



Case Study

How Synechron enabled 39 firms to complete a global trial of self-sovereign corporate KYC processes based on R3's Corda blockchain platform



As banks and their corporate customers know from painful experience, traditional know-your-customer (KYC) processes are complex, time-consuming and often duplicative. These issues result from the fact that current KYC rules require each customer to exchange information with every financial institution with which they deal. For banks and corporates with many thousands of banking relationships, this results in delays and inefficiency and an inability to trade until the KYC processes are complete.

However, a “self-sovereign” corporate KYC solution can overcome these issues and transform the speed and cost of KYC for both banks and their corporate clients. It does this by enabling corporates to create and manage their own profiles – including relevant documentation – and then grant permission to multiple banks to access this data in real-time, greatly reducing the need for each institution to individually verify and update KYC records.

Blockchain’s native immutability is an inherent data validation mechanism making it an ideal technology to underpin a self-sovereign corporate KYC solution – and R3 Corda’s unique strengths in terms of interoperability and data privacy make it the ideal blockchain platform for such an application.

So, when the digital business consulting and technology services provider Synechron set out to build a blockchain-based self-sovereign corporate KYC solution, it chose to collaborate with R3. In June 2018, the platform that Synechron built – LEIA II – underwent a successful four-day collaborative pilot, with 39 participants completing more than 300 KYC transactions across 19 countries. It went without a hitch, paving the way to a future transformation of KYC processes worldwide.

The Pain-point in KYC

The problems that know-your-customer (KYC) processes pose, both to banks and their corporate customers, have been well-known for some time. However, in recent years the issues have worsened, exacerbated by pressure from regulators for financial institutions to enhance their KYC and on-boarding processes to meet ongoing compliance requirements. This development has proven that current KYC practices – requiring each customer to exchange and maintain information with every financial institution they deal with – are overly complex and costly. The result is that collecting and managing corporate clients’ data efficiently becomes a client relationship success factor for any institution.

Whilst the speed and efficiency of their KYC processes help to differentiate from other banks, the process around collecting and curating client details remains an expensive and repetitive low-value-add task. With most banks conducting their own internal KYC due diligence, there is significant process duplication and redundancy in the industry. This, in turn, brings opportunities to mutualize the costs. However, to date the opportunities for industry standardization have been limited by the fact that every bank takes a different approach to the KYC policy requirements, and the old mentality of trying to store data at central utilities becomes a data security problem

“ The KYC problem includes a data collection challenge, a data validation challenge, and a customer experience problem. Every single legal entity that a corporate customer has with a bank in every country must have a bilateral KYC relationship in that country – and that relationship requires ongoing maintenance. A corporate may have thousands of legal entities, and each of those entities may have five banking relationships. Each of those KYC processes may take three to five months to complete, and until they’re completed, the business can’t trade. So, it’s expensive for banks, it’s a pain for corporates, and it’s bad for the financial system as well. ”

Tim Coates, Synechron, U.S. Blockchain Lead

Benefits of a Self-sovereign Model

To help overcome these issues, Synechron designed a self-sovereign corporate KYC solution based around distributing a single version of the truth. Crucially, the corporates using the solution would own their own data – including both its content and distribution – and have the guarantee of control in propagating a real-time version of that data to the banks with which they are dealing and to whom they would give permission to see it. This could be achieved by creating a single, decentralized self-sovereign KYC utility that would enable participants to create, manage and control access to their own identity, including the associated data and documentation.

“In this way, our self-sovereign KYC solution enables the corporate end-user to have a guarantee of the ownership and content of its data without having to trust a third-party to hold it, or a bank to find its own hidden view of the customer data,” says Synechron’s Tim Coates. “So, the user has full control: they can store the single version of the truth within its own firewalls without having to pass it to third-parties, and allow it to be permissioned and distributed securely and in real time to entities that it agrees need access to it.”

These capabilities differentiate a self-sovereign corporate KYC solution from the centralized KYC utilities that have emerged in recent years. The centralized models have faced two key barriers to adoption: first, the difficulty corporates face when requesting approval to store their data with a third-party, given the data privacy and security risks this raises; and second, the fact that banks often do not accept data that is sourced and validated by a third-party rather than coming direct from the customer. These issues have hampered take-up of centralized KYC solutions over the last few years.

Why Blockchain?

By removing the need for a central entity holding the data, a blockchain solution overcomes many of the drawbacks suffered by centralized KYC utilities. “The main reason why we think it’s ideal for KYC is its positive impact on data security and 3rd party fees, by enabling the customer’s data to stay within their firewall. Further, blockchain provides a guarantee of control: its native immutability features effectively provide a natural data validation mechanism,” explains Coates. “It means that if data is contributed from source with a digital signature to multiple participants, it can’t be tampered with, so the banks will have reduced drastically manual validation requirements.”

This results in not only much higher security but also far lower costs. “Currently, a bank usually will have at least two layers of checks to ensure that data is what it claims to be,” he continues. “But the fact that blockchain data comes directly peer-to-peer with the owner’s digital signature, rather than through a third-party, massively reduces the data validation requirement. Blockchain is also natively a traceable and auditable technology.

Why R3’s Corda?

With blockchain identified as the optimal technology, the next step for Synechron was to choose the most suitable blockchain platform – and Corda was the clear first choice. In Coates’s view, Corda’s inherent advantages for financial services applications spring from the fact that R3 built the solution from the ground up specifically to meet the financial industry’s exacting requirements, rather than taking an existing blockchain framework and trying to fit it into a financial services context. “That showed a very impressive degree of foresight,” he comments.

Coates continues: “There are three real positives that we see in Corda – all of which are mostly born from the fact that it was built for the most challenging industry possible, which is financial services. The first is the interoperability of profiles and data between



other KYC networks or networks that need KYC information, for example trade finance. The second is the transaction-level privacy Corda provides: You can't standardize everything in KYC, so you need very granular field-level control of your privacy – and other technologies available don't do that as well as Corda does."

He adds: "Corda's third advantage is its production readiness and sustainability. We have a few question marks about how some other technologies would survive in the real-world 'business-as-usual' mode, where the solution needs to be upgraded and evolved constantly – and we think Corda is very robust in that regard. On top of these three inherent positives, Corda also has high adoption, which is a great non-technical rationale. Network effects of a KYC solution lead to self-perpetuating critical mass: so if a lot of firms run it, then a solution has non-linear growth in value."

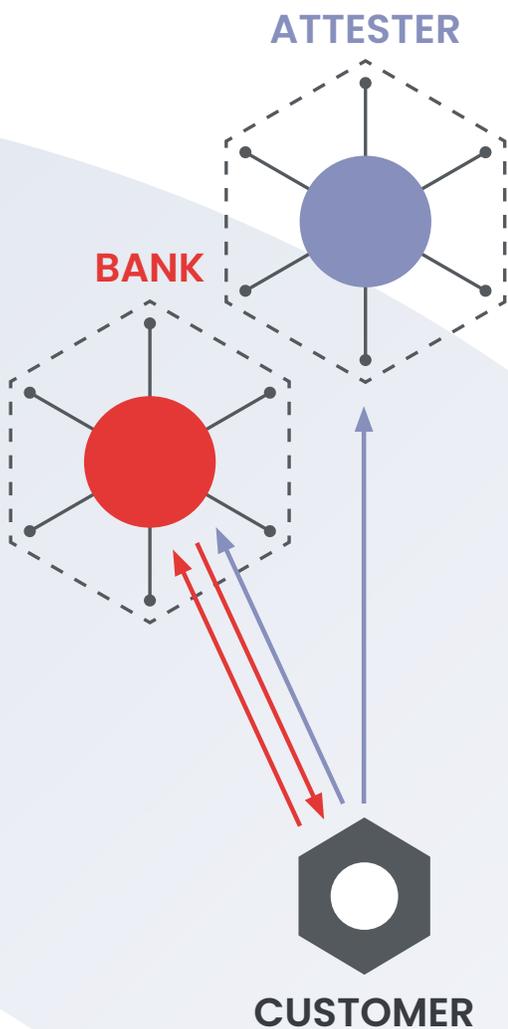


Working with R3 to Build the Solution

With Corda selected as the platform, Synechron set about collaborating with R3 to develop its solution, which is code-named LEIA and is now in phase II. Coates says the partners were able to hit the ground running. "Synechron already had built an internal accelerator on blockchain, so we had some experience, and R3 was aware of that," he says. "Also, R3 has its own subject matter experts (SMEs) in KYC and identity, so we started by engaging with that expertise."

As the development work advanced, the collaboration with R3 grew. "R3 provided a project manager for the development work with all 14 banks who were initially involved," Coates recalls. "Obviously keeping them all working in synchronization toward a single goal required a lot of work. R3's deep experience of working with its member banks meant it was very good at this stakeholder management, helping to make the LEIA II consortium very well-coordinated. Overall, R3 was very easy to work with – and obviously it also provides an exceptional piece of technology in Corda. So R3 contributed on all fronts: the SME level, the project manager level, and the technology level."





Running the Global Trial

By mid-2018 the Corda-based LEIA II KYC solution was ready for its first global trial. Conducted successfully in late June 2018, the trial ran for four days and involved the completion of over 300 KYC transactions in 19 countries across eight different time zones. During it, banks were able to request access to customer KYC test data, while corporate customers could approve requests and/or revoke access. Customers were also able to update their test data – which was in turn automatically updated for all banks with permission to access it. The 39 participants in the trial (see information panel) deployed and ran a total of 45 nodes in Microsoft Azure, demonstrating the power of collaboration using shared business logic on the Corda network. The participants were able to communicate and manage test customer KYC data across the Corda network using a CorDapp designed and built by Synechron.

As Coates highlights, the trial provided a powerful demonstration of Corda's ability to support a self-sovereign identity model capable of transforming KYC processes globally. "The trial showed that the Corda platform solves many of the KYC-specific requirements and supports gradual network adoption," he says. "Blockchain's immutability used as a new verification mechanism, and its peer-to-peer nature enabling greater data privacy, are two of the native features that have attracted many in the KYC sector to blockchain. The Corda-based trial was a big step toward solving some of the substantial problem statements behind corporate KYC, reworking the KYC utilities of the past – from centralized to decentralized, from trusted to trust-less, and from third-party data stores to controlling your own data."

TRIAL PARTICIPANTS

The 39 firms who took part on the global trial included ABN AMRO, ALD Automotive, Alfa Bank, Bank ABC, Bank of Cyprus, BCI, BNP Paribas, China Merchants Bank, Commercial International Bank – Egypt, CTBC Holding, Deutsche Bank, DNB, Hana Bank, ING, KB Kookmin Bank, Banca Mediolanum, Natixis, National Bank of Egypt, NH Nonghyup Bank, Qiwi, Raiffeisen Bank International, RCI Bank and Services (the financial services provider for Groupe Renault), SBI Bank LLC, Shinhan Bank, Societe Generale, U.S. Bank and Woori Bank.

In addition, the regulators and central banks involved included Banco de la República (Central Bank of Colombia), Federal Reserve of Boston, Superintendencia Financiera de Colombia, and Superintendencia de Banca Seguros y AFP de Peru.

Next Steps

With the first global LEIA II trial completed, work is continuing on several fronts. One focus area is around the impacts of the European Union's (EU's) recently-introduced General Data Protection regulation (GDPR) on KYC – an issue that Synechron's Tim Coates describes as "the elephant in the room." He explains, "The right to forget is a requirement in GDPR – and blockchain's immutability and the right to forget principle are polar opposites. You need to be able to segregate out data that identifies those people that have the right to forget. This is a challenge that we're working on. There are a couple different options on how to approach this challenge with mixed trade-offs."

Another area of focus for Synechron is creating the optimal user experience for corporate users. "While Corda's user experience ticks the usual boxes for bank technologist, we're looking to improve the ease of use from the corporate customer's point of view, by building robotics layers on top of the Corda platform to ensure that we can plug and play easily into any corporate out there," explains Coates. "We don't want the corporate to spend months configuring the KYC solution to the Corda node inside their environment and then connecting it to all of their systems. We're looking to streamline the user experience so it's a much simpler undertaking for them."

In terms of what Synechron is working on with its partners, the details are confidential – but what the company can say is that it's currently zeroing in from the generic, global trial to a specific national scope. "We want to focus on a particular country and particular set of partners, and work with data providers who are incumbent in this space," says Coates. "Incumbents do a lot of good work aggregating data from a vast array of stores around the world, and we're not trying to disintermediate them. We need to work together and find their best business model too. Everyone wants to provide a better service and solve a big problem."

The Future of KYC

So, what do the successful trial of LEIA II – and the progress that Synechron is continuing to make with its Corda-based solution – mean for the future of KYC? Synechron highlights two key implications. The first is the huge opportunity for cost reduction in today's manually-intensive KYC world, where the sheer volumes of interactions and relationships mean even small improvements could save billions of dollars.

However, the other – ultimately more important – positive impact is on the wider ecosystem of solutions that require new KYC relationships in a digital blockchain world. Tim Coates comments: "For example, if you think about trade finance, there is always a KYC element to understanding who your counterparties are that you are contracting with. So, if there is a solution that expedites the KYC leg, those other solutions like trade finance will run a lot smoother. That is important for the future digital world." It's a world that's already taking shape – and Synechron and R3 are helping to create it.

About Synechron

Synechron, one of the fastest-growing digital, business consulting & technology services providers, is a \$500 million firm based in New York. Since inception in 2001, Synechron has been on a steep growth trajectory. With 8,000+ professionals operating in 18 countries across the world, it has presence across USA, Canada, UK, France, The Netherlands, Switzerland, Luxembourg, Serbia, Hungary, Germany, Italy, UAE, Singapore, Hong Kong, Philippines, Japan, Australia and Development Centers in India.

About R3

R3 is an enterprise blockchain software firm working with a broad ecosystem of more than 200 members and partners across multiple industries from both the private and public sectors to develop on Corda, its open-source blockchain platform, and Corda Enterprise, a commercial version of Corda for enterprise usage.

R3's global team of over 180 professionals in 13 countries is supported by over 2,000 technology, financial, and legal experts drawn from its global member base. R3 is backed by investment of over USD 120 million from more than 45 firms.

The Corda platform is already being used in industries from financial services to healthcare, shipping, insurance and more. It records, manages and executes institutions' financial agreements in perfect synchrony with their peers, creating a world of frictionless commerce.

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