

Innovation of payments

Programmable Money

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Innovation of payments - Programmable Money

As global payments continue to become faster and more cost-effective, it will be increasingly challenging for banks to distinguish their offerings for end clients. Soon, outdated practices such as obscure cut-off times and non-transparent foreign exchange rates will be a thing of the past. In the future, the victors will be those banks capable of developing intelligent money solutions that cater to clients' broader business needs. This entails devising innovative approaches for automation, new business models, predictability, transparency, and risk management. Achieving this feat requires embracing cutting-edge solutions based on distributed ledger technology (DLT) and tokenization.

The banks that emerge as tomorrow's leaders will be those that actively experiment with and engage in real business projects leveraging programmable money on DLT today. Well-established banks, often encumbered by old legacy systems, may struggle to adapt if they do not take action now. In contrast, smaller and more agile players that can swiftly harness the full potential of this technology may emerge as the winners in the upcoming race.

I. Introduction

Global payments are evolving rapidly, becoming faster and more efficient. This progress is evident within both existing infrastructures, with initiatives such as SWIFT GPI, and alternative payment infrastructures, such as private networks like Thunes and Rapyd catering to retail payments. Additionally, global banks are offering proprietary "one bank" solutions, enabling real-time global payments within their group structures. These solutions have significantly enhanced the speed and efficiency of global payments. However, numerous inefficiencies persist.

By relying on traditional infrastructure, these solutions necessitate intermediaries, reconciliation, cut-off times, and lack a streamlined method for transferring value. New private networks often depend on prefunding, making them capital inefficient, while SWIFT gpi remains a messaging service only. The global banks' "one bank" platforms can move value within the group but face challenges in markets without access, and clients typically prefer not to be dependent on a single supplier.

The most significant hurdle for legacy solutions is their inability to address clients' growing demands for payment automation, new business models, efficiency, and risk management. The differentiating factor in the future will not be the speed or cost of the payment, but rather the ability to create intelligent money that adapts to clients' broader business needs. Legacy infrastructure will fall short in meeting these demands. Banks must adopt distributed ledger technology (DLT) solutions today to provide the innovative solutions of tomorrow.

II. Distributed Ledger technology (DLT) and Programmable money

The advent of blockchain technology and cryptocurrencies has facilitated the development of programmable money, which holds the potential to revolutionize the financial industry by eliminating intermediaries, reducing transaction costs, and enabling real-time settlement.

Central Bank Digital Currencies (CBDCs) are emerging across various jurisdictions; however, they are complex to implement, typically restricted to a single jurisdiction and currency, and will require considerable time before reaching a state where companies can engage in programmable cross-border trade using CBDCs. Today's cryptocurrencies and stablecoins offer alternative solutions to CBDCs, but their adoption may be hindered by the necessity for companies to transition from traditional banking to crypto wallets.

Moreover, significant credit risks are associated with using cryptocurrencies, as evidenced by high-profile collapses of crypto projects. This has raised concerns regarding the stability and reliability of cryptocurrencies as a medium of exchange.

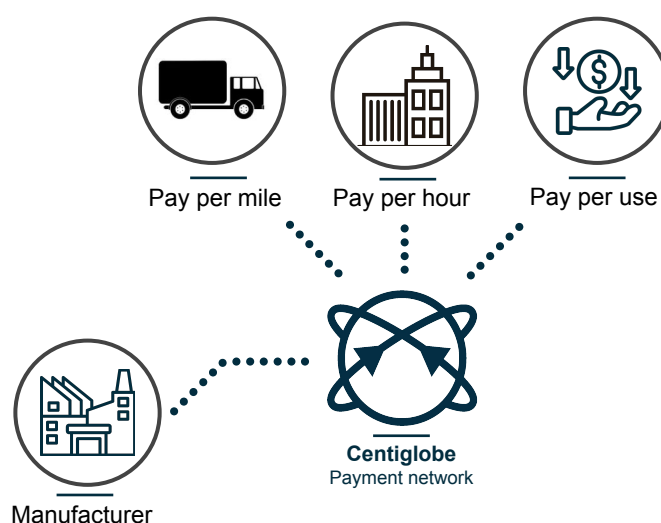
Despite these challenges, the potential benefits of programmable money are substantial, and the financial industry is actively exploring the application of this technology to transform how financial transactions are conducted.

III. Programmable Money Solutions

Cryptographic tokens and the development of decentralized applications that operate autonomously on peer-to-peer networks pave the way for innovative payment solutions. Smart contracts enable the introduction of programmable money that adheres to pre-defined rules based on various conditions or external data, all automated. These smart contracts can be employed to execute a wide range of use cases for clients. Some of the most prominent include:

- **New business models**

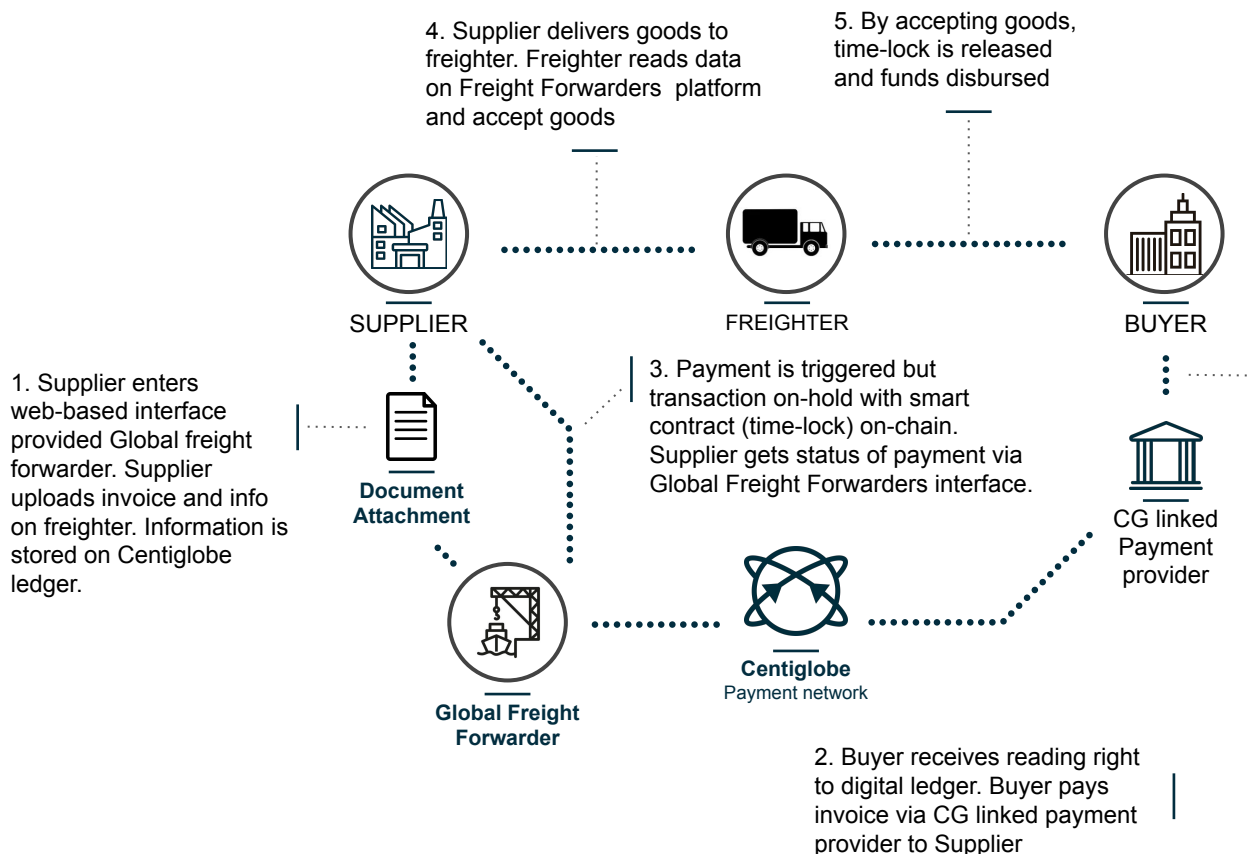
Programmable money can facilitate bespoke solutions for clients, allowing them to pay only when using a product or pay additional pre-defined fees to reward high quality or other agreed-upon KPIs. This creates "win-win solutions" by ensuring clients' efficient use of a product and enabling suppliers to charge more if the product meets quality targets. Applicable to both physical goods and services, programmable money can enable pay-per-use models, such as charging for a truck based on miles driven or for fuel savings achieved relative to miles travelled. These payment models offer more flexible and tailored pricing structures, benefiting both customers and suppliers.



- **Payments in global trade and trade finance**

Programmable money can facilitate trade finance by automating the payment process for cross-border trade. For instance, funds can be automatically released to a supplier upon successful delivery of goods, eliminating intermediaries and reducing transaction costs. This is particularly valuable when replacing open account payments and documentary collections, where buyers and sellers face counterparty risks. Payments could also be triggered by third-party inspections or by sensors guaranteeing specific quality parameters, such as temperature or humidity.

While initiatives like Marco Polo and We.trade have encountered challenges, numerous opportunities still exist, particularly with solutions that require only one bank to be connected to the network managing the smart contracts, without necessitating a consortium of global banks for end-customer solutions.

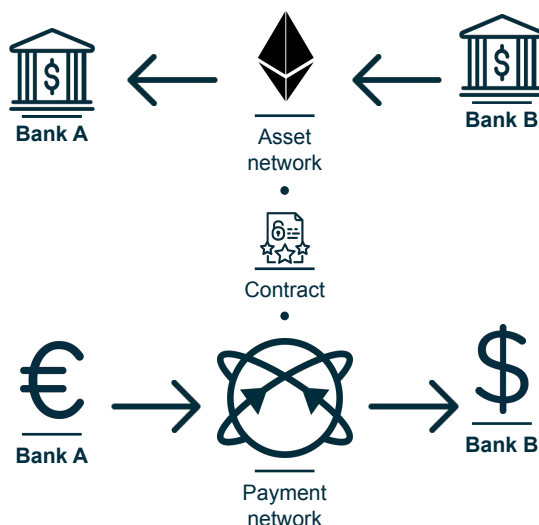


- **Decentralised “Delivery vs payments” (DvP)**

Settling assets between two unknown parties typically necessitates an intermediary to mitigate risks. By utilizing DLT and smart contracts, intermediaries can be eliminated, and assets can be settled without risk to any party. Integrating two networks, such as a public network like Ethereum for asset holding and a private payment network like Centiglobe, enables the synchronization of value transfers across both networks.

This is managed by smart contracts employing time locks and atomic swaps. Use cases include traditional securities as well as new assets found on tokenization platforms, where buyers can invest in tokenized real estate, intellectual property rights, royalties, and more.

As assets change hands, fiat cash moves simultaneously on the DLT payment network, enabling payments in any currency against any tokenized asset. In the future, smart contracts could replace clearinghouses and other intermediaries, ensuring a real-time settlement cycle with DvP at a significantly lower cost.



- **Tokenized invoices**

Programmable money can also be used to tokenize invoices, turning them into liquid instruments that can be automatically executed and sold. This can help companies to optimise their cash flow and reduce credit risk by providing access to financing options based on their receivables. Tokenized invoices can be traded on blockchain-based marketplaces, providing a transparent and secure way to access liquidity. Factoring, which involves selling accounts receivable to a third party, can also be facilitated through tokenized invoices, providing additional financing options for businesses.

V. Centiglobe SMARTdPAY

Centiglobe SMARTdPAY offers a comprehensive suite of smart contracts that empower clients to devise innovative solutions to existing challenges. By utilizing Centiglobe's DLT-based payment platform, clients can tailor payments to meet their specific business requirements. Centiglobe facilitates pay-ins and pay-outs in fiat currency directly from users' banks, while offering the full functionality of tokens for value transfers. Clients can program tokens based on external data or by leveraging smart contracts on other networks, such as Ethereum, without the need for an external crypto wallet.

By concentrating solely on the payment aspect of the value chain, Centiglobe can minimize the number of participants, thus avoiding the bottlenecks frequently encountered in many DLT initiatives that depend on network effects to function.

Programmable money is not a distant concept. With Centiglobe, it is a reality available today. To learn more, please contact us.



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