coins are used as incentives for miners to process transactions**. On “proof of work” chains like Bitcoin, **solving the complex math** problems necessary to process transactions is **energy-intensive by design**.

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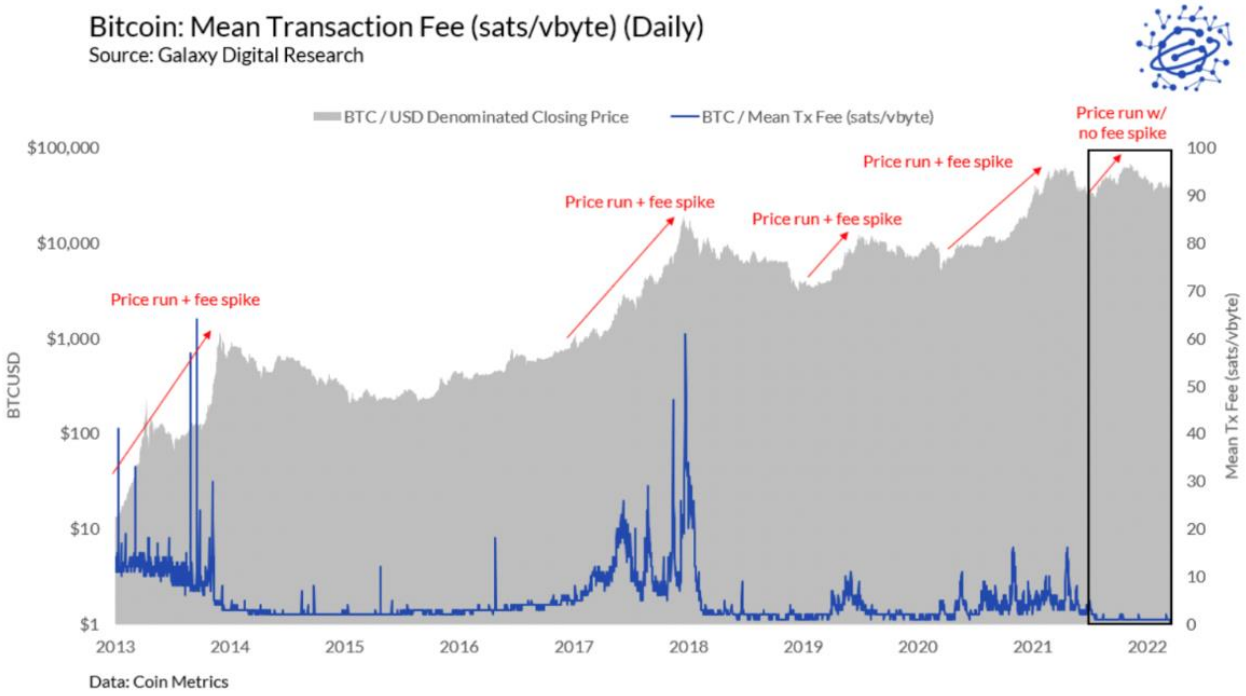
How a blockchain works

Blockchains need to give people **something in exchange for volunteering computing power**, and **cryptocurrencies fill that role,** but the system works only if other people are willing to buy them believing that they'll be worth more in the future.



The cost of a **"trustless" system** is that **it's highly inefficient**, capable of processing only a few transactions per minute, tiny amounts of data compared with a centralized system like, say, Amazon Web Services. Transaction costs on Bitcoin and Ethereum (which calls them **gas fees**) can run anywhere from a **few bucks to hundreds of dollars**. Storing one megabyte of data on a blockchain distributed ledger can cost thousands, or even tens of thousands, of dollars.

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From-tos for Platform Characteristics

Platform characteristics		Web 2.0	Web3
	Organizational structure	Centrally owned Decisions are based on adding shareholder value	Community governed, generally through a foundation decentralized autonomous organization (DAO) Native tokens are issued and enabled Participation in governance Decisions are based on user consensus
	Data storage	Centralized	Decentralized (game assets)
	Platform format	PC/console Virtual reality/augmented reality hardware Mobile/app	PC/console Virtual reality/augmented reality hardware Mobile/app coming soon
	Payments infrastructure	Traditional payments (eg, credit/debit card)	Crypto wallets

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From-tos for User Interaction

		Web 2.0	Web3
User interaction	**Digital assets ownership**	Leased within platform where purchased	Owned through nonfungible tokens (NFTs)
	Digital assets portability	Locked within platform	Transferable
	Content creators	Game studios and/or developers	Community Game studios and/or developers
	Activities	Socialization Multiplayer games Game streaming Competitive games (eg, e-sports)	Play-to-earn games Experiences Same activities as Web 2.0
	Identity	In-platform avatar	Self-sovereign and interoperable identity Anonymous private-key-based identities

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From-tos for Commercial

		Web 2.0	Web3
Commercial	**Payments**	In-platform virtual currency (eg, Robux for Roblox)	Cryptocurrencies and tokens
	Content revenues	Platform or app store earns 30% of every game purchased; 70% goes to developer (example model)	Peer-to-peer; developers (content creators) directly earn revenue from sales Users/gamers can earn through play or participation in platform governance Royalties on secondary trades of NFTs to creators

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Governance

Blockchain

DLT

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Blockchain

DLT

Governance

Trust

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Blockchain

DLT

Governance

Trust

Inclusion

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Blockchain

DLT

Governance

Trust

Inclusion

Incentives

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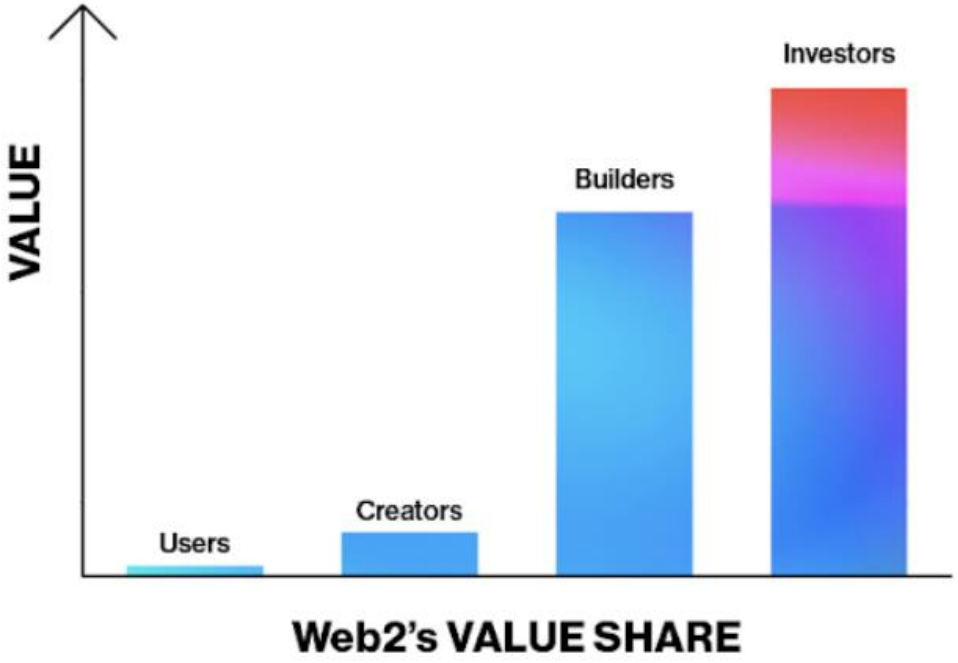
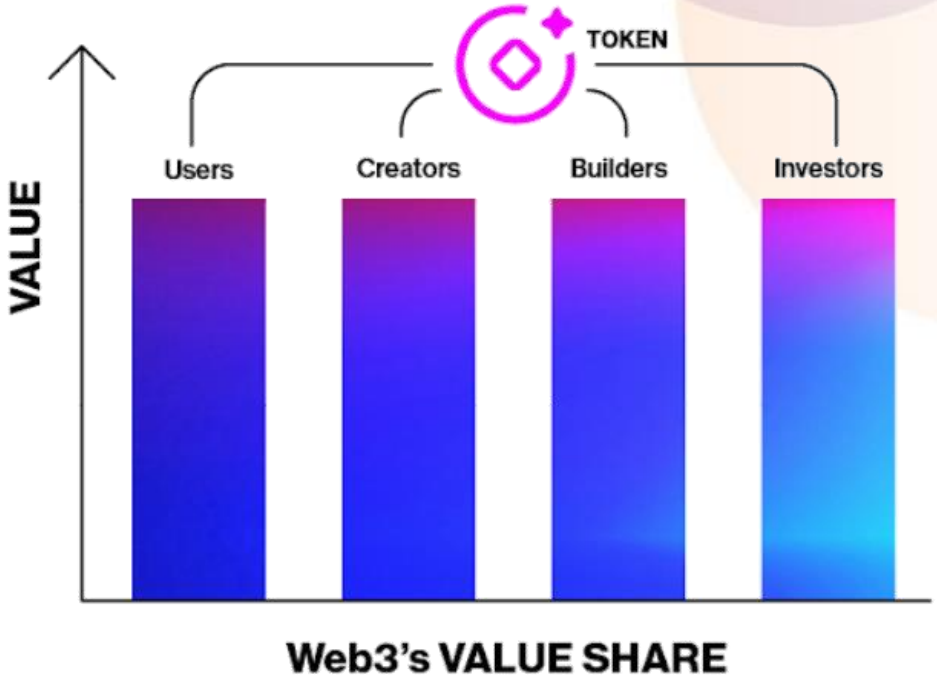
web2

Value stemming from users but "extracted" by builders and investors.



web3

Frictionless approach, the user becomes an investor, and the concepts of developer and creator overlap



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Blockchain

DLT

Governance

Trust

Inclusion

Incentives

Digital Asset

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Web3 Layers

“Lego” approach to building solutions

Select examples only

Aggregation Layer

Aggregators providing access to multiple DeFi applications on the supply and demand sides

Supply-side aggregators: Velvet.Capital (Your Automated Crypto Portfolio), yearn, APY.Finance, Staked, Idle

Demand-side aggregators: 1inch, DEX.AG, Matcha, paraswap

Application Layer

Key DeFi apps such as DEXes, AMMs, Lending protocols, Derivatives, Prediction markets, Stablecoins, Insurance and Asset mgmt

Stablecoins: BUSD

DEXes and liquidity: PancakeSwap, Bancor, IDEX

Insurance: Nexus Mutual, COVER

Prediction markets: Polymarket

Derivatives: δY/δX, SYNTHETIX

Credit and Lending: Compound, AAVE, Venus

Middleware

Technology that helps developers use the underlying protocols more easily, lowering the barrier and improving efficiency

Development frameworks: TRUFFLE, libp2p, substrate, OpenZeppelin, SOLIDITY

Node services, queries, APIs: QuickNode, alchemy, the graph, INFURA, DAppNode, BLOCKDAEMON

Layer 2

L2 protocols built on top of an existing blockchain (e.g., Ethereum) t solve the transaction speed and scaling difficulties; Off-chain computing and oracles

Scaling solutions: ARBITRUM, polygon, Optimism

Oracles & off-chain computing: Chainlink, nest, Band Protocol, tellor

Layer 1

Foundational networks processing and finalizing transactions according to a consensus mechanism (PoW, PoS, etc.)

AVALANCHE, SOLANA, ethereum, FANTOM, BNB CHAIN

Digital Asset

(Crypto Asset)

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Digital Asset

Programmability

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Digital Asset

NFT

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Digital Asset

Stable Coin

(backed Crypto Assets)

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Digital Asset

Unbacked Crypto Asset

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Digital Asset

CDBC

(Digital Euro)

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DeFi

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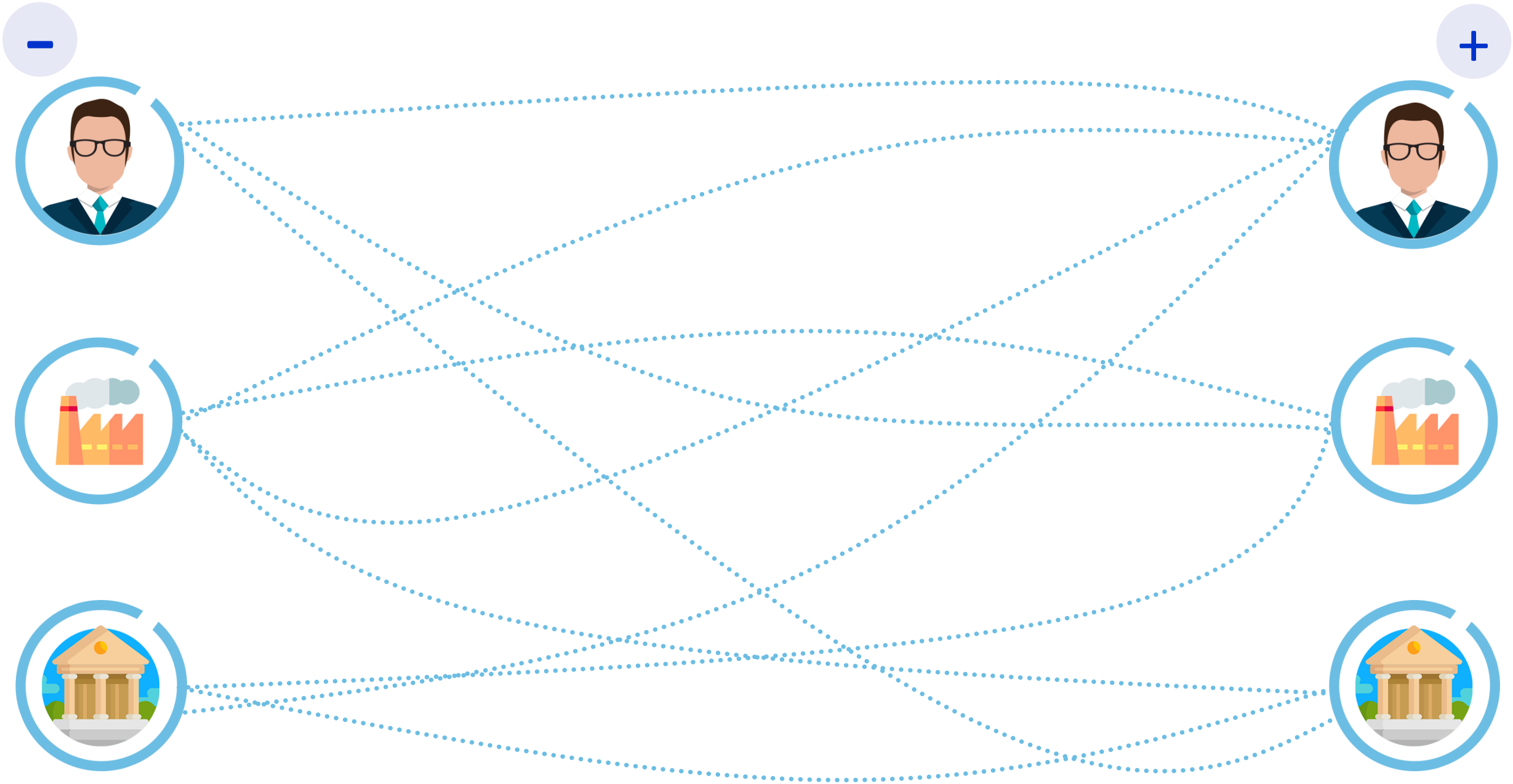

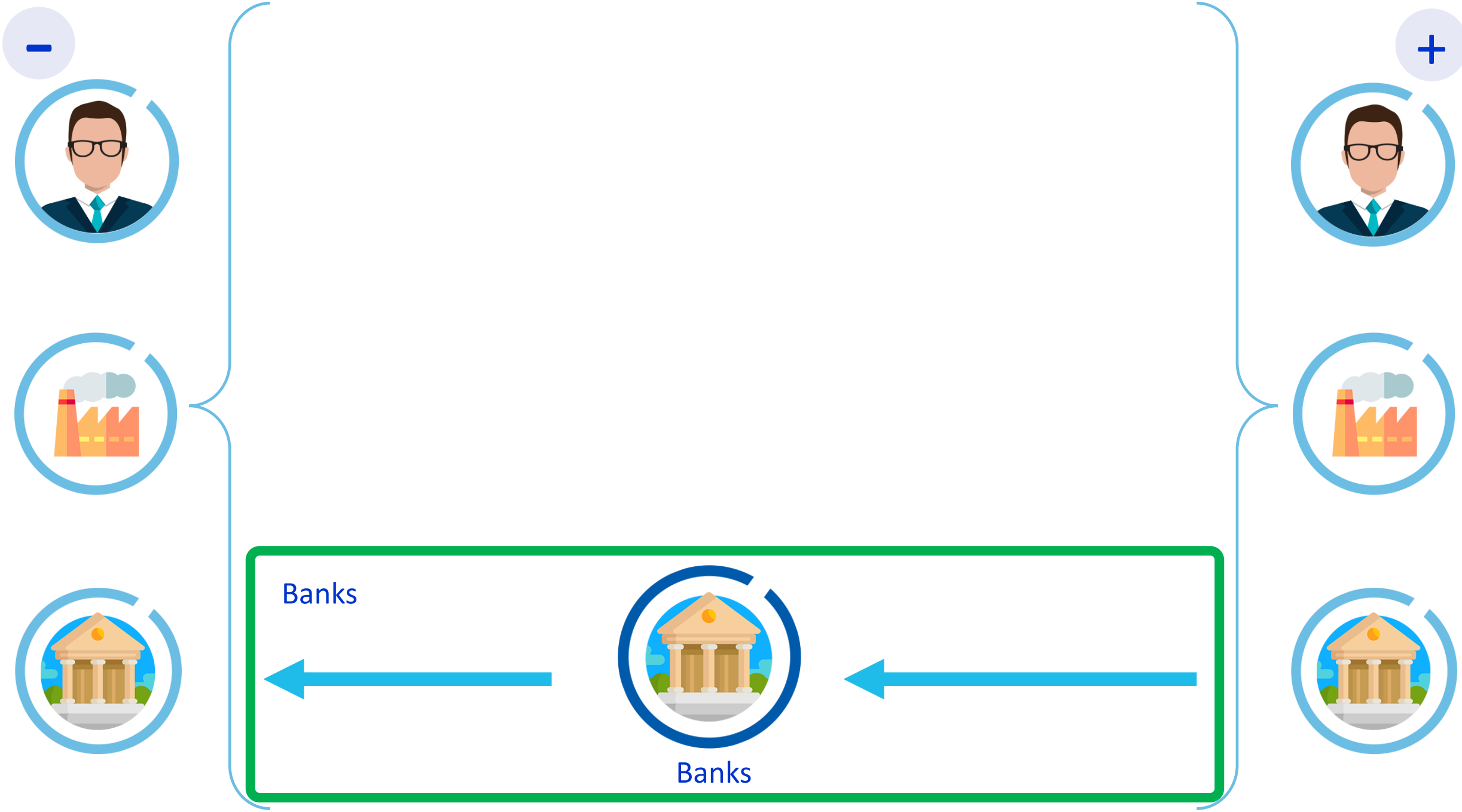
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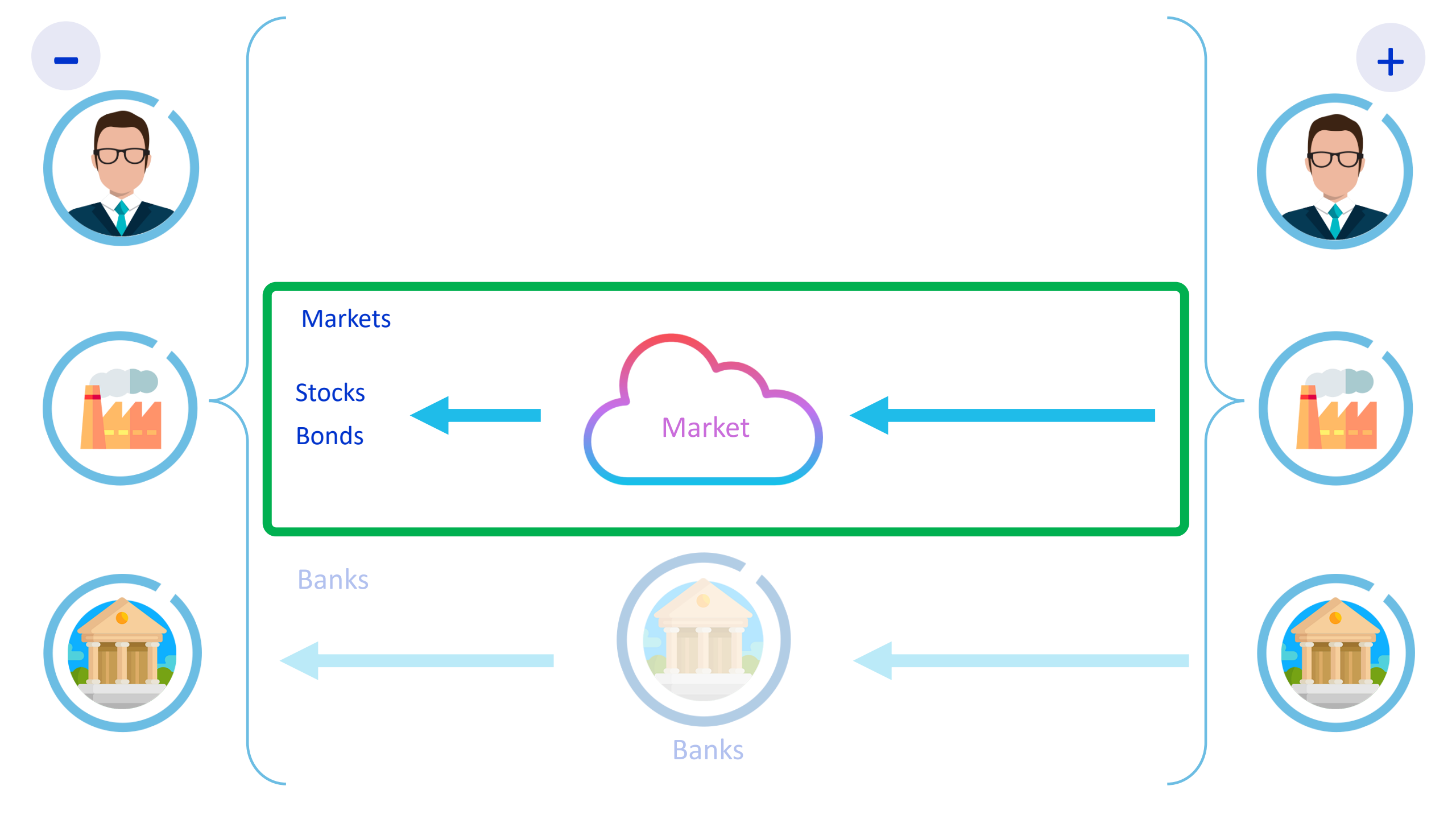
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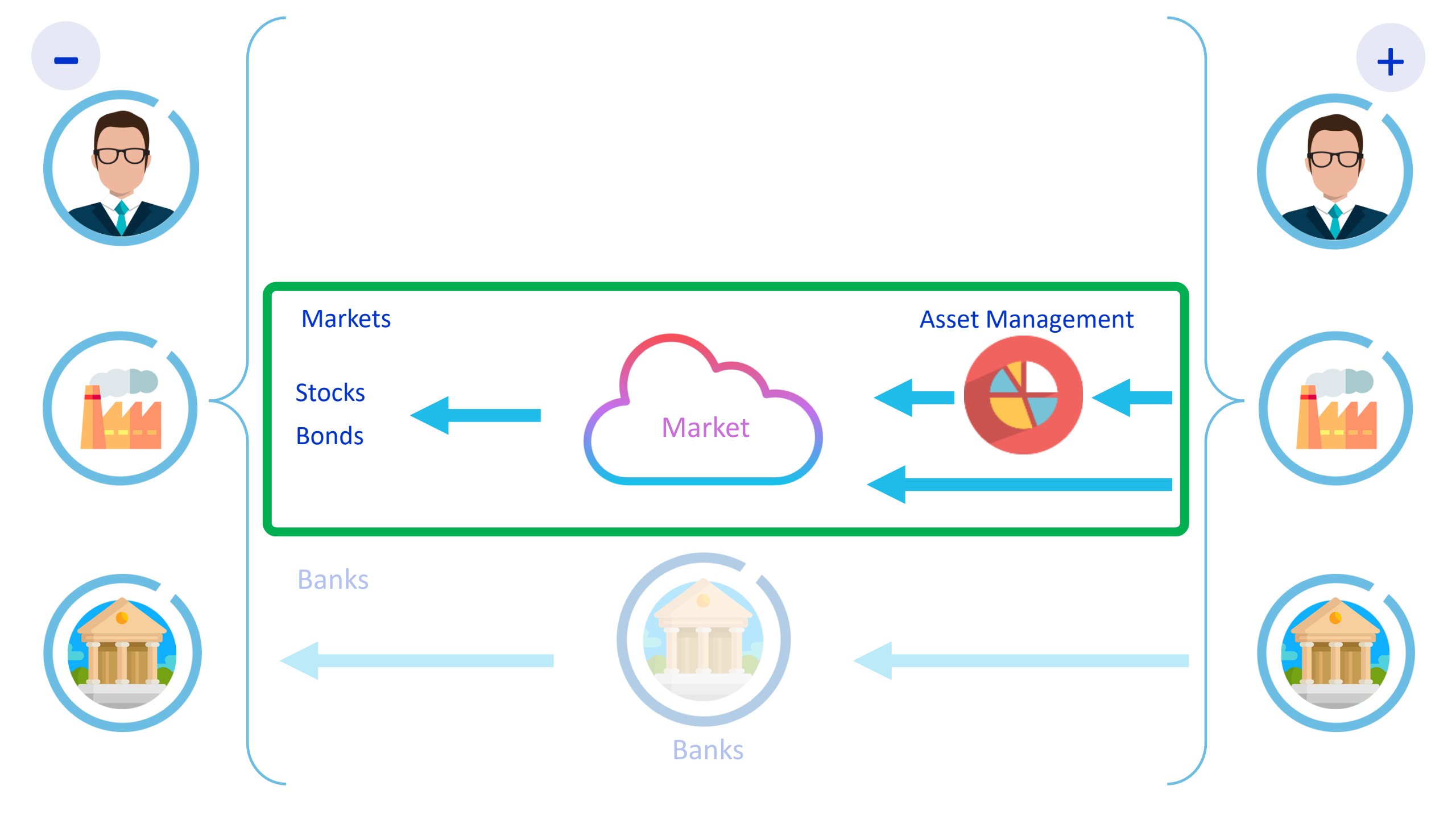
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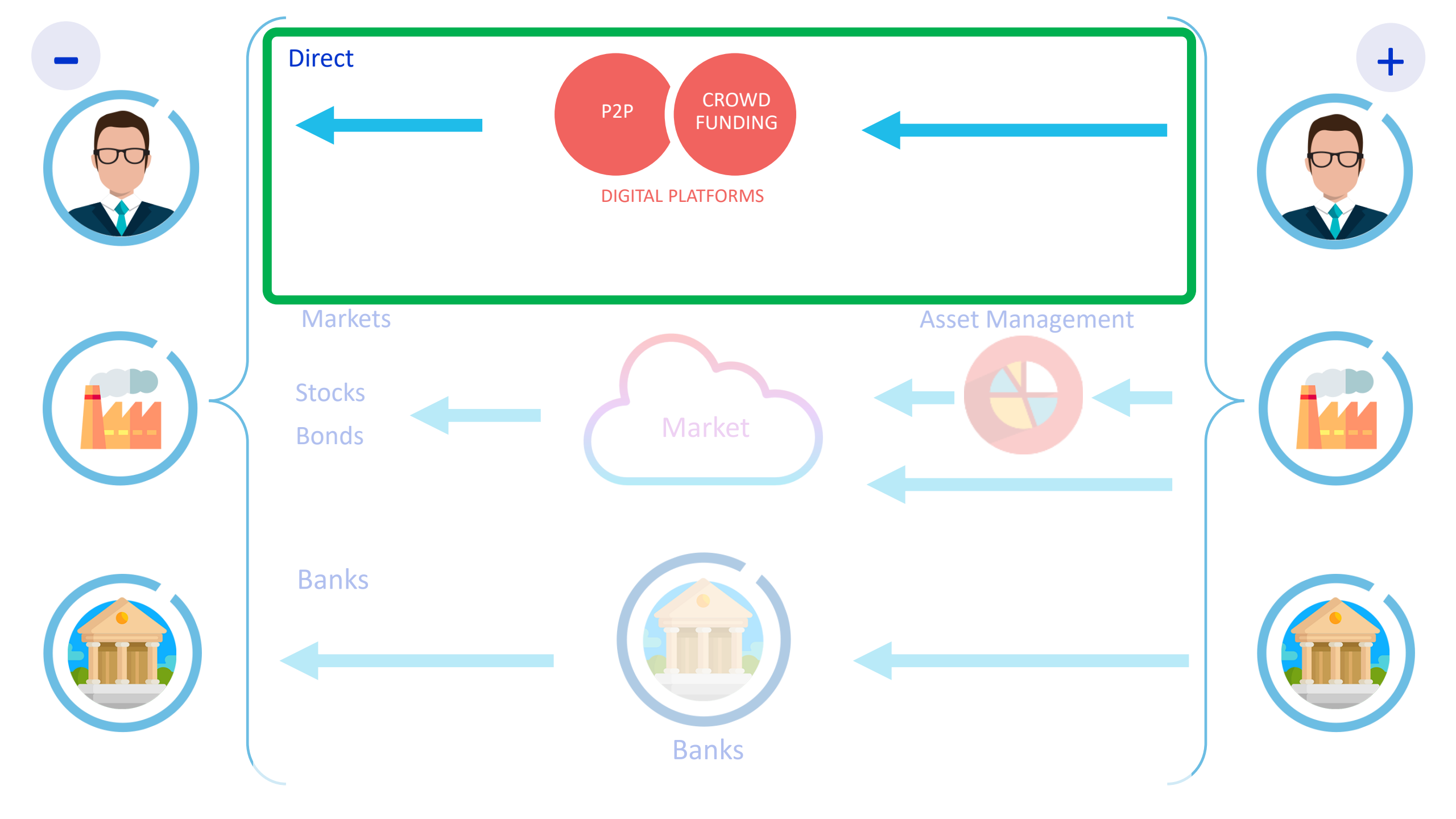
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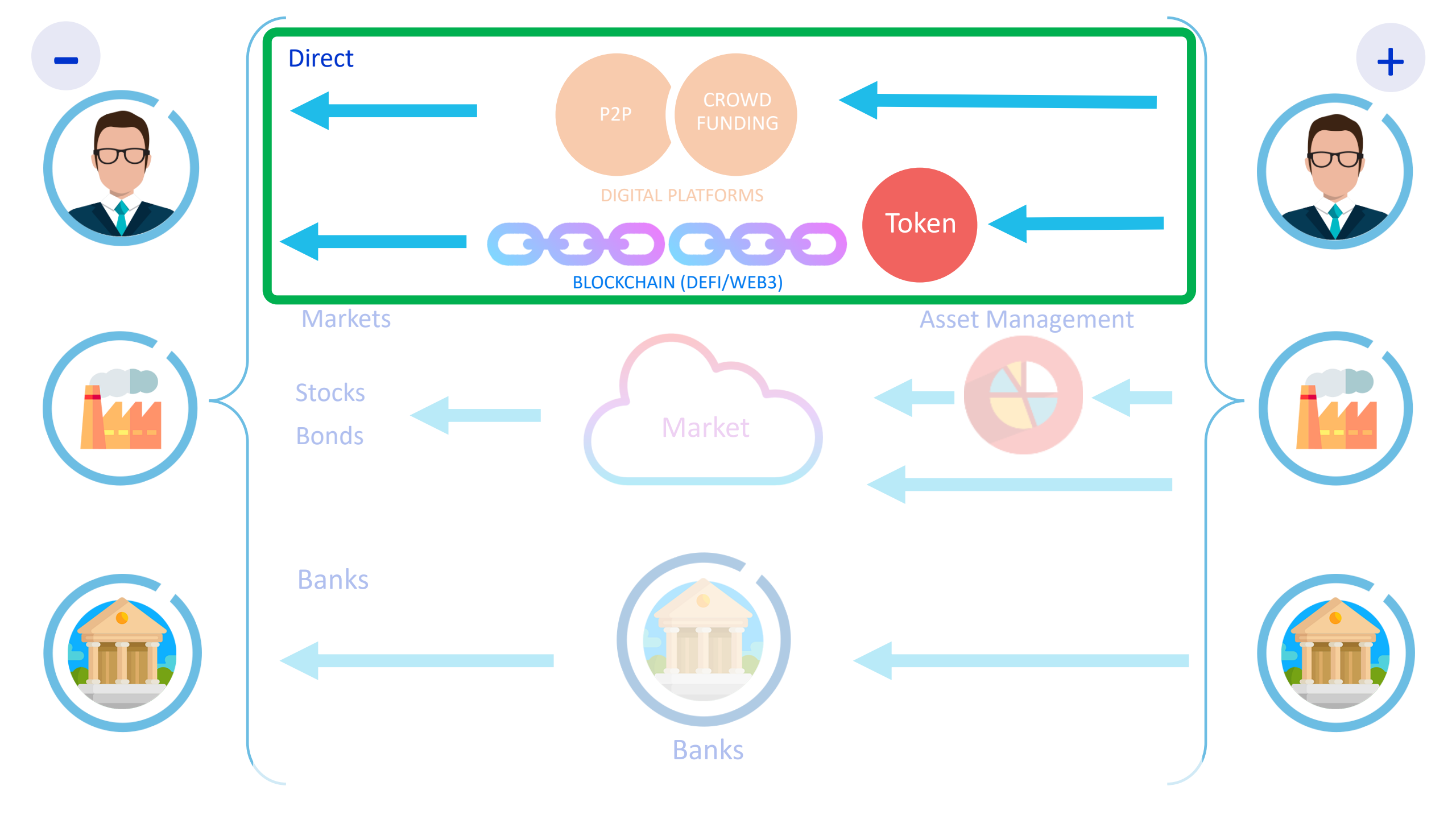
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BLOCKCHAIN (DEFI/WEB3)
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DeFi
Perchè **è importante per noi?**

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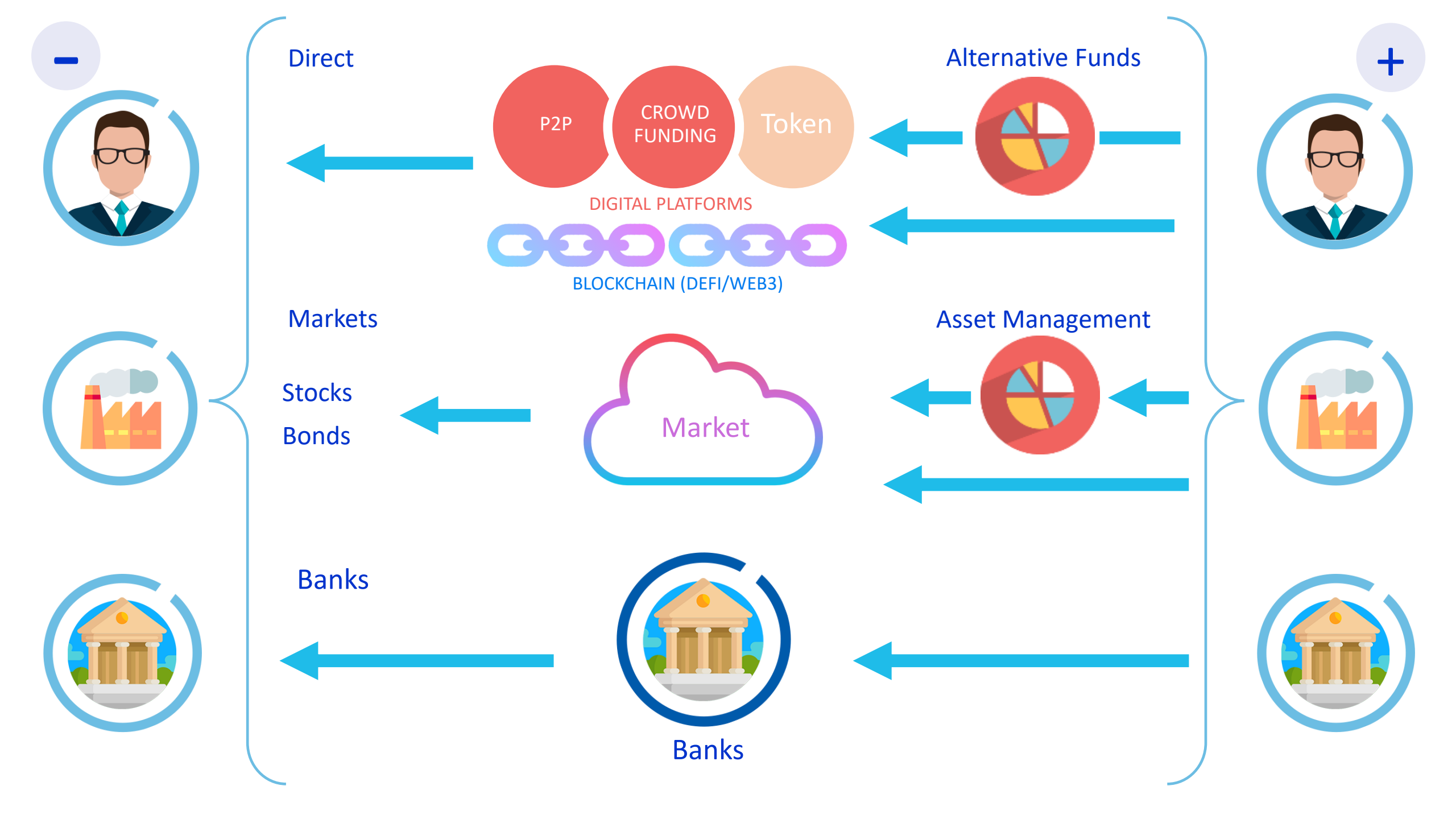
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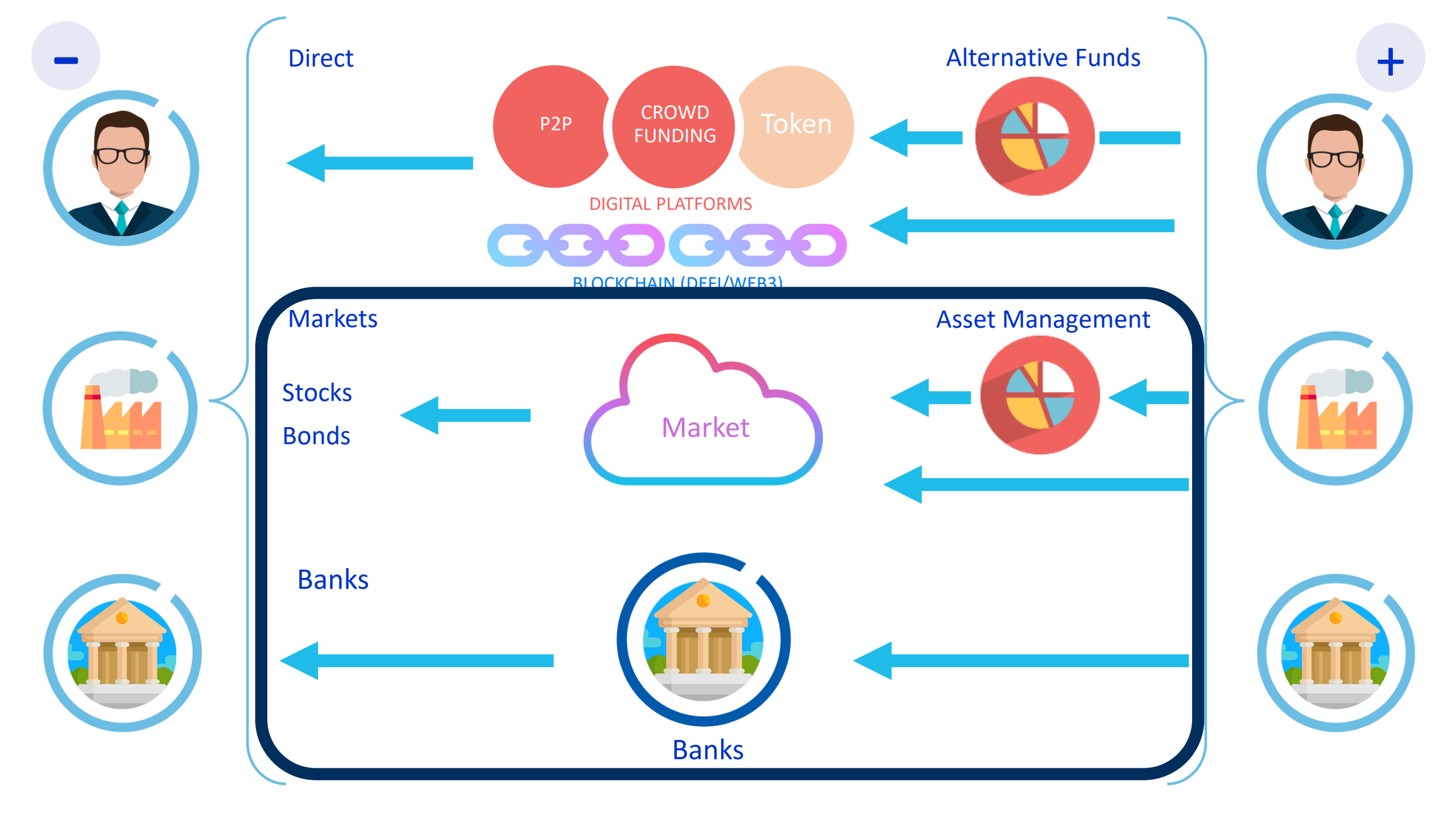
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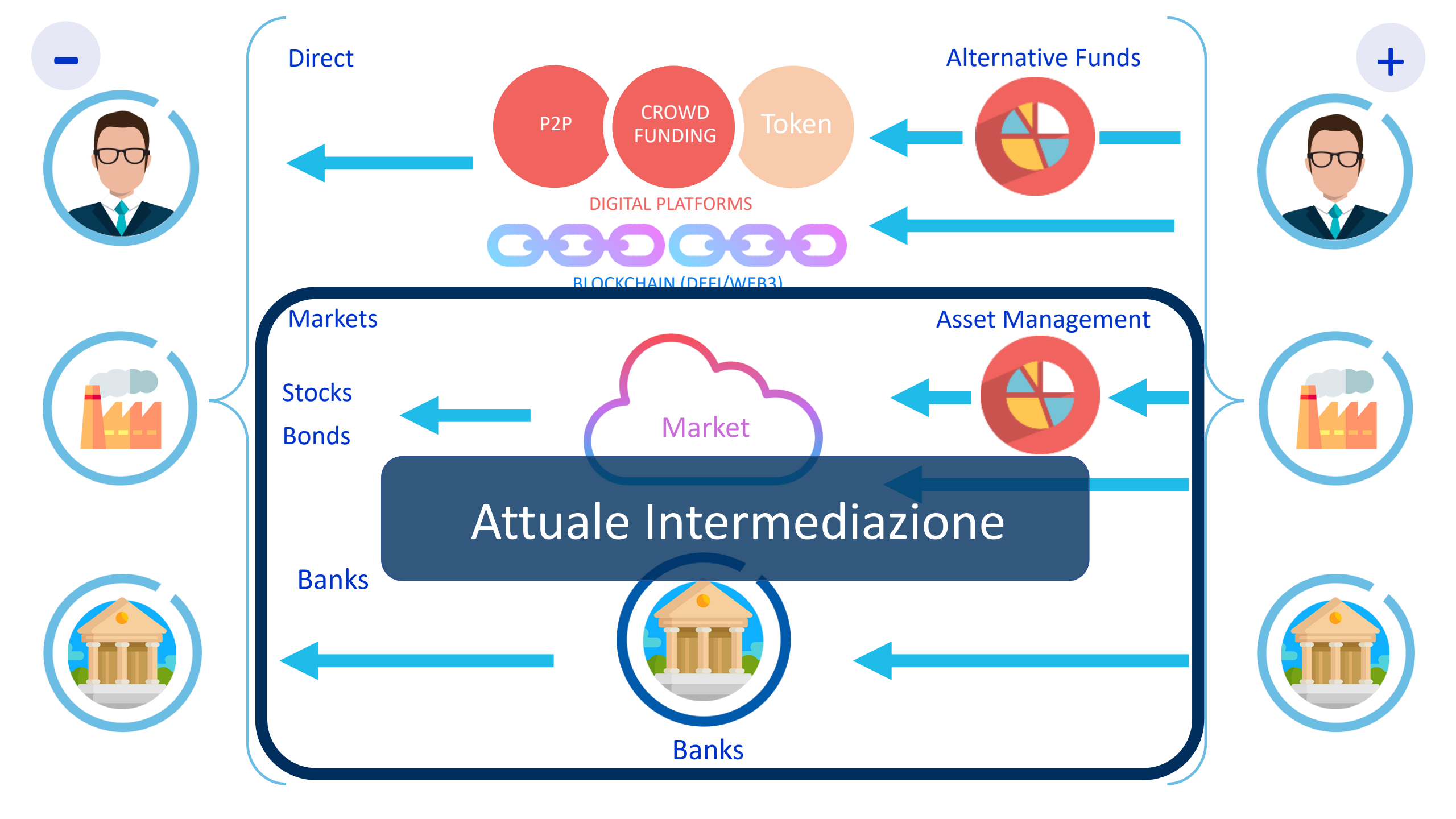
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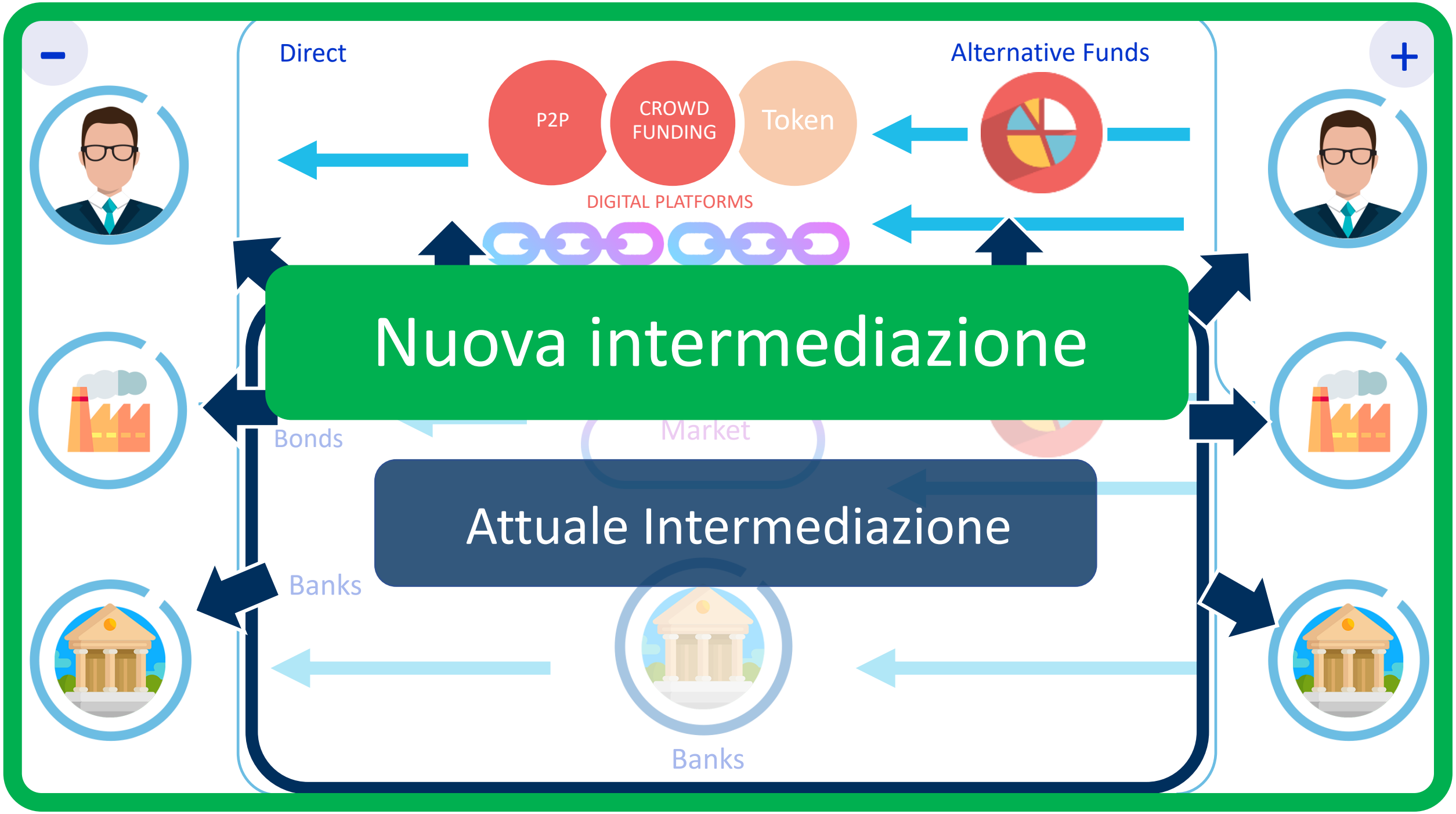
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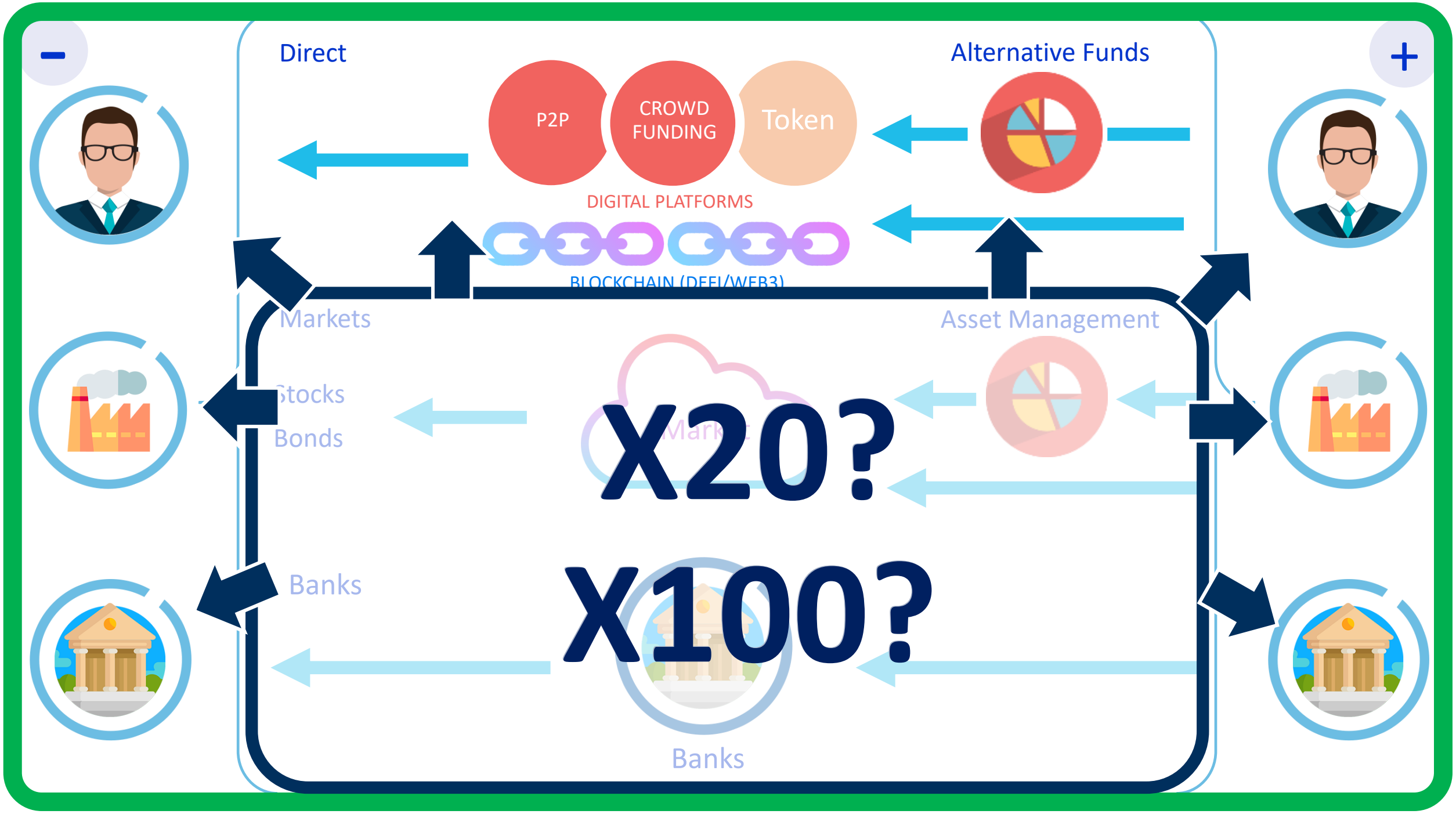
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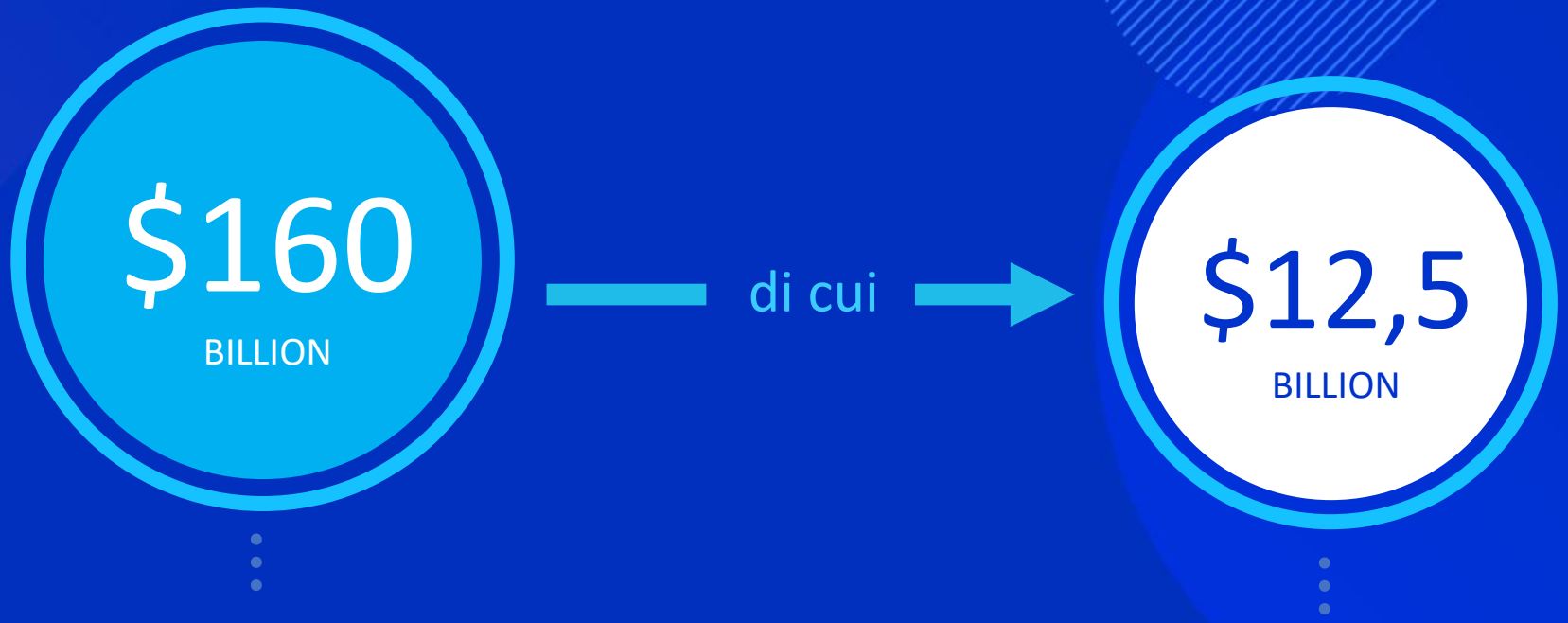
Investimenti DeFi



Total VC funding

Q1 2022

Gli investimenti de.fi/crypto sul totale investito nel Q1 2022 ammontano al 7,8% degli investimenti globali totali

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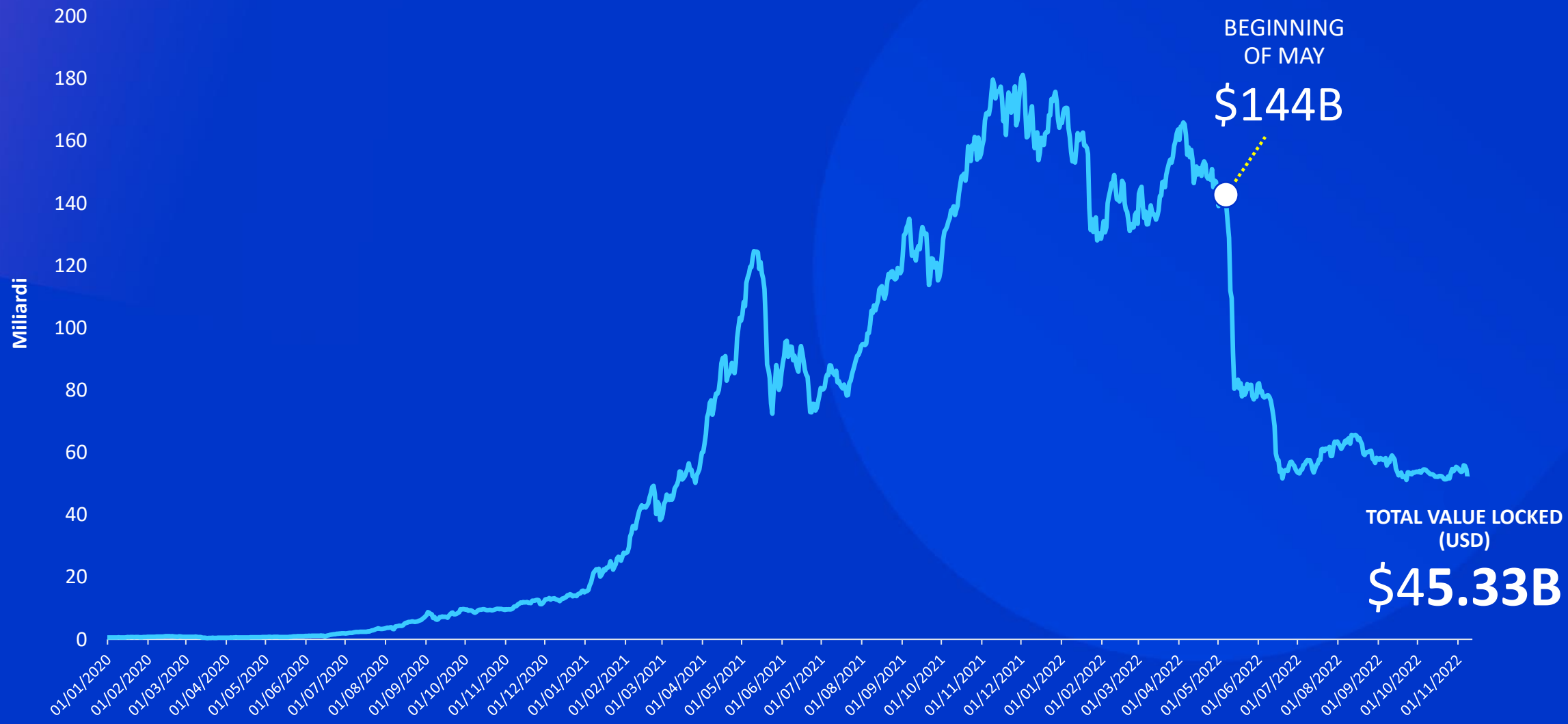
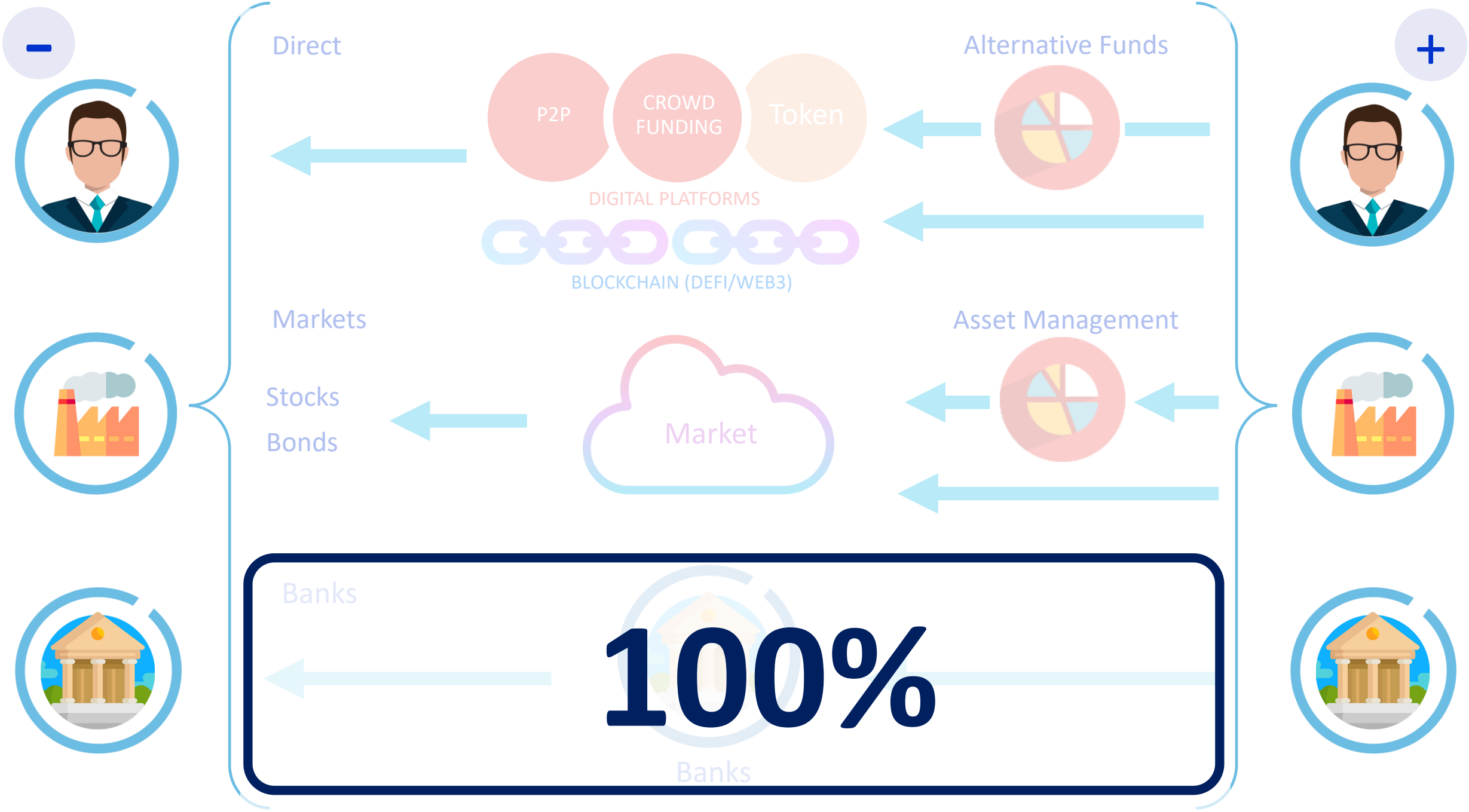
DeFi



TOTAL VALUE LOCKED (USD)

$45.33B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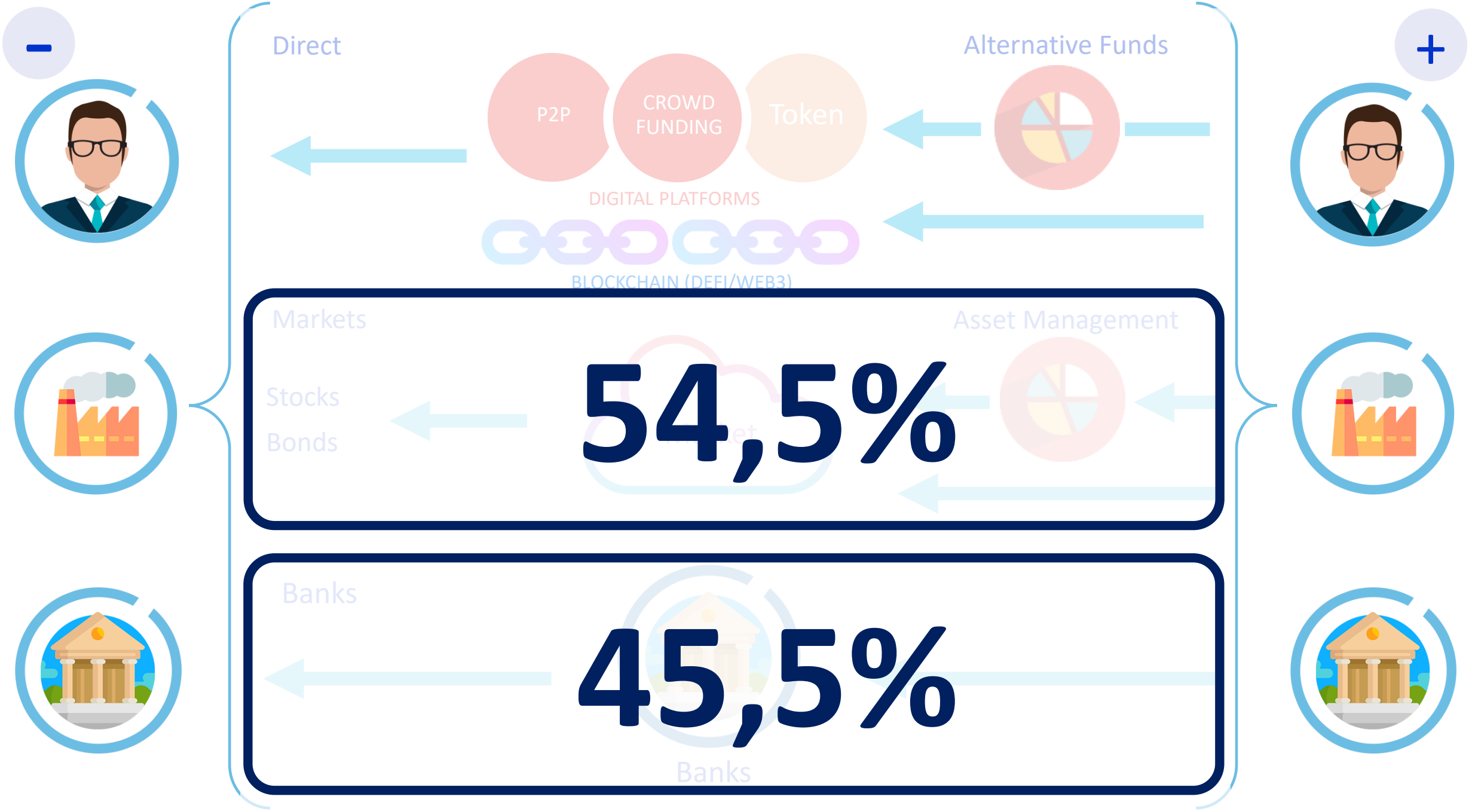
Asset Management
Banks
100%
Banks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54,5%
Asset Management
Banks
45,5%
Banks

0,1%

54,4%

45,5%

CBDC quale ruolo?

Sella


Direct
Alternative Funds
Nuova intermediazione
Markets
Stocks
Bonds
Euro Digitale
collega i due mondi e consente di cogliere le opportunità
Banks
Attuale Intermediazione
Banks