



Council of Foreign Relations

Banco Central do Brasil's Innovation Agenda

Roberto Campos Neto

Governor of the Banco Central do Brasil

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Digital world transformation



- People are looking for a digital representation of value
 - Assets are becoming encrypted
 - Distributed ledgers allow assets to be verifiable and transferable, with divisibility
 - We are talking about extracting value from an asset in its digital form
 - Art, pictures, properties, ideas and even money
- Are we moving towards a tokenized economy?

If the tokenization thesis holds true then the 21st Century may see the creation of regulated, global, token-based, multi-asset networks.*

* The Regulated Internet of Value, Citi's Digital Policy, Strategy and Advisory, 06/21.

Tokenization of the economy

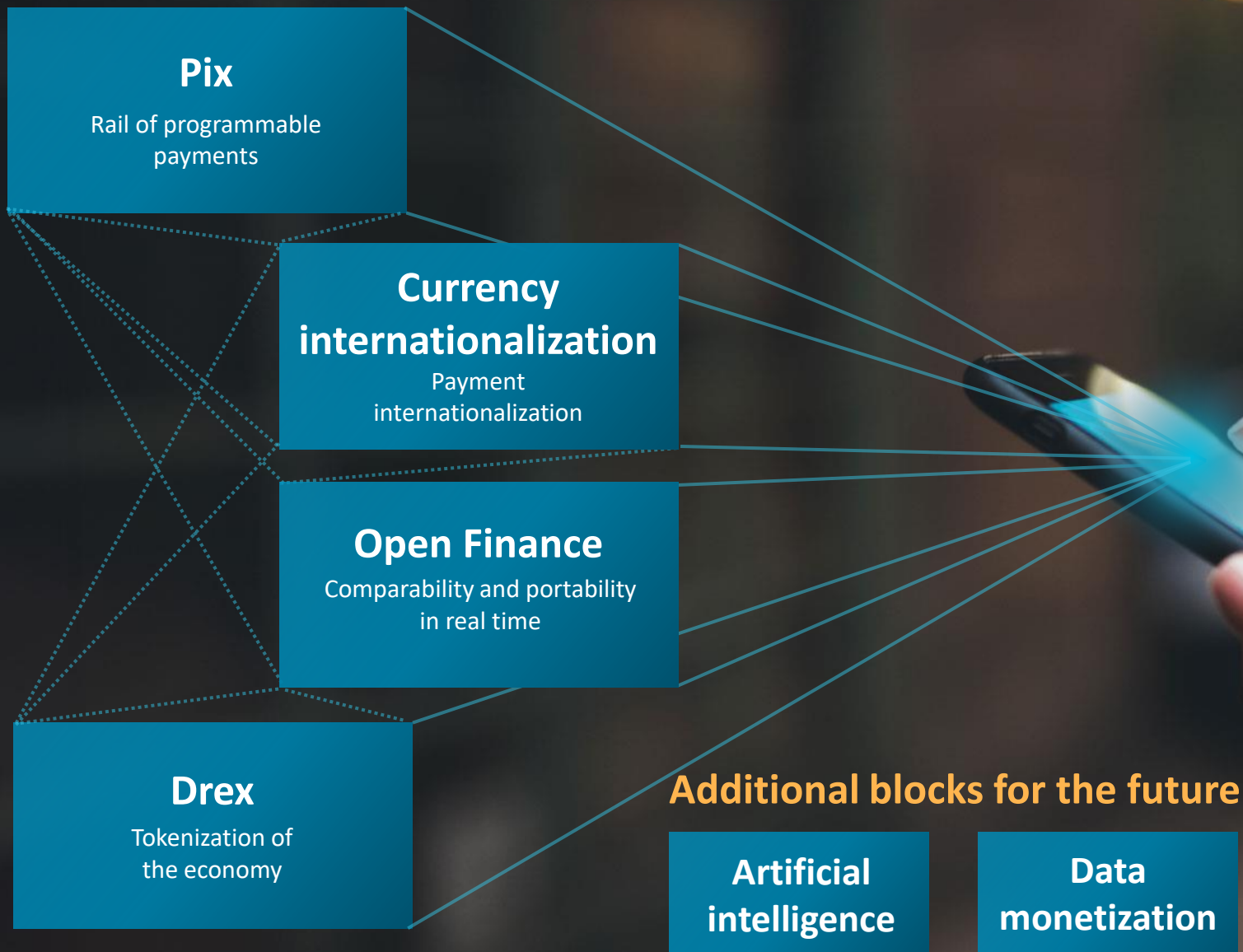
TOKEN



- The main change is the tokenization of assets for trading
- Asset tokenization generates efficiency gains
 - Trade, register, contracts, collaterals etc.
 - Greater speed and transparency
 - Lower cost
 - More open processes
 - Programmability in the purchase and sale of assets

An integrated agenda

The four fundamental blocks





Establish **rail of programmable payments**



Democratize the access to digital means of payment and **make things easier** for payers and payees



Enable **new business models and innovations in companies' payment processes**



Reduce costs



Contribute to payment **digitalization** and financial **inclusion**



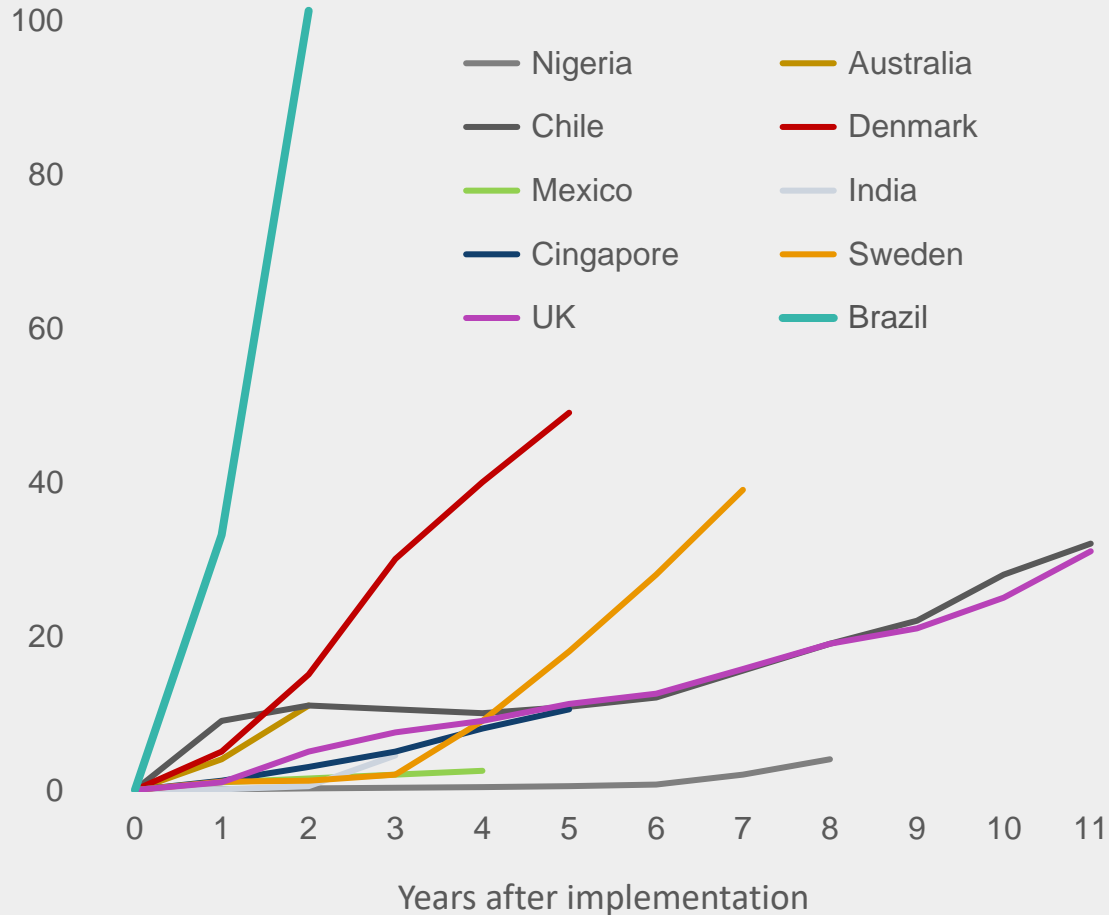
Boost **competition** and increase **efficiency**

Pix gains space and increases its popularity



Pix growth promotes financial inclusion and enables small businesses

Per capita transactions – by countries



Pix growth

733 million active Pix's keys.

148 million people and **14.0 million** companies use Pix.



201.6 million operations in one day

4.4 billion transactions in Feb/24, against **2.5 billion** in Feb/23, **increase of 72.8 %**.

Pix gains space and increases its popularity

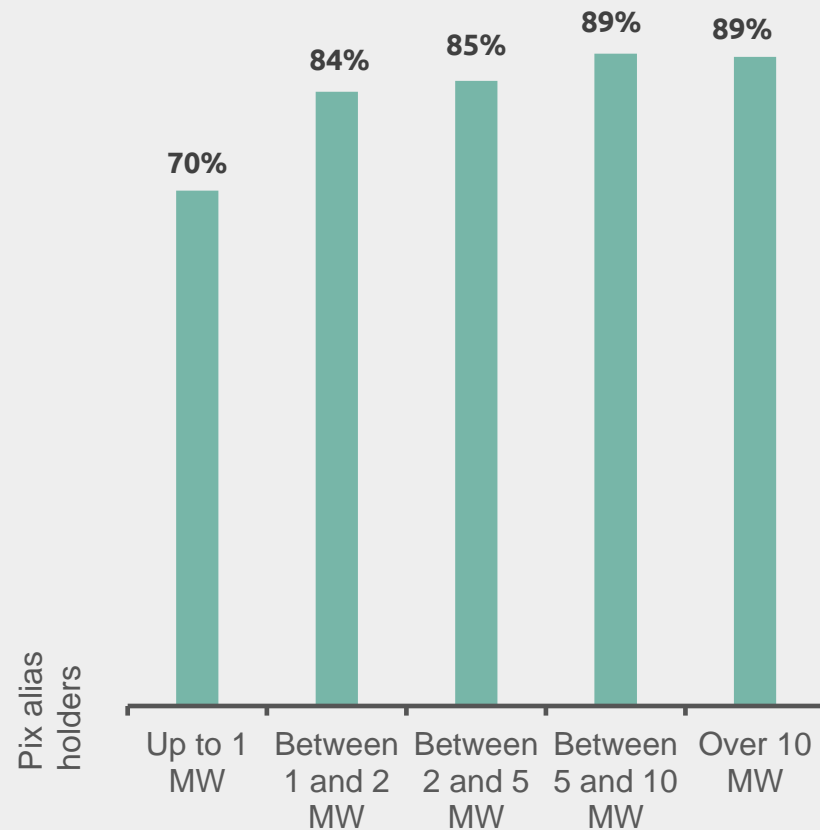


Pix growth promotes financial inclusion and enables small businesses

Pix and financial inclusion

- 71.5 million new users included with Pix.*

Pix transactions per income level
(2022)



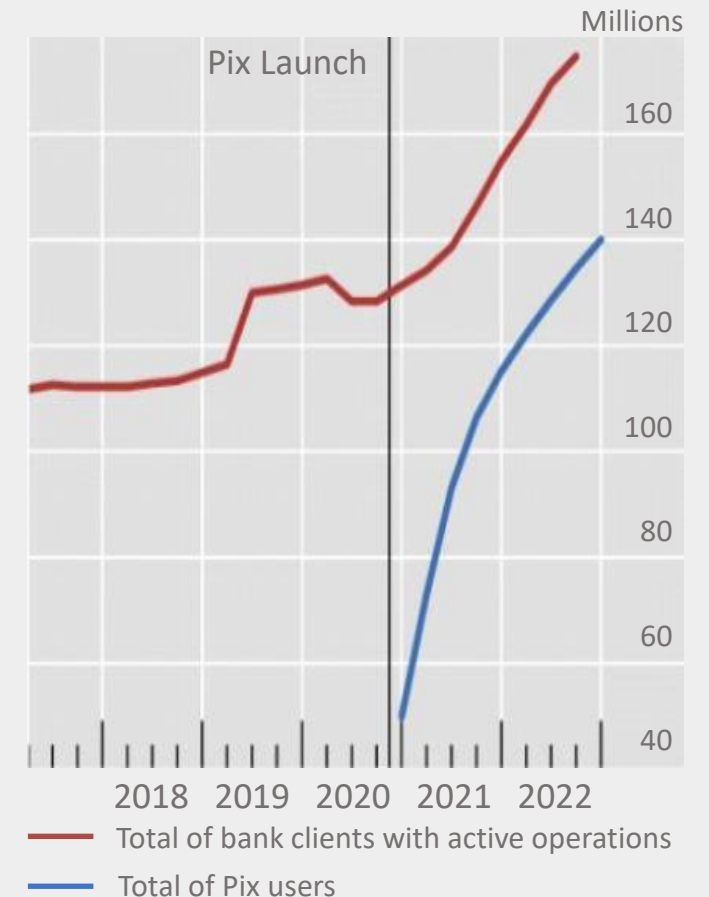
Sources: BCB, BIS.

Transactions by value range
(Only natural persons payers – Nov/20 until Dec/22)



* Considering users who did not use TED in the 12 months prior to the launch of Pix and became PIX users.

Pix users vs. Bank clients



Pix new functionalities



Pix

Pix Cobrança
(Future dated billing)

Pix Saque (withdrawal)
Pix Troco (change)

Pix Agendado
(Scheduling)

Transaction

- Single: mandatory
- Recurrent: optional
It will become mandatory

Frequency:

Value:

Receiver:

Payment instructions:

Channel:

Purpose:

Defined

Fixed

Individual or legal entity

Payer

Secondary

Transfer

Pix Automatico
(Recurring payments)

Automatic Pix after payer's previous authorization

Defined

Fixed or variable

Legal entity

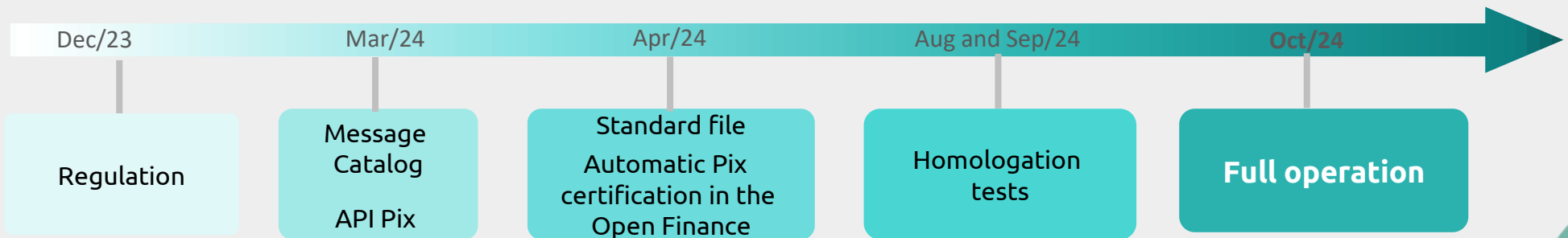
Receiver

Secondary

Purchase

- Frequency:
- Value:
- Receiver:
- Payment instructions:
- Channel:
- Purpose:

Schedule



Currency internationalization

- Macroeconomy: international trade efficiency.
 - Why don't we have a single currency?
 - Which international currency will prevail?
- These topics lose significance with the connection of currencies.
- Connection of digital currencies.
 - There will be real time transactions with low cost.

Currency internationalization

Three challenges for the connection of international payments systems:

- **Technology**
 - Connection between DLT and centralized systems (solved)
- **Settlements**
 - Liquidity token pool (solved)
- **Governance**
 - Taxonomy (minimal rules for cross-border payments)
 - We need to advance on the topic



Standards and infrastructure that support the sharing of data and financial services by institutions authorized to operate by the BCB.



The Brazilian model is a global reference.



Greater financial and digital inclusion.



Convergence to marketplaces, with one or few environments for comparison of products and services.



Competition for channel and principality.



- 27 API developed and 12 under development.
- More than 42 million consents to share data.
- More than **1.4 billion** API calls, on average, per week (phases 2 and 4).
- More than **68 billion** API calls (phases 2 and 4).
- More than **800** participating institutions (all phases).

Capital markets and Open Finance:

- CVM and BCB are joining efforts to foster the **Open Capital Markets** initiative.

Benefits in three dimensions:

1. Banking efficiency

- To introduce the concept of tokenization
 - Risk management, collateral, financing, asset management, data analysis, settlement and products

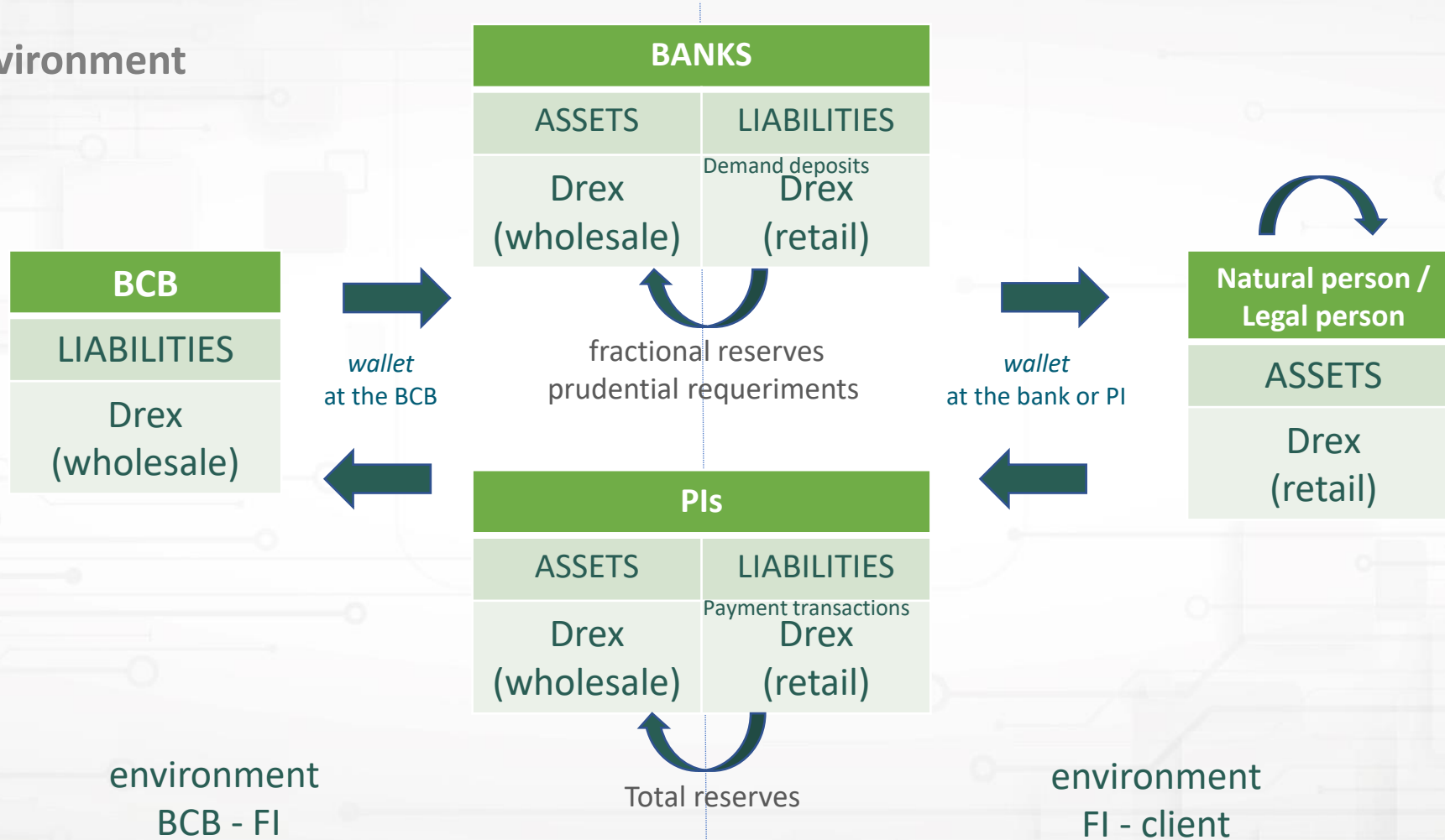
2. Efficiency in digital payments

- Bridge to De-Fi environment
 - To bring decentralized finance into the regulatory perimeter
- Efficiency in financial intermediation

3. Efficiency in contracts and register



on chain environment



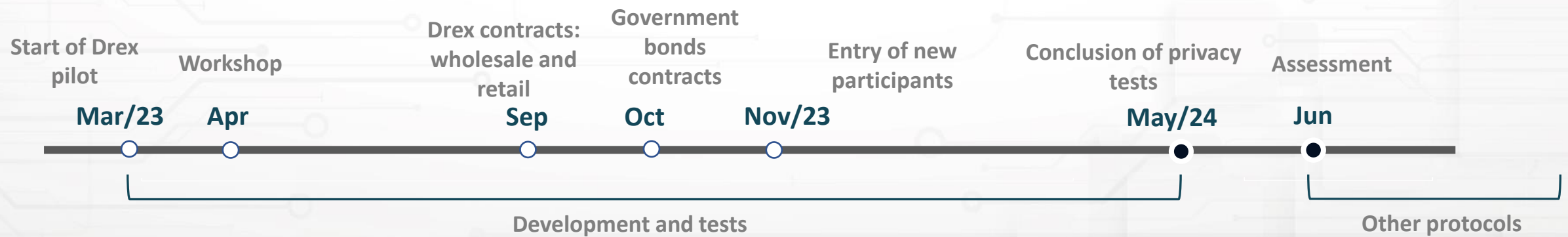
Objectives

- Development of the Drex platform
- Dialog with society on Drex development

Guidelines:

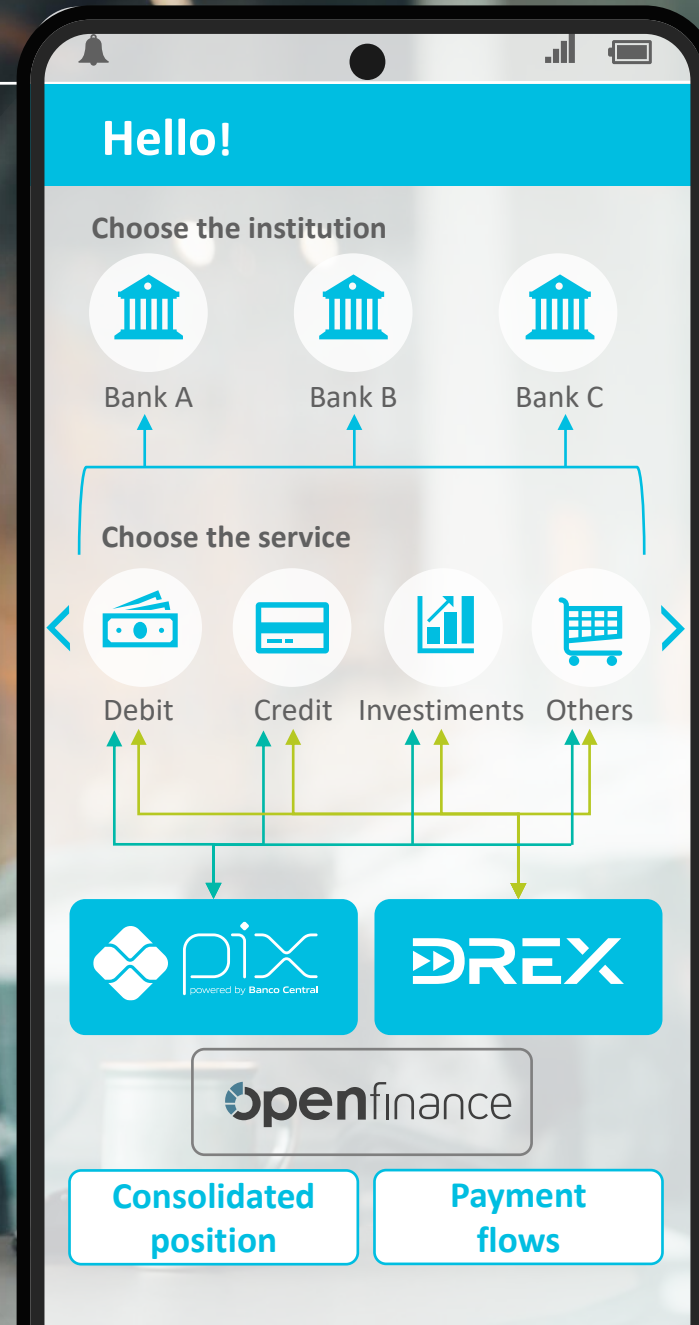
1. Multi-asset DLT - Hyperledger Besu
2. Simulated transactions
3. Asset fragmentation
4. Access to services through IFs and IPs

Next steps:



Financial services aggregator

- Marketplace environment
- Competition by channel and for principality



Offline

Online

Data wallet

Artificial intelligence



- The use of AI in the Super App can transform it in a financial advisor of the future.
- With programmability, connection with marketplaces and a comprehensive dataset, AI can be used in the 4 blocks for:
 - Financial consulting
 - Financial education
 - Process optimization (software and hardware) and improvements in the user experience.

Data monetization



- Data has become a great asset.
- Users are the owners of their data, but it is currently very difficult for them to monetize it.
- With marketplaces and connection between platform and digital wallet, clients will be able to store their data and monetize it.
 - Interaction of tokens with digital wallet

Thank you!

Roberto Campos Neto
Governor of Banco Central do Brasil

