



Towards an Open Finance Ecosystem

September 2024

Important

The content of this document is not intended to convey a simplified version of the regulations applicable to supervised institutions. Those interested in understanding the current regulations applicable to their activities should refer to the information published in the regulatory section of the BCU website (www.bcu.gub.uy).

This is a translated version of the original document, that can be found at <https://www.bcu.gub.uy/NOVA-BCU/Paginas/detalle.aspx?itm=40>

Table of Content

1. INTRODUCTION AND BACKGROUND	4
2. OPEN FINANCE AS AN INSTRUMENT FOR INTRODUCING IMPROVEMENTS IN THE FINANCIAL AND PAYMENT SYSTEM	6
3. OBJECTIVE AND SCOPE OF THIS DOCUMENT	6
4. OPEN FINANCE ECOSYSTEM	7
4.1 FOUNDATIONS FOR OPEN FINANCE.....	7
4.2 PARTICIPANTS.....	8
4.3 TYPES OF PARTICIPATION	9
4.4 DATA AND SERVICES TO BE PROVIDED.....	10
4.5 ROLE OF THE CENTRAL BANK OF URUGUAY (BCU)	11
4.6 CONSENT.....	12
4.7 GOVERNANCE.....	14
4.8 MONETIZATION	15
4.9 RISKS AND ASSOCIATED CONTROLS.....	16
4.10 REGULATORY AND LEGAL ASPECTS.....	18
4.11 TECHNICAL ASPECTS	19
5. IMPLEMENTATION APPROACH AND NEXT STEPS	20
5.1 MILESTONES FOR 2024.....	20
5.2 OPEN FINANCE ECOSYSTEM DEVELOPMENT CYCLE	20
5.3 KEY ACTIVITIES BY STAGE	22

1. Introduction and Background

The term Open Finance is associated with initiatives implemented to facilitate access to banking, financial, and payment data through automated access interfaces (generally APIs, “Application Programming Interfaces”) for duly authorized participants, provided that the users’ consent is obtained.

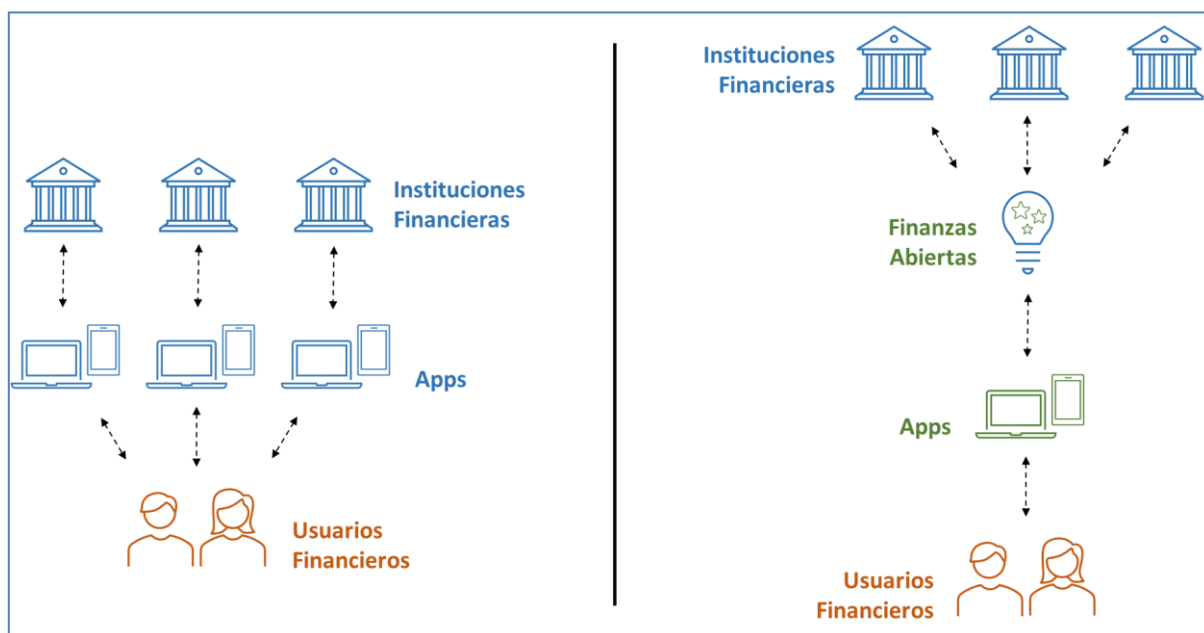


Illustration 1. Simplified functioning of Open Finance.

Regarding the terminology commonly used, there is frequent mention of Open Banking, Open Finance, and Open Data. These concepts, although related, differ from each other: Open Banking implies that the shared data is exclusively banking-related, while in Open Finance, the shared data is of a financial nature and not limited to banking. On the other hand, Open Data extends to data beyond the financial sphere.

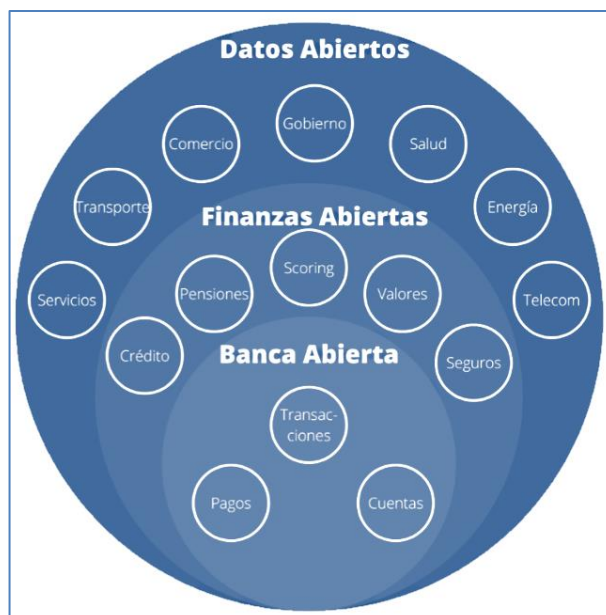


Illustration 1. Open Banking, Open Finance, and Open Data.

Open Banking initiatives (as an initial step toward Open Finance) have emerged worldwide for years, from the UK and the European Union to Southeast Asia and Oceania¹. The momentum in Latin America is also notable, especially in Brazil and with countries like Colombia and Chile having a strong agenda for developing Open Finance in their respective jurisdictions².



Illustration 3: International landscape of Open Finance (or Open Banking)

¹ Awrey, Dan, and Joshua Macey. "The promise & perils of open finance." Yale J. on Reg. 40 (2023): 1.

² See www.openbankingmap.com or www.kontomatik.com/blog/which-countries-have-open-banking.

Locally, the Central Bank of Uruguay (BCU) has addressed the topic from various perspectives, conducting analysis and work sessions with the industry. Recently, an internal working group at the institution conducted a detailed study, the results of which are presented in this document aligned with the strategy set by the BCU's Board of Directors. The presentation of this document contributes to advancing the 2025³ Payment System Roadmap in Uruguay, specifically in the task of promoting the development of a legal framework and the launch of an open finance system.

2. Open Finance as an Instrument for Introducing Improvements in the Financial and Payment System

Open Finance starts from the premise that the users own the data they generate through their transactions and seeks to empower them to derive greater value from this data, establishing secure channels for information exchange under their consent.

The development of a well-regulated ecosystem with clear rules and a level playing field for all participants offers benefits to society in terms of competition, inclusion, innovation, and stability.

Open Finance will enable new personalized financial products tailored to the needs of users, making their transactions more accessible, secure, and efficient, fostering financial inclusion. It is important to note that these benefits extend to the public, businesses, and other legal entities.

From the perspective of existing financial players, Open Finance allows for the availability of new services as well as making existing products more accessible. Additionally, there is the possibility of retaining and reaching new customers, monetizing the invocation of certain access interfaces, and creating opportunities for new business and partnerships.

Moreover, standardized access to user information can benefit both incumbents and new participants by enabling a better understanding of their customers, improving risk assessments, and offering more segmented services.

Consequently, and in line with Articles 3 and 7 of the BCU's Charter⁴, the development of an Open Finance ecosystem comprises a series of services, rules, and processes that provide benefits to the financial and payment systems, which will be pursued following the vision outlined in this document.

3. Objective and Scope of This Document

The objective of this work is to share with the industry and the general public the vision for the design of the Open Finance ecosystem, developed after a comprehensive analysis carried out by the BCU. It is expected that readers reflect on the points discussed in this document and submit their comments, which will be received by the institution⁵ at the email address of the Innovation Office (innova@bcu.gub.uy).

It should be noted that what is presented in this document constitutes a preliminary vision of the ecosystem and its rules, aimed at implementing a reliable, sustainable, and attractive Open Finance design for financial users, aligned with institutional objectives. This should not be interpreted as a regulatory proposal or a final version for the implementation of Open Finance, which will necessarily go through regulatory processes and conversations with the industry.

Furthermore, as evidenced by developments in other jurisdictions, the Open Finance ecosystem and its rules are constantly updated and evolving, requiring constant adjustments and improvements in operational, technological, governance, regulatory, economic, and other aspects.

The rest of the document is structured as follows:

³ www.bcu.gub.uy/Sistema-de-Pagos/Documents/Sistema%20de%20Pagos-hoja-de-ruta-2025.pdf

⁴ www.impo.com.uy/bases/leyes/16696-1995

⁵ These comments will be analysed despite them being considered as non-binding.

First, Section 4 presents the design of the Open Finance ecosystem. In Subsection 4.1, its foundations are specified. Then, in Subsection 4.2, the participants of the ecosystem are detailed, with Subsection 4.3 indicating the type of participation for each one. Subsequently, in Subsection 4.4, the data to be provided, which can be public or personal, as well as the services to be made available, are specified. Subsection 4.5 addresses the role of the BCU, while Subsection 4.6 deals with consent. The governance guidelines and structure are discussed in Subsection 4.7. The aspects related to monetization are presented in Subsection 4.8, while Subsection 4.9 details the main risks of the ecosystem along with their respective controls. Subsection 4.10 covers the regulatory framework and aspects, including the registration and authorization process for ecosystem participants, and Subsection 4.11 outlines the technical aspects of the access interfaces in broad terms.

Finally, Section 5 discusses the approach and next steps for implementing the Open Finance ecosystem. Specifically, Subsection 5.1 establishes the milestones for 2024, while Subsection 5.2 describes the development cycle of the Open Finance ecosystem. Lastly, Subsection 5.3 lists the activities corresponding to each phase of the cycle.

4. Open Finance Ecosystem

An Open Finance ecosystem consists, at a minimum, of participants (including Financial Users), accessed data, granted consents, clear rules of participation, a structure for agreements and governance, and benefits for all stakeholders.

4.1 Foundations for Open Finance

The creation of an Open Finance ecosystem aims to generate benefits for the financial system from various perspectives.

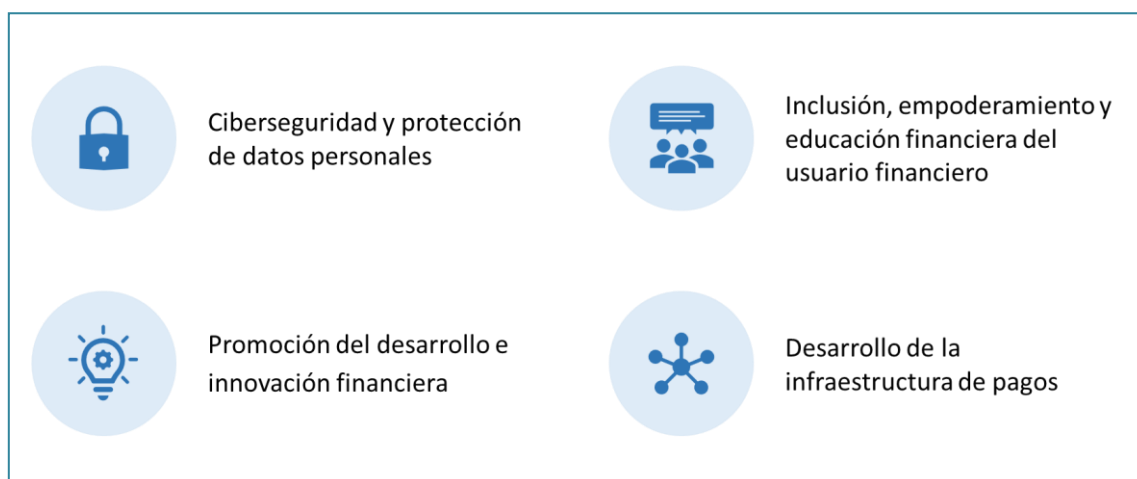


Illustration 4: Benefits of Open Finance

In terms of **cybersecurity and personal data protection**, the implementation of standardized access interfaces represents a qualitative leap in information security and has the potential to strengthen control over access to data by third parties, as well as the consent provided by Financial Users. This would directly contribute to better privacy and personal data protection within the financial system.

Open Finance seeks to establish new mechanisms for **accessing and transmitting data, especially those belonging to Financial Users, who are empowered to provide their consent for simple, automatic, and secure data sharing**. In creating an Open Finance ecosystem, the goal is to generate added value for the financial system through the effective use of data, the creation of new channels and partnerships, and the

development of products and services centred on Financial Users, aiming to increase inclusion, trust, and active participation in the financial system. Additionally, these services can contribute to the financial education of the public.

Another identified benefit is the **promotion of the development of the financial system and the payment system**, as Open Finance is a tool that energizes established participants and new service providers. It can also contribute to cost and time reductions by establishing clear participation rules and ensuring that the use of data within the system remains within the legal framework.

Finally, the design and implementation of an architecture based on high-quality standards represent a direct benefit of Open Finance for **payment infrastructure**. Open Finance schemes, linked to digital payments, are built using tools that provide greater security to Financial Users while promoting an interoperable payment system that can easily interact with other infrastructures. Thus, Open Finance can be developed as a complementary tool to other channels to enhance the system.

4.2 Participants

In general terms, three types of participants can be defined within an Open Finance ecosystem: *Information Access Providers*, *Third-Party Service Providers*, and *Financial Users*.

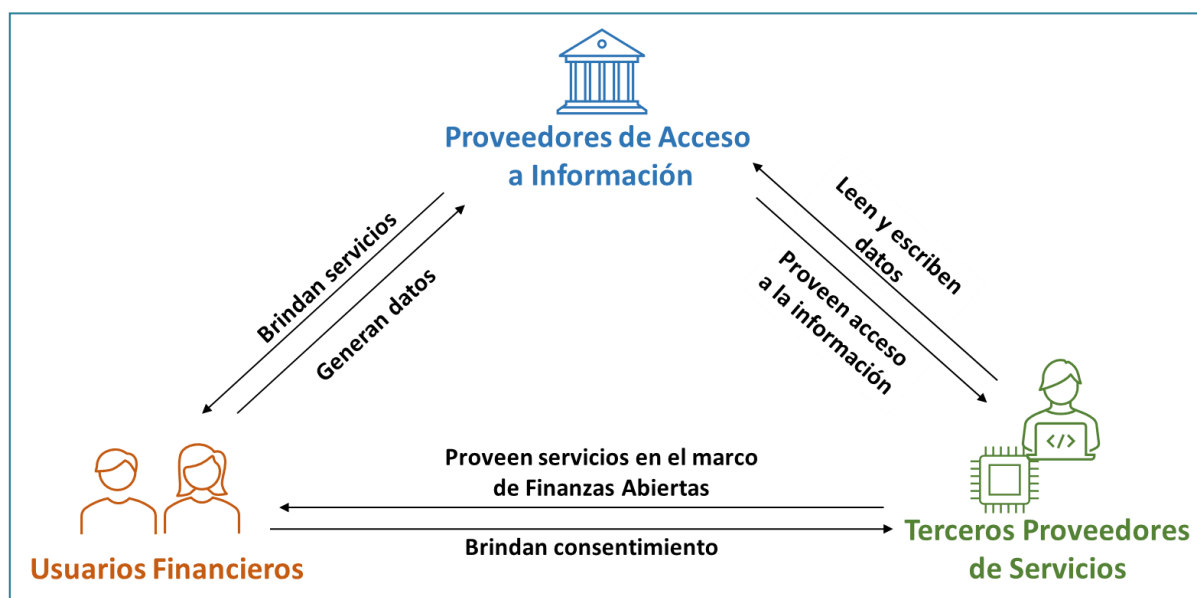


Illustration 5: Participants and model of financial and payment services in the Open Finance ecosystem.

Information Access Providers

Initially, these would be financial intermediation institutions and electronic money issuing institutions (“Instituciones Emisoras de Dinero Electrónico”, IEDE, in Uruguayan regulatory terminology). These entities would be responsible for providing access interfaces for data reading and writing requests to Third-Party Service Providers. They are classified into the following categories, which are not mutually exclusive:

- **Data Provider:** They provide access interfaces for reading requests of their public data, financial data of their clients, and potentially personal data of these clients that may be useful in the financial system.
- **Account and EMI Providers:** They provide access interfaces for reading and writing requests on financial accounts, payment system accounts, and electronic money instruments (EMI) used for payment initiation and embedded finance services.

Third-Party Service Providers

These are the entities that provide new financial or payment services through access to the interfaces provided by the Information Access Providers. Initially, their services can be classified into three categories, which are also not mutually exclusive:

- **Data-Based Services:** These make calls to access interfaces established by the Data Providers to offer services such as account aggregation, financial advice, and expense management. They do not make changes to the data sources, do not perform transactions, and do not acquire products on behalf of Financial Users (i.e. they only make reading calls to access interfaces).
- **Initiation Services:** These make calls to access interfaces established by Account and EMI Providers to initiate payments or acquire products on behalf of clients (writing access).
- **Other Services Associated with Open Finance:** These make calls to access interfaces established by Information Access Providers for other use cases that may gradually be developed as the ecosystem matures, such as account opening.

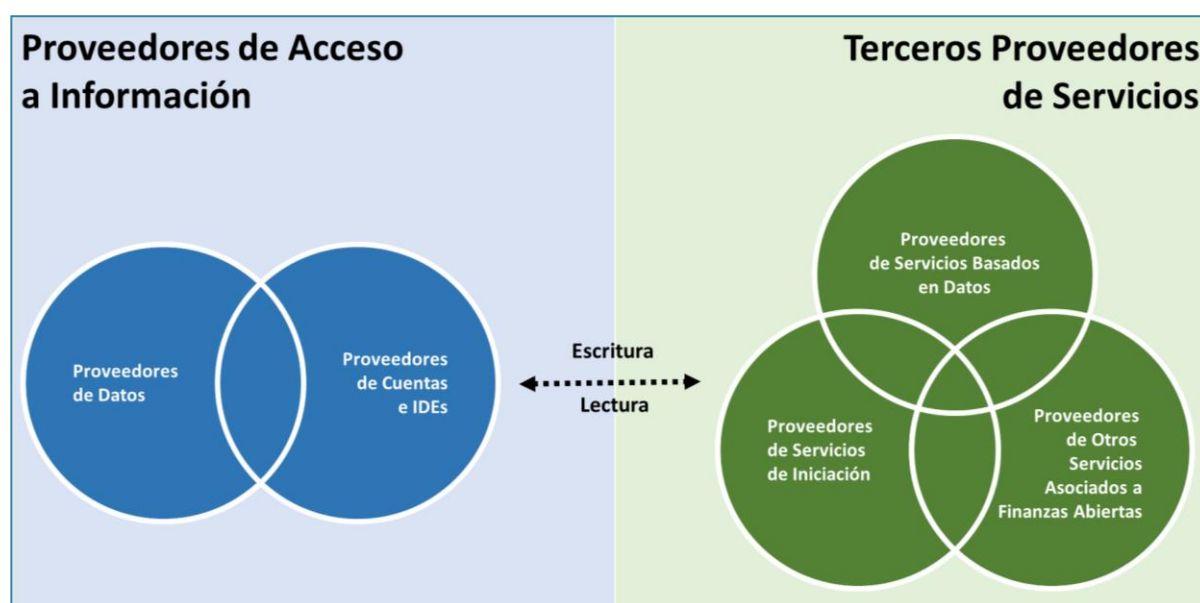


Illustration 6: Information Access Providers and Third-Party Service Providers

Financial Users

Financial Users are the owners of the data and financial and payment accounts. In this context, they give their explicit consent for an Information Access Provider to share certain data they own with a Third-Party Service Provider, and for that Third-Party Service Provider to initiate transactions on their behalf.

4.3 Types of Participation

Based on the roles previously described and international experience, it may be advisable to establish a scheme in which participation by certain Information Access Providers in implementing access interfaces is mandatory. This could be phased in stages, following an incremental logic.

Mandatory participation is expected from banks and electronic money issuing institutions that exceed a business volume threshold to be defined, while participation by other entities could be voluntary and subject to the authority approval.

Regarding Third-Party Service Providers, the previously defined entities may participate in the Open Finance ecosystem, provided they have gone through a registration, authorization, or similar process that will be appropriately established.

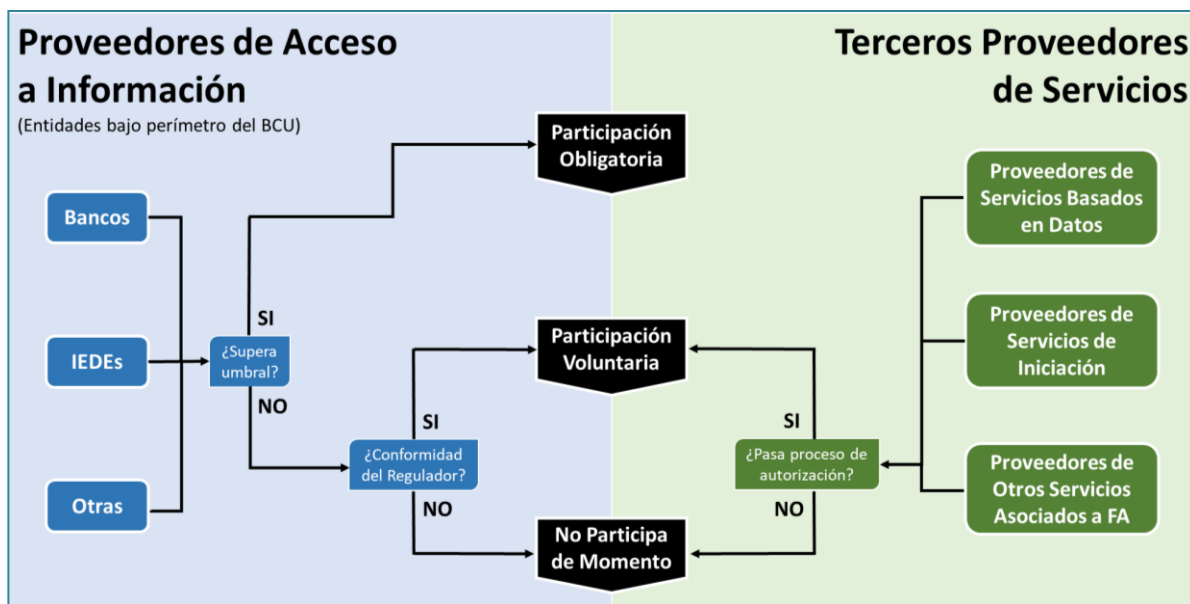


Illustration 7: Proposed participation scheme.

4.4 Data and Services to Be Provided

Information Access Providers will provide their interfaces in two categories: access interfaces for reading data and access interfaces for writing new information or modifying existing information regarding Financial Users.

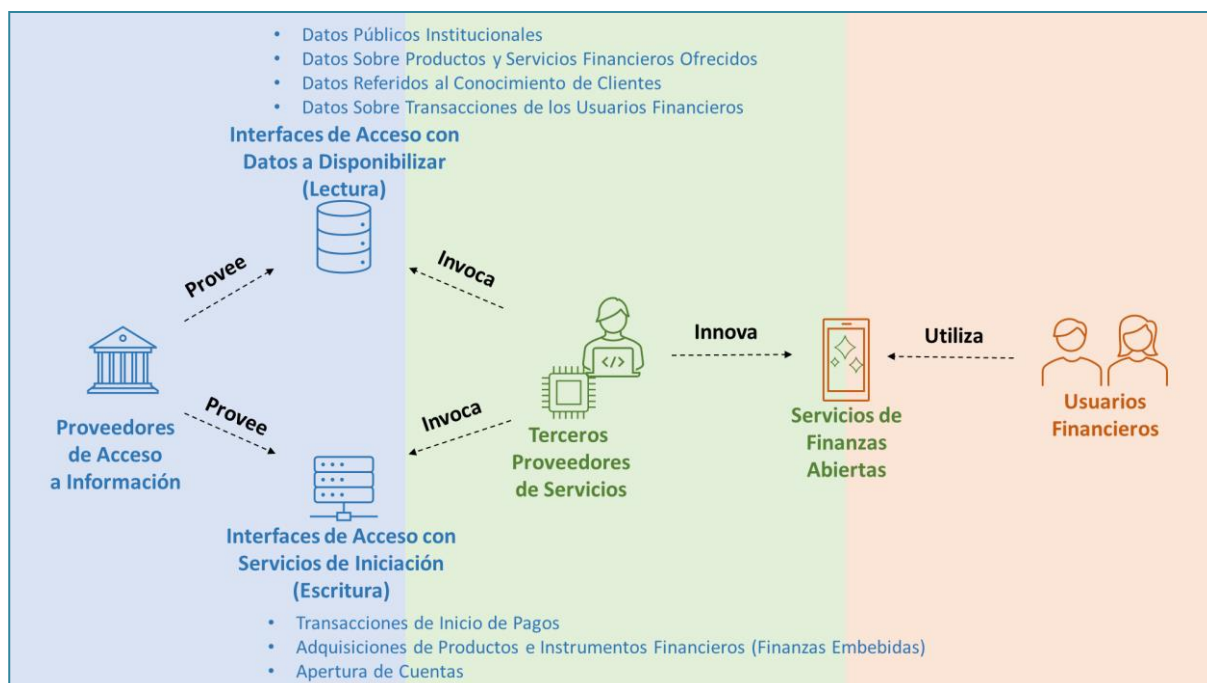


Illustration 8: Example diagram of access interfaces for the data and services to be provided.

Details of these data and services are provided below:

Data to be made available for access

During the implementation of the Open Finance ecosystem, it would be appropriate to gradually promote access to the following data so that Third-Party Service Providers can use them:

Public Data

- **Institutional data**
 - Location.
 - Customer service hours.
 - Other information related to customer service.
- **Data on financial products and services offered**
 - Types of accounts.
 - Cards and electronic money instruments.
 - Fees, reference rates, conditions, and product requirements.
 - Financial instruments offered.
 - Daily and historical exchange rates.

Personal Data

- **Data related to KYC**
 - • Data obtained by the institution within the framework of KYC and due diligence.
- **Data on customer financial transactions**
 - Transactions of accounts or using electronic money instruments.
 - Operations using financial instruments.

Services to be made available for initiation

In addition to services generated through data aggregation and usage, the implementation of Open Finance would allow Third-Party Service Providers to access the initiation of certain financial and payment services within the Information Access Providers, on behalf of the Financial User, always with their due consent.

Examples of these services include:

- **Payment initiation transactions**
 - Payments and transfers.
 - Extension to other types of transactions after obtaining the Financial User's authorization.
- **Acquisition of financial products and instruments (embedded finance)**
 - Loans and credits.
 - Securities and other regulated instruments.
- **Account opening**
 - Through non-face-to-face digital processes.

Both the data and the services to be provided should be deployed according to their characteristics in progressive phases to be determined.

4.5 Role of the Central Bank of Uruguay (BCU)

In the context of the services and participants involved, the BCU may play a fundamental role as a catalyst for the initiative by establishing an appropriate regulatory and operational framework, ensuring a level playing field among participants, and safeguarding Financial Users' protection.

Initially, the following activities that the BCU could conduct are envisioned:

- Formalization of governance mechanisms.
- Establishment of requirements regarding interoperability, neutrality, security, and data protection, among other applicable aspects.
- Definition of regulatory requirements for ecosystem participants.
- Creation and administration of the participant repository.
- Monitoring compliance with regulations and acting in case of non-compliance as established by the legal framework.

It should be noted that there may be aspects outside the BCU's jurisdiction that should be considered by the relevant regulators.

4.6 Consent

As previously emphasized, one of the fundamental pillars for the functioning of an Open Finance ecosystem is the consent given by the Financial User for their personal data, stored by an Information Access Provider, to be made available for Third-Party Service Providers to access in an automated manner.

An active consent approach is deemed necessary, meaning that the Financial User must express their acceptance in an appropriate manner for their data to be accessed and processed by third parties. The consent provided by the Financial User will determine the Third-Party Service Providers that can access the information, the scope of the data they are allowed to access, as well as the purpose for which the data can be used, among other aspects.

As will be discussed later, work will be undertaken to draft a law proposal related to Open Finance. In this regard, it is appropriate to align the consent requirements for Financial Users with those established by Law 18.331 (Personal Data Protection Law). Therefore, Financial Users must provide their consent to participate in Open Finance services freely, informed, expressly, specifically, revocably, and in advance.

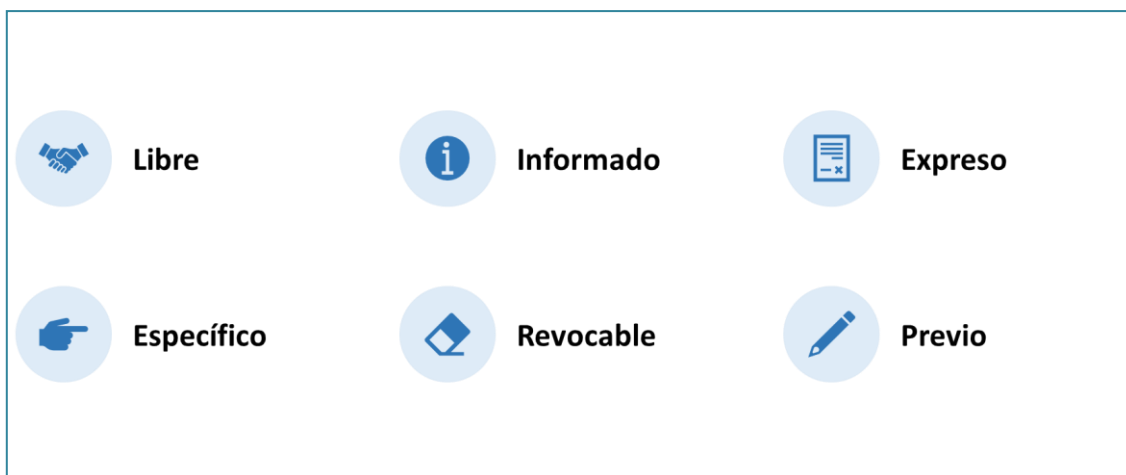


Illustration 9: Consent characteristics defined in Law 18.331

For example, Financial Users would give their consent to Third-Party Service Providers accessing their financial information and to those who establish databases where this information is stored. Those who conduct these activities must adhere to the principles of legality, accuracy, purpose, prior informed consent, data security, confidentiality, and responsibility.

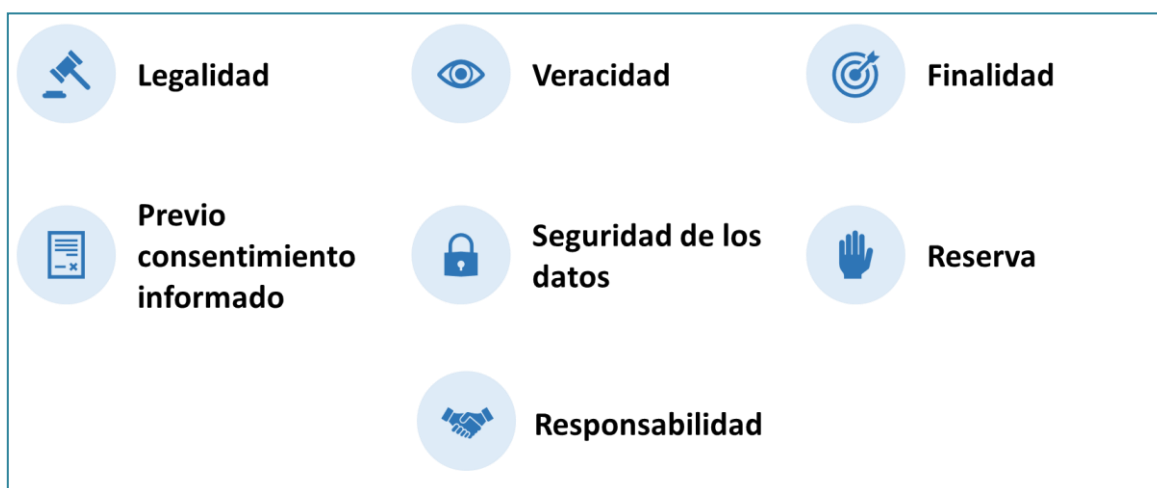


Illustration 10: Principles to be followed by those managing third-party personal data according to Law 18.331

The entire lifecycle of consent, from its granting to its expiration or revocation, must adhere to the best practices in terms of user experience. From an operational perspective, appropriate mechanisms need to be established for Financial Users to provide, manage, and revoke their consent in an informed manner, ensuring that it is integral, authentic, and suited to their needs.

Some aspects that will require definitions include:

- The channel through which consent is provided.
- The duration of consent and conditions for its renewal.
- Mechanisms for correcting and revoking consent.
- The visibility of consent statuses for Financial Users.

Additionally, Financial Users should be able to consult aspects such as:

- The consents they have granted.
- The status of these consents (whether active or not).
- Their expiration.
- The types of data consented to be accessed.
- The Information Access Providers involved.
- The accesses made by the authorized Third-Party Service Providers.

Finally, there are various models of consent from a technological perspective. It could be implemented in a decentralized manner, following redirection mechanisms as it is done in jurisdictions like Brazil and the United Kingdom. The advantage of this model is that it follows internationally established standards and practices. However, there is also the option of a more centralized approach, potentially involving, for example, Trust Service Providers established under Law 18.600, that may show interest in taking on the role of consents centralizer. In this case, the benefit would be that it would use already proven, regulated, and operational digital identification and signature infrastructure at national level. Additionally, managing consents from a centralized platform could improve the user experience.

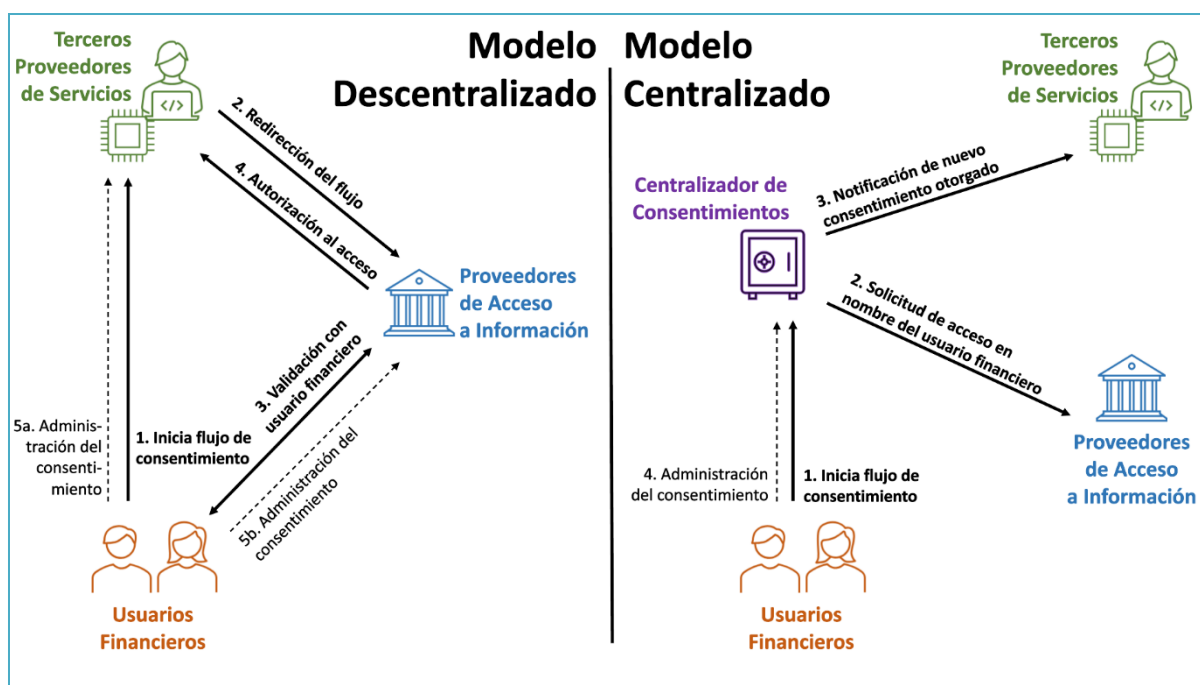


Illustration 11: High-level alternatives for the consent of individuals.

What are other operational aspects of consent that should be defined within the framework of Open Finance?

In your opinion, what are the most suitable channels for Financial Users to provide their consent? What characteristics should these channels have?

Which consent models do you think would be the most appropriate for the implementation of Open Finance?

4.7 Governance

The assignment of a significant role to the BCU for regulating the ecosystem implies that it will be responsible for defining the regulatory requirements. It may also define principles, mechanisms for agreement, and objectives to be adopted by the industry. Moreover, designated industry participants must address the responsibilities assigned to them.

The BCU could also function as a promoter and catalyst, creating a suitable environment for the industry to fulfil its responsibilities, including establishing the necessary agreements between the participating parties.

For the design phase of the ecosystem, which includes the standardization of access interfaces, representatives from the industry mandated by the BCU, as well as those who wish to participate voluntarily with the regulator's approval under the established regulations, will work alongside the BCU.

In terms of the necessary resources, each participant—whether the regulator or the industry—would assume the costs associated with their activities within the Open Finance ecosystem. They could use their own personnel or outsource certain aspects as deemed appropriate if they have the regulator's approval.

Governance Structure

Considering the experiences in other jurisdictions, the context of our financial system, and the designed vision for Open Finance in our market, it is considered appropriate to establish a working dynamic that includes the following governance framework:

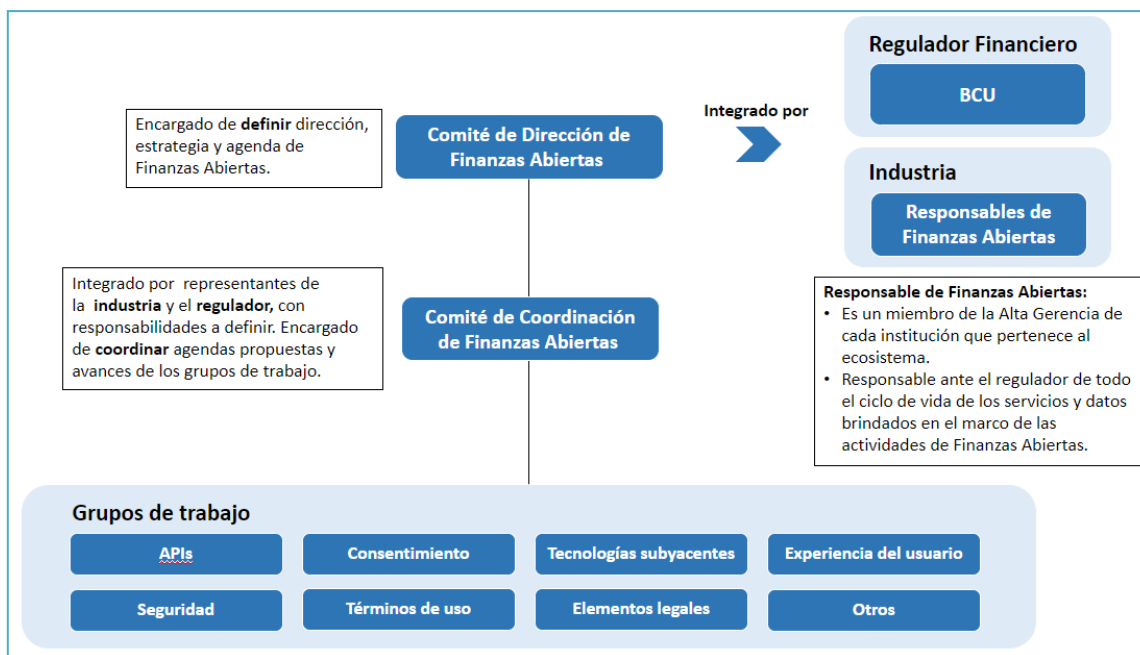


Illustration 11: Governance framework for the Open Finance ecosystem

Open Finance Steering Committee

Composed of those responsible for Open Finance from industry participants and representatives from the supervisory or directorate level of the regulator. Third-Party Service Providers could define representatives to participate in the committee. This body's responsibilities would include defining the direction, strategy, and agenda of Open Finance, aligned with the requirements set by the regulator.

Open Finance Responsible Manager

A viable option seems to be for each institution participating in the ecosystem to appoint an "Open Finance Responsible Manager" who belongs to the institution's senior management (or their delegate) and is

responsible before the regulator for the entire lifecycle of services and data provided within the framework of Open Finance activities.

Open Finance Coordination Committee

This committee would consist of representatives of the previously mentioned parties, but with individuals responsible for coordinating the proposed agendas for the development of the Open Finance ecosystem and the progress of the working groups described below, in a project management role.

Working Groups

Different working groups would need to be deployed to analyse, design, implement, test, deploy, maintain, and improve various aspects of the Open Finance ecosystem that require standardization, unification, and interoperability agreements among participants. For example, defining access interfaces, underlying technologies, security standards, consent requirements, user experience, legal elements, and terms of use. Their progress would be managed by the Open Finance Coordination Committee and would likely have a high degree of interaction in the initial stages.

What strengths, weaknesses, and risks do you identify in this governance framework for the ecosystem?

Distribution of Responsibilities Within the Governance Structure

In order to explore the responsibilities to be assumed by the participants in the governance structure defined, the following areas are initially considered:

- Standards, platforms, frameworks, tools, and other technological and operational aspects.
- Standardization of data and services within the framework of Open Finance.
- Handling of complaints from Financial Users.
- Dispute resolution between participants.
- Payment and commission agreements between participants.
- Participant management.
- Rights and obligations of the participants.
- Campaigns for education, awareness, and general communication to Financial Users.

Regarding the fulfilment of these responsibilities, participants would fall under the regulatory scope of the BCU, and potentially other regulatory bodies, depending on what is established in the legal framework that will ultimately apply.

How do you think it would be appropriate to divide these responsibilities between the regulator and the industry?

Is there any relevant role that you believe has not been defined in this document, either for governance or for the operation of the ecosystem?

4.8 Monetization

It is considered appropriate that the costs associated with automatic access interfaces offered by Information Access Providers can be covered by charging fees for their use. This can help create incentives for Information Access Providers, providing a way to achieve a sustainable system and fostering the creation of new services and business opportunities for all participants.

If the option of using fees is pursued, it is considered appropriate that they be set by the market within the governance structure, based on a legal framework that provides guidelines for their values. For example, indicating that these values should be based on the data or service provided and not dependent on who invokes the interface. Likewise, it is considered appropriate that the cost of access should not be linearly passed from the Information Access Providers to the Financial Users.

If necessary, the BCU can ensure that these fees align with the guidelines defined in the legal framework. Nevertheless, it might be advisable to establish free thresholds for certain services to promote usage and ensure the ecosystem's development.

At first, it seems appropriate for the costs to be related to the invocation of access interfaces. However, Information Access Providers could implement other monetization schemes if they do not create obstacles for accessing the interfaces.

To encourage ecosystem development and bring essential services closer to Financial Users, the following interface access invocations could be offered free of charge:

- Public information about Information Access Providers (such as branch locations, cash machines, products, services, and fees).
- Payment initiations within the Interbank Payment System (a monthly upper limit of invocations may be considered).
- Up to a certain threshold for reading registration data per month per access interface method and Financial User.
- Up to a certain threshold for reading financial data per month per access interface method and Financial User.

Do you think an upper limit is appropriate for the number of free payment initiation invocations per Financial User per month?

What thresholds would you consider optimal for free invocations related to registration and financial data per month, method, and Financial User?

Regarding standardization and neutrality in fees, it is understood that they should be governed by the principle of promoting competition and could be monitored by the BCU. Rules ensuring interoperability and prohibiting practices that limit competition or are outright anti-competitive may be established.

4.9 Risks and Associated Controls

The development and maintenance of the Open Finance ecosystem, with every aspect that it entails for its participants, will not be risks free. Below is a preliminary identification of these risks and their potential controls, though this is not intended to be an exhaustive or definitive analysis.

Challenges in Ecosystem Development, Value Creation, and Sustainability

There is a risk that the new Open Finance services may not meet Financial Users' expectations, which could function as a barrier to energizing and sustaining the ecosystem. Additionally, if Information Access Providers do not have sufficient incentives to make interfaces available and maintain them with the required security and privacy standards, the ecosystem may not evolve optimally. The sustainability of the ecosystem will also depend on participants' ability to establish new services and economically viable business models within a framework of healthy competition and inclusion, where the costs associated with invoking access interfaces are distributed fairly. It is essential to focus on the Financial User to identify and deploy attractive services with reasonable operational and access costs.

Legal Risk

The relevant regulatory framework for Open Finance will need to be adjusted and updated when necessary to accompany the system's initiatives and developments. This will require agility and resources from the regulator to keep pace with the industry.

Governance Functioning

The proposed governance structure requires the involvement of participants as well as the regulator. However, there is a risk that the necessary consensus for key decisions may not be reached. This could cause delays in implementing the different planned phases. Formalized agreements and appropriate powers for the regulator would help ensure these commitments.

Coordination Among Participants

This risk can arise from diverse levels of commitment, involvement, and resources dedicated by participants. As a result, difficulties may emerge in reaching agreements on technical standards or monetization schemes,

for example. Beyond commitments, having a clear and transparent agenda, along with proper planning, would facilitate coordinated development among all parties.

Operational Risk

This risk could stem from potential technological failures in the Open Finance implementations. The possible disparity in the technological maturity of participating institutions, both in providing and consuming access interfaces, should be considered. It is also essential to establish a regulatory framework proportionate to the identified risks, aligned with international standards and best practices in the field.

Interdependencies

Some services provided by participants within the ecosystem may fall under existing Financial Market Infrastructures (e.g., payment initiation). Therefore, these participants will need to implement necessary measures to manage any risks associated with these interdependencies appropriately.

Public Misinformation

The public might not understand the benefits of Open Finance services or the implications of sharing their data with third parties, increasing the risk of uninformed consent. This lack of understanding could erode Financial Users' trust and represent a significant barrier to their participation in the ecosystem. Proper public education, along with transparency in the consent processes, are fundamental elements that must be addressed to ensure informed and secure participation.

Information Privacy

This risk may arise from the possibility that information transmitted to third parties within the Open Finance context is used in an unauthorized manner or for purposes other than those consented to by Financial Users. This could include improper disclosure of data, unauthorized access by third parties, manipulation of the information for undue benefit, or use of the data inconsistently with the legal framework and the Financial User's consent. This risk could have negative consequences for Financial Users, the Open Finance ecosystem, and the financial and payment systems if data misuse issues become widespread.

Cybersecurity

New services provided within the Open Finance ecosystem will rely on IT developments and technological infrastructure. This includes access interfaces, applications on Financial Users' devices, systems, databases for processing and storing transmitted data, and the communication of data between systems. As such, all these elements must be adequately protected and monitored from a cybersecurity perspective, as any data breach or cyberattack could undermine Financial Users' trust in the ecosystem, its services, and participants. Additionally, all participants must have established procedures to address any cybersecurity incidents they may face. It is considered necessary to adopt international cybersecurity standards and best practices.

Manipulation and Fraud

The creation of new access channels for financial data may open opportunities for potential fraud and improper manipulation. Financial Users could be more exposed to fraudulent practices and social engineering tactics, which have increased in recent years nationally. Consequently, financial system users could suffer economic losses and lose confidence in the ecosystem, hindering its development. Therefore, it is essential that all participants have appropriate mechanisms in place to prevent and mitigate fraud attempts, and that Financial Users are knowledgeable about using these new technological channels safely.

Exclusion Risk

Access to data in the Open Finance context could lead to detailed profiling of potential customers. If not properly managed, Third-Party Service Providers could use these profiles to identify less profitable or riskier Financial Users and, consequently, exclude these groups from accessing certain financial products or services. This could significantly impact the most vulnerable segments of the population and undermine established financial inclusion objectives.

Reputational Risk

Inadequate management of financial data or any other significant incident arising from Open Finance services could damage the reputation of financial institutions and service providers in general. This could

result in a significant loss of trust by financial system users and negatively affect the ecosystem's healthy development. Moreover, this reputational damage could even extend to the financial system, including the BCU in its role as a catalyst for Open Finance and as the regulator of the system.

Do you foresee any other significant risks?

4.10 Regulatory and Legal Aspects

All participants in the Open Finance ecosystem must comply with the applicable regulations for their activities.

One of the most important points to consider is that legal changes will be necessary to establish the regulator's proper powers and to provide a formal framework for data access and transmission within the financial system. Drafting a law proposal that will later be submitted to the Ministry of Economy and Finance for review will be required.

These proposed legal modifications could include incorporating new participants under the BCU's regulatory scope. For this incorporation to be harmonious, coordinated efforts among the different Divisions of the BCU will be necessary.

It is also important to highlight compliance with all established legal aspects related to consumer protection, market conduct, personal data protection, and non-discriminatory treatment between participants and Financial Users.

The applicable regulations must clearly define the responsibilities of each party, including Information Access Providers, Third-Party Service Providers, and Financial Users. The BCU's regulatory responsibilities in the Open Finance context will be limited to the institutions under its regulatory scope.

Authorization or Registration of Participants

The most viable option for our system seems to be that Third-Party Service Providers undergo a registration and authorization⁶ process to provide services within the Open Finance ecosystem.

The authorization process could involve a stage with the Electronic Government and Information Society Agency (AGESIC) based on the requirements established in Law 18.331 (Personal Data Protection Law), as well as the BCU.

The requirements to be met and the information to be submitted to the BCU for authorization will be established in the regulations for each of the new entities previously discussed. In the case of entities already authorized to provide financial or payment services in our market, complementary requirements and information will be specified, along with the applicable licensing methods.

If the authorization process with the BCU is successful, the participant will be allowed to provide services within the Open Finance ecosystem.

Authorized Third-Party Service Providers cannot be prevented from making invocations to the access channels formally established by the Information Access Providers if they have the consent of Financial Users to access their data.

It is also considered appropriate for the list of authorized entities to be visible in a public directory of participants, detailing relevant information such as name, services provided, and data accessed, among other points.

Furthermore, it may be convenient to conduct periodic validations to ensure that Information Access Providers have made their access interfaces available in accordance with the established requirements and that these interfaces are up to date. For these purposes, documentary evidence, validations, audits, or certifications conducted by third parties may be used.

⁶ With its requirements to be defined.

4.11 Technical Aspects

Design of Access Interfaces

The strategy for developing Open Finance will seek to promote the standardization of access interfaces to achieve uniform, interoperable, and aligned development among all participants. In this regard, it seems most viable for the BCU to broadly determine the primary requirements, and for the industry to be responsible for conducting the standardization.

The implementations designed and developed by the industry must align with current international best practices and recognized standards on specification, security, transmission protocols, data governance, service management, operational continuity, auditing, project management, among others.

In terms of ecosystem transparency, it is considered appropriate for Information Access Providers to periodically report to the BCU on the availability of their access interfaces and the number of invocations received. As the ecosystem matures, the possibility of expanding the information reported to the regulator could be evaluated. This could include, for example, statistics and metrics by use cases or data types, differentiating between invocations with valid or erroneous responses, response times, and other parameters to be defined.

What information do you think is necessary for Information Access Providers and Third-Party Service Providers to report to the BCU?

Additionally, for proper service management of access interfaces, those who provide them should establish the necessary channels and procedures to offer support and problem resolution to any participant authorized to consume them in the Open Finance ecosystem.

Finally, the management of changes to access interfaces should be conducted in an orderly manner, following best practices in change management and, if necessary, coordinated among Information Access Providers. These changes should be communicated in advance to those who may be affected, especially Third-Party Service Providers.

What other technical aspects do you think should be prioritized?

Alternative Channels

Regarding alternative channels for accessing information, such as “screen scraping” or unauthorized API invocations outside the Open Finance scope, it is considered necessary to restrict this practice to protect all system participants. The most viable option appears to be limiting it to scenarios where the following conditions are simultaneously met:

- It does not involve the use of Financial Users’ access credentials. Specifically, Financial Users should not be required to share their passwords, PINs, two-factor authentication, or similar credentials with Third-Party Service Providers, nor should these third parties (or those they permit) process these credentials for authentication purposes with Information Access Providers.
- There is express authorization from the channel provider to access the information through this mechanism, meaning that the Information Access Provider allows the use of this alternative channel for accessing information.
- If necessary, the participant making the invocation to this alternative channel can be correctly identified each time it is used, along with the information being accessed.
- It is used as a temporary and circumstantial solution before the implementation of formally agreed and standardized access interfaces.

Do you agree with the strategy for addressing alternative data access channels?

Framework of Trust

The trust framework within the Open Finance ecosystem is considered a fundamental pillar: without Financial Users' trust, there will be no demand for Open Finance services. Therefore, it is crucial that this trust is not compromised by incidents. The development of Open Finance services should focus on the Financial User, always ensuring their protection.

Consequently, invocations to access interfaces must comply with certain requirements to ensure secure data transmission, adhering to all regulatory requirements related to data protection (as previously mentioned in this document) and international best practices in cybersecurity.

Given the sensitivity of the information transmitted and processed through access interfaces, general technical requirements will need to be established for all participants, covering the following aspects:

- Confidentiality of data transmission.
- Integrity of the provided information.
- Identification of Third-Party Service Providers.
- Identification of Financial Users.
- Authentication of Third-Party Service Providers.
- Enhanced authentication of Financial Users by Third-Party Service Providers.
- Authorization of Third-Party Service Providers.
- Auditing of invocations.
- High availability and contingency to ensure service continuity.
- Non-obstruction and neutrality.
- Test environments for participants.
- Compliance with standardizations.

Additionally, it is considered appropriate for participating entities to report indicators and metrics to the BCU, enabling the regulator to monitor the healthy development of the ecosystem and ensure it maintains adequate service levels.

5. Implementation Approach and Next Steps

5.1 Milestones for 2024

In the Payment System Roadmap of Uruguay for 2025⁷, one of the objectives on the agenda is to "Promote the development of a legal framework and initiate the operation of an open finance system."

The upcoming milestones for the development of the Open Finance ecosystem in our market include:

- Publication and analysis of comments regarding this document in the second half of 2024.
- Drafting of legal amendment proposals in the second half of 2024.
- Initial engagement with the industry.

5.2 Open Finance Ecosystem Development Cycle

The BCU understands that the development of Open Finance includes both supply and demand initiatives for data-based services in a financial system in constant evolution, from the supporting technology to the services offered to Financial Users, including the variety of data and access interfaces provided. For this reason, it is common to see the deployment of Open Finance in other jurisdictions in a series of consecutive implementation phases.

To support this development in an agile manner, it is essential to highlight the considerable workload that will also fall on the regulator. This will include not only regulatory work (law drafting, regulations, and regular communications and circulars as the ecosystem evolves) but also operational tasks related to

⁷ www.bcu.gub.uy/Sistema-de-Pagos/Documents/Sistema%20de%20Pagos-hoja-de-ruta-2025.pdf

maintaining and supporting the responsibilities that the BCU assumes (participant directories, periodic publications, authorizations, metrics collection, and others). This must be assessed and balanced with the BCU's current agenda, resources, and workload.

Moreover, the effort and investment required by all participants should not be overlooked. For example, this will include dedicating hours to governance-related work and ecosystem agreements; handling complaints, grievances, and disputes once the ecosystem is operational; promoting and communicating the ecosystem; managing access controls; and generating, processing, and publishing statistics, indicators, and metrics.

This is in addition to the technological aspects that will need to be optimized to support operations with the highest levels of reliability, quality, availability, resilience, confidentiality, interoperability, user experience, neutrality, data protection, and compliance.

In short, to better understand the workload and resource investment required from all parties, the following four-stage approach (for each phase of implementation) is conceptually proposed:



Illustration 2. General process Open Finance Ecosystem development.

- **Analysis Stage:** This stage involves the preliminary investigation before starting work on each phase of the ecosystem's evolution. Initial communication and contact with the parties are made, and, if necessary, legal, and regulatory changes are developed.
- **Design Stage:** In this stage, while the regulator makes the necessary regulatory changes and manages the project, the industry will establish the necessary agreements for designing the ecosystem, addressing strategic, technological, operational, and commercial aspects.
- **Implementation Stage:** During this stage, the parties will conduct the implementations agreed upon in the previous stage. This includes not only access interfaces but also the technology needed to support Open Finance services across all participants involved.

- **Maintenance Stage:** Once the access interfaces coordinated for a particular phase are in production, operational maintenance of the services will take place, along with participant authorizations, technological updates, continuous improvement, and other processes that allow the ecosystem to operate securely, constantly adding value to Financial Users. Additionally, tasks related to identifying potential future phases in the evolution of the Open Finance ecosystem will be carried out.

These stages should be seen as part of a continuous cycle, moving from the Maintenance Stage to the Analysis Stage to incrementally iterate and expand the Open Finance ecosystem. A clear example of this would be the development of the ecosystem phase by phase, gradually expanding its scope, data, services, and participants in a controlled and coordinated manner.

5.3 Key Activities by Stage

Below are the main activities to be addressed in the stages described above:

- **Analysis Stage**
 - Development of a vision and direction for the Open Finance ecosystem.
 - Drafting of substantive regulatory changes.
 - Initial convergence among participants.
 - Initial communications on the initiatives under consideration.
 - Risk assessment.
- **Design Stage**
 - Specific regulatory development.
 - Strategic, operational, and commercial agreements.
 - Technological agreements, standardization, interoperability.
 - Management of the phase's schedule.
- **Implementation Stage**
 - Implementation of access interfaces.
 - Implementation of other technological components to support operations.
 - Deployment of service management systems.
 - Technology testing.
 - Management of the phase's schedule.
- **Maintenance Stage**
 - Registration and authorization of participants.
 - Testing environments among participants.
 - Continuous improvement of access interfaces.
 - Supplementary regulatory measures.
 - Specific commercial agreements.
 - Supervision and compliance.
 - Audits and certifications.
 - Communication, education, and awareness for Financial Users.
 - Conflict resolution and dispute management.
 - Monitoring and continuous improvement of the ecosystem.

Do you agree with the approach in stages presented?

Are there any additional elements or activities that should be addressed beyond those mentioned?