Banc Ceannais na hÉireann
Central Bank of Ireland
Eurosystem

Innovation in Payments Sandbox Programme

Sandbox Report 2026



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Foreword

Ireland's payments system is changing quickly, driven by new entrants and new technology. Central Bank of Ireland's second Innovation Sandbox Programme, with the theme Innovation in Payments, was designed to give us direct, early sight of that change.

Over six months, eight participants worked on projects spanning topics such as cross-border payments, AI-driven financial guidance and tokenisation. Each received regulatory advice and support tailored to their proposition. We also partnered with Banca d'Italia on an Innovation Data Challenge, which resulted in over 380 students from seven universities examining how payments could be improved for consumers and the financial system.

The sandbox programme fits squarely within the Central Bank's mandate to maintain monetary and financial stability while ensuring the financial system operates in the best interests of consumers and the wider economy, enabling us to be more future-focused, more open and more engaged. It also reflects our catalyst role in the payments system: alongside our roles as issuer, operator, regulator and overseer, we have a responsibility to help shape a payments system that works better for the people and businesses who rely on it.

This is the Central Bank of Ireland's second Sandbox Programme, following our first on Combatting Financial Crime. Both cohorts serve the same purpose: engaging directly and early with innovation in a way that informs the Central Bank's policy and supervisory approach. We intend to keep running this programme on a thematic basis and will continue to keep it focused on delivering outcomes for the public good.

Mícheál O'Keeffe

Director of Policy and International

Central Bank of Ireland



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Key Statistics

	Applications Received	**38**
	Participants Selected	**8** (including **2** partnerships)
	Problem Statements Addressed	**3**
	Programme Duration	**6 months** (January– June 2026)
	Regulatory Advice and Support	**66** dedicated support sessions, **4** onsite modules
	Interactive sessions	**14** sessions covering a wide range of regulatory and technical topics
	Research Collaboration	Innovation Data Challenge with Banca d'Italia – **380**+ students, **7** Universities, **35** submissions, **18** showcased

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Executive Summary

This report presents the findings of Central Bank of Ireland's second Innovation Sandbox Programme, delivered in 2026 on the theme of Innovation in Payments. The Programme received 38 applications and admitted eight participants. Applicants and participants were assessed against three problem statements identified by the Central Bank as priority areas for the Irish payments system: frictionless and transparent money movement; inclusive access to the digital economy; and the safe integration of emerging payment technologies.

Over six months, Central Bank of Ireland delivered 66 bespoke engagement sessions and four thematic modules, covering the Central Bank's role in payments, the current regulatory landscape, the future of payments regulation, and the impact of AI and tokenisation on payments. Central Bank of Ireland also partnered with Banca d'Italia on a Cross-Border Data Hackathon, with over 380 participating from students across seven universities in Ireland and Italy producing 35 research high-quality research submissions.

Participants advanced work spanning instant cross-border payments, biometric authentication at the point of sale, AI-assisted financial guidance for small businesses, pension and tax administration, sustainability reporting, and tokenisation. For the Central Bank, the programme provided earlier and direct insight into how advanced technologies and innovative business models are being deployed and built, to help us shape our policy and supervisory approach.

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Introduction

Central Bank of Ireland serves the public interest by maintaining monetary and financial stability while ensuring that the financial system operates in the best interests of consumers and the wider economy. Our Strategy sets out four interconnected themes – future-focused, open and engaged, transforming, and safeguarding – that guide our work over the period.

Deepening our approach to innovation, including the establishment of the Innovation Sandbox Programme, is just one example of how we are delivering on some of these commitments. The sandbox programme informs our understanding of the early-stage development of selected innovative initiatives that have the potential to improve outcomes for consumers and the wider financial system. Through the sandbox programme, we provide regulatory advice and support to participating firms on their projects, consistent with our public policy objectives. Each cohort runs on a thematic basis over a six-month period.

The programme was structured around three problem statements, reflecting challenges in payments that the Central Bank of Ireland judged worth solving for

Payments are a part of the financial system that touches the public most directly, and the Irish payments sector is large, increasingly international, and changing quickly. When payments work well, they are largely invisible to the people using them; when they do not, the resulting friction, exclusion and fraud fall disproportionately on consumers and businesses.

Innovators were invited to bring forward solutions addressing one or more of these areas:

1. **Frictionless and transparent money movement:** how to make everyday payments faster, cheaper and safer, from instant cross-border transfers to the point of sale.
2. **Inclusive access to the digital economy:** how to use technology to widen access to financial services, so that smaller businesses and consumers are brought in rather than left behind.
3. **Safe integration of emerging payment technologies:** how to allow innovations such as artificial intelligence and tokenisation to develop in ways that are well understood and properly managed.

Our objective for the programme was to accelerate solutions that address these problems, in support of safer, faster and more inclusive payments for households and businesses, while giving us

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early insight into emerging risks and supervisory questions that will need to be addressed as these technologies mature.

Overview of Participants

Eight participants were selected from the 38 applications received. Their projects are set out below, grouped by the problem statement they principally addressed.

Our objective for the programme was to accelerate solutions that address the problem statements… while giving us early insight into emerging risks and supervisory questions

Inclusive access to the digital economy

Narrative (with Bank of Ireland) – an AI-native platform that transforms open banking data into financial guidance for small businesses.

Maximo – an API-based fintech connecting clients of life assurance companies to their pension and tax rebate options.

Antreo – a platform linking verified sustainability data to payments, to help organisations capture, share and audit sustainability information.

Safe integration of emerging payment technologies

PTSB and BarraLake– a cloud-based, API-ready system that tokenises digital assets for value exchange.

Frictionless and transparent money movement

Monee – a digital financial market infrastructure provider seeking to enable cross-border payments and securities settlement between the UK and Ireland.

FacePOS – a pay-by-account wallet for consumers and businesses, using facial recognition to enable instant payments at the point of sale.

StableGreen – systems supporting agreement-driven payment models in regulated markets.

Payemoji – an AI-powered payments service supporting secure card-not-present payments and refunds, aimed at reducing chargebacks through conversational commerce.

Programme Delivery

Regulatory advice and support to participants was delivered in two ways: bespoke engagement, tailored to the needs of each participant, and modules, which are open to all participants and delivered through onsite and virtual sessions.

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Onsite sessions bring participants together in person for discussions on broad, cross-cutting regulatory themes, pitched at a level suited to the diverse range of participants in the cohort. These sessions take the form of panel discussions, fireside chats and roundtables. Virtual module sessions focus on more specific, narrower topics. Speakers for both onsite and virtual sessions are drawn from industry, other regulatory authorities and from the Central Bank of Ireland's own subject matter experts.

Sandbox Champions

Regulatory advice and support is underpinned by the Sandbox Champions network: a group of internal subject matter experts from divisions across Central Bank of Ireland, who connect the programme to the wider organisation. For any novel query raised by a participant, the relevant Sandbox Champion is the first point of contact. Members of the network attend product demonstrations and onsite modules, deliver presentations, and disseminate updates and learnings from the programme back into Central Bank of Ireland. Given the theme of this cohort, the Champions network included representatives from payment authorisation, payment supervision, financial integrity, banking supervision, and payment systems policy and oversight, among other areas.

Regulatory advice and support was to participants was delivered in two ways: bespoke engagement, tailored to the needs of each participant, and modules

Bespoke Engagement

The programme delivered 66 dedicated support sessions, including a round of product demonstrations with the Sandbox Champions network held early in the programme. Bespoke engagement was informed by regular check-ins with participants to understand their needs and how Central Bank of Ireland could meet them more effectively. Where participants required regulatory advice or support that extended beyond the Central Bank of Ireland's remit, we made introductions to relevant external organisations on their behalf. This led to meetings between participants and organisations including the Banking and Payments Federation Ireland (BPFI), EBA Clearing, the Pensions Authority, the National Treasury Management Agency (NTMA), and the Strategic Banking Corporation of Ireland (SBCI).

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Modules

Speakers across the module programme included subject matter experts from within Central Bank of Ireland and other regulatory bodies, alongside industry practitioners.

1. Central Bank of Ireland's Role in a Changing Payments Landscape

This module gave participants a grounding in the Central Bank's role in payments, which spans five functions – issuer, operator, regulator, overseer and catalyst – operating across all levels of the payments system. Sessions set out how technological innovation, changing business models, evolving consumer preferences, geopolitical developments and changing financial crime patterns are reshaping the payments landscape, requiring a holistic and strategic approach to payments policy. Sessions also discussed the Central Bank of Ireland's role as overseer of payment systems and as part of the European supervisory framework, as well as the operation of day-to-day payment supervision, and authorisation and financial crime expectations for payments firms.

2. Current Regulatory Landscape

Participants spanned payments firms and third-party providers, and this module addressed cross-cutting regulation relevant to both. Sessions covered the Second Payment Services Directive (PSD2) and Open Banking, including the gap between regulatory intent and market experience since PSD2's introduction, and reflections on what has and has not worked for banks, fintechs and consumers respectively. Further sessions addressed the stablecoin regime under the Markets in Crypto-Assets Regulation (MiCAR); the Consumer Protection Code, including its provisions on informing consumers effectively and protecting their interests; and the Digital Operational Resilience Act (DORA), which strengthens cybersecurity and operational resilience across the financial sector through requirements for ICT risk management, incident reporting, digital resilience testing, and third-party risk oversight.

3. The Future of Payments Regulation

This module addressed the opportunities and challenges presented by Open Finance under the proposed Financial Data Access Regulation (FIDA) and the third Payment Services Directive (PSD3). A dedicated session covered the Digital Euro project, which at the time was progressing to a proposed launch in 2029, with legislation to be

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finalised by end 2026 and a pilot phase envisaged for 2027. A further session addressed the National Payments Strategy which sets out a roadmap for the evolution of Ireland's payments system, built around four vision statements and a set of actions aligned to a 2030 time horizon. The National Payments Strategy addresses Central Bank Ireland relevant items such account-to-account payments, the future role of cash, payment fraud prevention, and resilience, with the aim of enhancing public trust while ensuring that Irish consumers retain access to both modern and traditional payment functionality.

4. AI, Tokenisation and Payments

This module examined the two of the main technologies underpinning innovation in payments today: artificial intelligence and DLT. Sessions covered the impact of AI on payments, from generative AI through to agentic applications, alongside a standalone session on the EU AI Act and its implementation timeline. A further session addressed tokenisation and payments, covering developments in stablecoins, blockchain, decentralised finance, and the Central Bank's own Discussion Paper on tokenisation in financial services.

Innovation Data Challenge

The Innovation Data Challenge was a joint initiative between Central Bank of Ireland and Banca d'Italia, designed to explore how data-driven analysis could advance innovation in the retail payments market. Launched in 2026, the initiative brought together over 380 students from seven universities across Ireland and Italy. Participants were given access to a data platform with hundreds of synthetic datasets covering retail and instant payments, fraud alerts, operational outages, payment channels, and cross-border flows. Rather than prescribing specific research questions, the initiative set a broad theme and expected output while preserving academic initiative, allowing student teams to identify their own analytical approaches and research priorities.

The initiative brought together over 380 students from seven universities across Ireland and Italy

The Innovation Data Challenge generated 35 project submissions, of which 18 were selected for showcase presentations to representatives of both central banks. Payments fraud emerged as the dominant research theme, accounting for 31% of submissions and covering fraud exposure, detection methods and risk mitigation approaches. Other significant areas included operational risk and resilience (20%), instant payments and efficiency (20%), and digital assets and central bank digital currencies (14%). Student teams

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pursued questions of substantive policy interest to the central banks while honing their own data analytical skills.

Outcomes from the Innovation Data Challenge

The Innovation Data Challenge generated positive outcomes for both the central banks and for the third level institutions and their students. The two central banks received high quality, relevant research, while at the same time engaging with key stakeholders to advance knowledge on their respective mandates and priorities. The third level institutions gave their students an invaluable opportunity to hone their research, analytical and presentation skills and showcase their work in a real, engaged format outside the classroom. The key underpinning element to the Data Challenge was the data platform for the students to access synthetic data sets.

Outcomes and Learnings

Eight projects passed through the cohort, and the range of work undertaken contributed, in different ways, to the three problem areas set for the programme:

- **Money movement:** work advanced on instant cross-border transfers and on biometric authentication at the point of sale, addressing the friction and fraud risk that consumers encounter in everyday payments. The challenge for firms operating in this space is to minimise friction in the payment journey while also providing the payer sufficient opportunity to pause and confirm that a transaction is safe and authorised.
- **Inclusive access:** artificial intelligence and open banking were applied to bring financial guidance to small businesses; other projects sought to simplify pension contributions, tax rebates and money management, or to bring efficiencies to sustainability reporting.
- **Emerging technologies:** participants tested how data tokenisation might be used to channel customer savings into sustainable lending, in a way intended to make the underlying role of banks in turning deposits into loans more transparent to consumers.

In terms of learnings, our sandbox programme has deepened our understanding of innovative technologies and business models. This kind of information informs our policy making domestically and at EU level.

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For example, the programme showed how digital tools, including AI, can help consumers/SMEs to better understand and manage their finances. Through Savings and Investment Union, the EU is also focused on advancing retail market participation and new emerging digital tools are increasingly seen as being able to play a role in providing supports, information and guidance to consumers/SMEs. However, it is clear that the provision of advice concerning financial instruments admitted to trading on a regulated market is a regulatory activity that requires authorisation. Similarly, insurance and credit intermediation are regulated activities.[1]

Engagement with participants has… surfaced policy questions… and deepened our understanding of innovative technologies and business models

We also learned about a distinct form of tokenisation and its potential role in a retail banking context, in particular in helping consumers see that their deposits are being directed toward sustainable lending. Questions here include how existing product disclosure requirements apply to tokenised products.

The programme highlighted the potential for digital tools to support financial literacy, helping consumers manage their finances with more confidence and make more informed financial decisions.

We also gained insight into what is needed for safer, more secure payments in the current digital economy, and into the practical challenges involved in rolling out account-to-account payments.

Beyond the substance of individual projects, the programme also informed our own approach to engagement. We trialled new formats for module sessions in this cohort: more panels, fireside chats and roundtables for in-person sessions, and virtual module sessions for more technical regulatory content. To maximise learning within the Central Bank, a round of product demonstrations was also held early in the programme for the Sandbox Champions network. Feedback on this approach was positive, and we intend to carry it forward and build on it for future cohorts.

Taken together, the programme delivered clear benefits to our supervisory and policy functions. It provided earlier access to innovations than we would typically encounter through our regulatory engagements, and it tested new formats for regulatory engagement that received a positive response.

[1] For more on this topic, please refer to the “Spectrum of Advice” material within the Central Bank’s Retail Investor Participation in Ireland Consumer Research and Analysis

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Conclusion

This report has set out how our second Innovation Sandbox Programme was delivered, the work undertaken by the eight participating firms, and what we have taken from the engagement into its supervisory and policy work. The programme's underlying premise – that structured, early-stage engagement with innovators can improve our understanding of technological and business model change, without displacing the ordinary processes of authorisation and supervision – held up over the course of the six-month cohort.

We intend to carry a number of elements forward into future cohorts: the mix of in-person and virtual module formats and the role of the Sandbox Champions network in connecting participants to relevant expertise across the organisation. Future cohorts will also give Central Bank of Ireland the opportunity to test whether the observations from this programme hold beyond the specific participants examined here.

Central Bank of Ireland will continue to publish insights from its Innovation Sandbox Programme as successive cohorts conclude, as part of its wider commitment to transparency and engagement with the financial services sector and the public it serves.

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https://www.centralbank.ie/regulation/innovation-hub/innovation-sandbox-programme

Firms interested in participating in the Innovation Programme are encouraged to email us at: sandbox@centralbank.ie



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