

APIBox



A TECHNOLOGY SANDBOX
FOR OPEN FINANCE

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WHAT IS **APIBox**, THE TECHNOLOGY SANDBOX FOR OPEN FINANCE?

APIBox is a solution using open-source technologies that allows borrowing member countries of the Inter-American Development Bank (IDB) to develop a testing environment for open finance business models. Participants in financial ecosystems can use the environment to **experiment with, validate, and contribute to the process of developing standardized application programming interfaces (APIs)**, the central technology enabling open finance.

The tool is meant to **facilitate the adoption of shared standards** that ensure security, interoperability, and personal data protection, with the aim of promoting a more open and inclusive financial market in Latin America and the Caribbean.

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WHAT IS **IT FOR?**

The IDB provides the **APIBox** code and technical assistance so that its borrowing member countries can create a secure and controlled technological space where parties involved in the financial ecosystem—regulators, financial institutions, fintechs, and others—can:

- i. Test API integrations and data flows** using synthetic data but real interactions.
- ii. Ensure compliance** with defined technical and regulatory standards.
- iii. Explore new use cases for** financial innovation under secure and auditable conditions.
- iv. Facilitate testing integration with other key components of public infrastructure required** for developing open finance, such as the participants directory.

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WHY DOES IT MATTER?

APIBox is part of the **digital public infrastructure, that enables development of open finance** in the region. The tool:

- i. **Flattens learning curves** and, consequently, **implementation costs**.
- ii. **Encourages competition** by reducing new entrants' testing costs.
- iii. Provides **basic technical standards and APIs that can be adapted** to the region' needs.
- iv. Increases **trust and cooperation** between regulators, industries, and the general public.

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HOW DOES IT WORK?

APIBox has a modular structure that allows authorities and other participants to:

- i. **Register and manage participating public- and private-sector entities in the testing environment.**
- ii. **Find and document available APIs.**
- iii. **Perform functional and security tests with an information provider institution, using simulated data.**
- iv. **View validation results and reports.**

APIBox serves as a **technical laboratory**, connecting the ecosystem's different actors within a shared, collaborative framework. This innovation gives financial authorities valuable insights into APIs' business models and how they perform so they can make better-informed and more effective regulatory decisions.

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WHO CAN IMPLEMENT IT?

APIBox is a regional public good and can be implemented by any public- or private-sector institution in IDB borrowing member countries that supports an open finance model.

Because of its open and documented design, it can be adapted to diverse regulatory and technological contexts, fostering **regional collaboration** and **best practices**. The solution is built on:

- i. Standardized APIs in RESTful Security API format (FAPI2.0 + RAR+ Grant Management).
- ii. ISO20022 data dictionary and other international standards.

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WHO CAN USE APIBox?

- i. **Financial and regulatory** authorities interested in promoting **national open finance frameworks**.
- ii. Financial institutions, **fintechs —such as payment initiators or aggregators—** and developers looking to **test the interoperability of their APIs**.
- iii. **Multilateral organizations and technical communities** that advocate for standardization and transparency in financial services.

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HOW IS APIBox IMPLEMENTED?

To implement the tool, adopters need to:

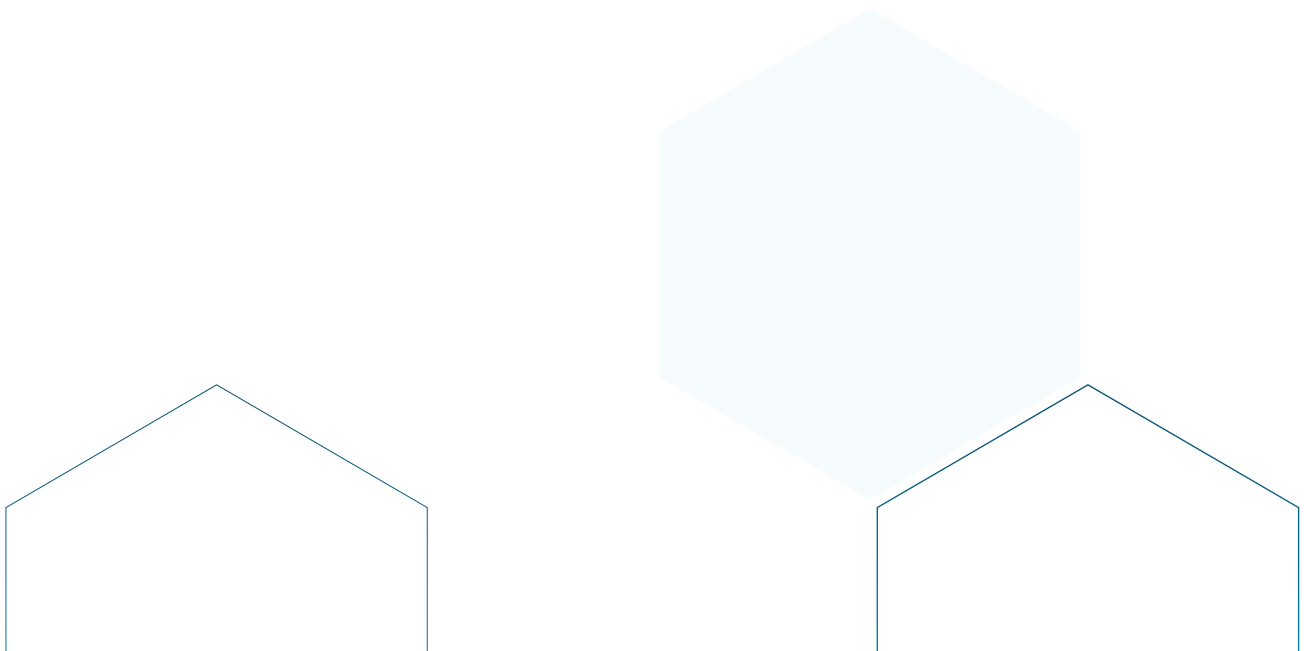
- i. Design the **governance and implementation model** for the open finance system.
- ii. Determine the size of the **technological infrastructure and resources required** to install the components.
- iii. **If necessary, request support from the IDB, which has a technical team that can support implementation** and explain the technology based on lessons learned in other regulatory environments.

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WHO HAS IMPLEMENTED APIBox?

Chile's Financial Market Commission was the first financial authority to implement this sandbox, with IDB support.



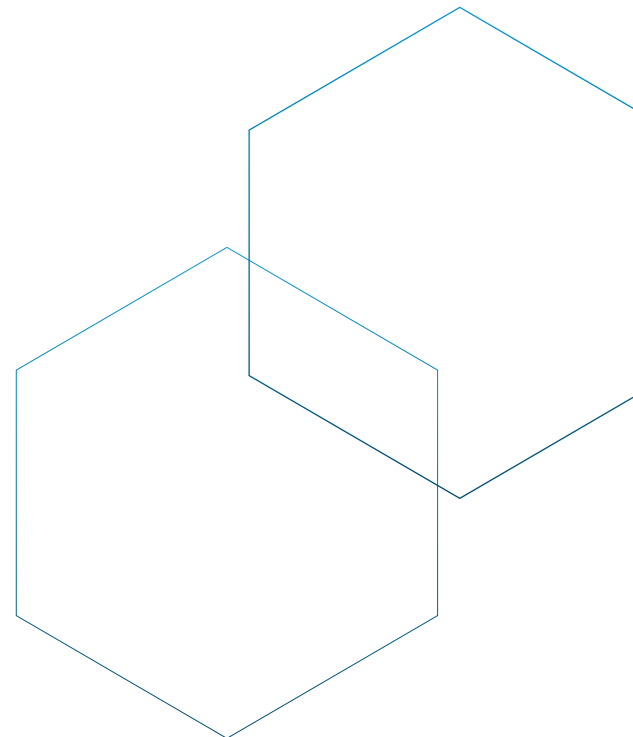
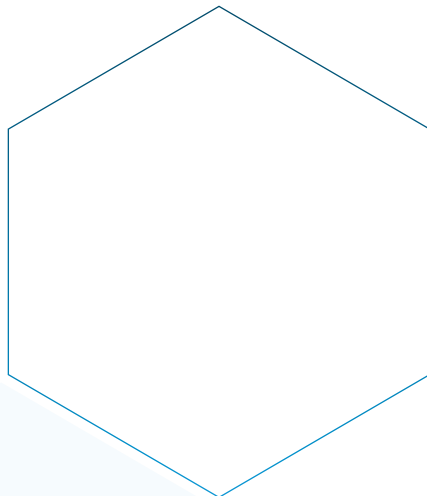
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WHAT ARE **APIBox's** **MAIN QUALITIES?**

The tool is:

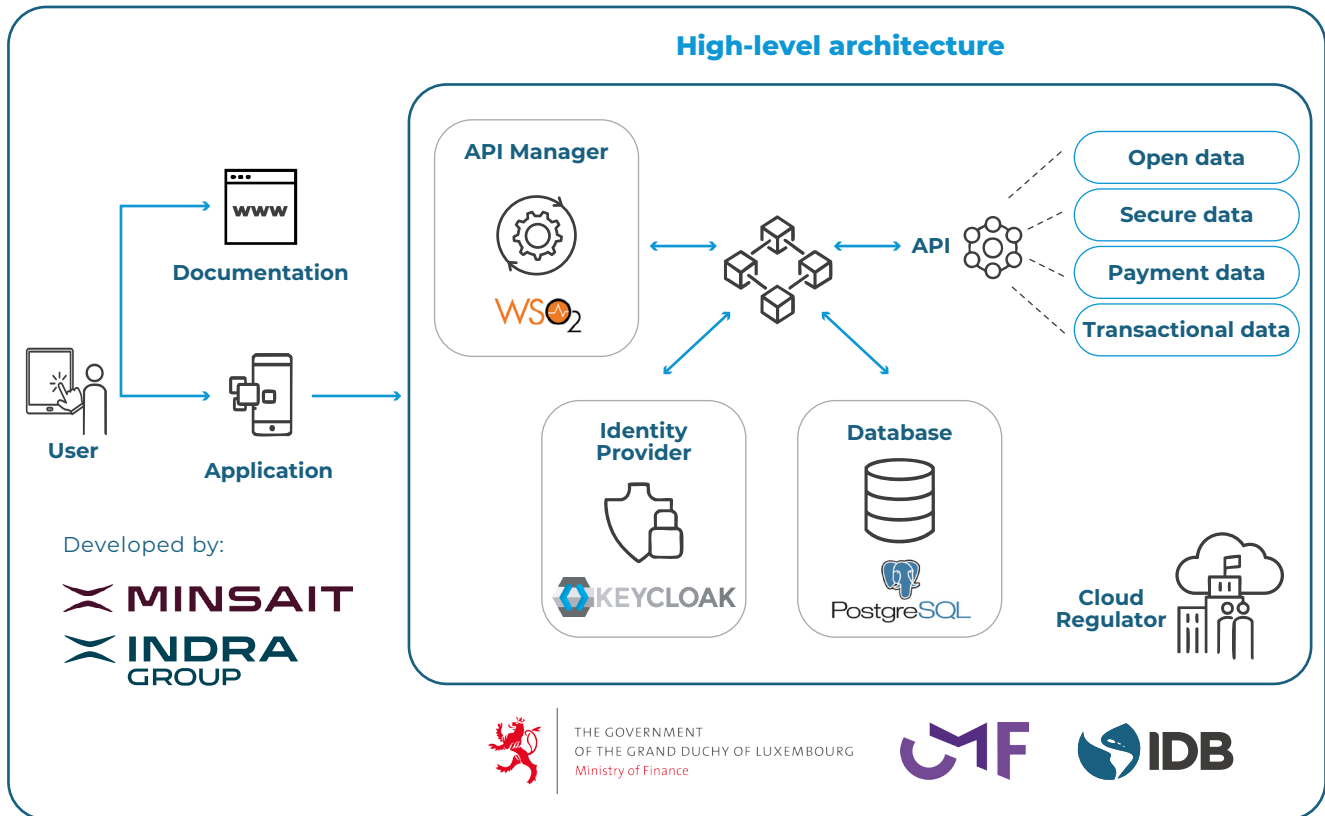
- i. **Open and replicable:** Its architecture and documentation are available for regional adaptation.
- ii. **Secure:** It meets the highest standards for authentication, authorization, and data protection.
- iii. **Collaborative:** It fosters cooperation between authorities, industries, and academia.
- iv. **Traceable:** Each test generates verifiable and reusable evidence.
- v. **Interoperable:** It can validate APIs according to international open finance standards.



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WHAT IS **APIBox** TECHNOLOGY STACK?



- i. **RESTFul API**
- ii. Data dictionary - **ISO 20022**
- iii. **TLS1.3** and **mTLS**
- iv. **FAPI 2.0 (RAR + Grant Management)**
- v. **Open-source technologies:**
 - API manager: WSO2
 - Identity provider: Keycloak
 - Database: Postgres

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HOW CAN I RECEIVE **THE APIBox CODE AND DOCUMENTATION?**



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