



Fast payments in Mexico. Advantages and challenges

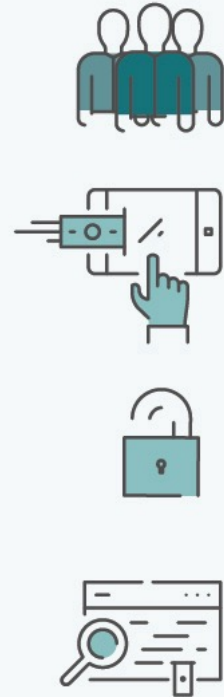
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BANCO DE MÉXICO

Payments Vision



Seamless and safe payments for everyone

Everyone able to send and receive digital payments

Immediate, low cost and total availability

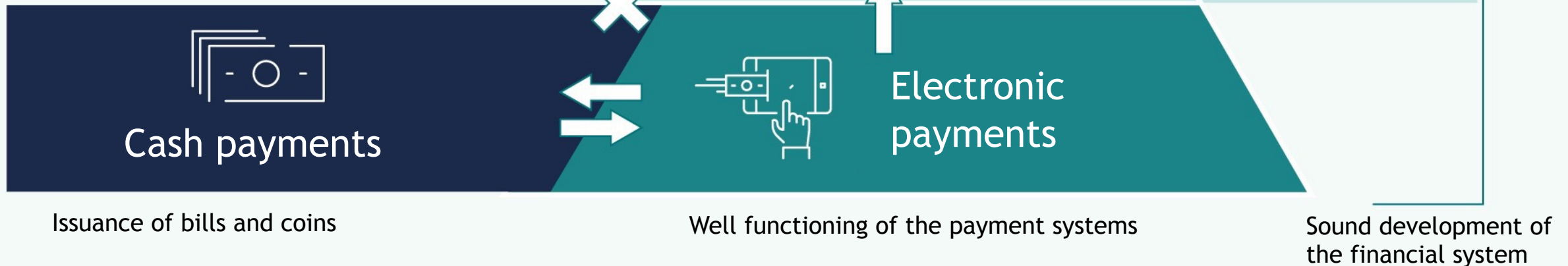
Security and transparency in each transaction

Clear responsibilities in fraud cases



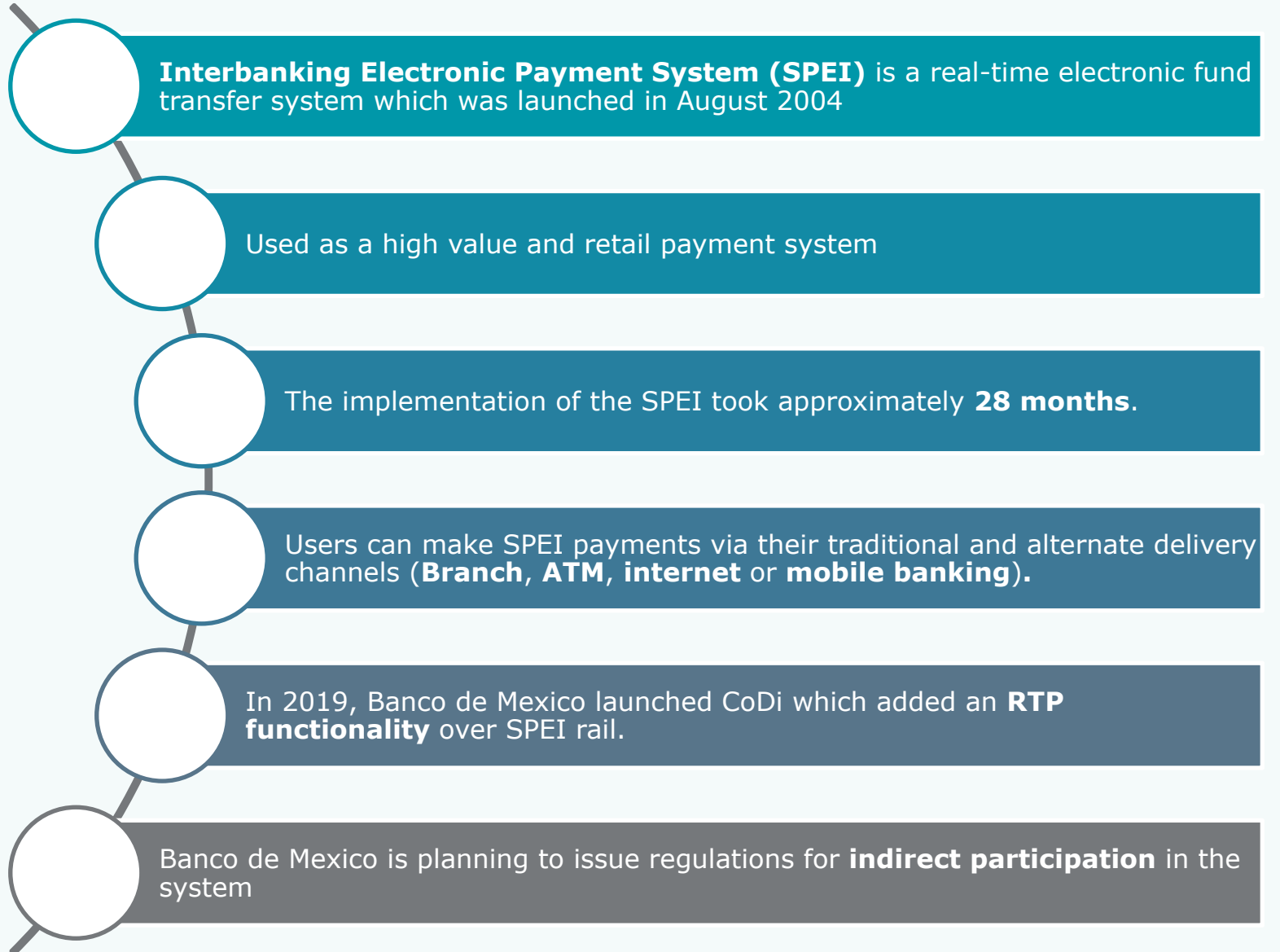
Central bank's role

Banco de México has a key position to boost digital payments in the country



SPEI | Mexico FPS

SPEI



SPEI | Highlights

Centralized Operation

- Banxico is owner, operator and regulator.
- Deemed as the **core FMI in the country**

Proprietary messaging standard

- Designed and developed by Banxico
- **No immediate plans** for migration to ISO 20022

Custom-built QR specifications

- Developed for **enhanced security measures**
- Enabled through **overlay service CoDi**

RTP functionality through overlay service

- In 2019, Banxico launched an overlay service CoDi
- Also allows payment through QR and NFC

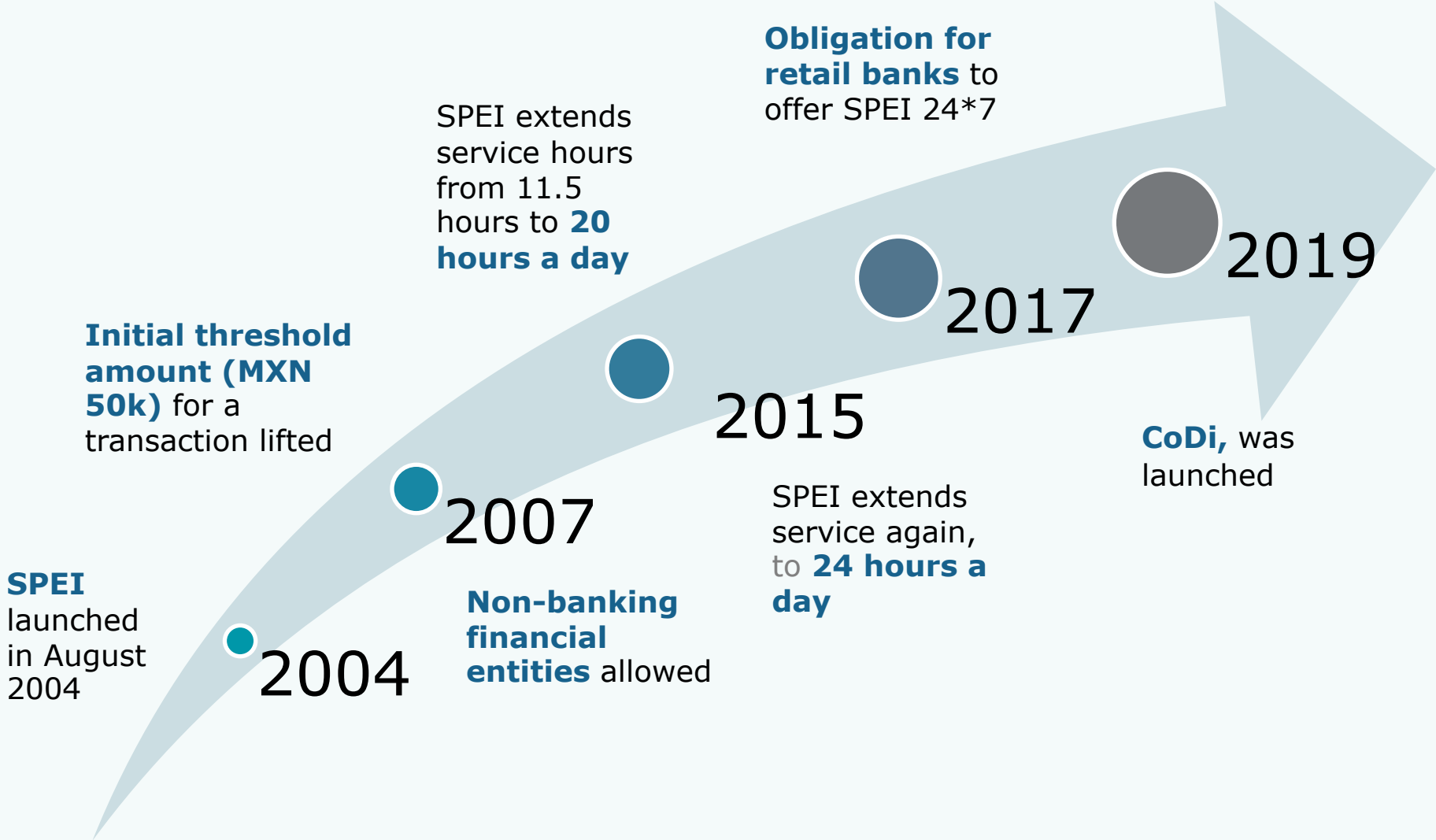
Direct access for all participants

- SPEI allows **all the banks and non-banking financial entities** regulated by Mexican regulatory authorities to directly connect with the system.
- The access criteria is **risk based** and has been kept same for all the participants, which ensures equal treatment of all the participants

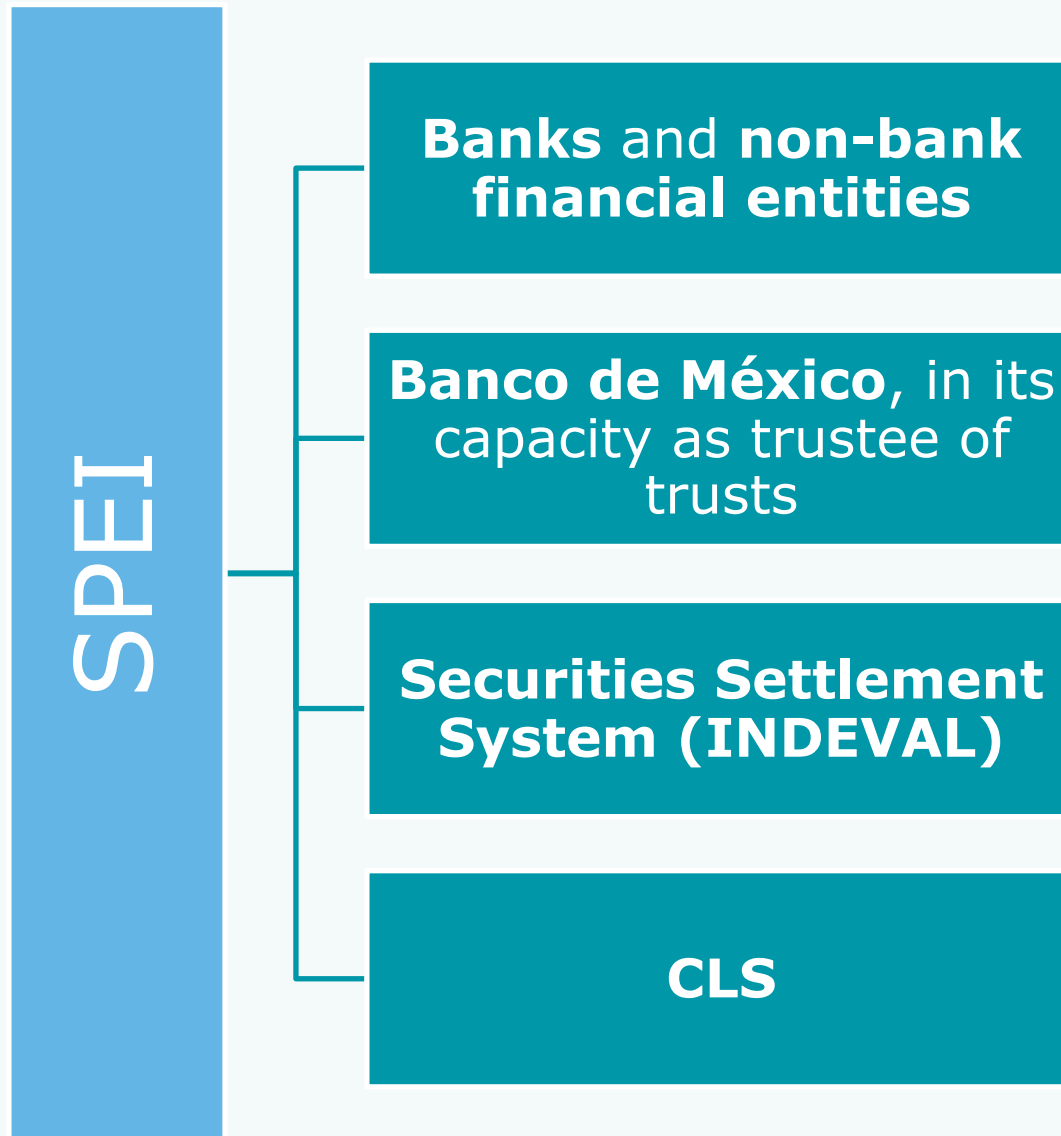
Hybrid Settlement

- SPEI has a **hybrid settlement** scheme which uses a **multilateral offsetting algorithm** (every 3 seconds or or a configurable number of payment messages) to clear and settle transactions.

SPEI | Timeline



SPEI | Participants



Participation Requirements

- Comply with legal, operational risk management and information security requirements
- E-money provider's participation is optional, but enforced in case any of:
 - More than 1.2 million of transactions
 - Sends or receives transactions equivalent to MXN 23.56 million in a year
 - Has more than 100,000 accounts
 - Customers have cumulative funds valued at MXN 1,963.4 million

SPEI | Liquidity Management

Near real-time **hybrid settlement system**. Multilateral offsetting algorithm running in quick successions (every 3 seconds or a configurable number of payment messages)

At the start of operations, participants transfer funds from their Account Holders Service System (SIAC) account to their SPEI account.

At the end of the day, positive balances in SPEI are credited to banks' current accounts in SIAC or to a concentration account within the system for participants without a SIAC account

During the operating day, participants' accounts can be funded through transfers settled in their favor or through transfers between SIAC and SPEI

Liquidity transfer operations with SIAC can be conducted from 19:00 hours to 18:00 hours of the following banking day. Between 18:00 and 19:00 hours, Banco de México carries out operations for the implementation of monetary policy

SPEI Rules establishes maximum processing times for end-to-end transactions for the timely credit of beneficiary accounts



01

Generates a payment request (CoDi®)



02

Displays the CoDi® QR



03

Reads the CoDi® QR



04

Verifies and accepts to pay



05

Receives a CoDi® notification of received deposit



Receives a CoDi® notification of the payment made



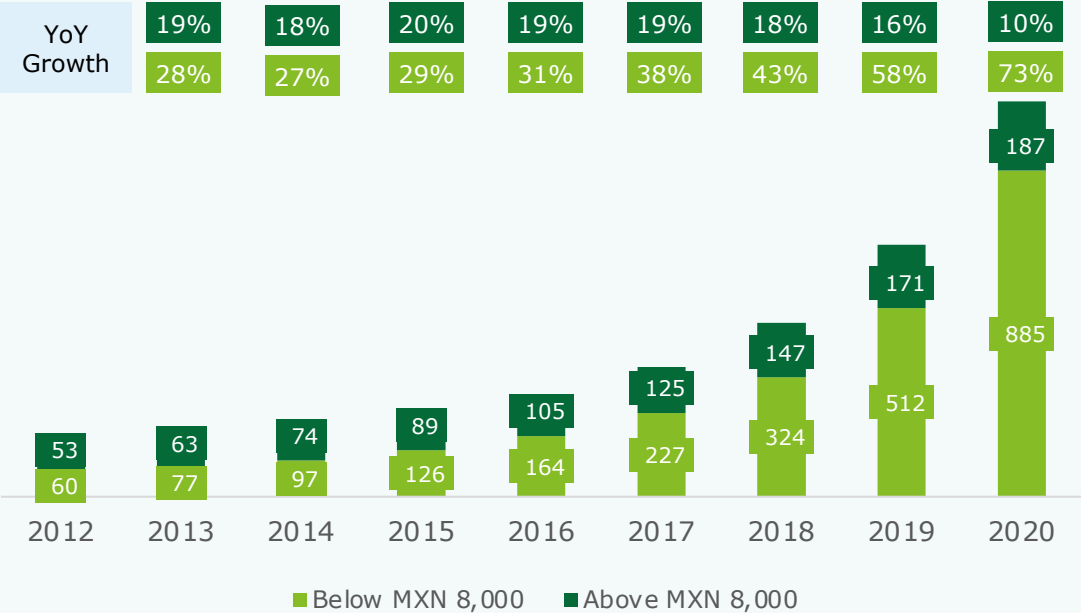
SPEI | Adoption

SPEI processed the highest daily transaction volume of more than 17 million payment orders.

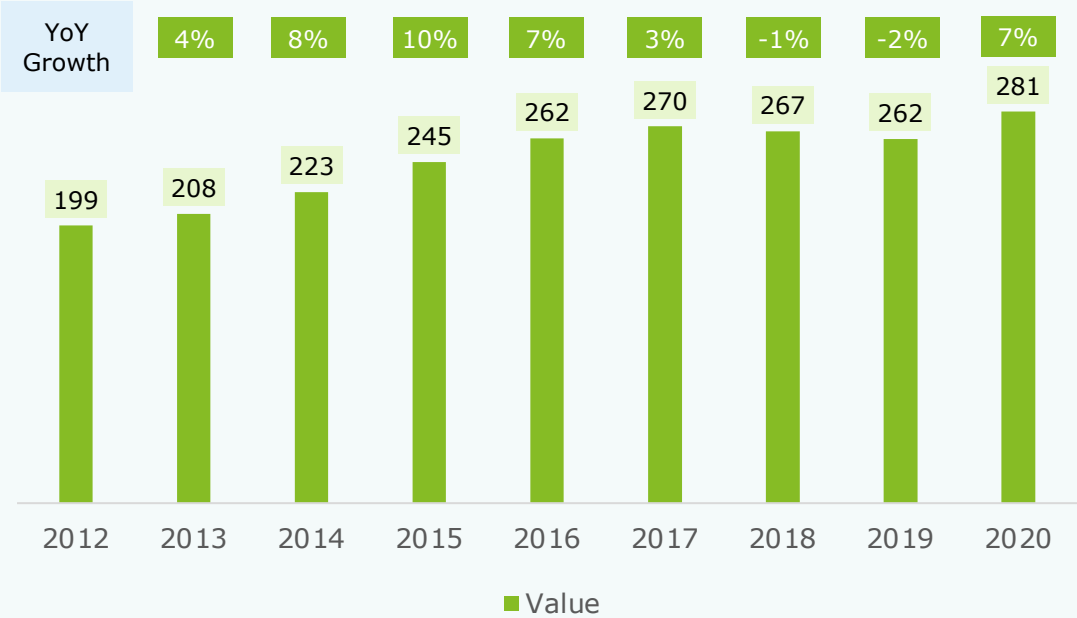


10.7 million registered users

Transaction Volume (in Million)



Transaction Value (in MXN Trillion)



SPEI | Risk Management

Risk Management Framework:

- SPEI is aligned with **PFMI guidelines** of applicable principles.
- Banco de México reinforces the assessment by internal and external program audits

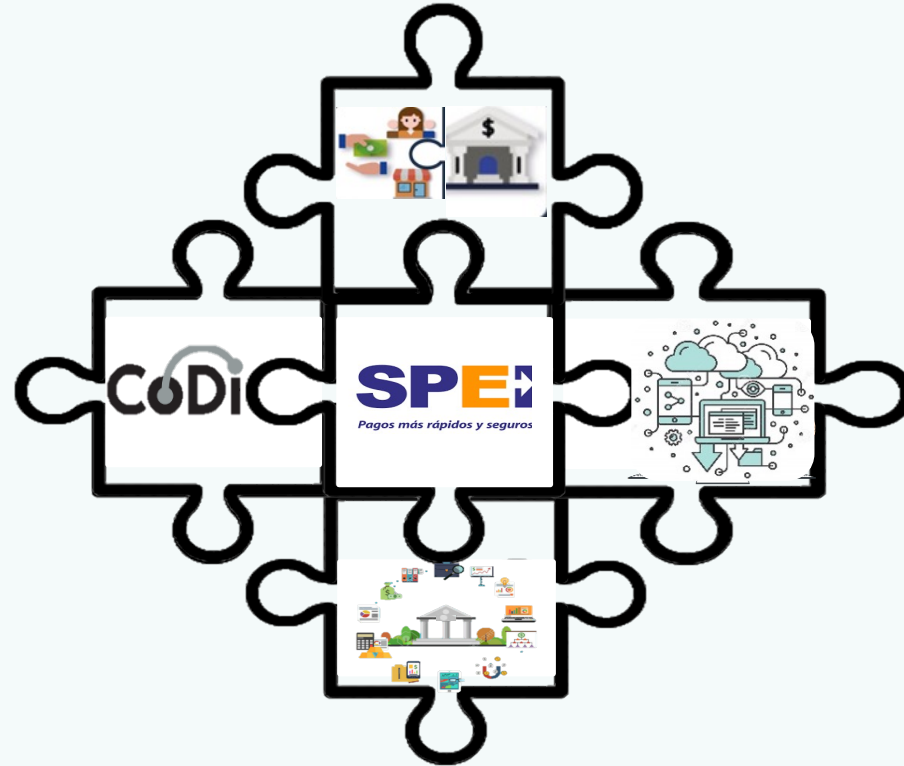
Cyber Resilience

- Aligned with international standards
- SPEI has **two back up systems** in case there are some security issues with main system.
- One of the backup system has all the functionalities of SPEI to ensure continuous operation
- Non-similar facility structure

SPEI | Future Pieces

SPEI as the central infrastructure and key point for innovation in digital payments.

- Maximize the impact of the **CoDi** infrastructure.



- **Innovation in application program interfaces (APIs)**
 - For the initiation of transfers in the SPEI through third-party applications.



- With SPEI as **the central node** and with an adequate regulatory framework:
 - 99.99% system operational continuity.
 - Robust and strengthened operational continuity and cybersecurity schemes.



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