

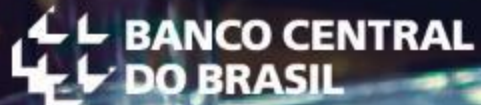
# *The BCB as enabler of innovation in the financial system*

Valor's Crypto Summit 2022

Governor of Banco Central do Brasil

**Roberto Campos Neto**

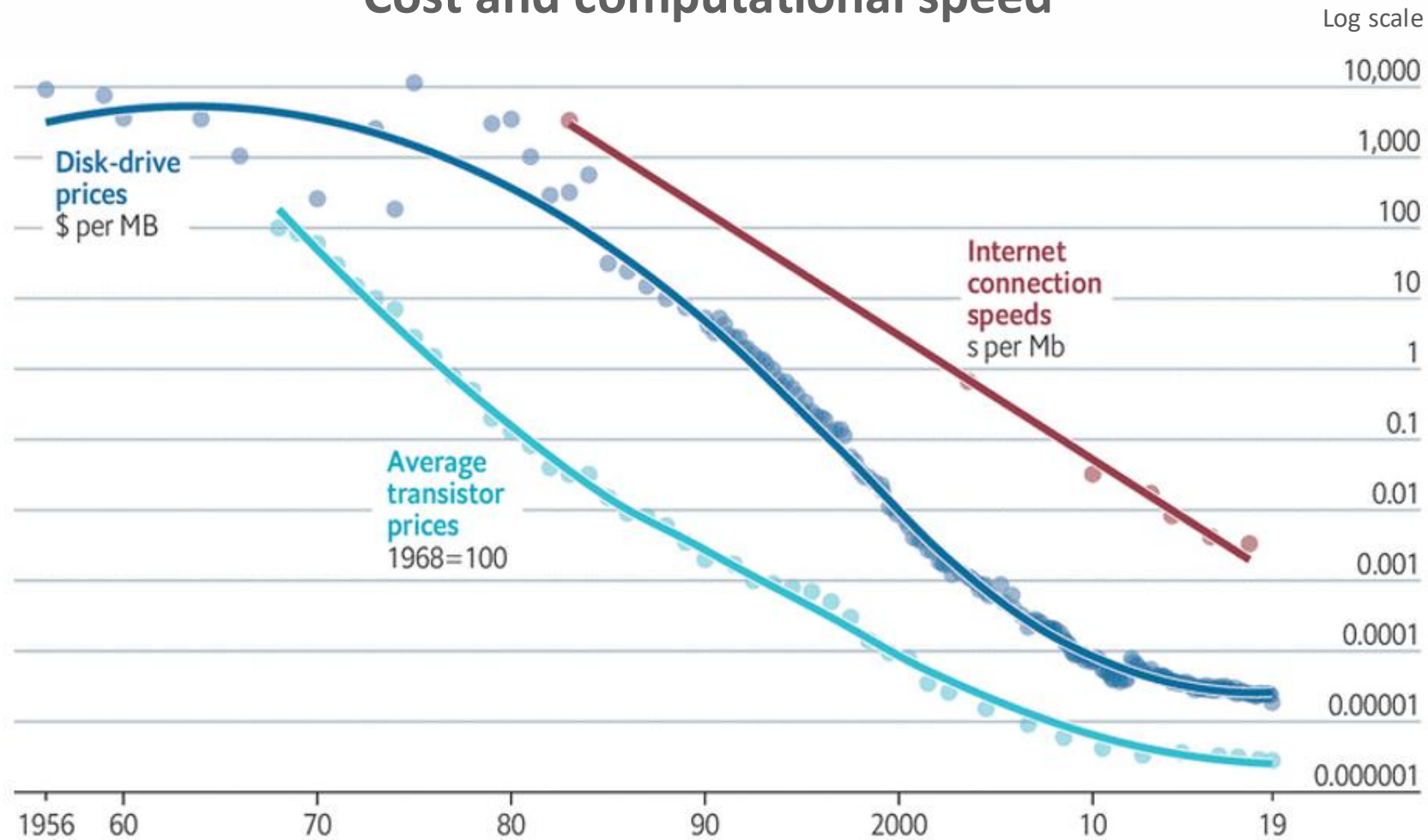
June 6, 2022



- A remarkable feature of the current moment is the speed of technological change and its impact on the financial system.
- The technology advances have provided:
  - An exponential decrease in production, storage and data processing costs;
  - The rapid evolution of payment systems;
  - New trends in the provision of financial services.
- The most visible face of this technological revolution in the financial sector occurs in payment services.

# Computational revolution

## Cost and computational speed



Source: John C. McCallum, Gordon Moore, The Linley Group, Nielsen Norman Group, The Economist

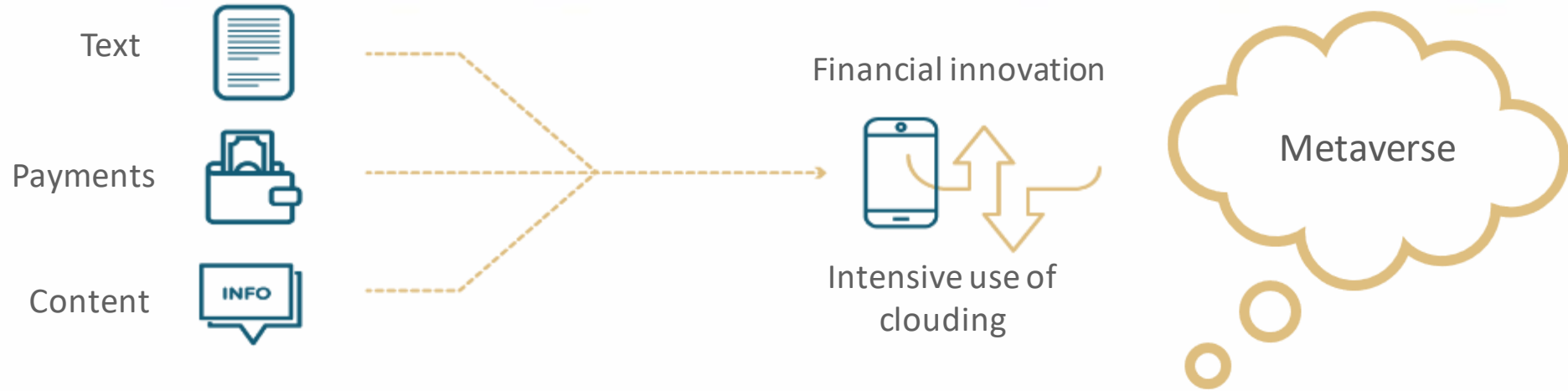
\* Cost in nominal values

# The BCB and innovation

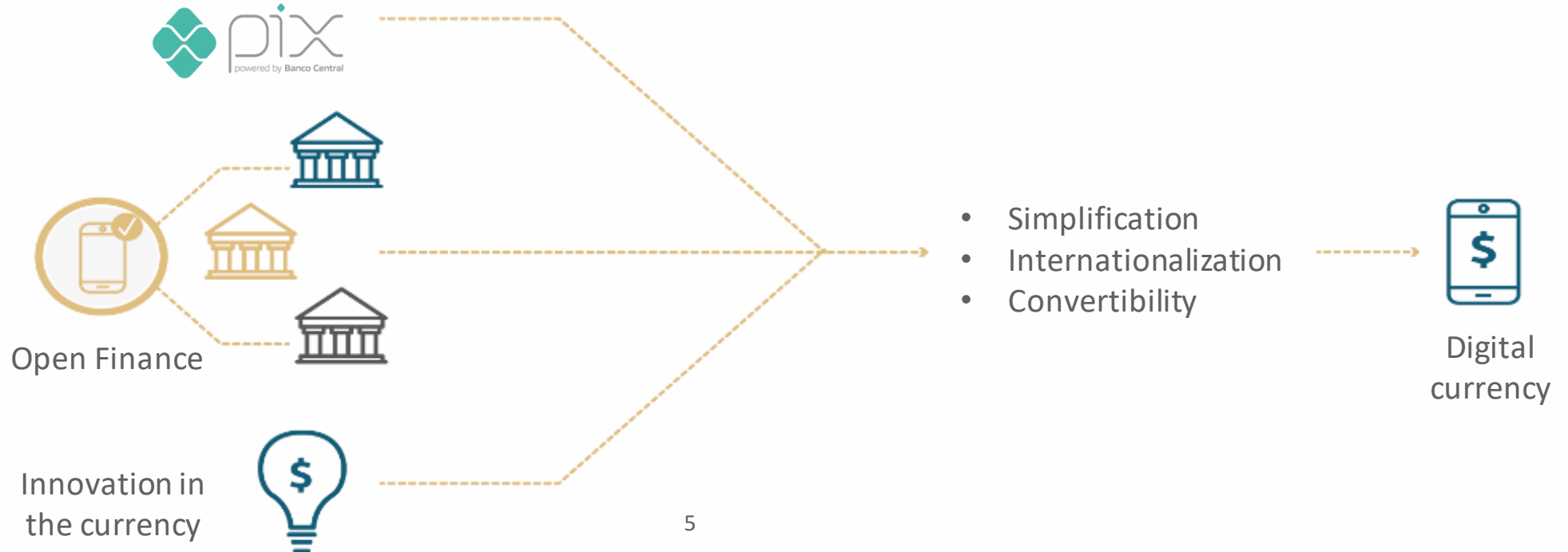
- The BCB has recognized the importance of network effects.
- We have acted as a catalyst for innovation in the National Financial System (SFN).
- To prevent fragmentation, it is important to provide open platforms (public infrastructures).
- Our projects in the Agenda BC#:
  - PIX
  - Open Finance
  - Digital Real

# Innovation in the financial system

## Convergence

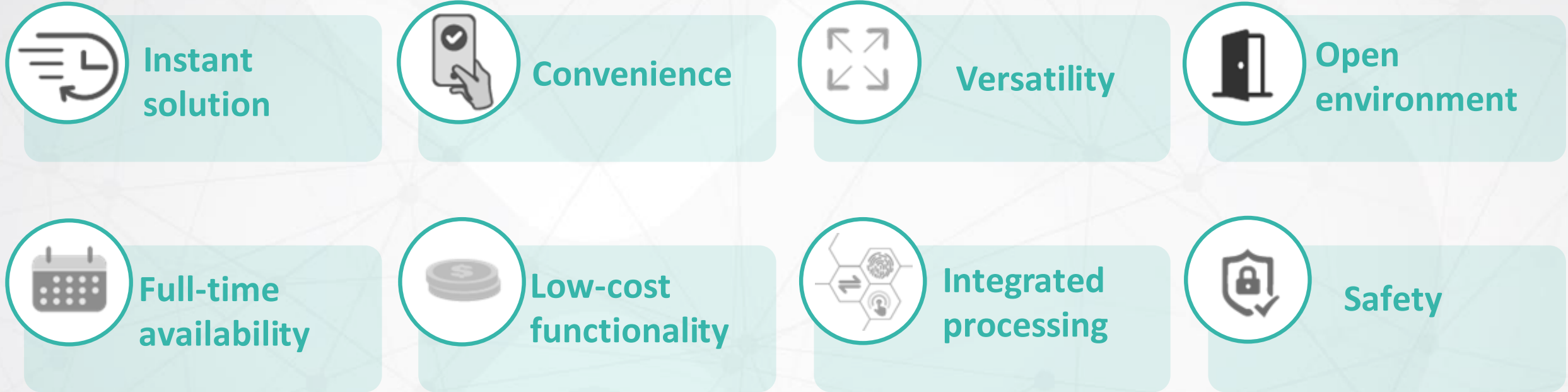


## Innovation in the SFN



A hand holding a smartphone displaying data charts against a blue background with blurred data visualizations.

# *Technology Agenda*



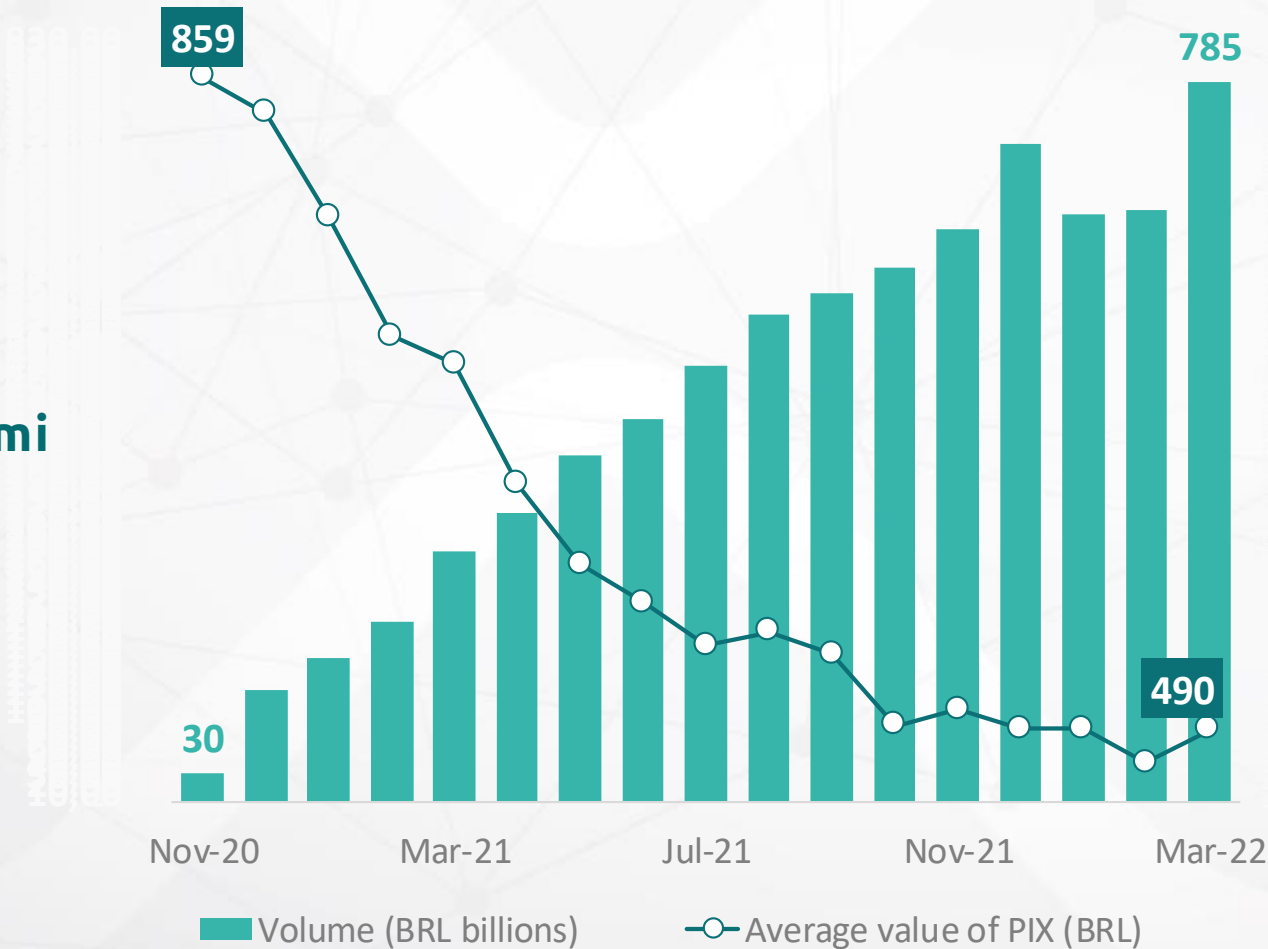
## Final step towards a synthetic CBDC

- e-money
- “universal” access
- Pix

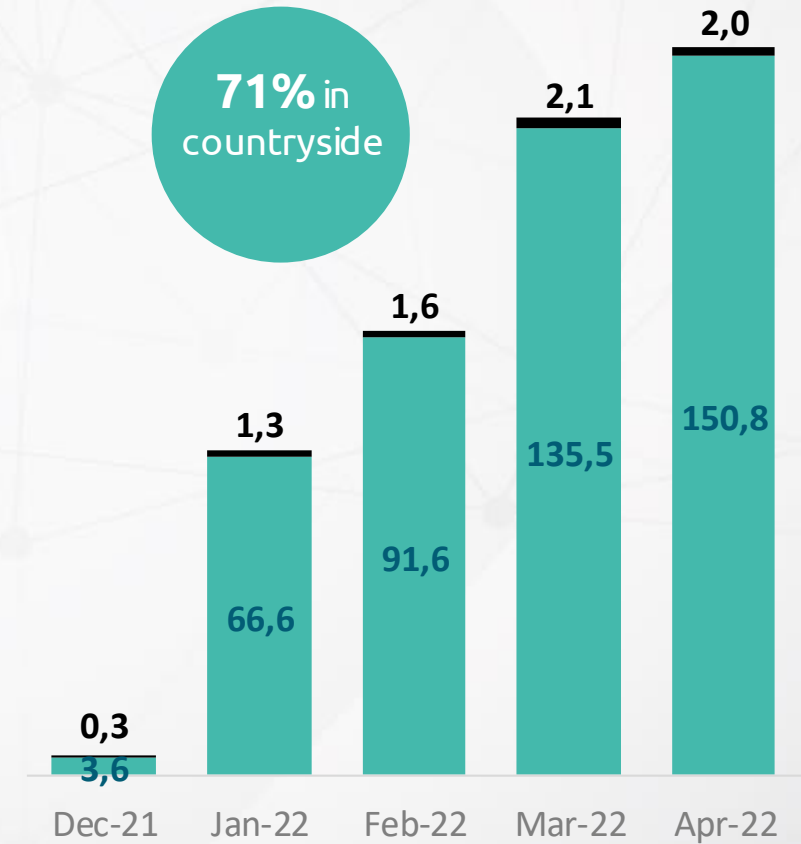
# Pix gains space and becomes popular



**Volume of transactions and average value**  
(in BRL billions and in BRL)



**Pix Saque and Pix Troco**  
(thousands of transactions)



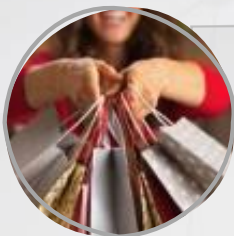
**PIX keys**  
(in millions)

Total: **438.5 mi**  
In April 2022

**Pix saque (cash withdrawal) Pix troco (cashback)**

## Products/Features 2022

In progress



Direct Debit



Non-Priority Settlement



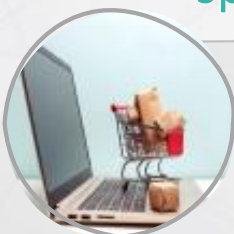
Electronic Bill Payment  
(standardized file specification)



Instant Payment Account Remuneration

## Products under design

Initial design



Early-stage work for new products to be launched in the future

## Features already in use

Incentive to use and measures for assimilation of features



Users



Participants



Automation



To be defined  
Evolution agenda  
**2023**

# Open Finance

The Brazilian model is the largest in number of institutions and scope.



- Implementation will be gradual

## Goals:

- To promote **competition, efficiency and data safety**
- Proper **balanced conditions** between existing financial institutions and new players

Solutions that can be developed from Open Finance:



**Devices to compare services and fees**



**Apps for financial advice and planning**

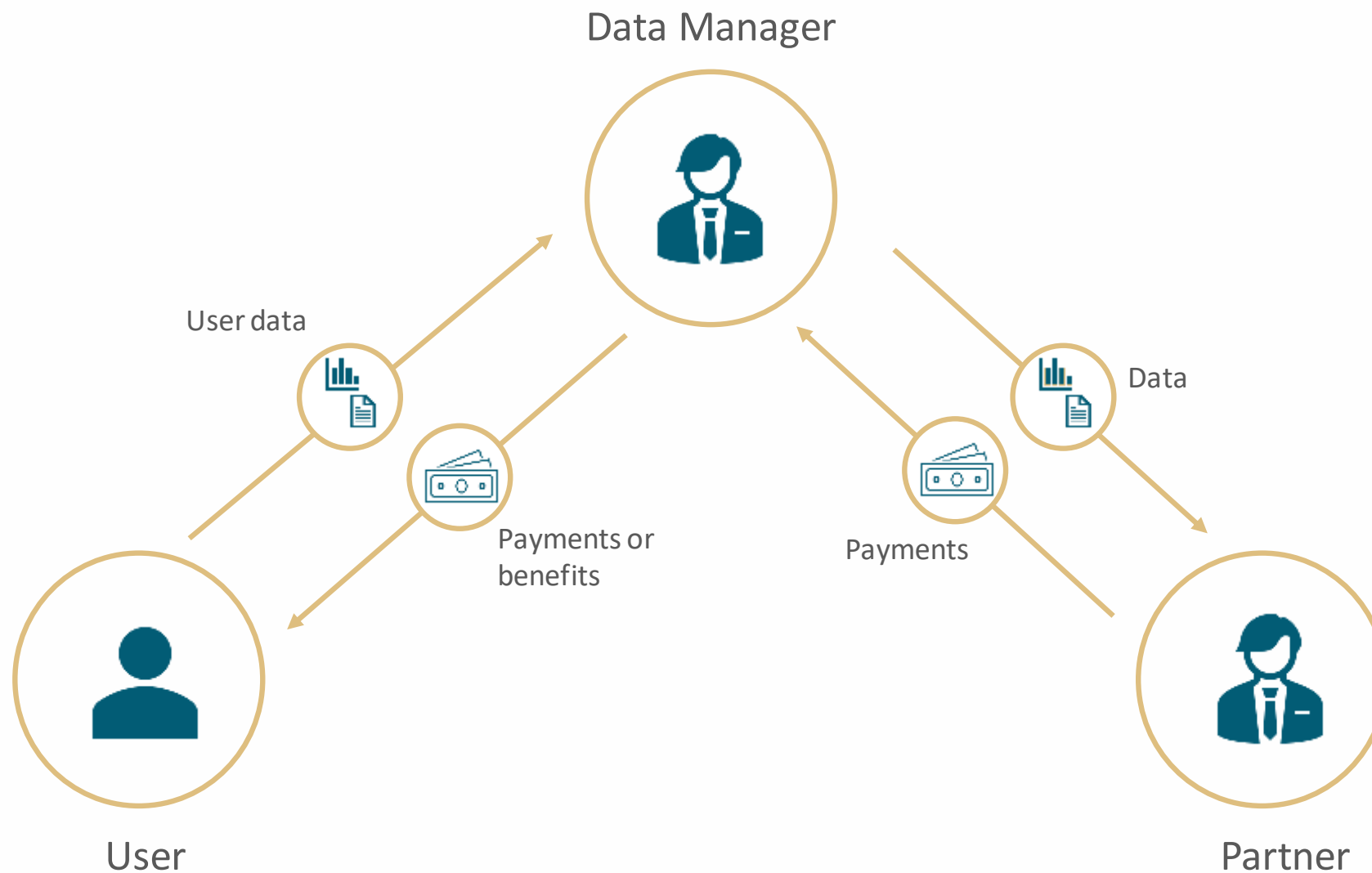


**Payment initiation in social medias**



**Credit marketplace**

# Data monetization



An aerial night view of a city with numerous skyscrapers, many of which are illuminated with blue and white lights. The image is overlaid with several semi-transparent circular icons representing digital currencies: Bitcoin (B), Ethereum (E), and Monero (M).

**CBDCs**

The logo of Banco Central do Brasil, consisting of four stylized, interlocking arrows pointing outwards from a central point.

**BANCO CENTRAL  
DO BRASIL**

## Three kinds of “practical” applications, internationally observed:

1. Wholesale payments (Europe, Singapore, Switzerland)
2. Instant payments (Bahamas, China, Sweden)
3. Fostering new business models (Brazil, Canada, Korea)



## Opportunities

- Reduced transaction costs and friction for:
  - designing, distributing, negotiating and settling financial deals
- High degree of
  - standardization and functional interoperability, reuse and composability of financial services
  - auditability, traceability and transparency
  - accountability: software-based governance
- Financial inclusion
  - automatic tools available to everyone, with transparency and non-discriminatory execution

## Challenges

- Scalability and settlement fees
  - blockchain platforms are limiting
- Limited interoperability
  - blockchains  $\Leftrightarrow$  traditional financial services
- Lack of maturity
  - Governance: potential for facilitating the crime of money laundering
  - Technology: Operational risks, poor implementation choices, failed software execution and interdependencies

# DeFi: Architecture

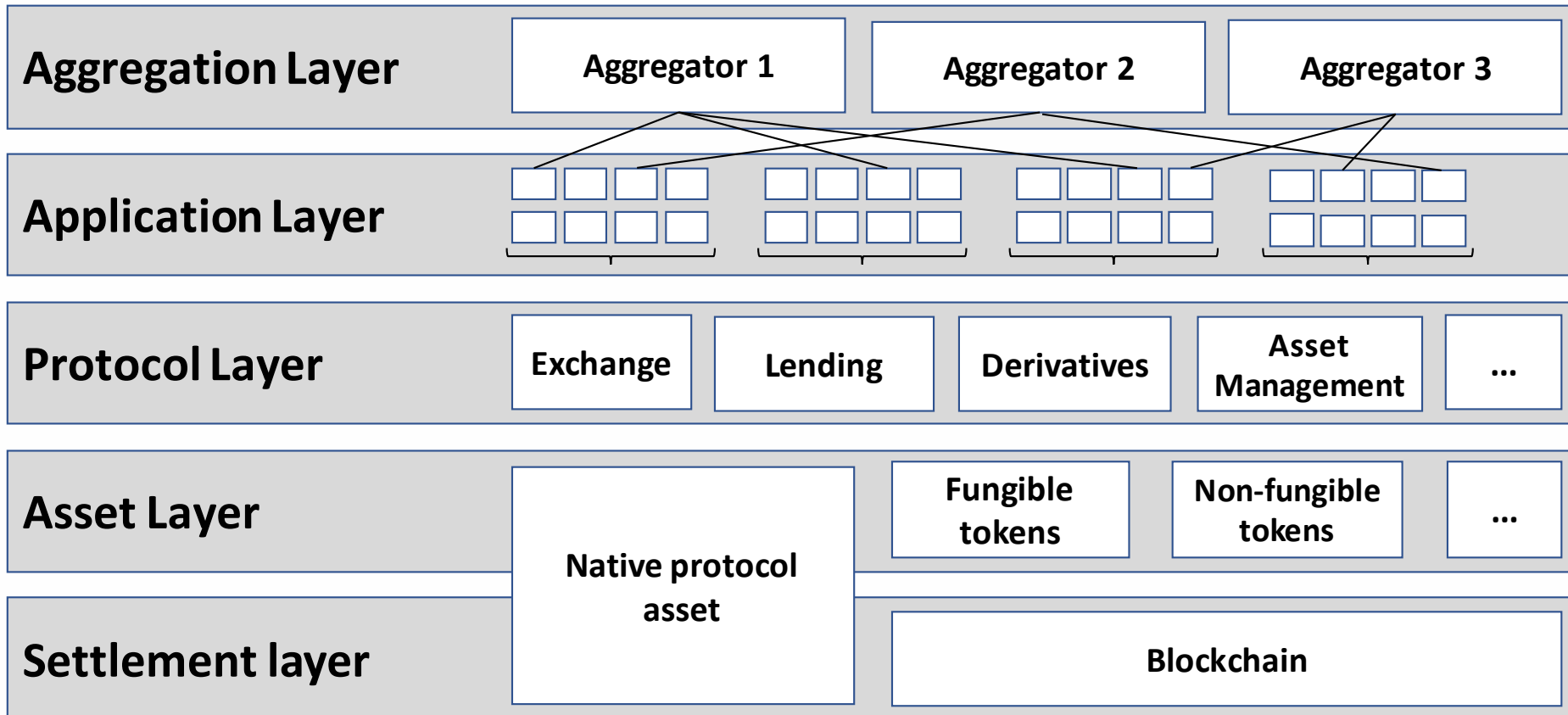
Platforms that aggregate several applications from the previous layer

Development of user-oriented applications

Standardizations for specific business models

Standards for issuing tokens representing financial instruments




Blockchain and its native token



# A CBDC for Brazil: The Digital Real



## Policy objectives

-  **Innovation and competition in a digital economy**
-  Improved cross-border payments
-  Reduction in the use of cash

## Challenges

- Must enable uses that go beyond the payment solutions we have available today.
  - It should take advantage of the business ecosystem we expect to emerge from the open banking.
  - Demand already exists – Lift and Regulatory Sandbox.
- Depends upon maturation

BC# Agenda

Internal markets

International discussion

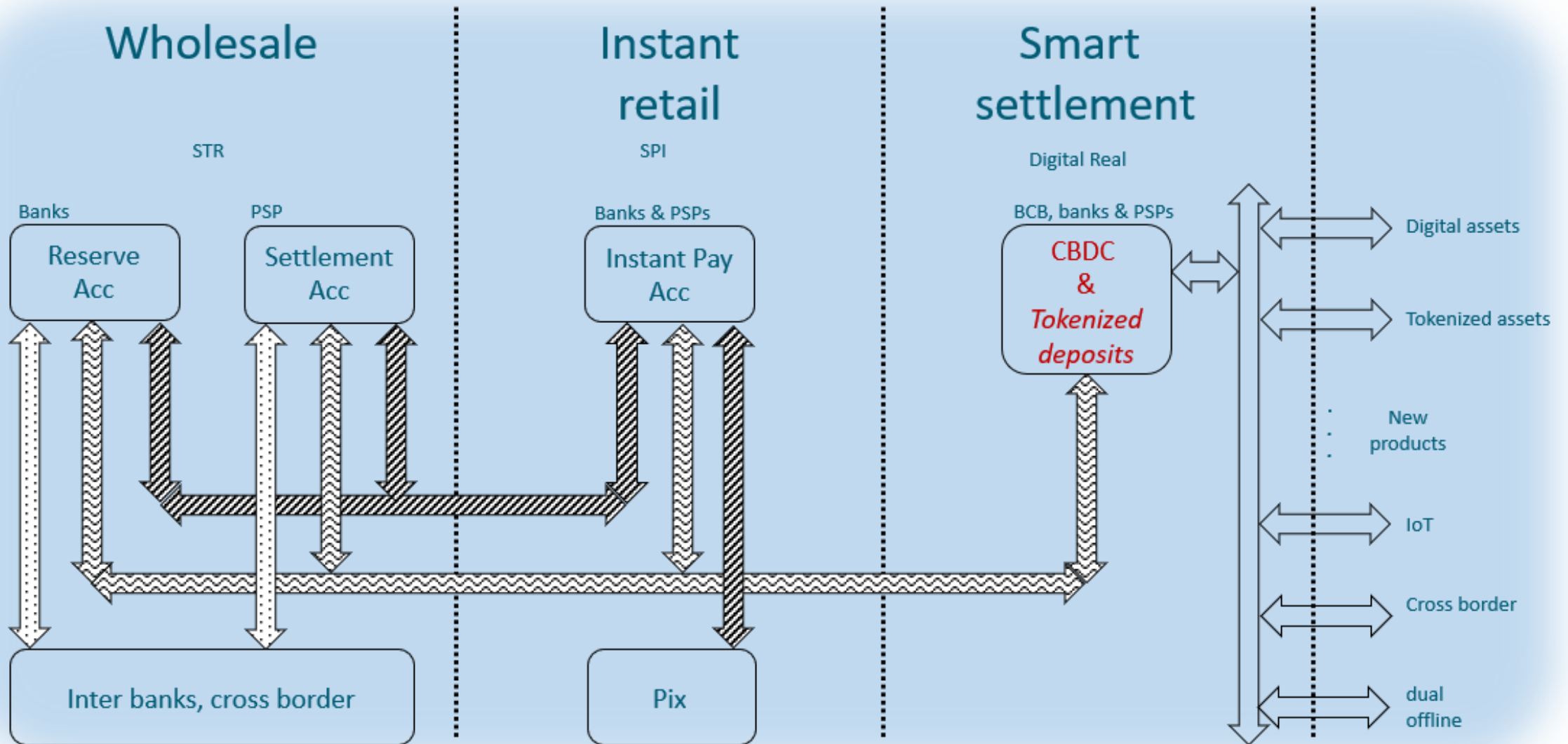
An instrument for the BCB to fulfill its mission in a digital economy

## Guidelines:

- Extension of the Brazilian real
  - Emission by BCB
  - Custody and distribution by the payment system
- Retail payments
  - On-line and, eventually, off-line
- ***Innovative models development***
  - *programmable money, smart contracts, IoT*
- Non interest-bearing
- Guarantee of legal certainty
- Data privacy and security
  - Bank secrecy and Brazilian General Data Protection Act
- Preventing and combating money laundering
  - Compliance with court orders to track illicit transactions
- Interoperability and integration
  - Cross-border payments
- High cyber resilience

# CBDC: public and private partnerships

Public and private partnerships in liquidity provision





# Digital Real



11/30/2021



Call for projects

01/10



Opening of submissions

02/11



Closing of submissions

Projects selection

03/04



Announcement of selected projects

To be defined



Beginning of implementation

120 days after the beginning



End of implementation

## Focus

### Use cases

- DeFi protocols
- DvP, Pvp
- IoT

### Infraestructure

- Interoperability, Scalability
- Programmability, Privacy
- Aecessibility, Usability

## Wide range of use cases and participants' background

### Selected proponents

Aave

Banco Santander Brasil

Febraban

Giesecke + Devrient

Itaú Unibanco, B3 e R3

Mercado Bitcoin, Bitrust e CPqD\*

Tecban e Capitulal

VERT, Digital Assets e Oliver Weyman

Visa do Brasil, ConsenSys e Microsoft

### Use Cases

DeFi – Liquiditypool

DvP – real assets

DvP – tokenized securities

Dual offline

PvP – Brasil and Colombia

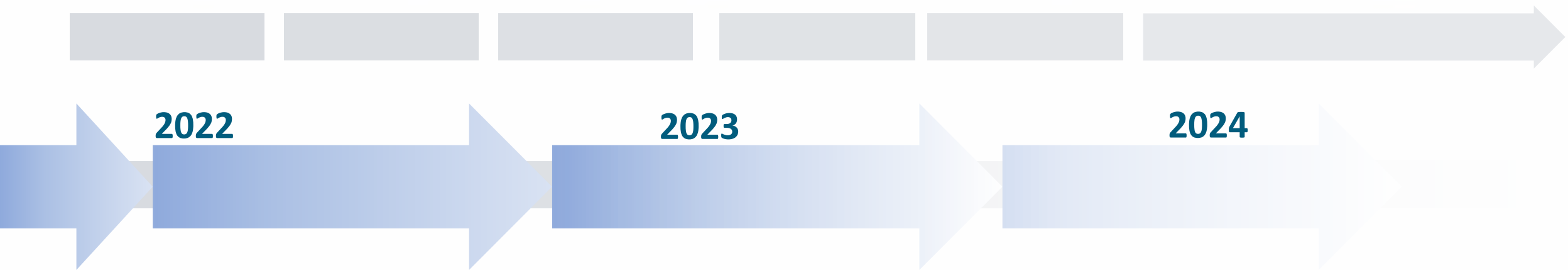
DvP – Digital assets (crypto)

IoT – Smart lockers / e-commerce logistics

Programable money – funding for rural activity

DeFi – funding for SMEs

# Next steps



LIFT Challenge

Pilots

Issuance

# Thanks



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