

CONTROLLED DIGITAL INNOVATION TESTING SPACE: SANDBOX

The controlled testing space¹, known internationally as Sandbox, continued to offer promoters the opportunity to test their technology-based financial innovations securely under the monitoring of the competent financial authorities. Over the course of 2022 there were two new calls for applications to Sandbox.

The third call was published by resolution of the General Secretariat of the Treasury and International Financing on 22 December 2021 and set the application submission period between 1 March and 12 April 2022. There was a total of five applications, of which two corresponded to the Banco de España and obtained a favourable prior assessment by the latter.

The fourth call was published on 22 July 2022, with an application submission period between 1 September and 13 October 2022. In this call, the number of projects submitted rose slightly to seven, of which three were assigned to the Banco de España and two obtained

favourable prior assessment (one of the projects, in the capacity as observer authority, together with the National Securities Market Commission)².

Therefore, since not all testing of projects from previous calls has been completed, in 2022 projects from the first four calls coexisted in the regulatory Sandbox. These projects were at different stages of the process, depending on the date on which they applied for entry into the controlled testing space.

In the course of 2022, testing was completed on the six projects from the first call that signed a protocol with the Banco de España, and the documents with the supervisor's conclusions on the results of the tests carried out were published (see Figure 1 for a brief summary of the topic of these projects). Therefore, with the publication of these documents, the participation of all the projects from the first call monitored by this institution was deemed to be complete. In most cases, added value was found in these

Figure 1
PROJECTS FROM THE FIRST CALL MONITORED AT THE BANCO DE ESPAÑA

Project	Description of the project
Rings	Business-to-business payment clearinghouse that uses distributed ledger technology and artificial intelligence to execute business-to-business transactions, creating customer-supplier rings for simultaneous collection and payment of all balances in the ring
Digital Custody in Blockchain	A solution that uses distributed ledger technology and digital fingerprint aggregation techniques to record documents that are signed digitally by customers in a distributed ledger, allowing verification of their integrity
Dalion	Decentralised self-managed digital identity solution based on distributed ledger technology that allows the user to maintain control over their personal data, managing it directly and autonomously both to share them with third parties and to recover them
Ithium 100	Solution that uses distributed ledger technology to record all relevant information on order financing transactions (including the agreed sale and purchase estimate, product characteristics or the bank's financing offer), adding transparency and assurance to the process
Neurodecision Technology	Artificial intelligence algorithm for risk management with a predictive capacity that is potentially superior to those traditionally used in the financial sector, addressing the problems of explainability inherent to artificial intelligence algorithms
Vottun Intercompany	Platform that uses distributed ledger technology to allow the companies in the same group operating in different countries to settle and reconcile, through the use of digital tokens, the resulting positions between them in real time

SOURCE: Financial Sandbox Annual Report 2021 (General Secretariat of the Treasury and International Financing).

1 The 2021 *Supervisory Report* details the characteristics of the Spanish regulatory Sandbox.

2 The projects of the fourth call finally assigned to the Banco de España and with a favourable prior assessment were Money EURM and Multilateral Trading System, based on decentralised ledger technology.

Box 2.8

CONTROLLED DIGITAL INNOVATION TESTING SPACE: SANDBOX (Cont'd)

projects, and a very wide range of technologies was used, such as distributed ledgers, artificial intelligence or digital identity in the financial system, and it was concluded that they may represent a potential benefit to financial service users, as well as an increase in efficiency of institutions or markets. The most significant challenges for the development of these proposals included most notably the existence of regulatory gaps or barriers that may hinder the launch of these projects on the market, and the technological, governance and third-party dependency risks.

Also, in the course of 2022, the protocols were signed and testing began for two projects from the second and third calls that had obtained a favourable prior assessment by the Banco de España (ContractID and Eurocoinpay, respectively). In particular, ContractID completed its tests and it is currently awaiting the publication of the conclusions document prepared by the Banco de España.

If we take into account the projects from the four calls in which the Banco de España has participated (alone or together with other supervisory authorities) in the prior assessment, the promoters belong to different sectors, mainly consultancy firms, FinTechs and banks (see Chart 1.1). As regards the technologies of the projects that obtained a favourable prior assessment, distributed ledger technology continued to dominate, followed by artificial intelligence (see figure 1.2).

None of the various technological innovation projects tested in Sandbox have so far been identified as being applicable to the better performance of the supervisory functions carried out by the Banco de España.

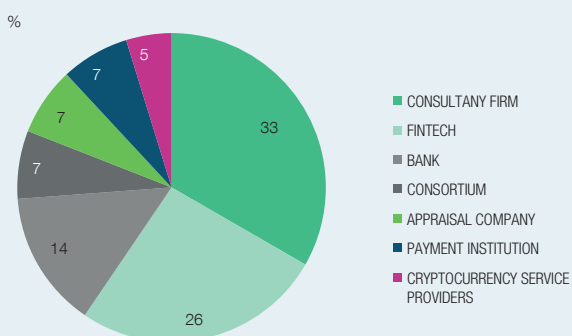
In 2022, the authorities responsible for Sandbox continued to work on improving its functioning. Firstly, the documentation to be provided by the promoter to justify compliance with data protection regulations has been simplified and the documentation related to money laundering and terrorist financing legislation has been further specified. Secondly, once the Sandbox process has been completed, the competent authorities have organised a discussion to assess the possibility of promoting regulatory changes to facilitate the secure development of innovation within the financial sector. As regards the impact of this tool on the promotion of financial innovation and, in particular, on the trajectory of the participating companies, it is still too early to make an assessment, as the testing of the projects that applied for the first call has just been completed.

As for the Banco de España, the communications channel for queries on financial innovation (provided for in Article 20 of Law 7/2020) was more widely disseminated, and communication and dissemination efforts continued on Sandbox at both national and international level.

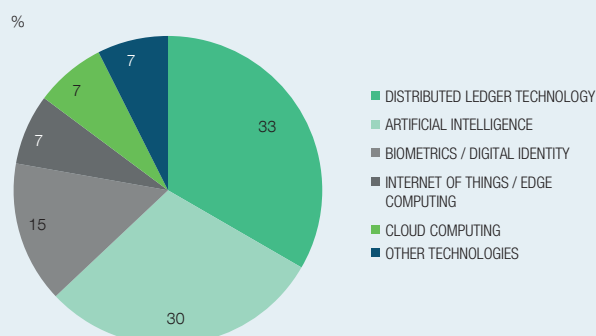
As part of this work, the Banco de España held a meeting with the financial community on 27 January at its headquarters in Malaga, which was attended by some of

Chart 1
PROMOTERS AND TECHNOLOGIES OF THE SANDBOX PROJECTS ANALYSED BY THE BANCO DE ESPAÑA

1 BY TYPE OF PROMOTER (ASSESSED PROJECTS)



2 BY TYPE OF TECHNOLOGY (PROJECTS WITH FAVOURABLE PRIOR ASSESSMENT) (a)



SOURCE: Banco de España.

a Projects can use more than one technology. Technologies in accordance with what is reported by the promoter in its application.

CONTROLLED DIGITAL INNOVATION TESTING SPACE: SANDBOX (Cont'd)

the promoters of the projects admitted to the first call of Sandbox and at which they shared their experience after participating in the controlled testing space.

Lastly, the European procedural framework for cross-border testing was launched in 2022, allowing promoters to test

their innovation simultaneously or in parallel in several Sandboxes in European Economic Area countries³. Once access to a Member State's Sandbox has been requested, promoters can request that other European authorities also monitor the tests, or that they are observers or have access to the test results.

³ <https://digital-finance-platform.ec.europa.eu/>

evaluation will be conducted by a team of independent international experts and will start in 2023.

Lastly, Box 2.8, which is dedicated to Sandbox, provides an update on the functioning of Sandbox, the projects that have participated in it and its improvements. In accordance with Article 26 of Law 7/2020 of 13 November on the digital transformation of the financial system, this document must reflect an assessment of the possible applicability and implementation for the better performance of the supervisory function of technological innovations that have been tested in the controlled testing space regulated in that law (Sandbox). According to the Banco de España's assessment, none of the projects that completed their passage through Sandbox in 2022 provided mechanisms for the better exercise of the supervisory function, so these assessments are not specifically included in Box 2.8.