Annual Report 2022

Open Finance Brasil Initial Structure

Information until 12/31/2022

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CARLOS ANTONIO RODRIGUES JORGE

General Secretary of
Open Finance Brasil

Message from the General Secretary

It is with great pride that I present, on behalf of the Initial Governance Structure, the 2022 Annual Report of Open Finance Brasil.

This year was marked by major operational and quality improvements to our ecosystem, including multiple reviews of API specifications and interoperability, with the effort culminating at the end of October in the release of versions 2.0 of the Phase 2 APIs.

We have accumulated a total of 11.6 billion API Calls as of March 2022 (the start of the official data collection period), with a success rate of 88%, obtained through 18.7 million active consents - our estimate is that this corresponds to about 7.2 million people[1] using Open Finance. This is slightly higher adoption than in the UK, one of the world's Open Finance benchmarks, in its fifth year of operation, while we are only in our second year.

Taking into account our vast user base of over 180 million citizens with bank accounts, approximately 4% of them are already benefiting from Open Finance - although we celebrate our growth, there is still a lot of room to evolve. We have reached 16 Payment Initiation Service Providers (PISP) enabled to operate, with the popular Pix being used in an innovative way.

Our governance has been strengthened: the original Specification TG gained three instances, and is now supported full-time by our first Product Group (PG). Formed by specialized professionals (e.g. Scrum Masters and API experts), the PG brings greater agility to the review and creation of APIs. In addition, we had the Deliberative Council's approval for the growth of the Technology and Operations Board (TOB), with the hiring of new specialists in Open Finance to start working in 2023.

Both current results and future expectations are remarkable: the year 2023 will be marked by the strengthening of payment initiation and the creation of new APIs, increasing the scope and strengthening the largest financial data sharing ecosystem in the world.

Enjoy once again the information in this new report, and be safe and secure in continuing to join Open Finance Brasil!

1 5.2 bank accounts per person, consents given to 50% of these accounts

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OPEN BANKING AND OPEN FINANCE BACKGROUND

Chapter 1

But, what is

Open Finance?

What is it?

Open Finance, also known as the open financial system, allows customers to share their information among institutions authorized by the Banco Central do Brasil. In addition, it enables the movement of bank accounts through various platforms, not limited to the bank's app or website. This approach offers users security, speed, and convenience.

Without Open Finance

Without the technological framework that Open Finance provides, an institution has no visibility of the relationship that customer have with other institutions, which hinders competition.

With Open Finance

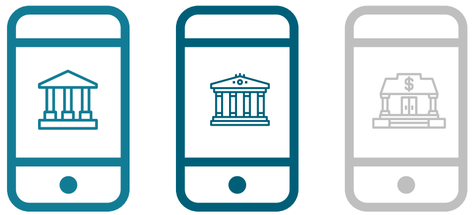
With each account holder's permission, the institutions connect directly to the platforms of other participating institutions and access only the data authorized by the customer(s). All this is done in a secure environment, and the permission can be cancelled by the customer at any time.

What is the difference between Open Banking and Open Finance?

Open Finance is the extension of Open Banking. The project has changed its name to show its broader scope, including not only information about more traditional financial products and services (such as accounts and credit operations), but also data about foreign exchange, accreditation, investments, insurance, and pensions.

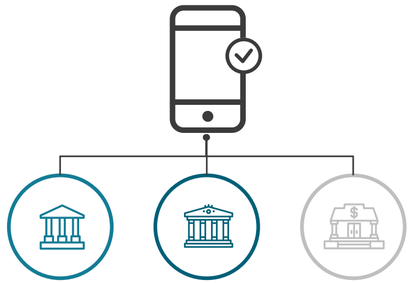
Example of data sharing
in the financial system

Previously



The customers faced challenges in securely and simply sharing their data with other financial institutions.

With Open Finance



Upon the customers' consent, financial and payment institutions authorized by Banco Central do Brasil will be given access to the users' registration and transactional data maintained by another financial institution, in an automated, standardized and secure manner.

EXAMPLE

Source: Banco Central do Brasil, press clippings, Open Finance Brasil Secretary

Motivators for the creation of Open Finance

Key drivers for the project

Various trends have emerged, thus impacting the financial system, both locally and globally. These include more intensive and intelligent use of granular data, as well as the public's demand for a greater empowerment of their information. In this sense, the need for an open financial system is aligned with the Brazilian General Data Protection Regulation (LGPD), making financial institutions require the authorization of customers to share their information.



Yet another key driver for the creation of Open Banking was the emergence of new players, such as fintechs, which offer disruptive financial service formats.

Source: Business Insider - Global open banking report 2022

Motivators for the creation of Open Finance



Composition of Open Finance

For Banco Central do Brasil, the purpose of **Open Finance's existence is based on 5 pillars of the BC# Agenda**

INCLUSION:

Facilitate access to financial markets, favoring the inclusion of the non-banking population.

COMPETITIVENESS:

Stimulate competition in the financial and payment systems.

TRANSPARENCY:

Improve the transparency, quality and flow of market and Banco Central do Brasil information.

EDUCATION:

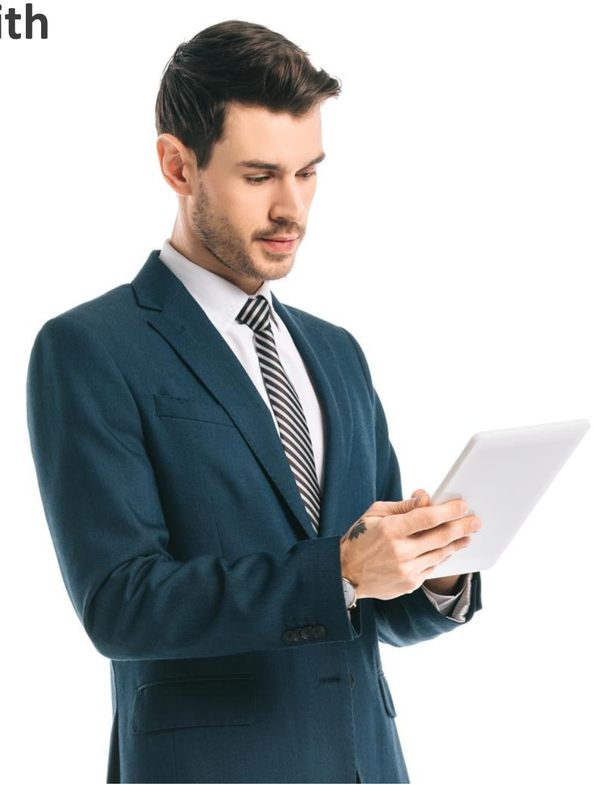
Stimulate savings and conscious participation in the market.

SUSTAINABILITY:

Promote sustainable finance and thus contribute to the reduction of socio-environmental and climate risks in the economy and in the Financial System.

Motivators for the creation of Open Finance

The Agenda BC#, released in 2019, is part of the strategic planning of the Banco Central do Brasil (BCB) with several **objectives and with the purpose** of fostering the **economic well-being of Brazilian society.**



Determining factors for the project

- Alignment with the global context of other countries that have started adopting the model, such as the United Kingdom and Australia;
- Encourage competition in Financial and Payment Systems;
- Facilitate access and financial inclusion for the Brazilian population;
- Focus on the future financial system with technological evolutions and innovations;
- Streamlining, demonetization, digitalization, portability, and interoperability with a focus on a more open model.



Benefits **for the population**

Benefits

for the Population



Besides bringing more transparency and increasing competitiveness, the main benefit of Open Finance is to provide better conditions, customized services and a better customer experience.

All consumers who have access to a digital channel of a participating institution will thus be enabled to share their information, through a fully digital experience.

Through data sharing and payment initiation, it will be possible to deliver solutions that bring real benefits to everyday life:

- Access to credit with better prices, rates, and limits, including the possibility of sharing your good-paying history to any institution that offers you benefits;
- Managing your financial life in a single place, with the offer of products and services at the right time and according to your needs;
- Access to differentiated products and services in one place, with the possibility of making payments and moving funds at any institution of your choice.



Conclusion: a complete and centralized management of the customers' financial lifecycle is made possible.

Source: Publications bcb.gov 2021

Benefits

for the Population

With almost two years of implementation, Open Finance has already been delivering benefits to customers:

Reports collected from real customers during simulated journeys in Open Finance

> Very good! Mainly in the sense of making it possible to seek opportunities in the market, and often you stick with an institution that doesn't allow you to grow, and when you share this information it may increase these possibilities.

> I understood that it would be a way to create opportunities, in the sense that you could demonstrate your financial status to the institutions that you have relationships with and get more opportunities to make operations that could benefit you in a patrimonial or financial growth.

> It's a pretty reliable thing, the two options that I defined appear. I was in Institution A and I was going to Institution B.

> I thought it was cool, I wanted to do it now. Since we have the accounts, maybe this sharing will help us to have a credit, some opportunities that the bank can offer, considering all the accounts are up to date, etc. This is for people who have a good financial situation.

Source: TG UX - Usability Testing 2022

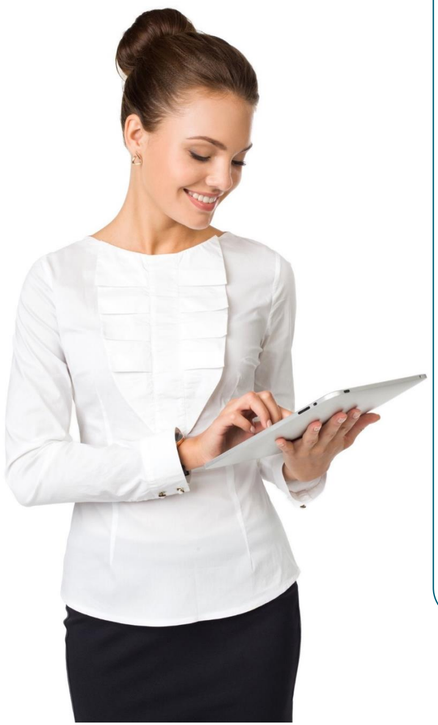
Evolution of **Open Finance**



Evolution

# of Open Finance

Open banking originated from the Banco Central do Brasil's initiative to empower customers from various financial institutions to securely and uniformly share data and services. It is important to note that sharing can only occur with the explicit consent of the customer.



Phase 1:

The implementation of Open Banking began in 2021, with Phase 1, with the financial institutions' own data being the object of sharing - service channels, products, and services offered.

Phase 2:

Phase 2 began in August 2021, with the aim of sharing the customers' own data - registration data, balance/ statement, credit - with explicit consent.

Phase 3:

Following this, in October 2021, Phase 3 began to be implemented, with payment transaction initiation service sharing via Pix. In February 2023, Phase 3 will evolve to allow single Pix schedules through the Open Finance ecosystem.
The evolution agenda foresees the inclusion of other payment methods in addition to Phase 3, such as: Express Wire Transfer, payment of bank slips, and account debit, in addition to the credit proposal forwarding service.

Phase 4:

Following the implementation schedule, Phase 4 will begin in April 2023 and will last until April 2024, sharing institutional and transactional data on foreign exchange, accreditation, insurance, investments, and pensions.

Evolution of Open Finance

What has already been delivered

After coming a long way since the creation of the Convention, Phases 1, 2 and 3A - the first cycle has finally been implemented, and it has delivered several new features to users and participating institutions

Key:
Entry into production

Beginning of the Open Finance Governance Structure
Creation of Governance and Technical Groups (TG)

July/20

2020

2021

Feb/21

Phase 1: Open Data
Enabled the sharing of information of products and services existing in the institutions
Shared information:
- Service channels;
- Products and Services (rates/fees);
- Ecosystem Metrics.

Phase 2: Transactional Data
Enabled the possibility of sharing registration and transactional data of the customers of the participating institutions
Shared information:
- Registration;
- Accounts;
- Cards;
- Credit Operations.

August and September
Gradual launch

Starting in October
Gradual launch

Phase 3A: Pix Payment Initiation
Enabled Single Payment Initiation via Pix
Formats:
- Manual Entry;
- Pix key;
- Initiation via Receiver.

2021

2022

Feb/22

Phase 3A: Pix Payment Initiation
New Feature:
- Initiation via QRCode.

Starting in March/22
Gradual launch

Phase 2 and 3 API Enhancements
Sharing of Registration, Account, Card and Credit Transaction Data and Initiation of Single Payments via Pix

2022

Evolution of Open Finance

Coming soon

The initiative has focused on revising and enriching the phases already delivered, aiming to improve the quality and scope of the data already being shared and to make room for the introduction of other planned scopes and features.

Key:
Entry into production

Phase 3A: Pix Payment Initiation
New Feature:
• Single Schedule

Phase 4B: Transactional Data Will enable the possibility of sharing customer transactional data of the participating institutions
Shared information:
• Investments;
• Exchange

Phase 2 and 3 API Enhancements
Improvements in the specification of customer registration and transactional data, as well as new functionalities in the Payment Initiation
• Webhook;
• Batch and recurring payments;
• Day without redirection.

2023+ | Feb/23

Phase 4A: Open Data
Will expand the scope of information that can be shared by institutions
Shared information:
• Investments;
• Exchange;
• Insurance;
• Pension Fund;
• Capitalization and Accreditation.

Phase 1 API Enhancements
Information on existing products and services at the institutions
Shared information:
• Service channels;
• Products and Services (rates/fees);
• Ecosystem Metrics.

Other Phases and Deliverables of Open Finance
Other regulatory scopes, with no date formally defined yet:
• Phases 3B/D/E - Payment Initiation: other arrangements (e.g. bank slip, direct debit, Express Wire Transfer/Electronic Funds Transfer);
• Phase 3C - Forwarding a Credit Proposal
• Phase 4B – Insurance, pension funds, capitalization, and accreditation.

Transitioning to

Open Finance



OpenBanking → Open Finance

Approximately two years after the initial resolutions that laid the foundation for the **Open Banking** initiative, in March 2022, the Banco Central do Brasil and the Conselho Monetário Nacional (National Monetary Board) mandated[1] the adoption of the term **Open Finance.** This decision further emphasizes the strategic aim of encompassing a wide range of financial services within the ecosystem, extending beyond traditional banking services in the country.

Such innovative changes aim for a **better understanding** by consumers about the use their data and access to ecosystem services, **greater uniformity** in communication and promoting **alignment of the name with the schedule foreseen** for implementation in Brazil, which, from Phase Four on is also going to encompass insurance, pension, accreditation, foreign exchange, and investment data.

Modifications did not imply changes in the scope of the initiative in its technical structure, security and other topics already covered in previous specifications. **'Portal do Cidadão'(Citizens' Web Portal) as well as diverse ecosystem documentation are being employed to complete the migration and nomenclature adaptation.**

Notes: 1 Joint Resolution No. 4, Banco Central do Brasil and National Monetary Board



Examples of
Use Cases

The seamless sharing of data and frictionless payment **capabilities facilitated by Open Finance are fostering the emergence of innovative solutions in Brazil**

B2C – cases directed to Individuals

NON-EXHAUSTIVE

Payment Initiation Service Provider (PISP[1])

Institutions in the Open Finance ecosystem will be able to provide payment initiation services;

Service Comparator

With data usage permission, the feature enables the search and comparison of the best service option for the user, such as: loans, financing, etc.

Digital Onboarding

Improving the digital onboarding experience by making the process more agile, reliable, and with less friction for the citizen.

PFM - Account aggregation and Personal Finance Management

A process that allows users to connect all or some of their bank accounts in one place, enabling greater visibility of their expenses and more efficient management. This feature allows users to access advanced financial services, such as financial planning and investments[2].

Customized credit

It allows an increase in the volume of personal credit proposals due to the exchange of information between financial institutions.

1 Payment Initiation Service Provider (PISP) is a service that allows a non-account holding institution to command a payment, with the consent of the end user

2 Scheduled for implementation in 2023

Source: Open Finance Brasil Secretary

The seamless sharing of data and frictionless payment **capabilities facilitated by Open Finance are fostering the emergence of innovative solutions in Brazil**

B2B – cases directed to Legal Entities

NON-EXHAUSTIVE

Automation of bank data analysis

It enables fraud analysis, KYC[1], credit risk reduction, as well as consumer profiling.

BFM – Business Finance Management

Consolidation of information enables management of corporate finances, for example, by performing automated accounting.

Open Finance as a Service[2,3]

It allows institutions to integrate into the Open Finance ecosystem using infrastructure and services from third-party companies.

Use of Artificial Intelligence (AI)

AI allows institutions to drive innovation and facilities for legal entities, which fosters market development, enhances the customer experience, for example by customizing services and products, and can encourage greater user adherence to the Open Finance System.

PISPs as a Service

It allows institutions to perform payment initiation using the infrastructure and integration with the Open Finance ecosystem of third-party companies, which provide the necessary technological tools.

1 Know Your Customer 2 Analogous to the TSP -Technical Service Provider in the UK; not regulated by the Banco Central do Brasil

3 Participation in Open Finance is restricted to authorized institutions; through partnerships, third-party companies will be able to access data exclusively concerning their partner institution and with the user's consent

Source: Open Finance Brasil Secretary



OPEN FINANCE COMPOSITION

Chapter 2

Organization and Governance of Open Finance Brasil

The Initial Structure of Open Finance Brasil consists of three main levels...

Strategic

- Deliberative Council (DC): responsible for defining the internal regulations, structure and guidelines for groups, approval of norms and specifications, implementation and operation decisions, in short, ensuring proper implementation and operation of Open Finance Brasil.

Tactical/Administrative

- Secretariat: responsible for organizing and coordinating work;
- Administrative layer: responsible for managing contracts, finances and infrastructure;
- Technological infrastructure management.

Technical

- Technical Groups (TGs): responsible for preparing studies and technical proposals according to the work plan defined by the Council and BC;
- Several representatives impacted by Open Finance can participate in this group.

... and it is represented by various national financial institutions

Boards which they represent: deposit accounts and retail credit operations
- Febraban;
- ABBC / ACREFI / ABBI / ABDE;
- OCB.

Boards which they represent: payment services and fintechs
- ABECS;
- Group Abranet / Abipag / e-net Chamber;
- ABCD / ABFintechs.

Independent member of the Board
- Rubens Vidigal Neto

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Secretariat - main responsibilities:
- Process management (initiatives, schedules, work plans);
- Preparation, organization and coordination of periodic meetings (with the Board, Technical Groups and suppliers);
- Communication (internal and to the market);
- Technical discussions beyond the original scope - for example functional specification, versioning control.

Administrative layer - main responsibilities:
Hiring and dismissal of professionals:
- Contracting and termination of contracts for all specialized companies that perform administrative, financial, and operational processes;
- Financial management (for example, budget management, Participant turnover, Vendor payments);
- Infrastructure Management.

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Examples of Technical Groups (TGs)
- Architecture;
- Specifications;
- Security;
- Infrastructure;
- UX;
- Communication;
- Policies, Risks and Compliance.

Coordinators and Vice-Coordinators Main Responsibilities
- Definition of guidelines for Technical Group meetings;
- Leadership and direction of technical discussions;
- Presentation of technical definitions to the Council.

600+

Source: Open Finance Brasil Secretary

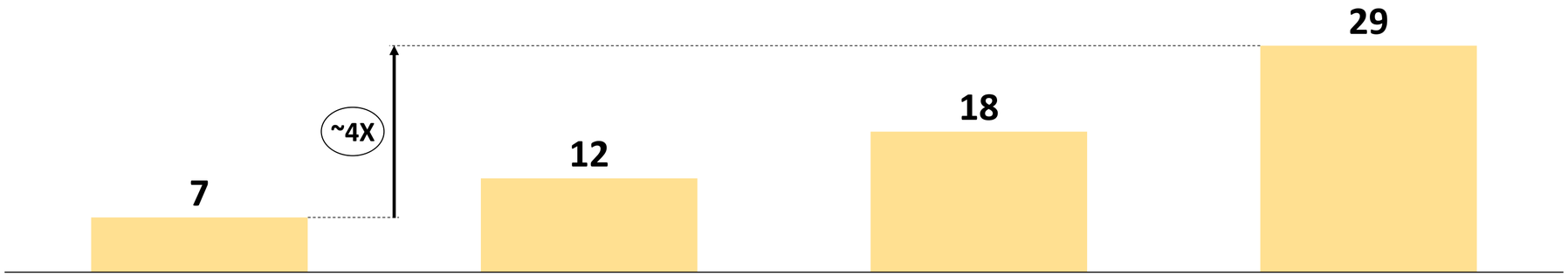
No. OF PEOPLE INVOLVED

We have 29 Technical Groups:

the technical complexity was reflected in the increase of the groups by more than four times

Discontinued Groups

Number of Technical Groups and Implementation Squads



Technical Groups and Squads[1]

First Technical Groups
2nd semester 2020

- Data Scope;
- Interfaces;
- Security;
- UX / UI;
- Policy, Risk and Compliance (PRC);
- Infrastructure;
- Communication.

Start of implementation

- Architecture;
- Directory;
- Portal;
- Service Desk;
- Phase 2 Operations.

Dec/21

- Sandbox;
- CIBA;
- Reimbursement;
- Dispute Resolution
- EPOC – Forwarding of Credit Proposals;
- Fraud Prevention;
- SOC / MISP.

Dec/22

- Squads OPIN-OFB2;
- Call limits;
- Definitive Structure;
- N2 Tickets (specifications);
- Contracts (subgroup);
- Tax (subgroup);
- Policies, Regulations and Compliance;
- Coordinators;
- Action Plan Phases 2 and 3A - 1st Cycle;
- Specifications:[3]
  - i. Open Data;
  - ii. Customer data;
  - iii. Services.
- Joint Resolution No. 4;
- Data Quality.

1 In addition to the Technical Groups and Squads, there are subgroups created to discuss specific topics. While some subgroups are temporary, others are perennial

2 Agendas held to discuss and define interoperability between Open Finance and Open Insurance environments

3 Division of the Technical Group Specifications (formerly Interfaces) into three fronts

Source: Open Finance Brasil Secretary

Composition of Open Finance

Participatory model - Mandatory participation

The institutions that must comply with Open Finance regulations encompass three cases:



Account Servicing Payment Service Provider (Data sharing) and Third-Party Provider

S1 and S2 institutions, except institutions that are members of prudential conglomerates that do not provide the services related to customers' transactional data.



Account Servicing Payment Service Provider and Payment Initiatior Service Provider

Institutions that hold demand or savings deposits or prepaid payment accounts; and Payment Initiatior Service Providers.



Institutions that have signed a correspondent agreement in the country

Regulated institutions that have a signed contract with a correspondent agreement in the country to receive and forward, by electronic means, proposals for credit operations.

Participatory model - Voluntary participation

Other financial and payment institutions that are authorized to operate by Banco Central do Brasil may, voluntarily, become part of the Open Banking ecosystem for data sharing.

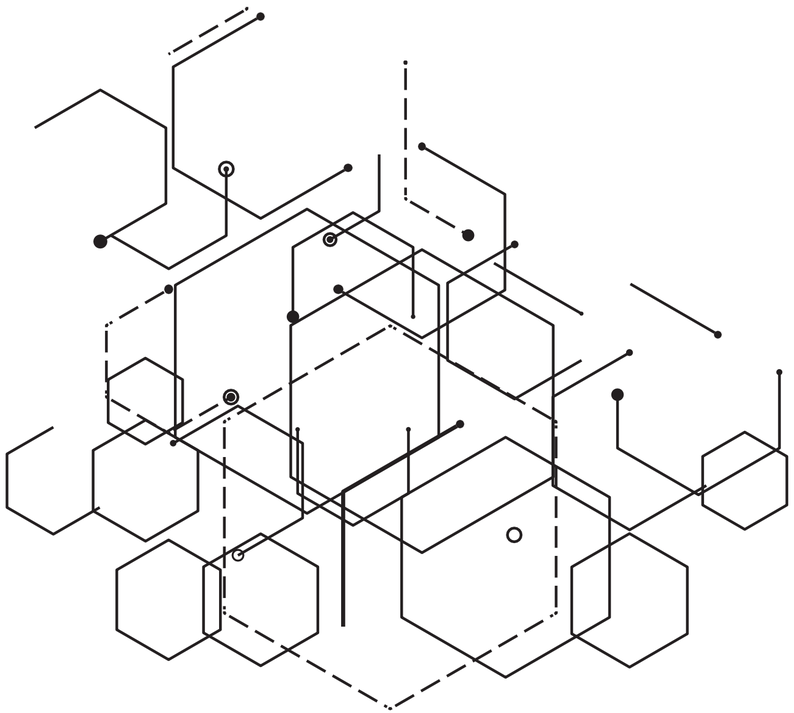


The condition is that they provide a dedicated interface as Account Servicing Payment Service Provider (Data sharing) and register their participation in the participant repository proposed by the governance structure of the Open Finance implementation process.

The ecosystem is composed

of more than 800 institutions from more than 150 conglomerates, divided into 11 associations

Open Finance Ecosystem



Over 600 people participating in the Open Finance Initial Framework Technical Groups that build and maintain the OFB ecosystem

Over 800 institutions and cooperatives are registered in the participants Directory

Over 150 prudential or financial conglomerates:

In Phase 2:
S1 – 6 mandatory conglomerates;
S2 – 6 mandatory conglomerates;
S3 – 4 mandatory conglomerates;
S4 – 5 mandatory conglomerates;
S5 – 4 mandatory conglomerates;
Other 1 mandatory conglomerate

In Phase 3, in addition to the previous mandatory conglomerates:
S3 – 23 mandatory conglomerates;
S4 – 57 mandatory conglomerates;
S5 – 47 mandatory conglomerates;
Other 10 mandatory conglomerates.

11
Associations

Access the list of participating institutions here.

Source: Open Finance Brasil Secretary



TECHNOLOGICAL COMPONENTS AND SECURITY

Chapter 3

Open Finance ecosystem architecture
consists of many technological components, of which the Participants Directory is the core one

Platforms and tools also have a testing and approval environment (sandbox)

Main technological components of Open Finance Brasil

Participants Directory

Environment in which an institution authorized to operate by the Banco Central do Brasil formalizes its participation in the ecosystem, performing its integration to initiate data sharing, payment transaction and/or credit proposal forwarding with the other participating institutions, by means of APIs

Open Finance Brasil Portal

It consists of three areas:

1. Citizen's area, containing information for the general public about what Open Finance is, participating institutions, news, events, among others;
2. Participant's area, focused on the rules for participation and phases of OFB;
3. Developer's area, containing all the guidelines for implementation of Open Finance by the institutions.

Service Desk

Environment in which the Open Finance ecosystem in the country centrally requests and maintains technical support requests related to the Participant Directory, its APIs, and the data and services shared among the participants, besides enabling the request of various accesses to other tools

Dispute Resolution Platform

Environment in which the institutions of the Open Finance ecosystem in the country open, respond to, and manage current and closed disputes

MISP Platform

Threat intelligence platform that integrates all institutions participating in Open Finance to share information regarding security incidents

Compliance Test Suites

Tool responsible for validating if the participants' implementation follows the Open Finance rules. It is divided into:

- Functional compliance validation;
- Security compliance validation.

Mock TPP Mock Bank

Certificate Authorities

Issue the security certificates used by the participants

Collection and Metrics Platform (CMP)

The purpose of CMP is to account for the interactions between the participating institutions, i.e. calls that institutions make to each other. In this way, it becomes possible to collect information with the goal of creating metrics and indicators, in order to have visibility into the entire OFB ecosystem

Financial institutions are authorized by BC

Source: Open Finance Brasil

Open Finance Brasil

uses international security protocols adopted by similar ecosystems in other places, such as the UK

Open Finance security elements (non-exhaustive)

Consent:

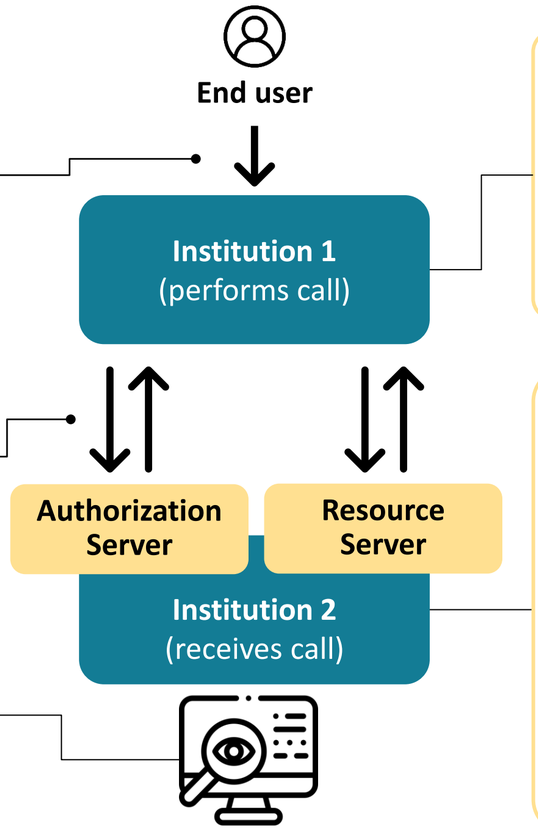
- To initiate data sharing between institutions, it is necessary for the user to choose which data will be accessed and for how long they will be shared, giving their consent in a secure environment;
- In the context of payments, it is necessary that the user approves the execution of the payment or of a payment scheduling, having full visibility and control of the transaction that is being performed.

FAPI BR Protocol (Financial-grade API Brazil):

- All calls made on Open Finance Brasil follow the FAPI Brazil security profile and international web standards (RFCs);
- FAPI protocol is used as a basis in several ecosystems, such as Open Banking in the United Kingdom, Australia and India.

Security Monitoring:

- The Chief Information Security Office (CISO) leads the continuous monitoring of the Security of the ecosystem. Among its attributions are: performing periodic intrusion tests on the technological components of the ecosystem, integrated incident communication via MISP, among others.



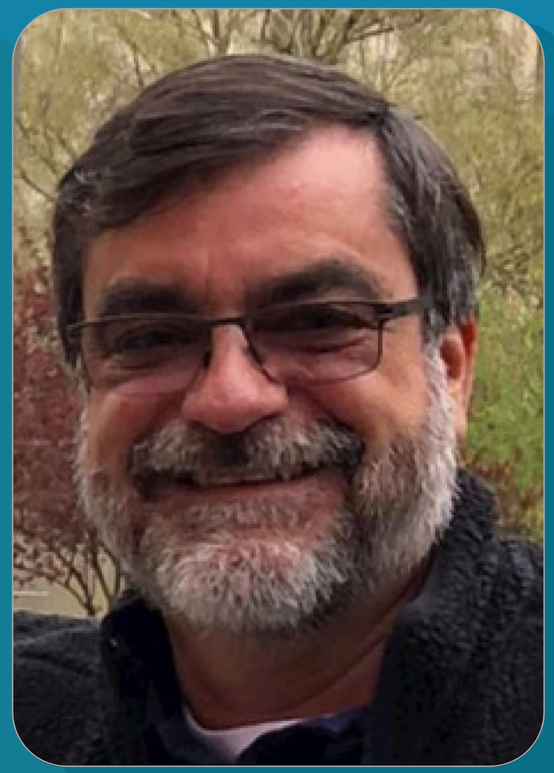
ICP-Brasil Security Certificates:

- The calls made between institutions use ICP-Brasil SSL certificates to ensure encryption and validation of each institution's identity before data transmission takes place;
- Payment transaction messages are signed, to increase fraud protection and avoid denial of authorship by institutions.

Functional compliance and OpenID Foundation (OIDF):

- All institutions (ASPSP[1] (data sharing), TPP[2], ASPSP[1] and PISP[3]) need to obtain security certification from OIDF in order to operate in the Open Finance Brasil ecosystem;
- TPP and ASPSP must also obtain functional compliance certification for all APIs to ensure interoperability between participants;
- In addition, the ecosystem has a Production Validation Tool that continuously checks each institution's compliance with the certifications obtained, ensuring that the institutions' implementation remains adherent to security protocols.

1 Account Servicing Payment Service Provider 2 Third-Party Providers 3 Account Servicing Payment Service Provider
Source: Technology and Operations Board, Open Finance Brasil Secretariat



CARLOS RUST

Chief Information Security Officer Open Finance Brasil

Message from Chief Information Security Officer (CISO) of Open Finance Brasil

We continue in the effort to conduct Open Finance Brasil's cybersecurity actions together with highly trained and competent professionals. The challenge is constant.

The exchange of experiences accumulated by financial institutions in these several years of digital transformation in our country contributes a lot to our security operation.

The results have been very satisfactory and our goal is to maintain the security of Open Finance Brasil so that users can enjoy the benefits with peace of mind.

There can be no digital transformation without security, and Open Finance is one of the great examples of digital transformation of our time.

I would like to reiterate my gratitude for the invaluable contribution of the professionals who work directly in the Security Office, the members of the Technical Groups, the Service Provider Companies, and all those who have contributed to the security of Open Finance Brasil.



MAIN INDICATORS

Chapter 4

Open Finance Brasil Big numbers
from March to December 2022

11.6 BILLION
of API calls[1] from March to December 2022

1.7 BILLION
of API calls[1] in the last 4 weeks of the year

18.7 MILLION
of active consents

Total of 16 PISP[2]
certified and enabled to operate (onboarded)[2]

Over 800
active institutions in the participants directory

Over 150
Participating Conglomerates (13 mandatory)

Over 600
people, from many institutions, contributing daily to Open Finance

openfinance ⇔ OpenBanking

Migration from OpenBanking to Open Finance already addressed by the Initial Structure

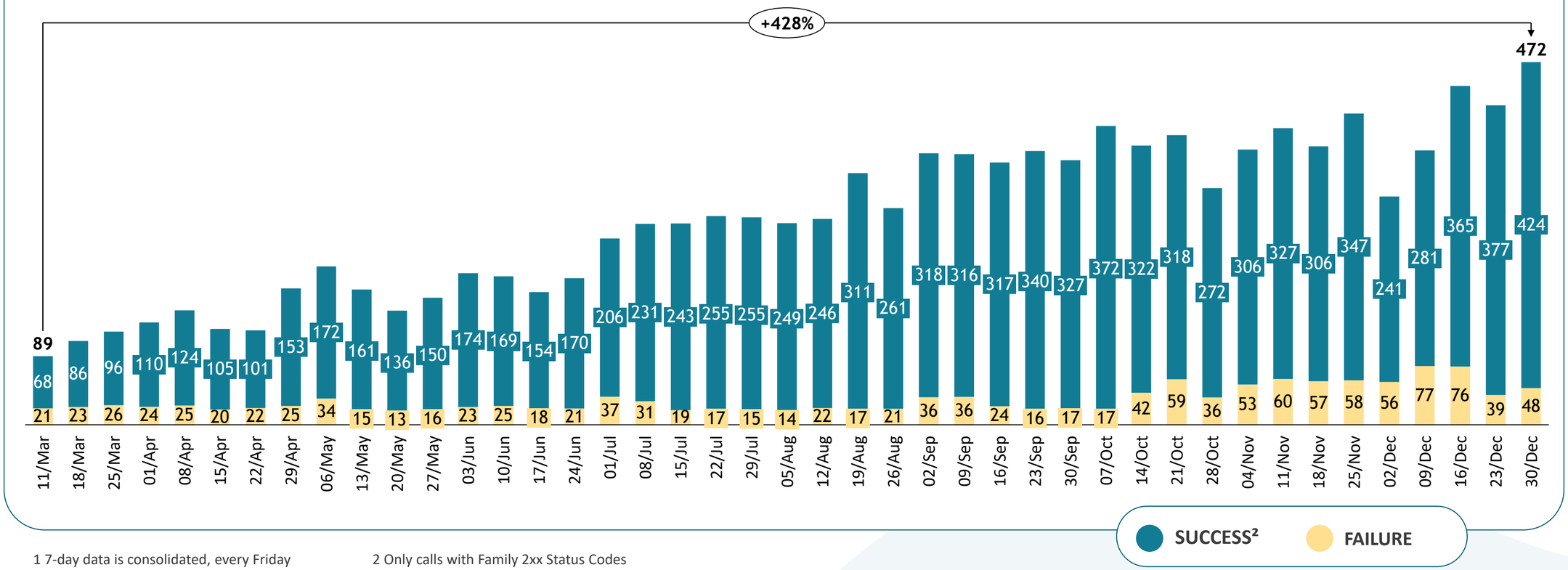
1 Considering 23 participants reporting information
2 Payment Initiation Service Provider (PISP) Institution
Source: Open Finance Brasil

We reached a total of 11.6 billion

API calls from March to December 2022, a 428% growth of calls per week since the start of accounting

The number of calls made is an important metric, demonstrating the evolution of activity by ecosystem participants and the adoption of Open Finance by users

API CALLS PER WEEK[1], IN MILLIONS



Total calls for the period:
11.6 billion

Total successful calls² in the period:
10.3 billion

1 7-day data is consolidated, every Friday

2 Only calls with Family 2xx Status Codes

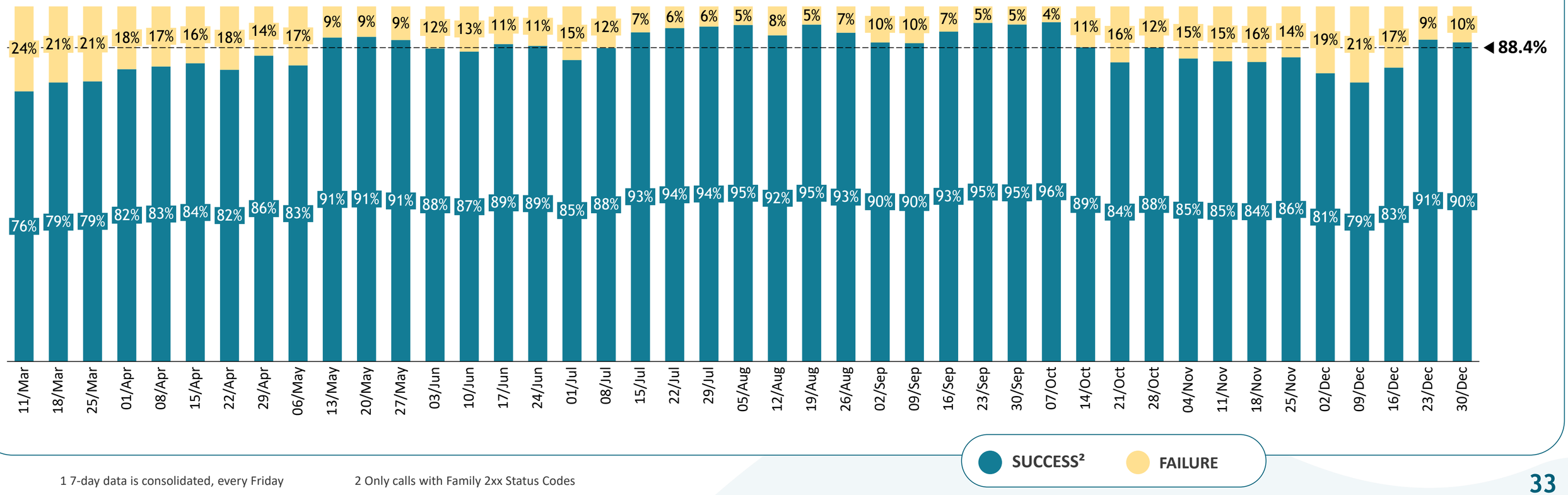
Source: Open Finance Brasil Dashboard

API call success rate

shows oscillation throughout 2022, reaching a total of more than 88% in the period

The success rate is a metric that indicates the maturity of Open Finance API implementations and can vary according to the release of new versions of existing APIs, release of new APIs, and new participants joining

OVERALL SUCCESS RATE OF API CALLS PER WEEK[1] % OF TOTAL CALLS



1 7-day data is consolidated, every Friday

2 Only calls with Family 2xx Status Codes

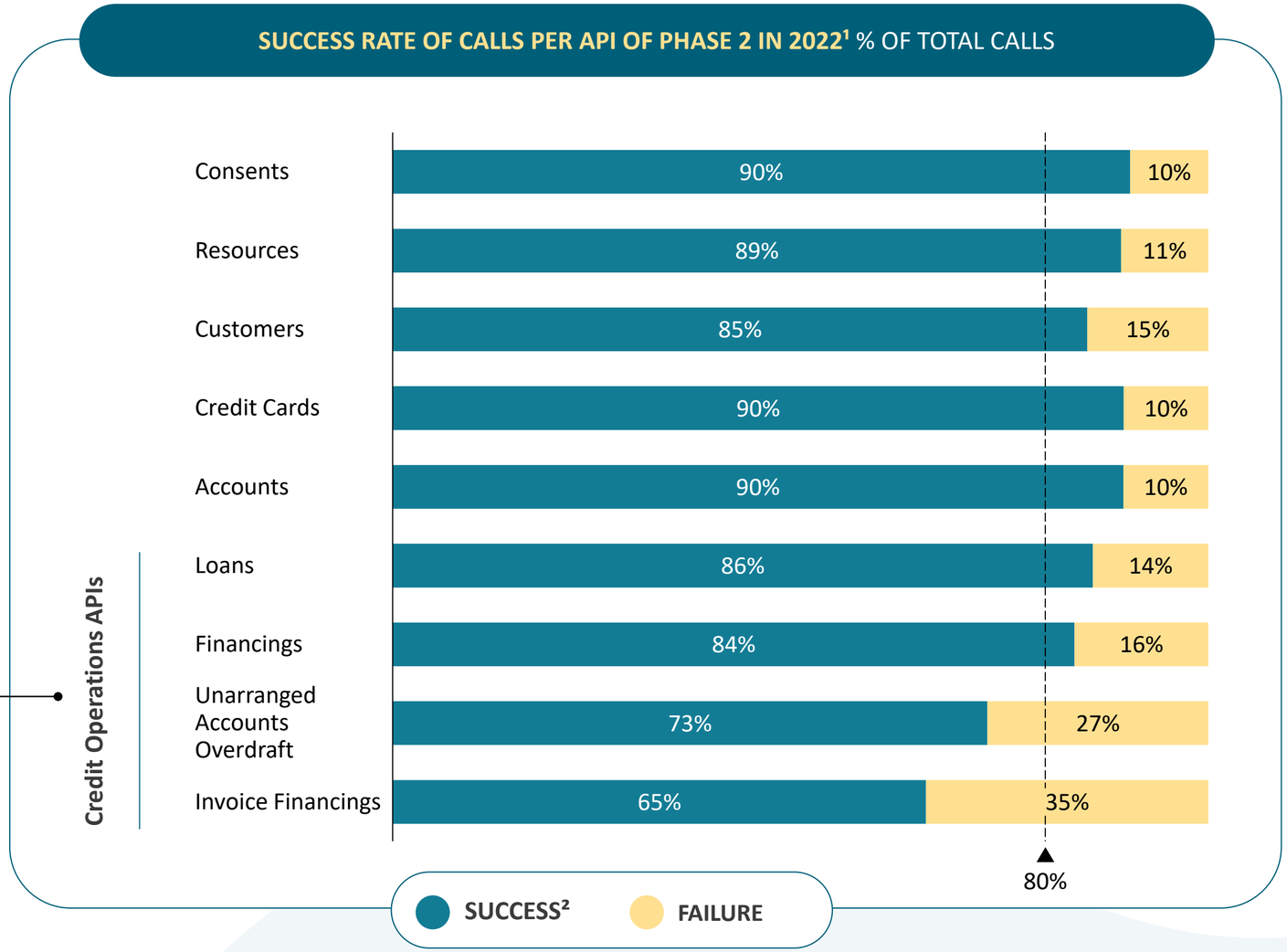
Source: Open Finance Brasil Dashboard

Success rate in 2022

remained above 80% in 7 of the 9 APIs in Phase 2 of Open Finance Brasil

APIs from **Open Finance Brasil**

- In Open Finance, data is transmitted through APIs, which are standardized protocols for communication between systems
- In Phase 2,There are 9 APIs – Registration and transactional data sharing:
  - Consents;
  - Resources;
  - Customers (Individual and corporations);
  - Credit cards;
  - Accounts;
  - 4 Credit Operations APIs



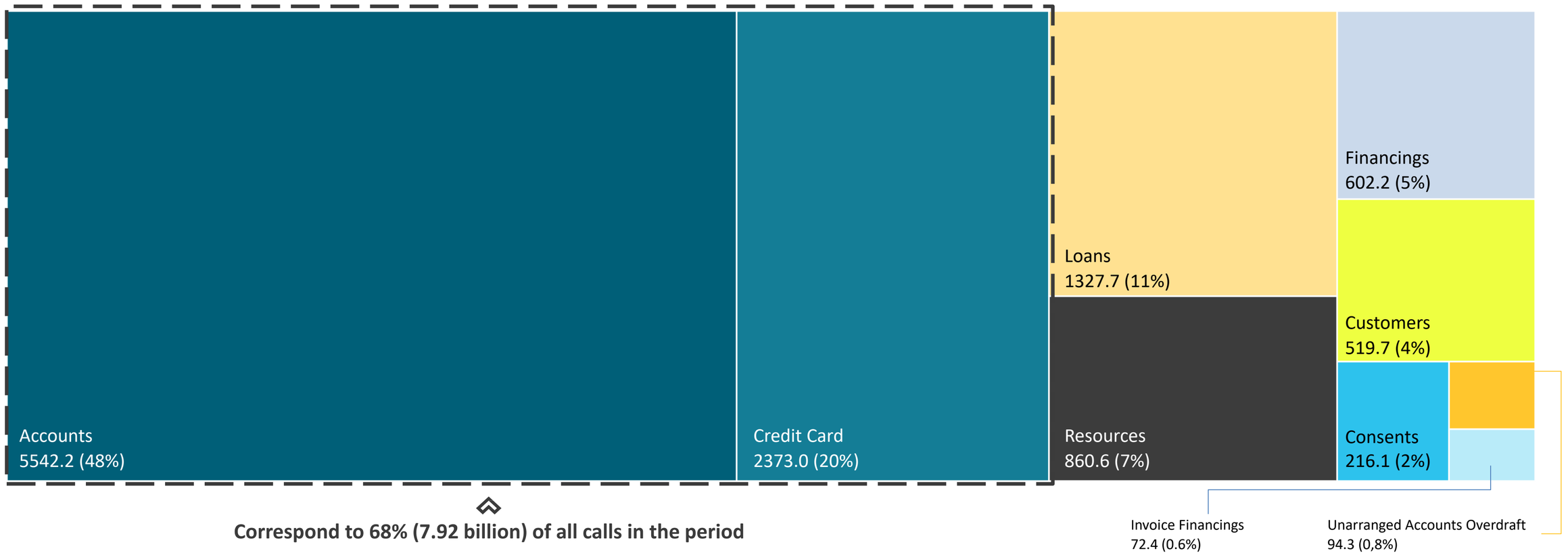
1 Data from March 05 to December 30
2 Only calls with Family 2xx StatusCodes
Source: Open Finance Brasil Dashboard

There were 7.92 billion calls on the APIs

of Accounts and Credit Cards, representing 68% of the total

Volume of **Phase 2 calls per API, in millions**

In percent, 100% = 11.61 billion calls on APIs
Period: From March 05 to December 30, 2022



Source: Open Finance Brasil Dashboard

We reached 18.7 million
active consents for data sharing across the ecosystem

- Following the guidelines defined by the LGPD, for the sharing of registration and transactional data (Phase 2 of OFB) to occur, the customer must complete the consent experience through API consent;
- Sum of the reporting from 23 institutions participating in OFB Phase 2 reaches 18.7 million active consents, up 95% compared to 1st semester of 2022;
- There is a growth trend in total consents due to planned improvements in the Phase 2 APIs, the spread of Open Finance usage among the population, and increases in the User Experience.



2022 DATA

Source: Open Finance Brasil Dashboard

In Phase 3 of Open Finance,

we already have 16 certified and enabled payment initiation service providers in the ecosystem

Payment Initiator Service Provider (PISP)

- In Phase 3 of Open Finance - sharing of payment transaction initiation services - the role of PISP was created, which is an innovation for the Brazilian market;
- PISPs are institutions regulated by Banco Central do Brasil, capable of initiating payments and transfers in the very environment in which the user makes a purchase (app or website)
- At the current stage of OFB, only payment via Pix is enabled for use. Subsequently, other forms of payment already foreseen in the regulatory schedule will be incorporated;
- Payment flow via PISP aims to reduce the number of steps during a transaction, facilitating the consumer's experience with the necessary security

2022 DATA

16 PISPs enabled and in operation

btg pactual · mercado pago · SICOOB · Itaú · Banco do Brasil · QUANTO · gerencianet · inter · Mercantil do Brasil · hub fintech · PARATI Crédito, Financiamento e Investimento · bradesco · xp · U4C Instituição de pagamento · Sicredi · celcoin

Source: Open Finance Brasil

We have 886 registered institutions

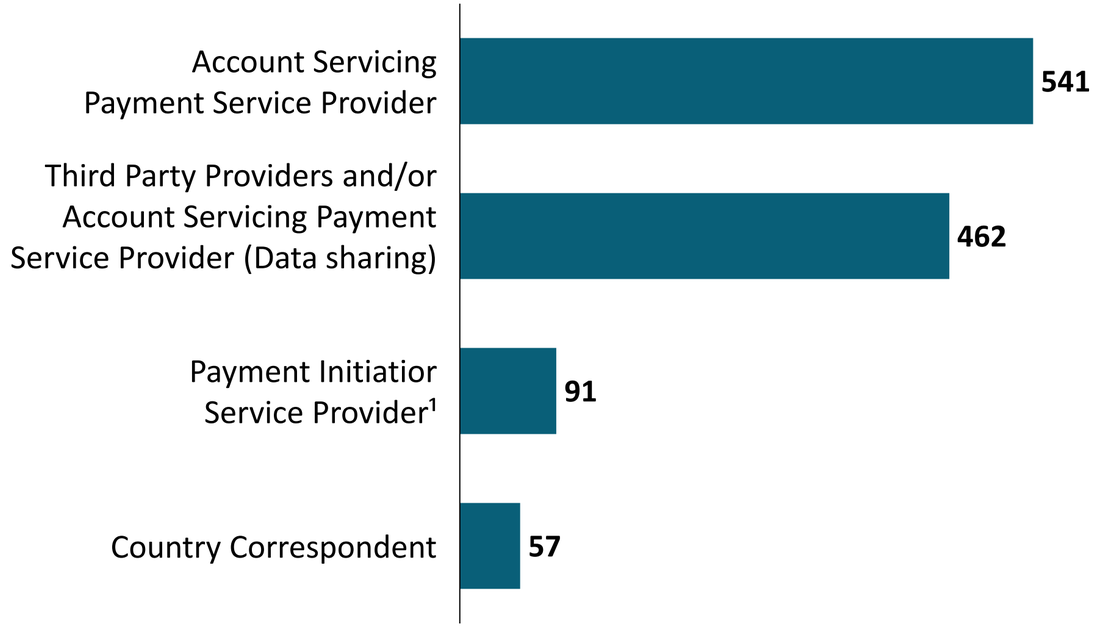
in the participant directory in several roles

Central Directory
Open Finance Brasil

- The Focal Point of OFB Architecture, the Central Directory, includes the records of all participating institutions and suppliers;
- Registration of the institutions is done according to their roles in each regulatory phase of the OFB:
  1. Phase 2 Roles: Account Servicing Payment Service Providers (Data sharing) and Third-Party Providers;
  2. Phase 3 Roles: Account Servicing Payment Service Providers and Payment Initiation Service Providers;
  3. The same institution can have one or more active roles simultaneously.

- The Directory works as a central repository which allows identification and communication between institutions;
- In addition, the Directory enables the registration of users linked to the institutions, who are responsible for the administration and operation of this participant in the OFB.

Institutions registered in the
Central Directory per Role



886 total number of institutions registered in the Participants Central Directory

1 Only 16 institutions are qualified to operate as payment initiation service providers in a productive environment

Source: Directory of Participants, Open Finance Brasil

In our Service Desk, peaks in requests

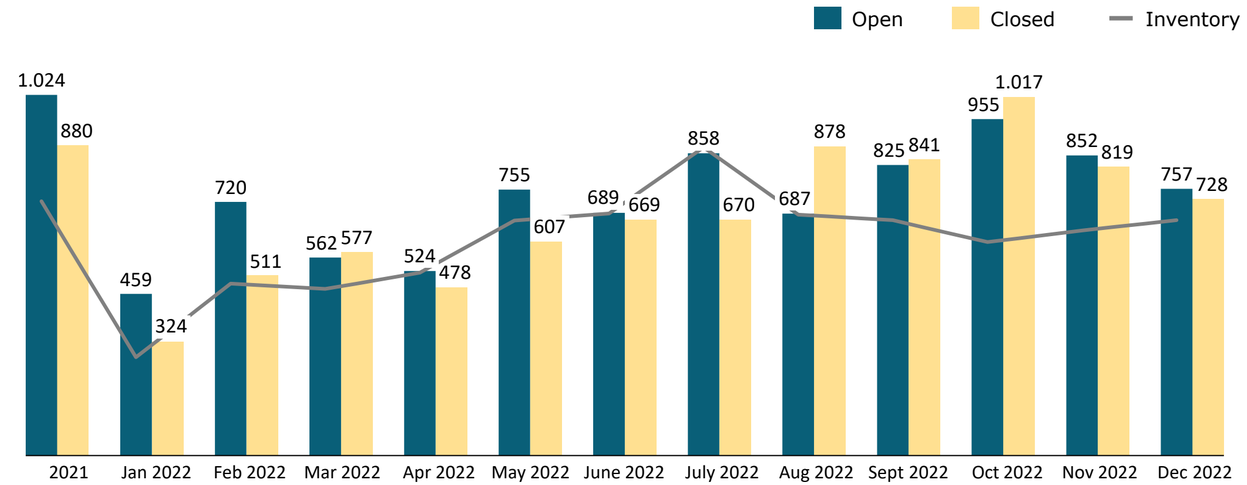
have occurred during periods of mobilization of the ecosystem for improvement surveys

- The Service Desk is a tool used by Open Finance participants to communicate with each other and with the Initial Structure;
- Users can open requests for varying purposes, which are registered in the existing categories in the Tool:

Information Request	Improvement suggestions
Initiators	Scheduled outage
Access request	Certification request
PISP onboarding	FAQ

Evolution of the number of open/closed calls at the Service Desk

of requests, monthly



We had high call volumes at different times of the year:

- Initially in February, due to opening requests for resolution of errors between institutions made by the Initial Structure;
- In May, due to requests with suggestions for improvements in the second version of the Phase 2 APIs;
- In July and September, due to the increase in the number of bilateral requests and access requests to the platforms (directory, Service Desk and Open Finance dashboard);
- In October, due to requests for functional certification according to the Phase 2 v2 APIs;
- In November, due to the release of version 2.0.0 of the Payment Initiation API.

Cumulative Service Desk availability was greater than 99.5% in the last 6 months

Source: Service Desk, Open Finance Brasil

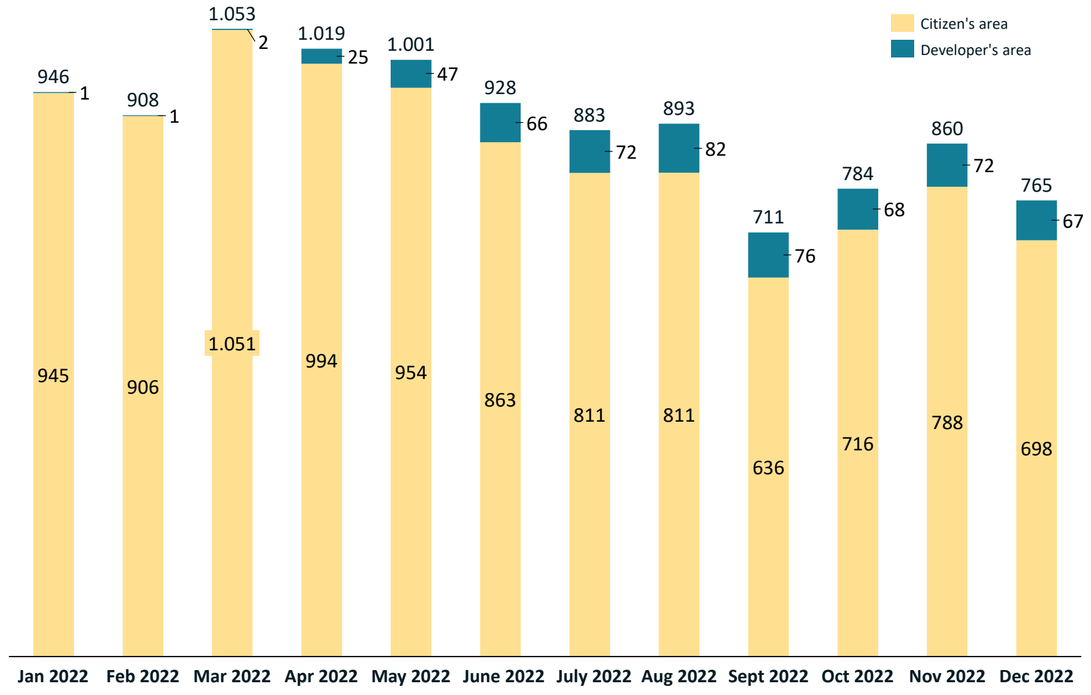
A high number of views of the Portal

shows interest in Open Finance, with a peak in the Citizen's Area in March 2022 and in the Developer's Area in August 2022

Portal
Open Finance Brasil

- OFB Portal is the main communication channel of the Initial Structure for interested parties, consolidating general, technical and regulatory information for consultation;
- In this way, information on the Portal is divided according to the target audience: Citizen's Area, Participant's Area and Developer's Area;
- From January to June 2022, there were 10.2 million views of the OFB Portal;
- A greater demand for the Portal is for identification of institutions participating in the OFB
  - The "Who participates" page was the most visited of the Portal[1], with 2.9 million views (29%)

Views on the Open Finance Brasil Portal
Cumulative number of views, in thousands



1 To normalize the results, views of the following aggregator/organization pages were not counted: "Home – Open Finance", "Open Finance Brasil" and the Developer's Area

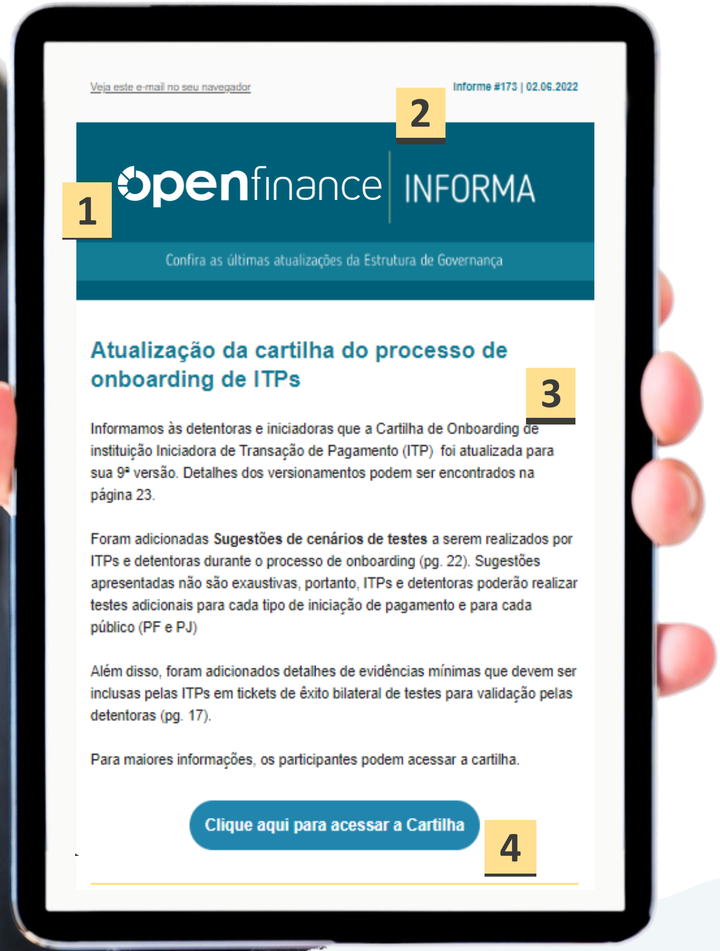
Source: Google Analytics, Open Finance Brasil Secretary

The Initial Structure sends **periodically communications (Reports) to the institutions participating in the Open Finance Brasil**

Open Finance Brazil reports

- Through the Developer's Area on the OFB Portal, it is also possible to view the Reports sent to the ecosystem
- Reports communicate the latest updates as defined by the Open Finance Initial Structure
- Communications may include, among other topics, security issues; opening and closing processes; and changes or standardization in the understanding of documentation
- In the year 2022, 187 reports were sent
- 35% of Open Finance Brasil subscribers are frequently engaged[1]

1	Logo and standard header identify the Reports
2	All reports are dated and identified by a sequential number
3	Relevant themes are identified and detailed
4	Buttons lead to areas of the Open Finance Portal containing more detailed information



Access here the repository of Reports

1 Percentage of opens and clicks on 01/09/2023

Source: Open Finance Brasil



ELCIO CALEFI

CIO Open Finance Brasil

Message from the Chief Information Officer (CIO) of Open Finance Brasil

The Open Finance agenda in Brazil was consolidated in 2022. We have witnessed consistent double-digit growth, quarter over quarter, in the adoption of Open Finance among individuals and businesses. This trend reflects the increasing number of people and organizations leveraging Open Finance to share their information and take advantage of the diverse value propositions offered by participants within the ecosystem.

Through Open Finance, customers are experiencing enhanced credit assessment capabilities and improved financial management, benefiting from the solutions provided across various verticals. Our contribution to this ecosystem includes facilitating Payments Initiation, seamlessly connecting the robust ecosystems of Pix and Open Finance. This integration fosters the evolution of the overall financial experience and contributes to the advancement of the national financial system

I need to emphasize the role of the technology adopted here in Brazil, which is world-class, in its role of being a strategic and secure lever for the evolution of the ecosystem, allowing the delivery of a robust roadmap in 2022 and in constant evolution for 2023. The challenge of increasing the observability and data-driven management of a distributed system of this magnitude becomes one of the great challenges for 2023, along with expanding the agenda for new products and services.

The evolution passes through a look toward 2022, identifying key lessons learned with the goal of enhancing these levers to enable healthy and reliable ecosystem growth. Now we are the world benchmark and our responsibility grows so that we can support other regions in the evolution of their financial system and the democratization of information.



DISBURSEMENTS ALREADY MADE IN THE INITIAL STRUCTURE

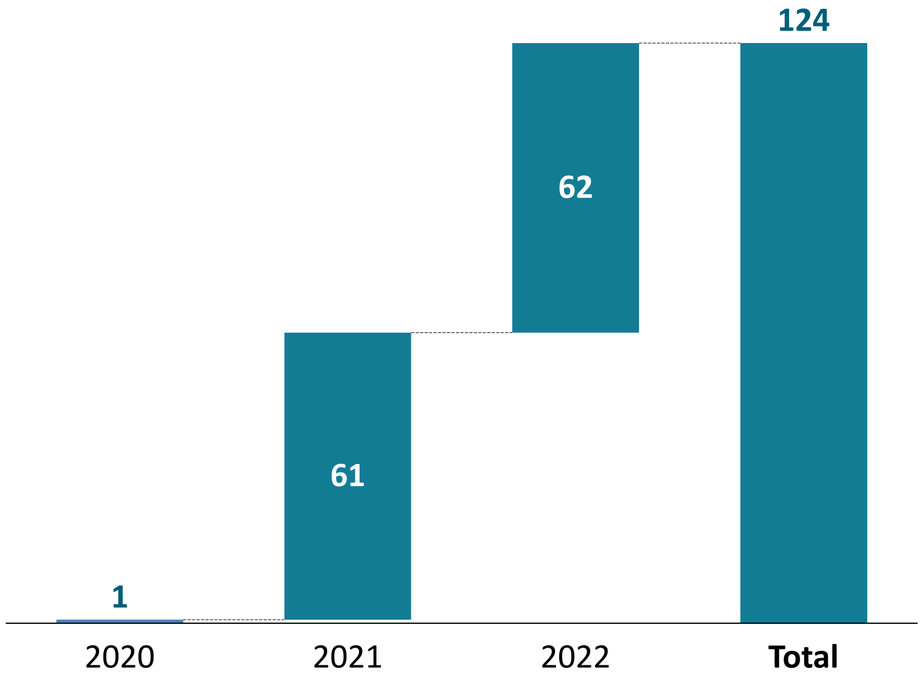
Chapter 5

Disbursements in Open Finance from its start to December 2022

have totaled BRL 124 million, and more than 79% were directed to the development of technological infrastructure and cybersecurity

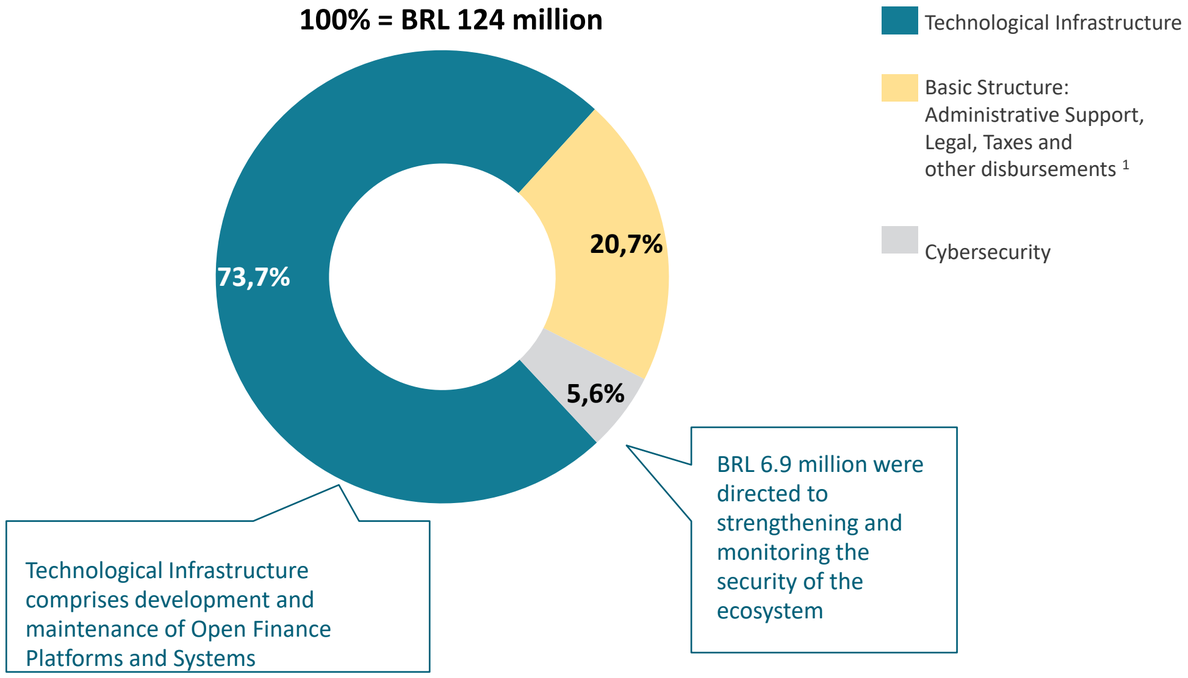
Disbursements made in the Open Finance Brasil Structure

BRL millions per period



Disbursements made in the Open Finance Brasil Structure

%, per classification



1 For example IT licenses and services, digital signature services, graphic publishing, etc.

Source: Open Finance Brasil Secretary

Message from the Independent Board Member of Open Finance Brasil



RUBENS VIDIGAL NETO
Independent Board Member Open Finance Brasil

In 2022, Open Finance took shape and became a reality. By the end of 2022, there were over 18 million active consents, and there were weeks in December with another 400 million calls. In view of these and other figures that can be found in this Annual Report, as well as the growth verified at the beginning of 2023, it can be said that Brazil's Open Finance is already the largest in the world.

Open Finance is a collective accomplishment. There are hundreds of people, with different profiles, backgrounds and education, belonging to the most varied sectors, many of them in competition with each other, who have contributed decisively to building and maintaining Open Finance. BACEN's performance in all areas of this project, including as its creator and great propeller, always deserves to be highlighted.

There is, however, a lot of work to be done. While there have been important developments during 2022, there remains a need to improve a number of technical aspects of what is already in place. Adequate technical development of the phases scheduled for launch in 2023 and 2024 must also be ensured. The discussions for the construction of the definitive governance structure must be resumed, and it will be of utmost importance to guarantee a plural and balanced participation of the different market segments, leading to decision making aligned to the objectives of efficiency, competition, and incentive to innovation and the promotion of financial citizenship.

By hiring Elcio Calefi as CIO, 2022 saw the start of a team of outsourced service providers with technical expertise and exclusive dedication to Open Finance. This team has assisted the Initial Structure, especially the Working Groups (WG) in their technical functions, and has been instrumental in raising the quality, speed, and consistency of Open Finance's deliverables. The expansion of this team should continue throughout 2023.

It is a great satisfaction to participate and follow the engagement of all those involved in the implementation and consolidation of this project that can transform the financial market, and that has become an international benchmark.


openfinance
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VISIT
https://openfinancebrasil.org.br

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- Élcio Calefi

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- Deloitte
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- Rennó Penteado
- Rustcon
- Sensedia
- SysAid / Data Group
- Try
- Wyser

Once again, we would like to give special thanks to the more than 600 coordinators, vice coordinators and other technical members of all the Technical Groups, subgroups and squads that make up the technical level of Open Finance Brasil.

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- Chicago Advisory Partners

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- GT Comunicação