



C A S E S T U D Y

Trade Finance

Paperless Trade Finance and Blockchain



Scenario

r3.

Today
Trade Finance runs on Paper.

Future
Paperless Trade Finance with
Secure Corporate Data Sharing.

The WTO (World Trade Organization) and ICC (International Chambers of Commerce) are pushing enable a rapid transition to Paperless Trade Financing.



KEY FACTS

Trade finance is a complex cross-border process, largely Paper-based process involving many players and an overwhelming Documentation & Manual Approvals, all this resulting in a poor customer experience.

A simple trade finance transaction heavily relies on the Trust mechanism, but Risk of Fraud and Disputes is high due to the Fragmented nature of this chain.

- ~80% of global trade is supported by some sort of financing or credit insurance.
- 60% of SME Trade Finance requests are Denied. SMEs account for 20% of US exports, and 40% of EU exports.
- Gaps in trade finance provision are highest in new Frontier countries for trade, where trade opportunities are increasing as global production patterns evolve.
- USD 1.5 Trillion is the resulting Global Trade Financial Gap

Platform: Corda



CORDA in Trade Finance

The advent of Blockchain marked the beginning of a new era, one which will disrupt every industry and revolutionize the way it operates. From recognized banks to even a shoe company like Nike, Blockchain has seen massive adoption in the past couple of years alone, which bears witness to the promised revolution. Its ability to bring trust and transparency between two parties, eradicating the need for a third party makes it a perfect fit for several industries. One such industry subjected to the might of Blockchain is the industry of Trade Finance.

Need for Blockchain

The core capabilities of Blockchain are a natural fill for the void in Trade Finance. Traceability, transparency, auditability, trust, security and all other requirements of Trade finance that you can think of the features of a typical Blockchain platform takes precedence in all of them.

Essentially, by implementing Blockchain in Trade Finance, you can target the challenges faced by the traditional system which includes manual transactions, chances of errors due to high manual processing, unstructured data, heavy paper-work, and need for multiple compliances. Therefore, when it comes to integrating Blockchain with Trade Finance, it is not a matter of “if” or “why” but “when” and “how”. However, there is one major concern before we get to the “how” part. From the plethora of options available in this domain, it is imperative to select the right platform for the job.



Why CORDA

Identifying the need for Blockchain in Trade Finance was no revelation. It was an obvious and perfect fit. But the most crucial task which later defined the extent of our success in the domain of Trade Finance was employing the most appropriate blockchain platform.

Back in 2017 when we first heard about a new Blockchain platform gaining immense popularity, we started digging like any other curious team enthusiastic about Blockchain. We heard that it is supposedly an enterprise-grade platform built specifically to enhance the adoption of Blockchain into the finance sector. It exhibited unparalleled capabilities in terms of security and efficiency for swift transactions. But it's a blessing and a curse that we don't believe in assumptions, but we believe in the technologies that we have incorporated into our stack which is why we started exploring it right away. And so began our journey with Corda.

Initially, it was difficult to keep track of the changes in the Corda platform as it was growing exponentially. New releases, new features, and deprecation of old features made it a bumpy ride in implementing Corda. Thanks to our R&D team, it was a piece of cake for our developers as they were always equipped with all the necessary facts to stay ahead of the updates and exceed our client's expectations. As of today, our R&D team constitutes almost a dozen Corda certified developers keeping close tabs on every update. This team consists of only the passionate Blockchain evangelists who are always keen on learning and figuring out the new stuff.





Implementation

Trade finance is a complex process and bringing it onto a digital platform is no child's play. It requires great insight into the financial domain as well as expertise in the Trade Finance process. Fortunately for us, we have a background in developing robust financial applications which allowed us to excel in this venture.

There are several parties involved in this process such as importers, exporters, banks, financiers, insurers, export credit agencies and service providers. All these parties need separate and robust contract structure to enable trust in their agreements and trades. Bringing all this on Corda and leveraging the features of Corda to achieve a more

optimized process along with rich expertise is what makes us adept in this domain. I will try to give a simplified explanation of our process to demonstrate our extensive services for an unblemished integration of Trade Finance and Blockchain.



About Webmob

Webmob has emerged as a service delivery pioneer in this dynamic Fintech industry. Served a legion of laurelled clients in Europe & the Middle East.

With AI, ML-powered, Cloud-native, and Blockchain in our stack, Webmob provides cutting-edge solutions to fulfill the customer's advanced & disruptive requirements.

Particularly for the FINTECH industry, Webmob offers unparalleled robust solutions in Trade Finance, Money Market, Fiduciary, Commercial Real Estate Loan Tokenization and NFT Marketplaces on top Blockchains.

Process

The most prominent feature of any successful Trade Finance application on Blockchain is robust architecture and defining letter of credit for the application. Hence, we identified the parties that had to be included on the application and so we defined their respective node structure. The node structure defined the node of the party on the Corda DLT platform which was accessible through an RPC connection. Every party who has a node structure also has a secured vault associated with that node which is used to store all the critical information with the highest form of encryption.

Next, we developed a customized smart contract structure to issue the LC on the DLT platform. The LC was saved as a draft on the immutable ledger which was shared among the different parties as per the traditional use case. We replicated the manual paper-based process into a digital process to the smallest details. As a successful outcome, the issuance of LC, which otherwise takes a few days, took only a few hours on our platform. Key Corda features such as states, contracts, and flows were the basic building block of the application.

Then came the encapsulation of the business logic into the application. To enable a secured trade between the Buyer and Trader, necessary flows were developed. These flows defined the process undergone by each task on the application. In a way, it allowed us to standardize the tasks leading to astonishing compliance and regulatory standards. To exchange the documents, the user was able to upload them and share a secured Hash which referenced to an individual document. For defining the flow of trade, we developed a separate 7-step process representing seven stages involved in the trade. Each step needed authentication by either the buyer or the trader which is done through their digital signature. For trade confirmation, we generated a QR code on the mobile app which contained encrypted information regarding the Trader. When the trader scanned the code, the application decrypts the information and hits an API which verifies the information and authenticates the trade.





The most remarkable thing here was that each considerable step required the digital signature of the party. This signing was authenticated by the Notary. Now, the notary is another node on the Corda network which is responsible for various tasks one of which is network mapping where it maps the digital signature with the party. Therefore, there is no chance of faking a signature or denying it. Another benefit of having a notary was that it is leveraged to eradicate the need for a third party between trades.

After the completion of the trade, we also added a feature where the trader can request a loan from a finance provider registered on the network. The trader has the freedom to choose from a number of finance providers and request a loan by entering the necessary details. These details are stored in the form of a state on the Corda ledger which is shared with the finance provider. From here, we developed three scenarios. One where the request is declined, one where the request is accepted and one where the finance provider generates a counteroffer on the set terms. When a mutual agreement is reached, a PDF with all the details of the loan is generated which is shared between both the parties.



This marked the completion of our product and to put our experience in one word, it was amazing. Our whole team was exposed to a unique set of tools and skills and the results reflected that. For instance, our DevOps guy became the first developer, globally, to deploy the Corda application on a private Cloud (AWS).

Working on Corda made us realize that all the assumptions were true. Hence, it took us no time to add it in our stack and soon it became one of our crown-jewels. Corda's simple yet powerful features are the reason we favor it as our primary option for Blockchain application development. As of now, we have a comprehensive R&D lab dedicated to providing the optimum Blockchain solutions to our clients and a major part of that lab is our Corda certified team.

