

Impact of the Digital Revolution on the Financial System

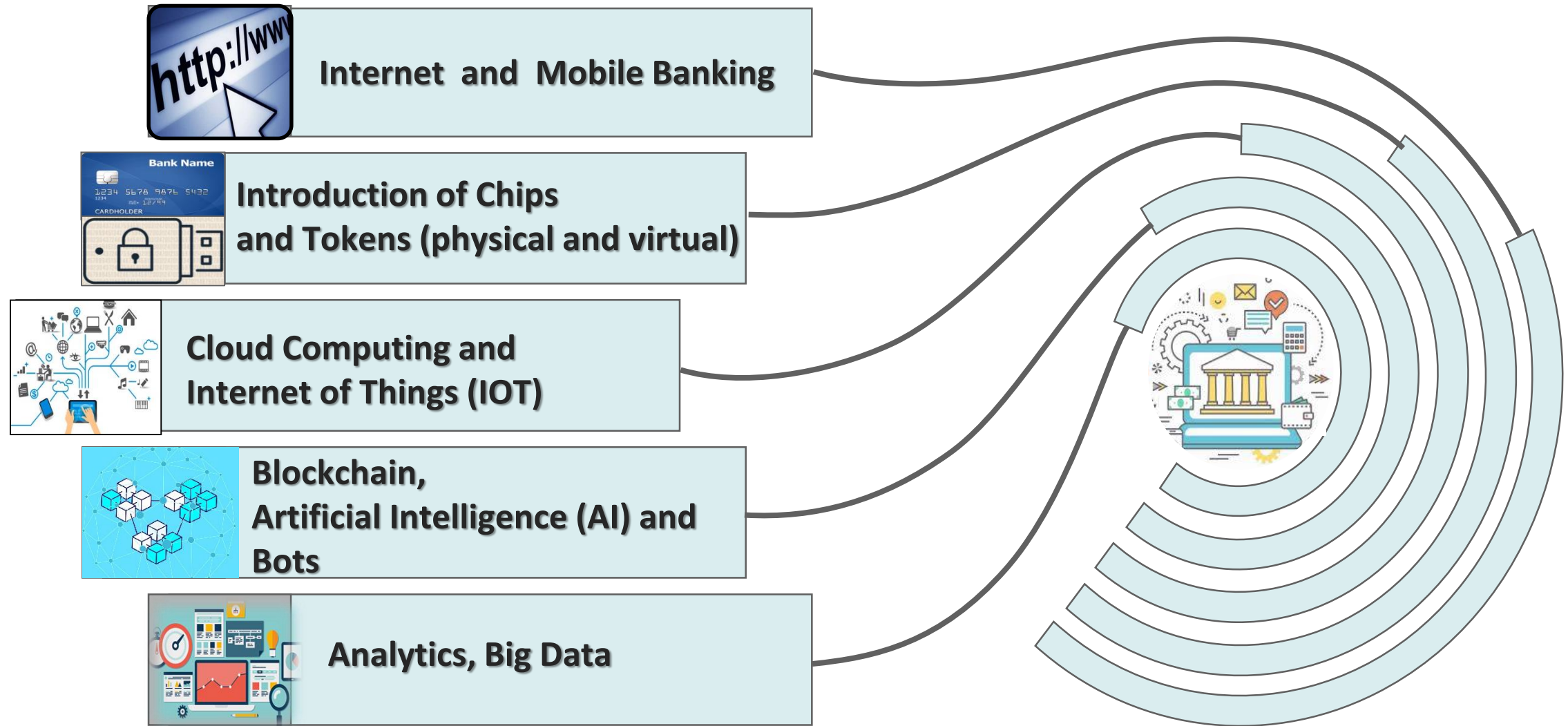
March 10, 2020

Murilo Portugal

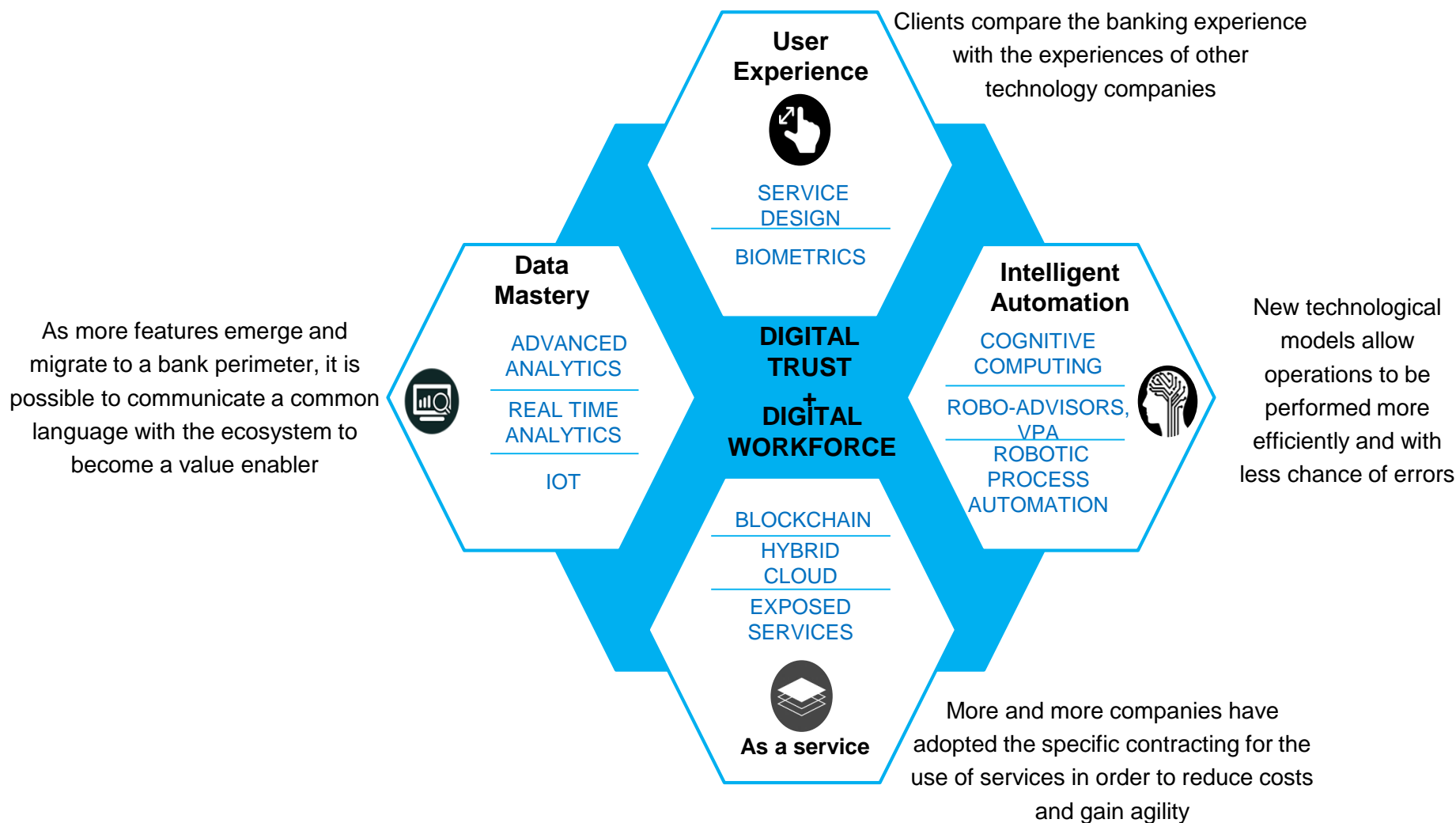
FEBRABAN

Brazilian Federation of Banks

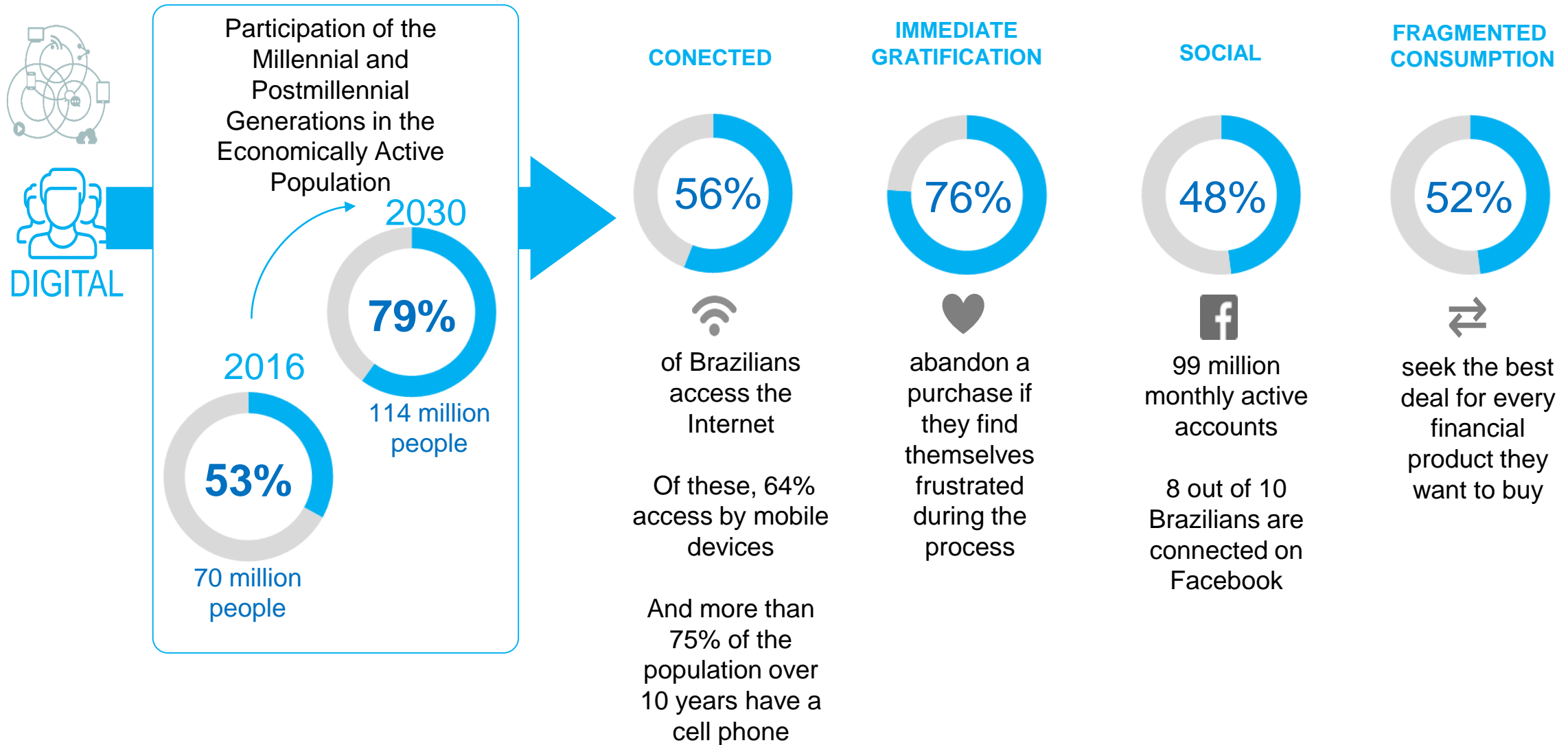
The Digital Revolution main technologies



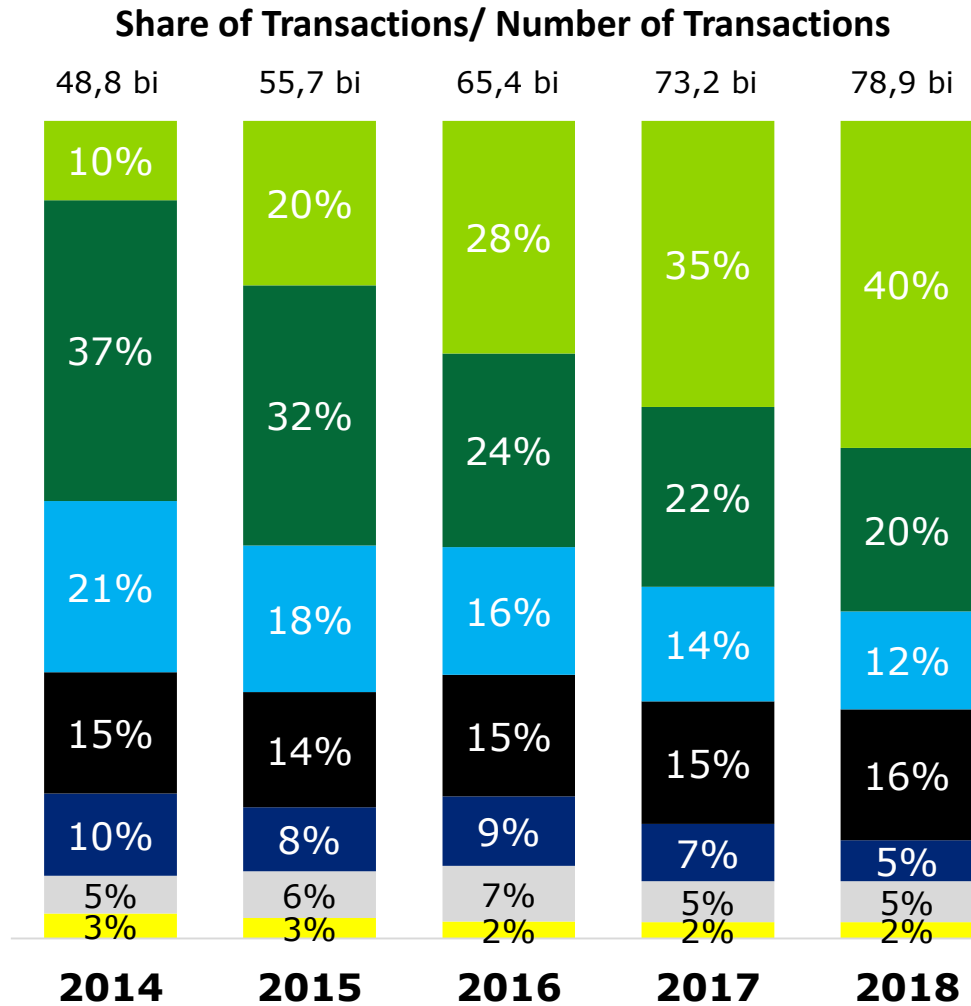
Key factors driving the digital revolution in the banking sector



The Brazilian consumer is already mostly digital, connected and seeks immediate gratification



Mobile banking is already twice as relevant as internet banking in bank transactions



■ Mobile banking
■ Internet banking
■ ATM – Automated Teller Machine
■ POS – Points of Sales
■ Banking Branches
■ Banking correspondents
■ Contact center



Mobile banking

2018: 31,6 bi
2017: 25,6 bi



Branches

2018: 4,0 bi
2017: 5,9 bi



Internet Banking

2018: 15,8 bi
2017: 16,1 bi



Correspondents

2018: 4,2 bi
2017: 4,0 bi



ATM

2018: 9,2 bi
2017: 9,9 bi



Contact Centers

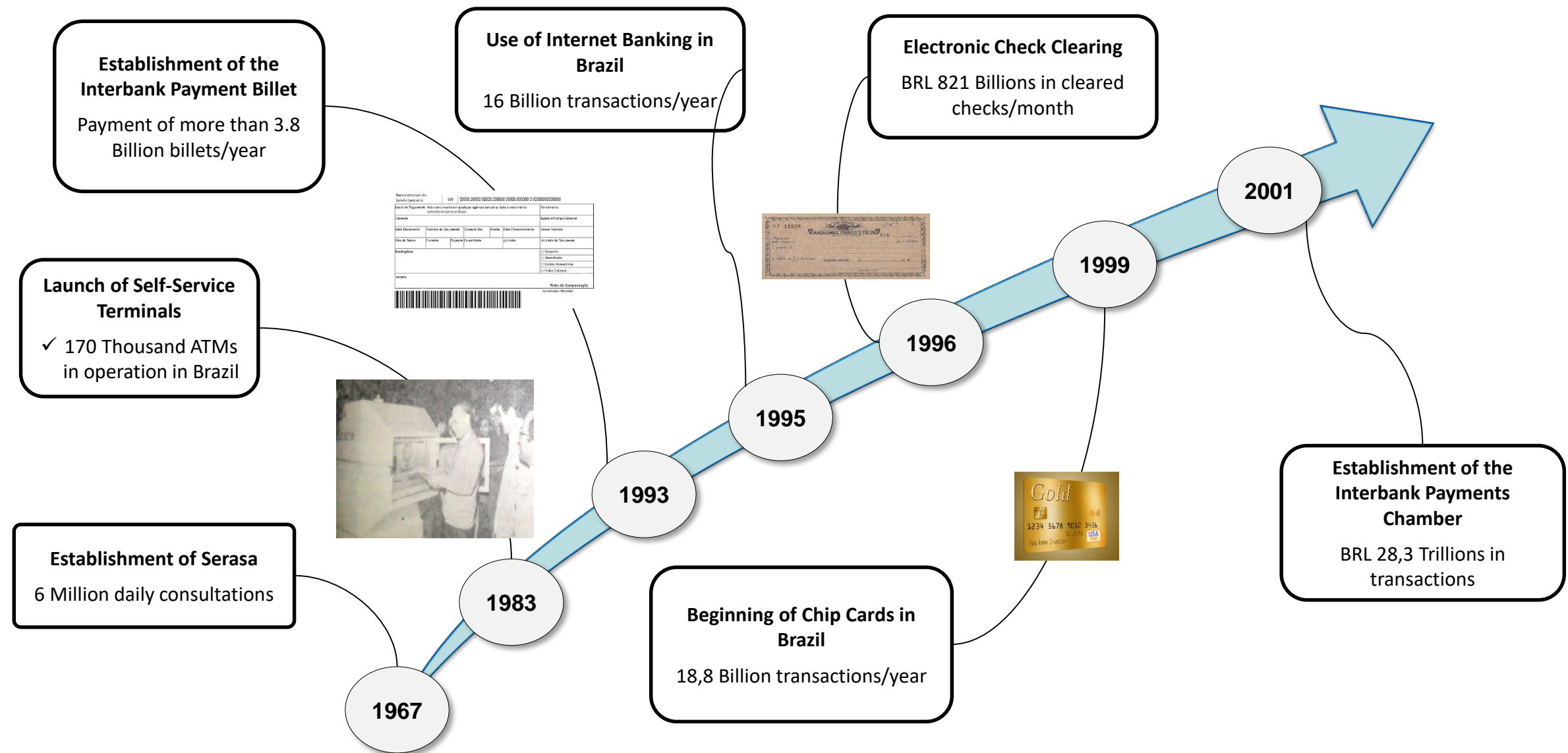
2018: 1,4 bi
2017: 1,5 bi



POS

2018: 12,6 bi
2017: 10,9 bi

Brazilian banks have long been in the forefront of Information Technology and Automation



The synergy among fintechs, bigtechs and the financial industry is producing good results

FINTECHS



- Intensive use of new technologies
- Oriented to meet specific niches
- Greater agility, accepts errors and encourages innovation
- Vision based on Simplicity and Enchantment












BIGTECHS

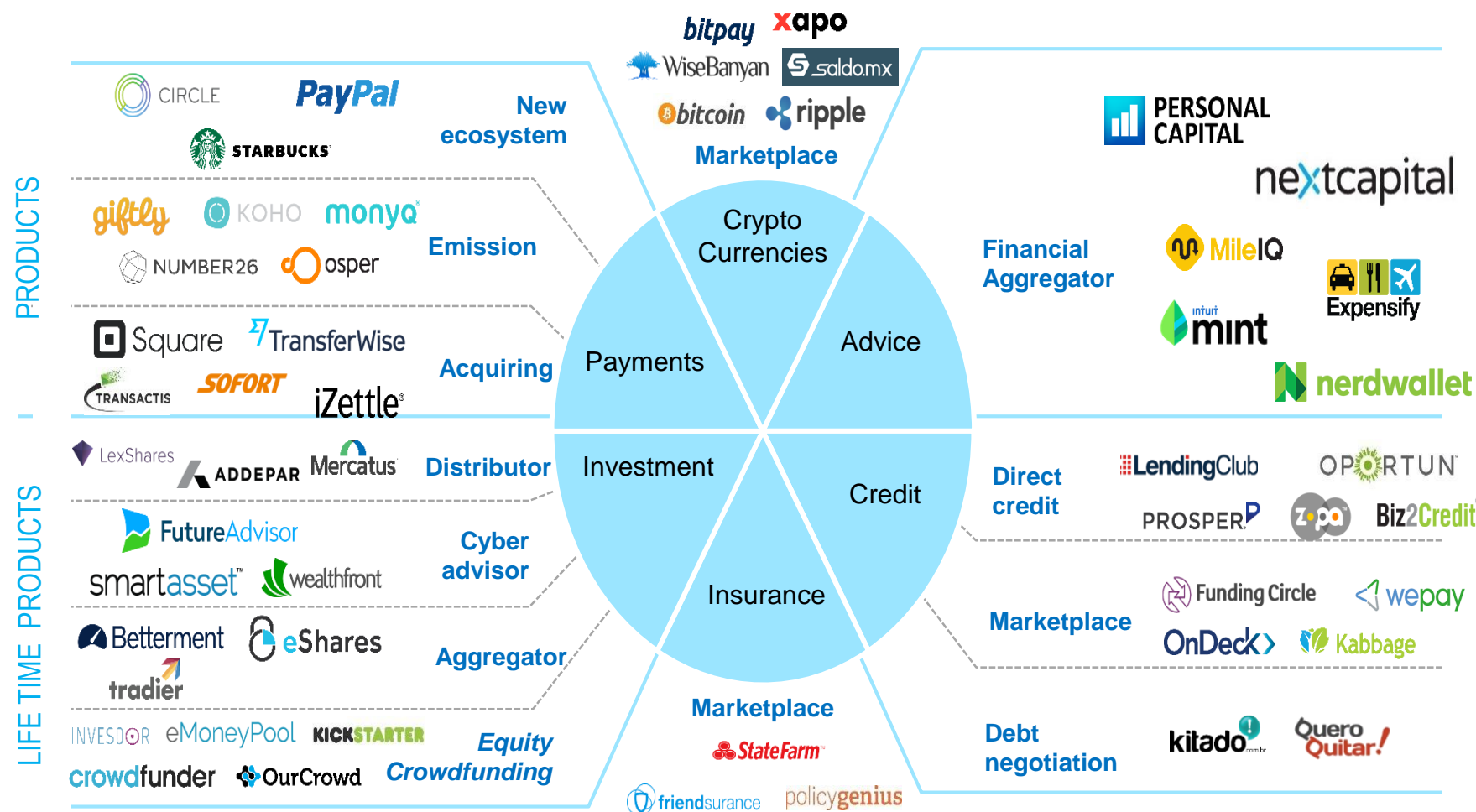


- Redefine the consumer experience
- Acting on a global scale and at various times of consumer day
- Integrated sales of financial products and other goods and services

Fintechs create opportunities for partnerships with the banking sector

 	<ul style="list-style-type: none"> • Itaú created a startup incubator called Cubo Coworking to approach startups and enable possible solutions / tools development • Several startups join segmented programs that offer integration between startups and other companies that may be interested in their projects, products and services
 	<ul style="list-style-type: none"> • Banco do Brasil joined Bradesco to launch Digio, a platform • Announced the Advanced Laboratory (LABB) in Silicon Valley, used both for incubating internal innovation projects and identifying potential investment opportunities in startups
 	<ul style="list-style-type: none"> • Bradesco launched Next, a digital bank that offers a range of banking services • Additionally, created the InovaBra Ventures, a fund of BRL 100 Million for investment startups accelerated by InovaBra, the bank's innovation platform
 	<ul style="list-style-type: none"> • Santander purchased ContaSuper, renamed to SuperDigital, a fintech that offers 100% digital payments and receivables as well as transfers, withdrawals and access to prepaid cards • It also has a program called Radar, in partnership with Endeavor, which offers mentoring, networking and creates opportunities for entrepreneurs in the financial market
 	<ul style="list-style-type: none"> • Caixa Econômica Federal created Youse, an innovative digital platform for the sale of vehicle, home and life insurance • Another initiative was the adoption of the Social Impact Business Challenge, with an NGO called Artemisia, a program that invests and contributes to financial inclusion in Brazil
 	<ul style="list-style-type: none"> • The biggest technology business fair in Latin America • 40 Startups (35 Brazilians + 5 International) selected to the Fintech Lounge

Fintechs operate in 6 distinct segments creating opportunities for relevant partnerships with the banking sector

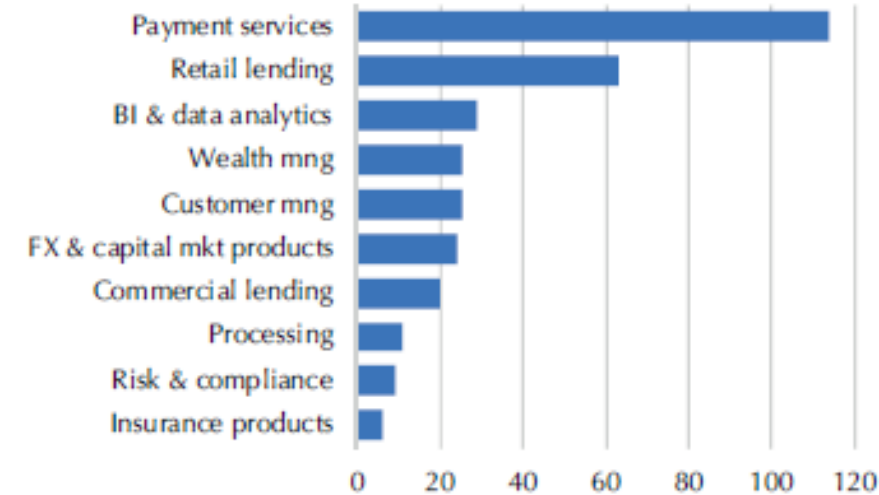


Developed Countries: Possible impacts for the banking industry

Products and services affected by technological developments



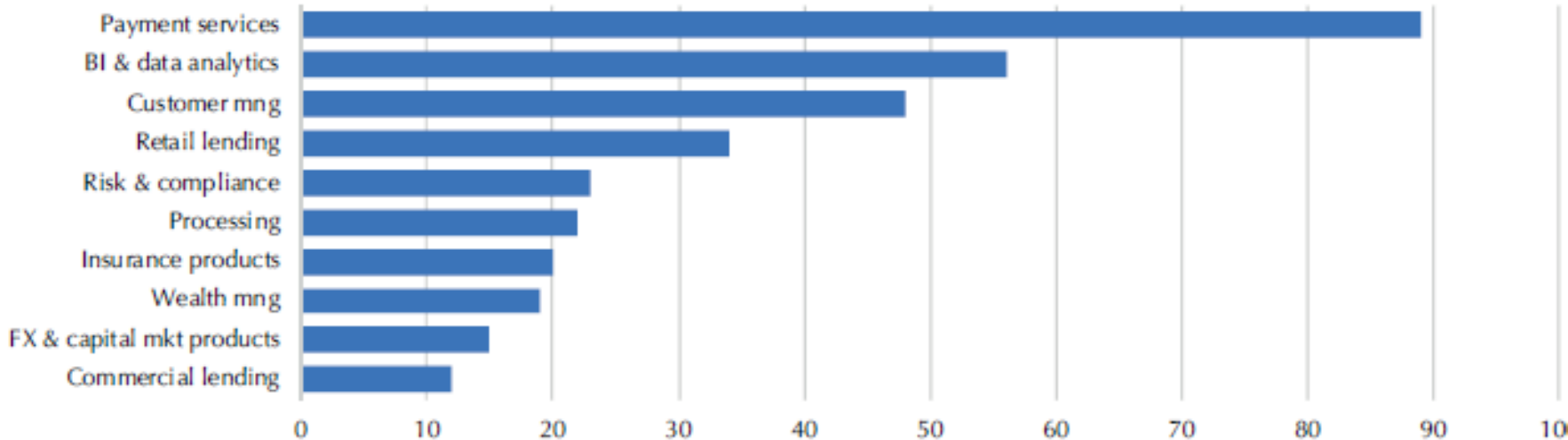
Products and services affected by competition



The ICMB (International Center for Monetary and Banking Studies) survey asked financial institutions to select the financial products and services that are:

1. Most affected by technological developments at present;
2. Likely to be most affected by technological developments over the next five years; and
3. Seeing the greatest competition.

Products and services that will be mostly affected by technological developments over the next five years



Note: The longer the bar, the more important the product or service in the ranking.

Source: Authors' qualitative survey of financial institutions. Banking Disrupted? Financial Intermediation in an Era of Transformational Technology

Brazil: Possible impacts for the banking industry



Credit



Regulation makes bank disintermediation difficult

Deposits and Current Account



The increase of digital players points to strong pressure on tariffs

Payments



Great growth of investment and market players

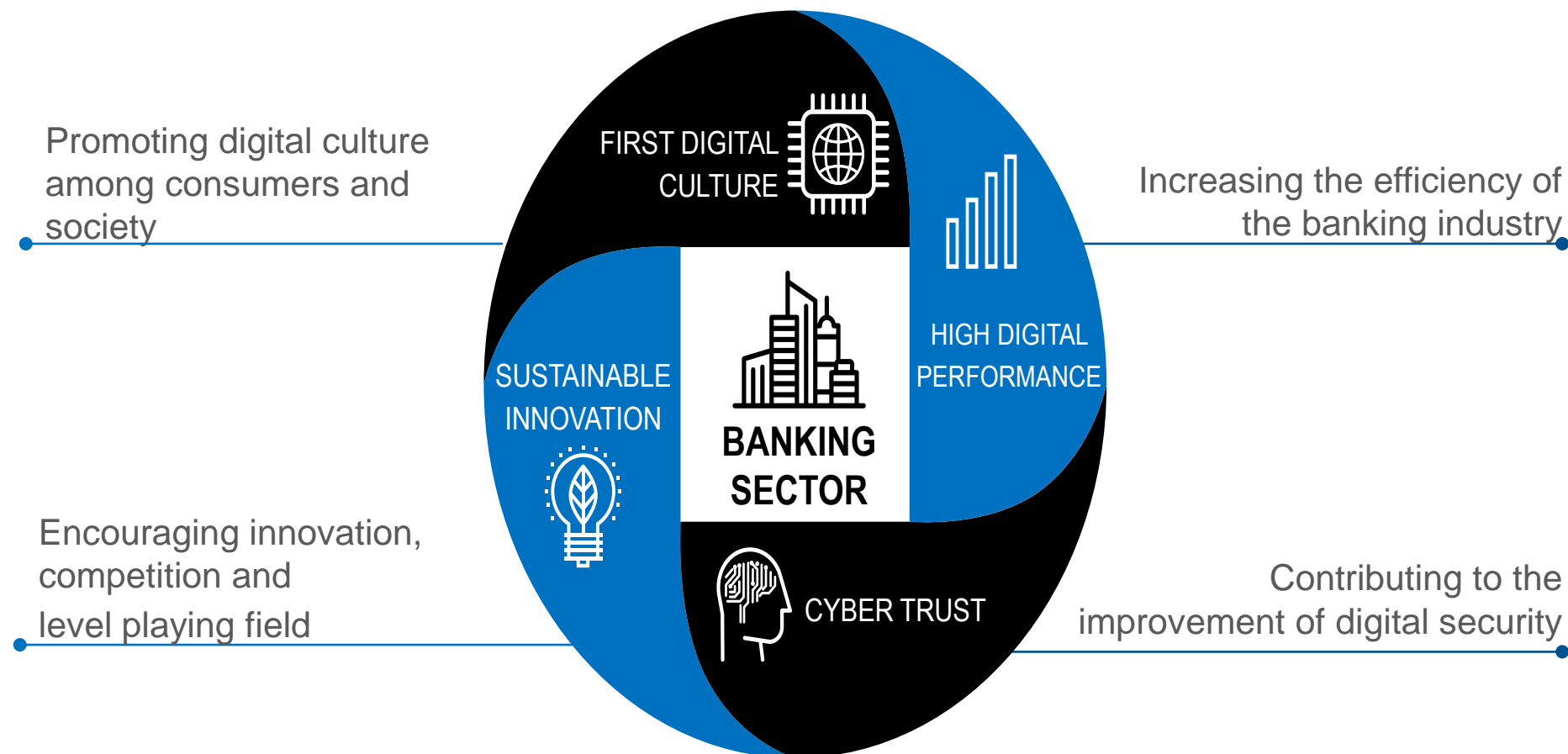
Investments & Insurance



Innovative players have not yet gained relevant traction



To promote the digital revolution in the banking sector, a digital agenda was built with 4 key guidelines



- **FEBRABAN's Framework**
 - Cloud
 - Critical Infrastructure
 - Outsourcing
- **Monitoring and Validation** of new products and services from Cyber Security viewpoint

- 
- **Creation of Sector Cyber Security Center**
 - Personnel training
 - Integrated simulations
 - Prevention research
 - **Use of cyber incident sharing platform - FS ISAC**

True Competition x Regulatory Arbitrage x Free Riding

Regulatory Arbitrage

Occurs when two groups of enterprises operate in the same market, offering the same products or services, but one of them is subject to softer legal and regulatory requirements than the other



Free Riding

Happens when someone benefits from something without expending effort or paying for it

Instant Payments

Today in Brazil there is a fast payments system (TEDs and DOCs) that concludes transactions from 20 minutes to 2 days.

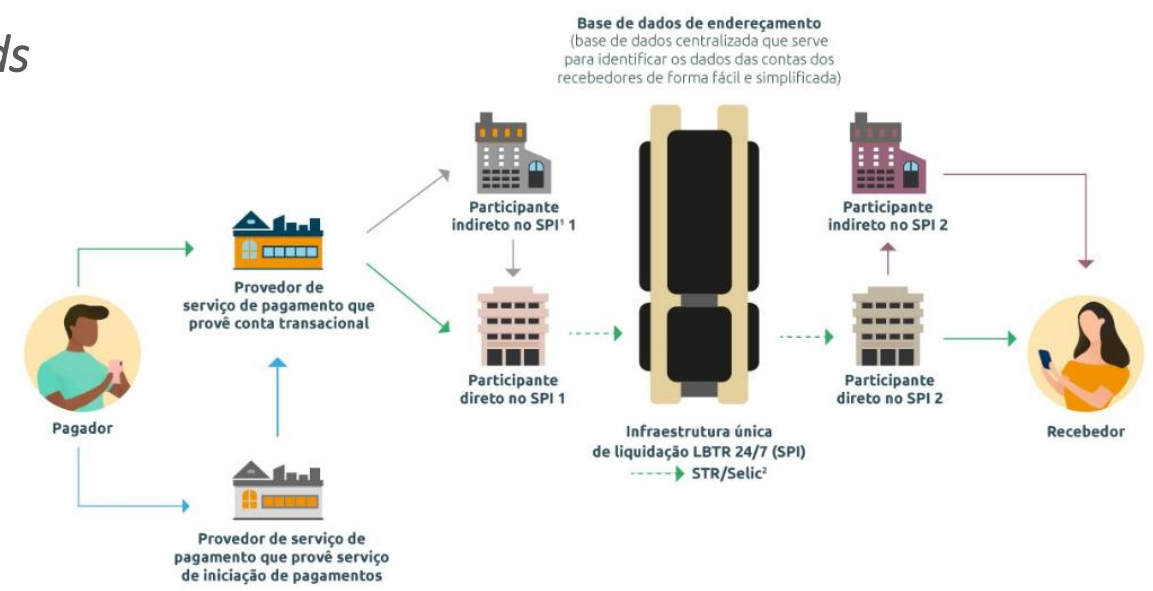


*Now, the Brazilian Central Bank and the banking industry are **developing** an instant payments system (PIX)*

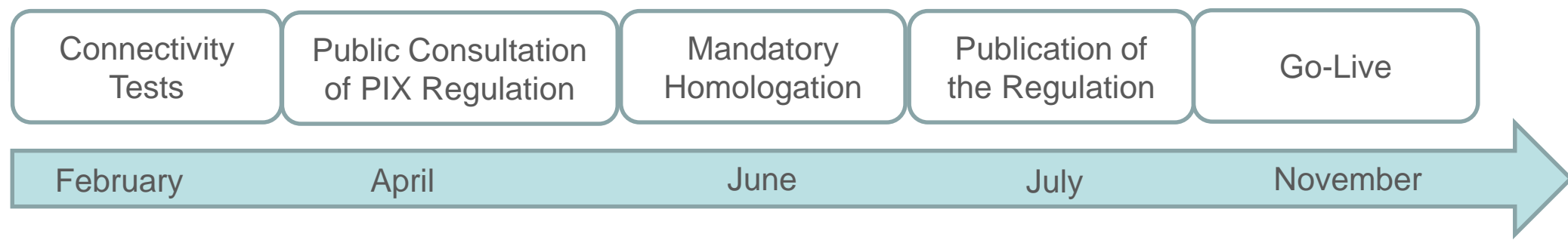
Instant Payments

PIX will enable to conclude transactions in 10 seconds

The Brazilian Central Bank is developing and will operate the “addressing base” and “settlement system”

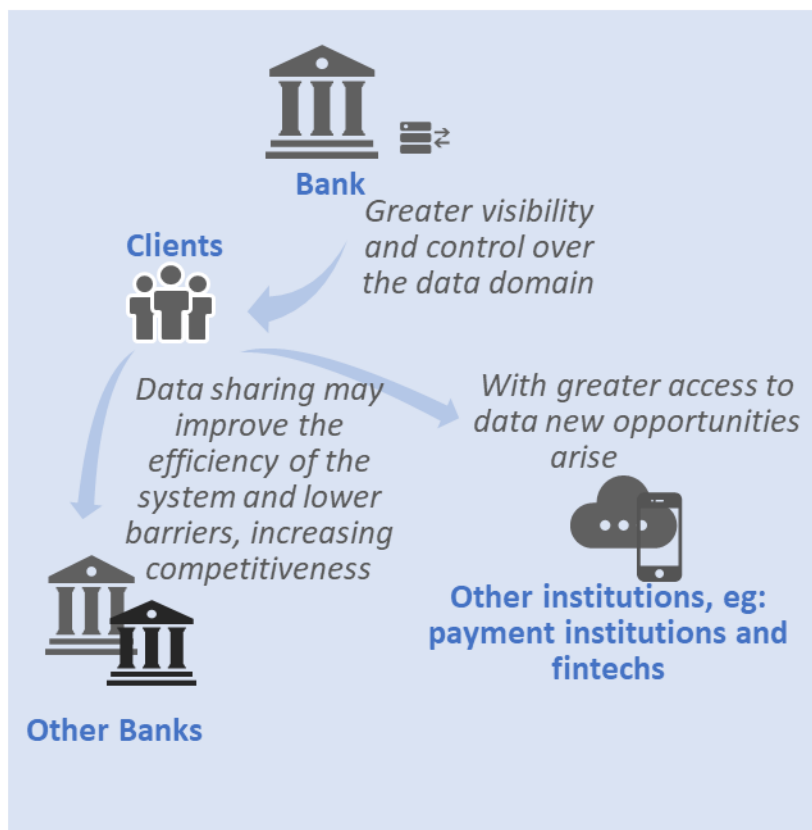


Implementation Milestones | 2020



Open Banking: sharing of customer's data if authorized by the client

What is it?



Key Points



*Customers are owners and can manage their **own data**, reducing entry barriers*



*Customers may determine **what data will be shared** with third parties in electronic form for easy use*

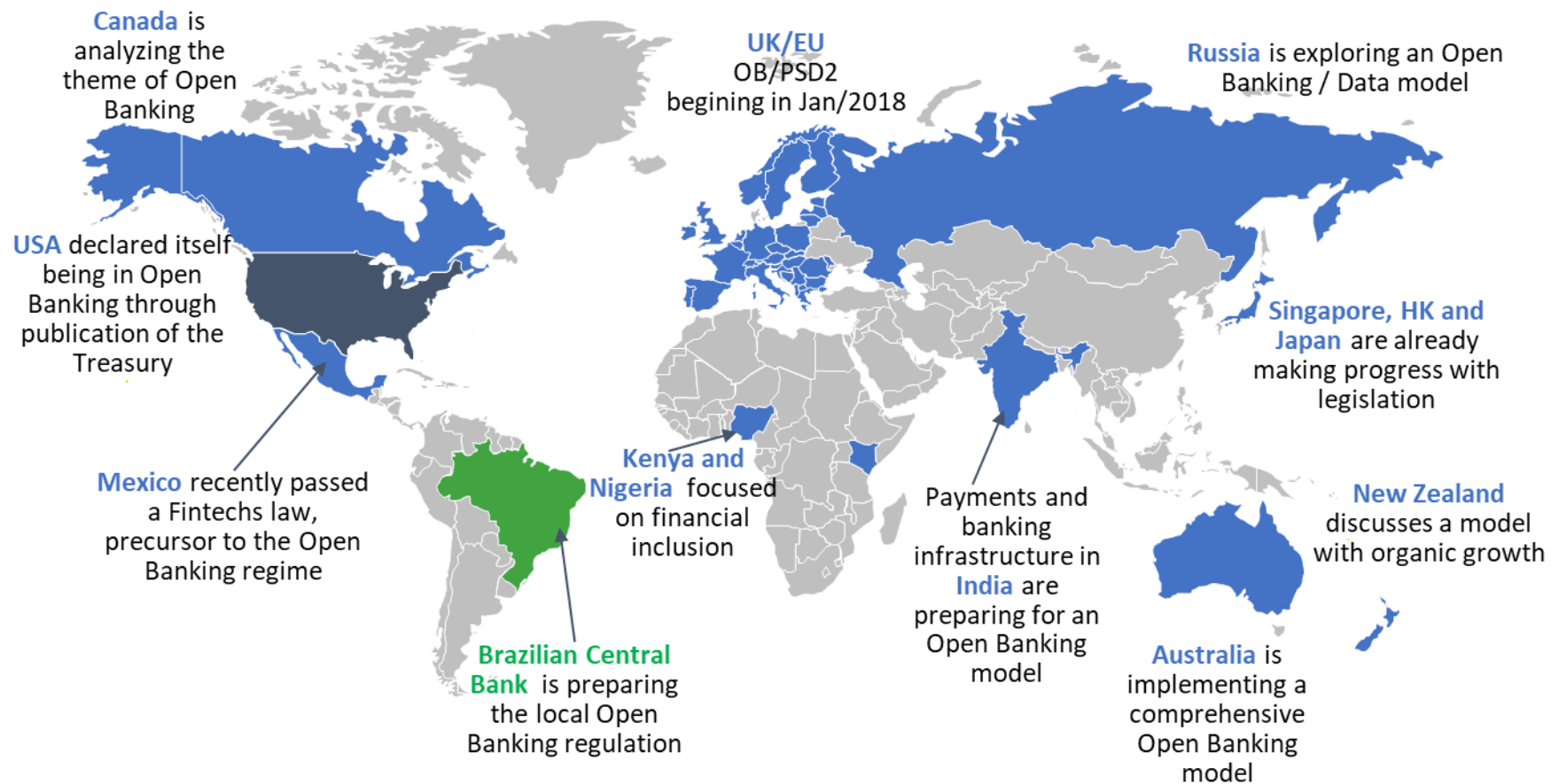


*Customers may **define which providers will initiate their payments***



*Explicitly registered **consent and permission** are required to access the data*

Open Banking is being examined in several jurisdictions, and each one is establishing the model that will best fit to local complexity



Open Banking implementation in Brazil

Brazilian Central Bank Communication 33.455, of April 24th, 2019

Public Consultation Notice 73 with deadline for comments and suggestions ended in January 2020

1	2	3	4
OPEN DATA	REGISTRATION AND TRANSACTIONAL DATA	SERVICES	ADDITIONAL DATA
<ol style="list-style-type: none">1. Information about dependencies and access' channel2. Product information and services offered:<ul style="list-style-type: none">- Demand deposit accounts, savings and prepaid payment- Credit Card (Account postpaid payment)- Credit and credit operations lease financial	<ol style="list-style-type: none">1. Identification of customer / representatives2. Qualification of customer / representatives3.Demand deposit accounts, savings and payment e.g.: balance available, credit and debit transactions, debit list and scheduled payments)4.Credit card (bank account postpaid payment)	<ol style="list-style-type: none">1. Initiation of Payment Sevices<ul style="list-style-type: none">- Scheduled debits, recurring or eventual- Internal transfers- TED and DOC- Instant payments	<ol style="list-style-type: none">1. Data on:<ul style="list-style-type: none">- Investments- Insurance- Wealth

Legal Responsibility for shared data

The responsibility of each Open Banking participant should be limited to its performance and activities (supplier and recipient of data, payment initiator or data holder account). Institutions participating in the Open Banking should be individually responsible for possible damage caused to customers and third parties within the limit of their performance.

Reciprocity in data sharing

The bigtechs have a significant amounts of qualitative data that can improve the performance and risk engines of the banking industry, but there is no access. With Open Banking, bigtechs will be able, if they meet the criteria, to obtain data from the banking industry. Should there be Open Social Media, Open Electronic Trade, etc.?

Pricing and Costs

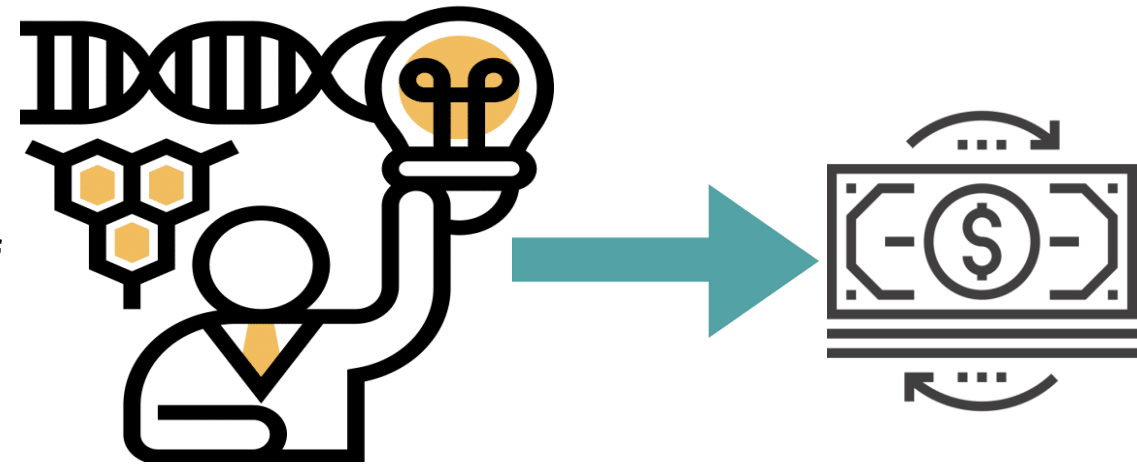
There should be an apportionment and reimbursement of the implementation costs. Business models must be adjusted to work within the reality of free consultations x cost reimbursement.

Financial Industry Ecosystem

Banks have evolved to solve problems which prevent or make it difficult for funds to flow from lenders to borrowers:

❑ MAIN PROBLEMS

- **Asymmetric information**
 - Adverse selection
 - Moral hazard
- **High contracting and monitoring costs**
- **Duration mismatches between suppliers and demanders of credit**
- **Risks of leveraging**
- **Frequent banking crises**



❑ SOME SOLUTIONS

- **Creation of lender of last resort → bankers' moral hazard**
- **Tight prudential regulation, intense supervision of banks and ample resolution powers by Central Banks and financial regulators**

Future Trends

- Will FinTechs and BigTechs replace banks?
- Will technology solve the problems of asymmetry of information, high contracting and monitoring costs, the risks of maturity transformation and leverage to the point of allowing deposit taking, lending and leveraging to happen without a lender of last resort, prudential regulation and supervision, and without increasing frequent financial crises?

Yes

→ Banks will become FinTechs

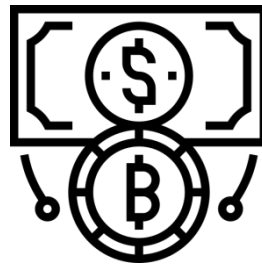
No

→ FinTechs will become Banks

YES AND NO

→ Bantechs will continue to evolve

- Could it be that the news about the death of banking are greatly exaggerated?



The background is a deep blue with a complex, abstract pattern of concentric circles and radial lines. These lines are composed of many small, overlapping segments, creating a sense of motion and depth. There are also numerous small, bright white and light blue specks scattered throughout, resembling stars or digital data points. A solid dark blue rectangular box is centered horizontally and vertically, containing the text "Thank You!".

Thank You!