R3 Sandbox for Digital Currencies •

Experiment with CBDCs and interact with diverse participants in an R3-managed learning and development environment

80%

of central banks are engaging in some form of Central Bank Digital Currencies (CBDCs) work, and about 40% of central banks have progressed from conceptual research to experimenting with concept and design, according to a survey by the Bank for International Settlements (BIS).

As consumer preferences shift to a digital-first economy, central banks and monetary authorities are actively exploring ways to issue, manage and distribute digitally native fiat currencies, including Central Bank Digital Currencies (CBDCs). By playing a pivotal role in furthering the use of CBDCs as a secure and reliable payments instrument, central banks can ensure they maintain monetary policy and financial stability in their region. Private sector institutions also want to get a head start in this space by exploring new business models, approaches to settlement, applications and payment networks.

However, to effectively learn and experiment with CBDCs and other digital currencies, all participants across both the private and public sectors need access to a secure, scalable and resilient infrastructure, as well as a ready-made network that matches that of existing payment systems.

As the leading provider of multi-party technology for regulated markets, R3 has developed **R3 Sandbox for Digital Currencies**—the only platform that combines distributed ledger technology (DLT), guided learning paths from industry experts, and a ready-made global payments network in a single environment to enable the issuance, management and distribution of CBDCs. The Digital Currency Sandbox is an R3 managed SaaS offering powered by Corda—the first DLT platform built specifically for highly regulated industries.

In 2020, R3 convened a CBDC Working Group comprised of 35 central banks, leading global supervisory organizations, major consultancies, software firms, as well as the world's leading commercial banks. Most of the working group members began using the Digital Currency Sandbox in early 2021 to evaluate use cases and test asset and system functionality. Now, for the first time, the platform is available to the wider market as Public Preview with an anticipated market launch of December 2021.

Key benefits

Plug into an existing ecosystem of world-leading institutions already simulating digital currency transactions

Accelerate your CBDC expertise with guidance from demos and sample applications, access to a research and development program and collaboration with institutions further along in their CBDC journey

Simulate the issuance, distribution and exchange of CBDCs between banks, exchanges, payment providers and consumers in a simulated environment

Explore CBDCs at your own pace with pop-up instructions and documentation available for those who are just starting on their journey as well as SDKs for the more advanced

Enable cross-border payments and discover how a CBDC can interface with existing payment networks and infrastructures

Realize the power of tech, networks, and expertise

Multi-party technology

- A fully managed SaaS sandbox environment powered by Corda and managed by R3

- Wholesale CBDC SDK with source code for building applications in the platform

- Detailed documentation site and interactive videos that explain how to engage within the environment and how the technology works

- Wholesale CBDC sample applications

- Toolkits to help assess how, where and why digital currency is relevant to a given jurisdiction

- Stablecoins sample apps and Retail CBDC SDK— coming soon

Transact seamlessly across networks made up of

- Central banks

- Commercial and retail banks

- Exchanges and Financial Market Infrastructure (FMIs)

- Global Systems Integrators (GSIs) and software vendors

- Payment providers

Access to digital currency experts

- A set of reference architectures for visualizing and mapping different design choices for enhancing certain features, and how to build each in the Digital Currency Sandbox

- Knowledge series comprised of 22 recorded panel discussions featuring industry thought leaders who delve into the latest topics and trends in digital currencies

- Research reports authored by R3 and CBDC working group participants and an opportunity to contribute to future reports in an open forum

- Monthly guided demos with 'walk throughs' of how to build out different use cases

- Access to R3 engineers who are building the SDKs

- A monthly newsletter highlighting the latest developments and insights in digital currencies

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R3 Sandbox for Digital Currencies	Technical Environment	Demo CorDapps
		CBDC SDK
	R&D Program	Technical Deep Dives (Monthly Series)
		Domestic + International Test Runs
Fully managed SaaS testing and development platform for CBDCs (stablecoin functionality coming soon)	Assessment Toolkit	Assessment Toolkit Overview
		Assessment Toolkit Applied
	Reference Architectures	Decision Tree Tool
		Reference Architecture Applied
	Subscriber Resources	Knowledge Series (22 Session Library)
		Monthly Newsletter and Active 'Newsroom'
Price upon request	Research Center*	Opportunity to Contribute to Research
		Featured in events, case studies, etc.

Who can benefit from participation?

Actors from the public and private sectors can come together in a single learning environment to evaluate the suitability of CBDCs in a country or region, along with the ways to modernize the payments landscape.

- **Central banks** can understand the pain points and opportunities for constituents in the private sector through joint demos, while the private sector can increase value for customers through early central bank collaboration

- **Commercial banks** can build applications that will drive efficiencies across settlement and assess where potential risks could threaten business models

- **Large corporates and retail banks** can explore new methods for increasing liquidity

- **Tech firms, payment providers and system integrators** can become a leading provider for payments and financial services to customers and experiment with new payment networks

R3's leadership position in digital currencies

With roots as a bank consortium, R3 has deep expertise working with government entities, regulators, central banks and private sector institutions to build product offerings that meet the needs of the highly regulated industries they operate in. To enable the practical development of digital currencies, only R3 has uniquely brought together participants from both spectrums in a learning and development environment underpinned by Corda—the market leading DLT platform for regulated industries because it is permissioned by design, secure and scalable.

> " Collaboration is critical to success in the enterprise blockchain industry. Our partnership with R3 has driven our progress in the CBDC space, where we now offer Corda Enterprise-based solutions to central banks around the world. Accenture was also a founding member of R3's CBDC Working Group.
>
> **John Velissarios,
> Managing Dirrector & Global Blockchain Lead,
> Accenture**

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Primary digital currency use cases

- **Retail payment:** A general purpose CBDC for retail applications enables real time person-to-person (online and offline) transfers with instantaneous settlement

- **Cross-border payments:** A CBDC network can facilitate direct cross-border monetary relationships to be established under the central bank's supervision

- **Wholesale payments:** A CBDC can serve as a risk-free settlement cash asset in high value payments system and on digital financial markets infrastructures

- **Stablecoins:** Private sector entities can explore business models in which they serve as the issuer and operator of digital currencies

Contact us today

Start your digital currency journey with the market-leading product for CBDC experimentation with learning paths, tools and a growing ecosystem of leading CBDC experts from the public and private sector.

Get a guided demo

Contact sales for pricing

About R3

R3 is an enterprise software firm that is pioneering digital industry transformation. With our foundation in enterprise blockchain technology, we power solutions that deliver trust across the financial services industry and beyond.

R3's enterprise blockchain platform Corda is digitalizing the processes and systems that firms rely on to connect and transact with each other and has more than 350 institutions deploying, servicing and building on it. Our Conclave platform harnesses the promise of confidential computing and Intel® SGX technologies. Conclave empowers businesses to develop applications that analyze and process sensitive data from multiple parties—all without compromising on confidentiality.

Our customers and partners have access to an ecosystem of leading systems integrators, cloud providers, technology firms, software vendors, corporates and banks. To ensure our customers derive the greatest value from their investment, we provide services and support to shorten time-to-market, as well as guidance on implementation, integration and building blockchain business networks.

Learn more at **www.r3.com**, **www.corda.net**, and **www.conclave.net**.