CIRCLE

Circle Payments Network

WHITE PAPER

Contents

Circle Payments Network brings financial institutions together in a compliant, seamless, and programmable framework to orchestrate global payments in fiat, USDC, and other payment stablecoins.

Abstract

Stablecoins have long held the promise of becoming a new foundation for payments and money movement on the internet. However, until very recently, they were predominantly used as digital cash within global digital asset markets and decentralized finance (DeFi). With the launch of the Circle Payments Network (CPN), Circle is bringing stablecoins one step closer to realizing their potential to upgrade the global payment system—much like previous eras of internet innovation transformed media, commerce, software delivery, communications, and other industries. These shifts enabled radically better customer experiences, reduced costs, increased speed, and fueled economic growth for individuals and businesses worldwide.

To help realize this potential, CPN is designed to overcome many of the infrastructure barriers that have so far limited the adoption of stablecoins in mainstream payments. These include onboarding challenges, ambiguous compliance requirements, technical complexities, and concerns about the secure storage of digital cash.

CPN brings financial institutions together in a compliant, seamless, and programmable framework to orchestrate global payments in fiat, USDC, and other payment stablecoins. Business and individual customers of these financial institutions can enjoy payments that are faster and cost less than traditional payment systems, which are constrained by often fragmented networks or closed systems. Crucially, CPN serves as the foundation for an ecosystem that eliminates many of the technical complexities and operational hurdles that have slowed mainstream stablecoin adoption to date, including the need for businesses to custody their own stablecoins. CPN also opens the door to the breakthrough of programmable money, unlocking a completely new utility for money in global value exchange.

This white paper sets forth the design principles of CPN, outlines initial and near-term use cases, and suggests future use cases and growth opportunities. This paper is designed to help financial institutions, payment companies, app developers, innovators and other stakeholders understand their role in building on and leveraging CPN—and how the network enables them to innovate and deliver the benefits of stablecoins to their customers.

Introduction

Our global digital economy is more interconnected than ever, yet unlike almost every other sector of the economy, the infrastructure that underpins money movement remains largely reliant on frameworks established in the pre-internet era.

Until very recently, delivering a "money protocol" for sending value in a fully native digital form across the internet was not possible. ACH and other similar protocols—now core components of today's fragmented global payments landscape—emerged worldwide in the early 1970s. Recent developments (such as SEPA in the eurozone, and national real-time payment systems like PIX in Brazil and UPI in India) have improved domestic transaction speed, but they still lack global interoperability and scale and do not take advantage of the openness and extensibility of programmable money built on open blockchain networks.

Businesses and people around the world pay the price of relying on this legacy payments infrastructure. McKinsey[1] reports that global payments industry revenue has surpassed $2.4 trillion annually. Much of this 'revenue' comes in the form of fees charged to both senders and receivers, reflecting the operational complexity and intermediary layers of legacy infrastructure—effectively functioning as a toll on global commerce and households.

The current reality is that international wire transfers can cost up to $50 per transaction, with extra fees often taken by intermediaries along the way. According to the World Bank[2], in the second quarter of 2024, the global average cost of sending $200 was 6.65%. Additionally, the need to convert across a wide array of fiat currencies adds to these challenges by introducing expensive FX fees and price volatility.

It is time for a new way to move money globally—one that is always-on, seamlessly connected, and designed to eliminate the inefficiencies of legacy payment systems, while building upon and integrating with the strong foundations of the traditional financial system.

The fragmented settlement processes of the correspondent banking system continue to impose significant economic costs on businesses and society alike. For importers and buyers, having to wait days for an outgoing payment to clear can hamper their cash position and drive complexity in liquidity planning. For exporters and sellers, unpredictable multi-day settlement windows mean they must fund more of their short-term operations with costly borrowed working capital. Remittance recipients who depend on cross-border transfers for food, shelter, and other basic necessities risk seeing critical income eroded by traditional intermediaries while enduring lengthy payment delays, and in some cases, the inherent risk of handling cash in environments susceptible to physical crime.

A transformation is long overdue. While the internet has revolutionized nearly every aspect of global commerce over the last several decades, the way money moves is still rooted in fragmented legacy networks that lack transparency, efficiency, and a path for open innovation. While some governments have implemented successful national real-time payment systems, these solutions do not scale globally and offer limited access for developers.

In the half century since the emergence of early payment messaging and settlement systems like ACH, global communications have advanced to connect people instantly, across the world. Billions of people can now stream movies on mobile phones while riding the subway, access the sum of human knowledge instantly at virtually no cost, and buy or sell nearly any product from every corner of the world.

It is time for a new way to move money globally—one that is always-on, seamlessly connected, and designed to eliminate the inefficiencies of legacy payment systems, while building upon and integrating with the strong foundations of the traditional financial system.

This vision is becoming a reality with the introduction of CPN. In collaboration with leading global banks, payment service providers, and other digital asset native financial institutions, CPN will serve as a new protocol layer in a comprehensive, open and internet-based settlement system—with USDC, EURC, and eventually other regulated payment stablecoins at its core. By connecting open platforms with global scale and fewer intermediaries, CPN enables money to move in a way that is not possible with closed, legacy networks.

CPN serves as a new protocol layer in a comprehensive, open and internet-based settlement system with USDC, EURC, and eventually other regulated payment stablecoins at its core.

Importantly, CPN does not move funds directly; rather, it serves as a marketplace of financial institutions and acts as a coordination protocol that orchestrates global money movement and the seamless exchange of information.

CPN marks the first time a regulated settlement asset in the form of stablecoins is married with an institutional coordination and governance layer purpose-built for financial institutions. This integration connects traditional payment systems to assets like USDC and EURC, while establishing a trusted counterparty framework for more efficient settlement with fewer intermediaries. By introducing a new 'clearing layer' based on compliant, always-on digital dollars, CPN lays the foundation for cross-border settlement at internet scale.

CPN will make it possible for billions of people and tens of millions of businesses to use money and access other financial services in ways that are as transformative as these other global internet utilities. Senders will be able to initiate payments in either fiat or payment stablecoins, while recipients—both businesses and individuals—can choose to retain the stablecoins or convert them to local currency upon receipt. CPN will make nearly instant, borderless payments a widespread reality.

The launch of CPN makes it easier to envision a future where international suppliers receive cross-border payments almost instantly and at low cost, using a modern, compliance-first platform that supports global supply chains; where small merchants can get paid in near-real-time without significant fees eating up several percentage points of sales; and global sellers can reach new markets directly. Content creators can receive small-value payments from consumers, enabled by the cost efficiency of stablecoins. Remittance recipients will gain a greater share of every dollar sent home, boosting purchasing power where it's needed most.

In addition to serving as an upgrade to many of today's institutional payment networks—which are often burdened by legacy infrastructure, closed ecosystems, and slow or expensive settlement—CPN is built to scale as an orchestration layer for modern payment stablecoins and blockchains. While blockchain-based payments have gained traction, they are not inherently frictionless or trusted, especially in institutional contexts where features like settlement guarantees, reversibility, compliance, standardized protocols, and strong security are table stakes. CPN will further reduce the technical complexity and minimize operational and financial challenges that have thus far prevented the adoption of stablecoins into mainstream payments and commerce, paving the way for a more efficient, inclusive, innovative and transparent financial ecosystem.

From a cost and speed perspective, CPN presents a compelling alternative to traditional cross-border payments. While there are fees associated with purchasing stablecoins and converting them back into fiat, in many markets outside the U.S., these "onramp and offramp" costs are coming down and can be lower than sourcing dollars through banks. Traditional dollar transfers can be expensive and slow for both senders and receivers, making both counterparties more reliant on short-term working capital financing (as noted above). By enabling near-instant settlement and reducing dependence on intermediaries, CPN can unlock significant cost efficiencies. Moreover, as an open platform, it has the potential to foster a competitive onchain marketplace for onramps and offramps, FX, and other services, further lowering costs and improving access.

About USDC and EURC

USDC and EURC are two of the world's leading regulated stablecoins. USDC and EURC are issued and operate natively on the internet, utilizing blockchain networks to empower businesses, builders, and individuals with near-real-time, low-cost and programmable global transactions.

CPN is transparent, secure, scalable infrastructure for financial institutions to better serve their business and individual customers. Critically, CPN will offer the ability to unlock these efficiencies without sacrificing compliance. Circle has built a rigorous governance framework for CPN that requires participating financial institutions to meet global Anti-Money Laundering and Countering the Financing of Terrorism (AML/CFT) standards, along with economic sanctions requirements.

Importantly, CPN does not move funds directly; rather, it serves as a marketplace of financial institutions and acts as a coordination protocol that orchestrates global money movement and the seamless exchange of information. As the network operator, Circle defines the CPN protocol and provides application programming interfaces (APIs), developer software development kits (SDKs) and public smart contracts to orchestrate global money movement.

The growth and success of CPN will both depend on and unlock economic value for a broad ecosystem of participants beyond Circle. This network will be a space where banks, payment companies, onramp and offramp providers, app developers, and other regulated stablecoin issuers can innovate together to deliver greater value and improved experiences for their own customers. Built on open, public blockchain infrastructure, CPN and regulated payment stablecoins provide a powerful foundation for builders to launch onchain applications that use these networks to move money seamlessly.

CPN provides the building blocks for innovators and builders to develop new user experiences and support a wide range of payment use cases. Over time, builders will be able to create a vibrant ecosystem of modules and app services on top of CPN—building a third-party marketplace of capabilities for participants and end users of CPN to benefit from, and unlocking a new and powerful distribution platform for fintech developers.

The vision

With CPN, Circle is building a new platform and network ecosystem that will deliver value for every stakeholder in the global economy, helping to accelerate the benefits of the new internet financial system:

Businesses

Importers, exporters, merchants, and large enterprises can leverage CPN-enabled financial institutions to eliminate significant costs and friction, strengthen global supply chains, optimize treasury operations, and reduce reliance on costly borrowed working capital.

Individuals

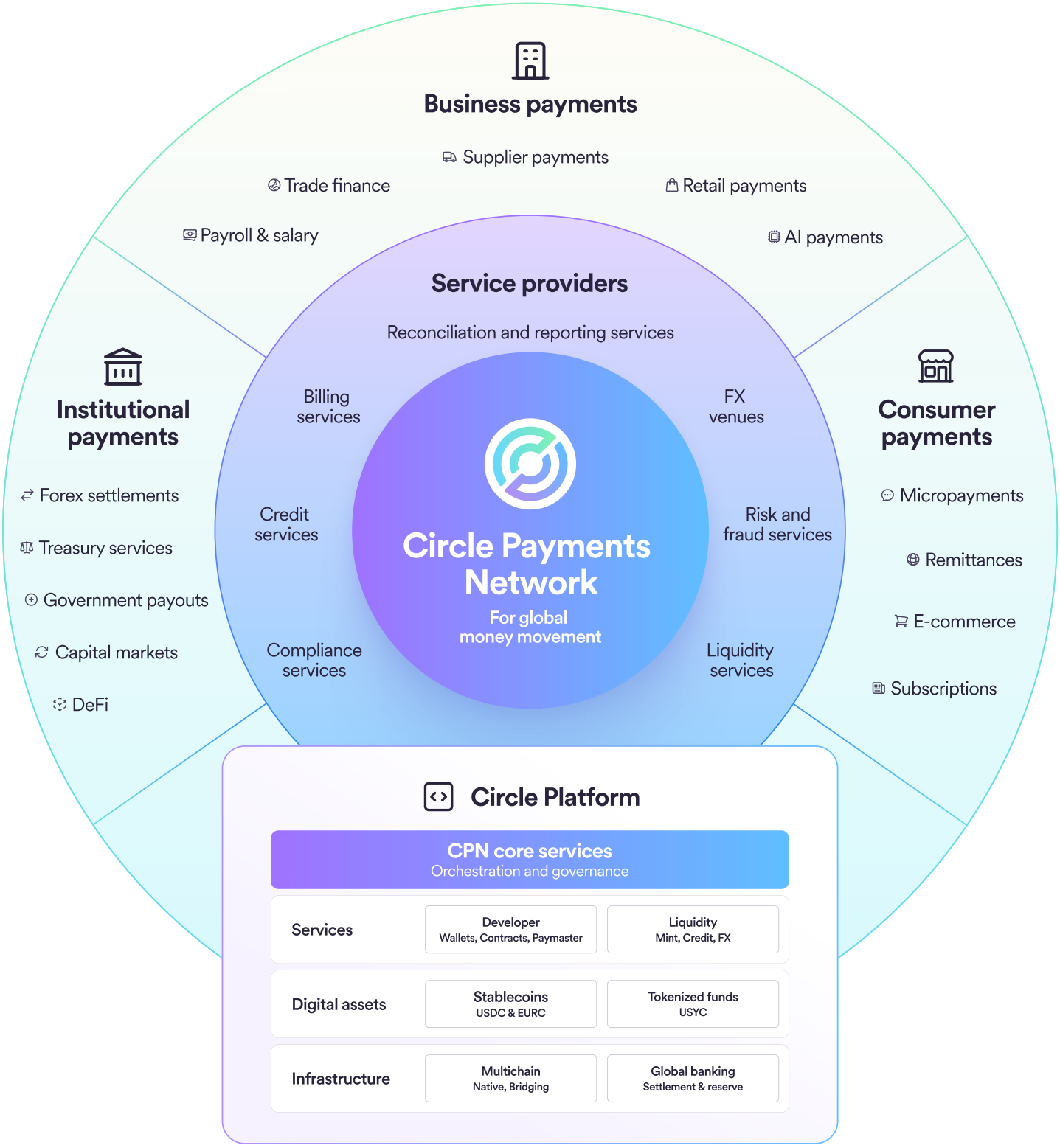
Remittance senders and recipients, content creators, and other individuals that tend to send or receive small value payments will realize more value, and the financial institutions that use CPN will be able to deliver these improved services faster and with less expense and complexity.

Builders

Banks, payment companies, and other providers can leverage CPN's platform services to develop innovative payments use cases, utilizing the programmability of stablecoins, SDKs, and smart contracts to deliver a thriving ecosystem. Over time, this can unlock the full potential of stablecoin payments for businesses and individuals alike. Additionally, third-party developers and enterprises can introduce value-added services, further expanding the network's capabilities.

All CPN network participants and ultimate end-users will be able to benefit from open, constantly upgradable money movement infrastructure that will not only lower the cost and increase the speed of cross border payments, but will also ensure technological readiness for the internet financial system.

CPN strategy and vision

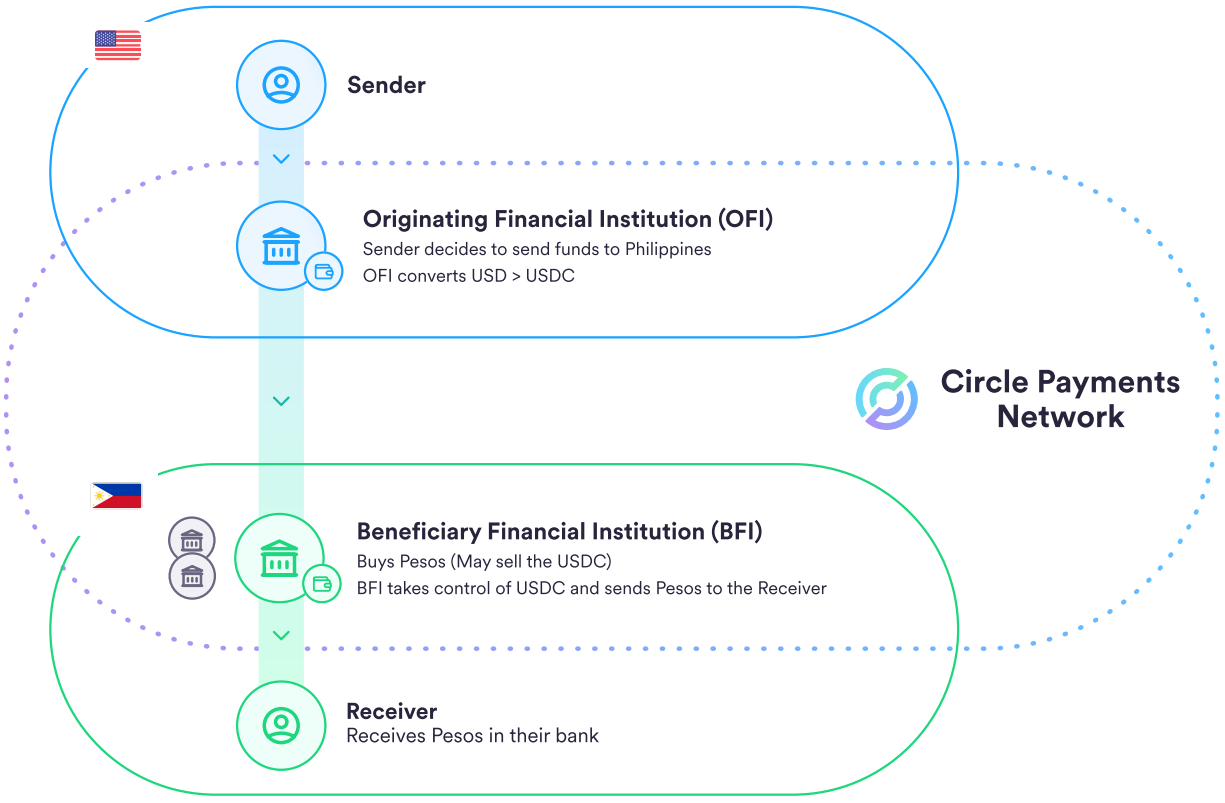


CPN use cases

CPN is designed to support a wide range of payment and value exchange use cases by enabling seamless, efficient, and secure transactions using regulated stablecoins across supported blockchain networks.

Its compliance-driven architecture allows an Originating Financial Institution (OFI) to discover and connect with a Beneficiary Financial Institution (BFI) through CPN, while empowering builders to develop innovative solutions for individuals, businesses, and institutions.

End-to-end cross-border payment settlement with CPN



Business payments

Supplier payments

Accelerate and simplify cross-border payments for companies by cutting settlement times, and eliminating intermediaries.

A manufacturing company in Mexico needs to pay a steel supplier in Germany but wants to avoid high FX fees and multi-day bank transfers. The company's OFI converts MXN to USDC, leverages CPN to discover BFIs in Germany and sends USDC, who then seamlessly converts the USDC to EUR and settles the payment instantly into the supplier's account.

Retail payments

Elevate global online commerce with secure, efficient, and versatile payment options.

A fashion retailer in Brazil sells to U.S. customers. The retailer's BFI discovers an OFI via CPN to collect USD payments. The OFI converts the USD into USDC and sends it to the BFI, who then seamlessly exchanges USDC for BRL, or holds it as USDC with a digital asset custodian on behalf of the retailer, who receives funds instantly compared to traditional payment processors, with the option of keeping working capital in digital dollars.

Trade finance

Streamline and secure international trade payments.

A U.S. textile importer places an order with an Indian manufacturer and seeks to minimize the timelines and costs associated with traditional trade finance. The importer's OFI converts USD to USDC and, through CPN, connects with a BFI in India to transfer the funds. The BFI holds the USDC in escrow, managed via a smart contract, and verifies shipment documents before settling INR to the manufacturer. This approach enables faster settlement and reduced counterparty risk, while leveraging the innovation of smart contracts for escrow services.

Payroll and salary disbursements

Enable companies to process salary payments globally with minimal fees and instant settlements.

A multinational company pays remote employees across multiple countries. Instead of relying on traditional banking channels, it uses its OFI to convert local currency to USDC and distributes salaries instantly to employees through several BFIs discovered via CPN. These BFIs receive USDC from the OFI and facilitate the final payout in each employee's local currency.

AI payments

In the future, CPN will enable autonomous AI agents to send and receive payments on behalf of users or systems, supporting real-time value exchange.

A logistics company uses AI agents to book freight services across borders. When an agent selects a provider in Singapore, it uses a CPN-integrated OFI to convert USD to USDC and automatically sends the payment to a BFI in Singapore, which offramps it to SGD. The entire payment flow is executed programmatically using smart contracts—minimizing manual steps and enabling intelligent, cross-border machine-to-machine payments.

Consumer payments

Remittances

Empower individuals with fast, cost-effective remittance services that avoid high fees and delays.

A user in the United States wishes to send money to a family member in the Philippines. The remittance company, an OFI in the U.S., converts USD to USDC and simultaneously transfers USDC to a local BFI in the Philippines, dynamically discovered via CPN, to deliver PHP to the family member in near-real-time and at a fraction of traditional remittance fees.

Subscriptions

Support recurring payments for digital services with programmable, stablecoin-based billing.

A digital media platform offers premium subscriptions to users worldwide. Each month, a user's wallet initiates a USDC payment via an OFI, which routes the payment to the platform's BFI discovered using CPN. The BFI receives the funds, holds them as USDC with a digital asset custodian on behalf of the media platform or converts them to local fiat if preferred, and credits the media platform.

Micropayments and content monetization

Support content creators and digital services with instant, low-cost micropayments.

A content creator in Brazil receives micro-donations from global followers through CPN, using local OFIs and a CPN-enabled BFI. Instead of facing long delays and high platform fees, supporters send stablecoins instantly—enabling fast, low-cost monetization.

E-commerce

Expand consumer access to global online marketplaces with fast payment experiences.

A customer in the U.K. purchases electronics from a seller in South Korea through an international e-commerce platform. At checkout, the customer pays in GBP via a local OFI, which converts the funds into USDC and transfers them to a BFI in Korea. The BFI offramps the USDC to KRW and deposits it into the seller's account.

Institutional payments

Capital markets settlement

Improve trading by enabling faster, transparent settlements between financial institutions, reducing counterparty risks and operational costs.

A U.S. asset manager executes an OTC bond trade with a European investment bank but wants to avoid T+2 settlement delays, with related capital inefficiencies and counterparty risks. The asset manager's OFI converts USD to USDC and, leveraging CPN, connects with and transfers USDC to a BFI in Europe that instantly settles the transaction in EUR for the investment bank.

Foreign exchange (FX)

Simplify currency conversion by making multi-currency operations efficient, addressing challenges such as expensive foreign exchange rates from traditional providers and the complexity and delays of multi-currency management.

A European investment firm wishes to fund a real estate acquisition in Japan, avoiding high FX fees and delays. The OFI for the investment firm converts EUR to EURC, which a BFI in Japan receives and seamlessly exchanges for JPY at a competitive FX venue onchain and settles instantly.

Treasury services

Simplify fund repatriation by enabling efficient conversion of foreign-earned revenue back to a company's home market.

A U.S. based enterprise software provider licenses cloud-based solutions to businesses across Southeast Asia. To repatriate revenue from the region, the company's BFI in the U.S. uses CPN to discover a local OFI in the Philippines. The OFI collects PHP payments from enterprise clients, converts the funds into USDC, and transmits them to the U.S. based BFI. The BFI then offramps the USDC into USD and deposits it into the company's treasury account—enabling faster and compliant global revenue consolidation.

Government and humanitarian payments

Provide a secure, reliable and efficient channel for large-scale disbursements—from disaster relief funds to institutional transfers.

An international NGO distributes disaster relief funds using stablecoins. The NGO initiates the payment through its OFI, which converts local fiat into USDC and transfers it to a BFI operating in the recipient's region. The BFI then either delivers the funds directly to recipients' digital wallets or offramps the USDC into local fiat and deposits it into their bank accounts, ensuring transparency, accelerating fund delivery, and enhancing accountability for aid disbursements.

Decentralized finance (DeFi) integrations

Support DeFi innovators by providing a foundation for lending, borrowing, saving, and more, unlocking the power of onchain finance at mainstream scale.

A duly licensed and regulated DeFi lending platform integrates USDC and EURC to offer loans and savings products. With CPN's infrastructure, the platform can facilitate seamless cross-border transactions, reduce volatility, and support compliant institutional customer flows, while building trust among a diverse user base.

CPN key stakeholders and roles

CPN ecosystem comprises key stakeholders and participants who play a vital role in facilitating global payments and advancing technology innovation while driving network governance, economic value creation and network adoption.

CPN governing body

Circle serves as the primary governing and standard-setting body for CPN, and also acts as the network operator.

Circle's primary responsibilities include:

- Establish and maintain the Circle Payments Network Rules ("CPN Rules") that govern eligibility, operations, and compliance for all participants.
- Develop and maintain core infrastructure—smart contracts, APIs, and SDKs—for seamless payment settlement of send/receive transactions across blockchain networks.
- Operate the coordination protocol for member and price discovery, payment routing and settlement between counterparties.
- Facilitate standardized and automated information sharing between members to enable compliance with Travel Rule.
- Verify the eligibility of financial institutions, approve their participation in the network, and issue credentials confirming adherence to CPN standards for licensing, AML/CFT, sanctions compliance, and financial strength.
- Oversee member compliance with regulatory requirements, including AML/CFT and sanctions, through ongoing risk-based reviews.
- Plan and manage network security, incident response, and infrastructure to ensure operational integrity and resilience.
- Onboard pre-vetted third-party service providers and modular applications that meet CPN's compliance, security, and performance standards.

CPN members

Members, also known as Participating Financial Institutions (PFIs), are the backbone of CPN. They serve as counterparties that originate, facilitate, or receive payments across the network and execute transactions in compliance with CPN Rules and governance standards.

PFIs include financial institutions such as Virtual Asset Service Providers (VASPs), both traditional and crypto-native Payment Service Providers (PSPs), and conventional or digital banks. Depending on their role in a transaction, PFIs may act as either Originating Financial Institutions (OFIs), which initiate payments on behalf of senders, or Beneficiary Financial Institutions (BFIs), which receive stablecoin payments and either facilitate last-mile fiat payouts via local payment systems or provide stablecoin custody on behalf of recipients.

CPN members' core responsibilities include:

- Maintain proper licensing and ensure ongoing compliance with applicable regulations, including AML/CFT and sanctions, across all relevant jurisdictions as well as adherence to CPN Rules.
- Participate in Circle's eligibility process and maintain up-to-date verification of legal entity information, compliance posture, jurisdictional scope, and risk profile.
- Perform risk-based evaluation of counterparties and transactions as per their compliance obligations, leveraging information collected and oversight performed through CPN.
- Execute payments through a suite of technology services and protocols, as detailed in the CPN Rules, based on their role as an OFI or BFI.
- Adhere to CPN's technical and infrastructure requirements, including secure integration, SLA performance, transaction monitoring, and data protection protocols.
- Share required originator and beneficiary information, in accordance with CPN's compliance framework for Travel Rule, requests for information (RFIs), and other oversight requests.
- Monitor transactions to detect and report suspicious activity in accordance with applicable regulations.
- Contribute to CPN governance through structured feedback, operational reviews, and member reputation scoring to enhance transparency and support continuous improvement.
- Provide timely support and resolution for network inquiries from other members or end users.
- Develop and deliver innovative payment use cases by leveraging CPN's developer SDKs, regulated stablecoins and smart contract infrastructure.

CPN end users (businesses and individuals)

End users are the ultimate senders and beneficiaries of payment transactions—while they do not directly interact with CPN, they benefit from lower costs, faster settlements, greater transparency and ongoing innovation, with senders initiating payments via an OFI and beneficiaries receiving payments via a BFI.

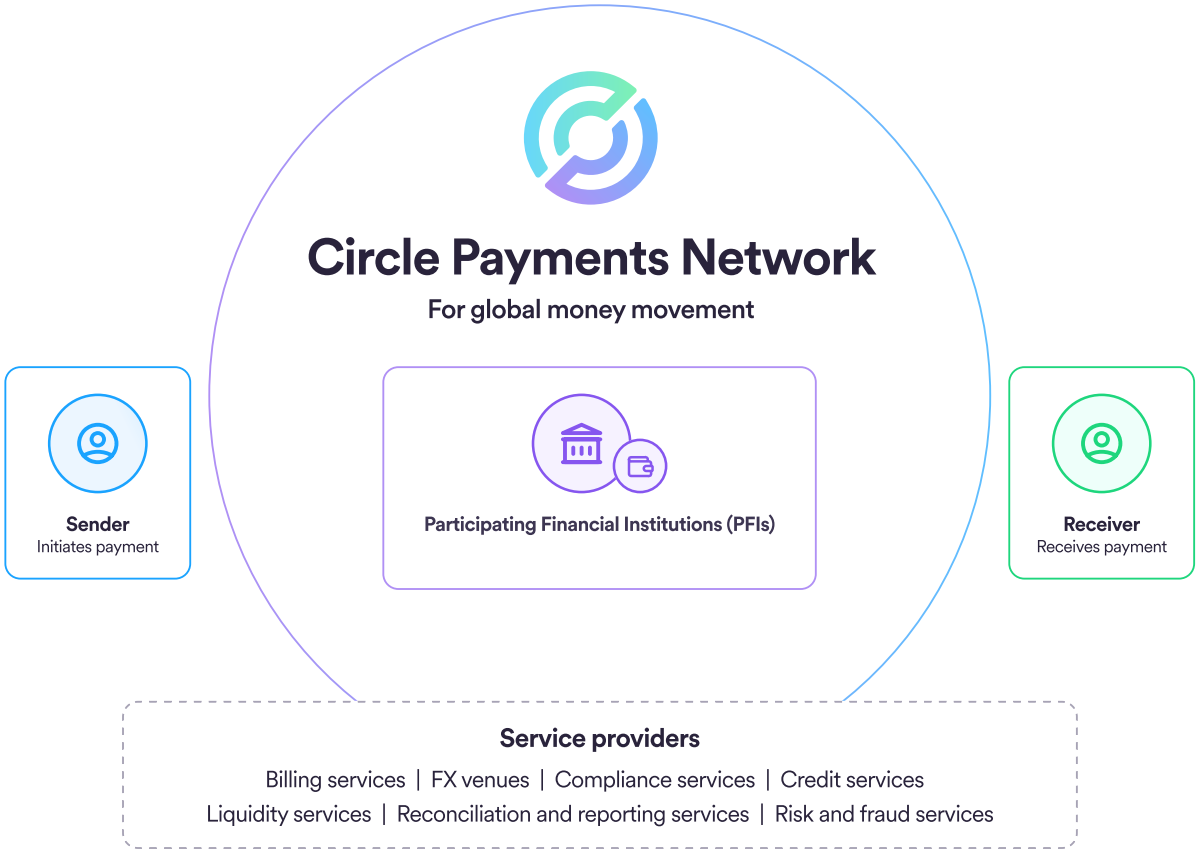
CPN service providers

These entities, both financial institutions (FI) and non-financial institutions (non-FI), offer value-added technology solutions and financial services to CPN members and end users.

They include:

- **Liquidity providers and FX venues:** These entities facilitate efficient market-making, price discovery, and currency conversion for stablecoin transactions within CPN. They provide liquidity for cross-border stablecoin settlements and ensure competitive FX rates.
- **Stablecoin issuers:** These institutions issue regulated payment stablecoins, that serve as the primary medium of exchange within CPN. Stablecoin issuers ensure transparent reserves, regulatory compliance, and underlying fiat liquidity for seamless cross-border transactions.
- **Technology solution and financial services providers:** These service providers equip CPN members with a range of services such as fraud and risk management, wallet infrastructure, custody solutions, billing and invoicing, and compliance and transaction monitoring solutions, supporting their business and operational needs.

CPN stakeholders and the ecosystem



CPN governance, eligibility and network operations

CPN operates under a collaborative and transparent governance framework designed to prioritize compliance, security, and trust within the network. The framework covers three key aspects of governance:

- **Eligibility reviews and oversight:** Circle serves as the primary governing body, responsible for setting stringent eligibility standards as detailed in the Circle Payments Network Rules, and facilitating the integration of regulated payment stablecoins into the network.
- **Network functionality and operations:** Core functionality enables seamless, compliant transactions, but also ensures operational rigor, and ongoing improvement.
- **Transparency and stakeholder engagement:** By actively engaging diverse stakeholders—including financial institutions, regulators, businesses, and builders—CPN aligns with global standards to foster trust, accelerate adoption, and promote sustainable network ecosystem growth.

- Duly licensed financial institutions only
- Mandatory AML/CFT and sanctions compliance
- Secure transaction data sharing, including Travel Rule
- Ongoing audits and oversight

Eligibility reviews and oversight

CPN's governance framework defines the eligibility standards, credentialing protocols, and integration of regulated stablecoins to ensure trusted participation across the network—for financial institutions, regulated stablecoin issuers, and service providers alike.

Strong eligibility criteria

Members must meet comprehensive eligibility requirements before being granted access to the network. This includes holding all necessary licenses, implementing sanctions and AML programs aligned with local regulations and global norms, maintaining reasonable security controls, and demonstrating sufficient financial strength. As the network operator, Circle evaluates all prospective members before enabling access and periodically reevaluates them based on risk. Members licensed under robust regulatory regimes, as established by international compliance standard-setting bodies such as FATF, are subject to standard reviews, while others are subject to more in-depth evaluations. Eligibility standards are published, and Circle's assessments may also serve as inputs to members' own counterparty diligence processes.

Member credentials & access

CPN issues unique network credentials to eligible members upon successful eligibility verification and approval. Credentials enable counterparties to identify each other and retrieve counterparty information in a secure manner, promoting transparency, facilitating informed risk assessments, and increasing the efficiency of counterparty due diligence. This credential captures a defined set of attributes—including membership status, jurisdictional scope, and eligibility information—which are continuously monitored and updated to reflect changes in risk posture.

Integration of regulated payment stablecoins

CPN's governance framework outlines a structured evaluation and approval process for integrating new regulated payment stablecoins into CPN. Prospective stablecoins must undergo rigorous assessments against CPN's stringent eligibility standards, including factors such as regulatory compliance, transparent reserves and attestations, banking rail availability, underlying fiat liquidity, risk management standards, information and cybersecurity capabilities, and reporting practices. Only stablecoins that fully satisfy these criteria and receive approval from the governing body may operate within the network, ensuring they contribute to a stable, secure, and efficient network ecosystem.

Network functionality and operations

CPN empowers members to conduct secure, real-time transactions through a robust operational framework that ensures consistency, scalability, and resilience. This framework includes transaction orchestration, operational support, incident response, and infrastructure management.

Transaction orchestration and risk management

Transactions within CPN are orchestrated through a suite of technology services and protocols, ensuring seamless execution between participating members. Additionally, network members continuously monitor transaction flows using automated alerts provided by CPN, along with periodic risk assessments focused on transaction anomalies, partner performance—such as evaluating failed transaction rates, SLA breaches. Together, these measures proactively mitigate operational risks and help preserve the reliability and efficiency of the network.

Member operational support

CPN provides well-defined operational guidelines, including service-level agreements (SLAs) as defined in the CPN Rules, that include expectations for uptime, transaction speed, dispute resolution, and timely information sharing. The network also standardizes the exchange of transaction and counterparty data to streamline operations by reducing the need for bespoke coordination.

Incident and crisis management

CPN maintains detailed protocols for managing security incidents, regulatory compliance issues, and system outages. These include pre-defined communication channels with members and a transparent and impartial resolution process, ensuring swift action and effective dispute management, whether related to compliance or transactional issues.

Infrastructure scalability and planning

CPN's infrastructure is continuously monitored through observability tools that track throughput, latency, and error rates. Automated performance monitoring and routine load testing allow the network to scale in response to demand. Circle works with vetted infrastructure and cloud partners to ensure elastic compute and storage provisioning. Scalability reviews and corridor-level stress tests validate readiness for growing volumes and network expansion.

Transparency and stakeholder engagement

CPN governance is built on transparency, fostering trust and confidence among all participants. Circle, as the governing body, with input from advisory committees, acts on strategic recommendations that strengthen the governance framework. CPN conducts regular surveys, focus groups, and structured reviews to capture member feedback and assess service quality. These inputs drive continuous improvement and help ensure the network evolves to meet participant needs. Independent audits and periodic public reports on transaction volumes, system uptime, and member compliance further reinforce operational integrity and accountability.

CPN member and end-user representation, along with regulatory engagement, play a vital role in the network's evolution. CPN members are encouraged to actively contribute to the development of network rules and technical standards by offering recommendations and operational insights that help shape the network's strategy and growth.

Additionally, Circle's financial services arm brings a strong track record of ongoing engagement with global regulatory bodies—an asset that can be leveraged to ensure CPN remains aligned with international standards—particularly international AML/CFT and FATF Travel Rule standards—and operates in a secure, trusted, and compliant environment.

CPN core services

CPN serves as a coordination protocol purpose-built for stablecoins, enabling seamless, compliant, and programmable global transactions.

It leverages public blockchain networks for final settlement while optimizing payment orchestration, compliance-related data exchange, and intelligent routing across payment stablecoins and network members. Stablecoins serve as the foundational digital asset class within CPN, providing the stability, interoperability, and programmability required for high-trust financial applications.

At launch, the network supports USDC and EURC, with plans to extend support to other regulated payment stablecoins that meet CPN's rigorous governance and eligibility standards. Over time, CPN will serve as a foundation for builders to develop interoperable modules and app services that expand the network's utility and unlock new use cases for global payments and financial innovation.

Powering payments through smart orchestration

CPN's payment protocol is built on a hybrid architecture that combines offchain and onchain systems to help aggregate liquidity and facilitate price discovery among network members. As additional payment stablecoins join the network, CPN will evolve into an onchain FX routing infrastructure, enabling efficient and instant stablecoin-to-stablecoin exchanges while still orchestrating transaction settlements between the OFIs and BFIs.

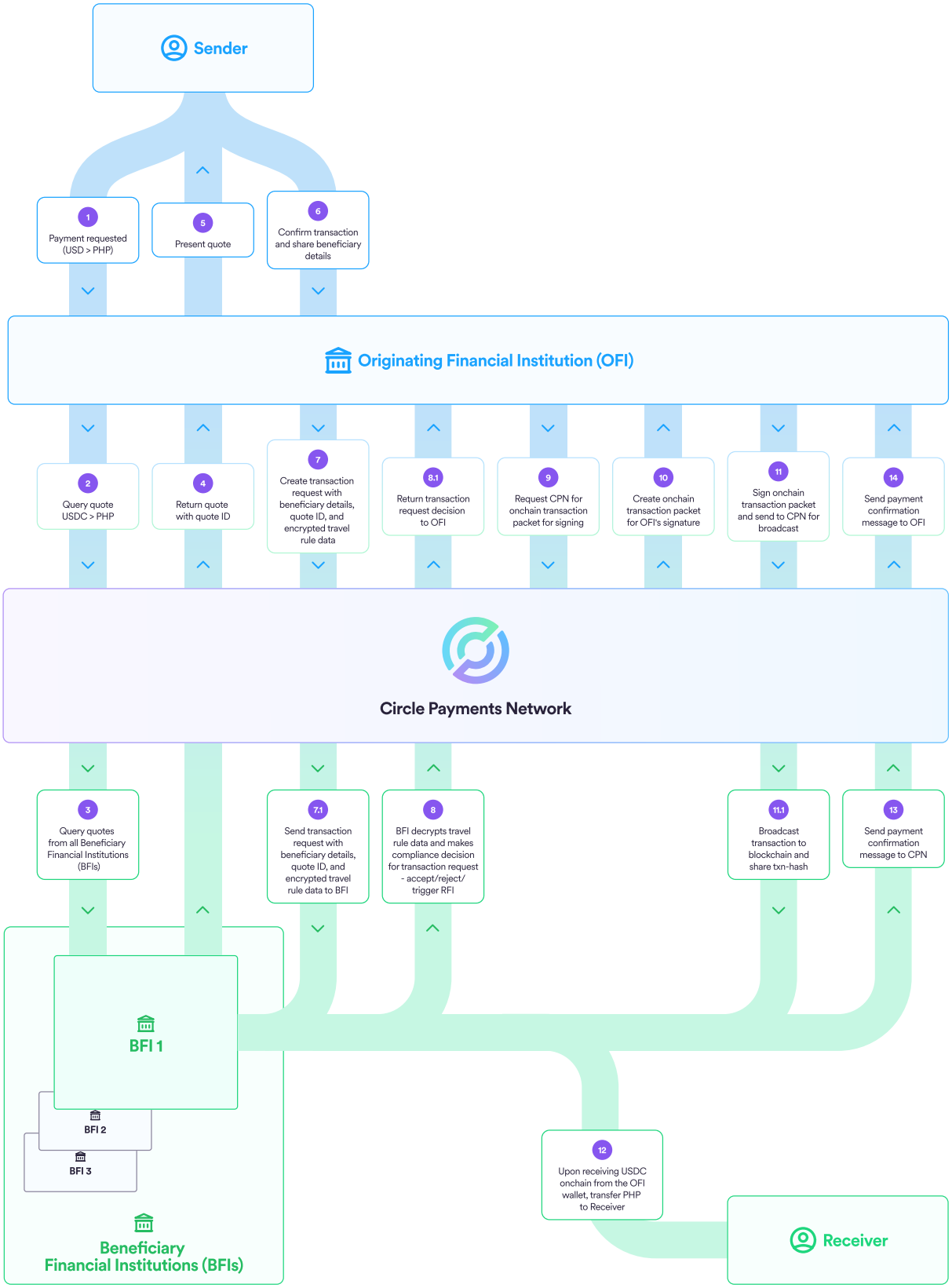
In the initial iteration of CPN, orchestration occurs through offchain API systems that generate transaction requests. The OFI signs these requests to initiate the transfer of USDC or EURC to the designated BFI wallet. At this stage, Circle—acting as both the network operator and governing body—broadcasts the transaction to the appropriate blockchain. This process validates the payment details, ensuring the correct amount and tokens are delivered to the BFI and that all associated fees are covered within the agreed settlement timeframe.

Subsequently, CPN will transition to a smart contract protocol architecture, enhancing network composability and introducing more efficient, value-added features. The CPN Smart Contract Payment Protocol has been designed to orchestrate seamless, onchain payments between network members using stablecoins including USDC and EURC. By leveraging smart contracts, the protocol would enable transactions with minimized risk of errors, automated reconciliation, and efficient fee collection while maintaining a non-custodial design.

Under this protocol, OFIs initiate payments via a smart contract deployed on CPN's supported public blockchain networks. The contract validates key transaction parameters—such as token type, amount, recipient address, and deadline—before executing the payment. Unlike traditional transfers, which are prone to errors and require separate invoicing for transaction fees, the smart contract enforces precise payments and routes transactions efficiently across different BFIs in scenarios involving multiple bids and quotes.

To enhance transparency and security, each transaction is uniquely identified and timestamped, ensuring clear auditability for compliance and reconciliation purposes. Additionally, in the future, the protocol would include an optional "undo" feature, allowing senders a brief window to cancel erroneous transactions before finalization.

Detailed flow of B2B cross-border payments orchestrated by CPN



Optimizing FX through intelligent discovery and routing

CPN enables participating OFIs to discover BFIs and to send stablecoins for payment settlement. For discovery, CPN allows for an OFI to query the network for a given stablecoin or fiat pair. The system allows the OFI to discover the network participants and the corresponding price and liquidity available for the request. Initially, the platform integrates USDC and EURC with local fiat liquidity order books and private liquidity sources. Over time, the system will transition to a fully onchain architecture for FX routing, aggregation and settlement—providing direct access to onchain FX pools, order books, and private liquidity. The network's discovery capability will include order routing and the Request-for-Quote (RFQ) system will further optimize FX execution to meet the performance standards of traditional payment systems.

While the network initially focuses on discovering liquidity across BFIs, it will evolve to include whitelisted onchain venues—such as Automated Market Makers (AMMs), onchain order books, and other liquidity providers—to expand access to stablecoin liquidity. Once discovered, CPN intelligently matches orders across these sources, enabling direct stablecoin FX swaps with built-in safeguards and transparent execution, coordinated by Circle as the network operator.

Settling payments seamlessly across chains

CPN enables native settlement of stablecoins across multiple blockchains, offering a seamless mechanism for cross-chain payment transfers. PFIs bring their preferred blockchains to the network, while CPN orchestrates transactions between the selected source and destination blockchains for efficient payment settlement. Leveraging Circle's Cross-Chain Transfer Protocol (CCTP Version 2), CPN enables fast and secure cross-chain transfers for allowed stablecoins, ensuring transactions retain both speed and integrity across blockchain networks. Initially, the platform will support a limited number of chains at launch, with future expansion to additional blockchains driven by network members' preferences.

Preserving confidentiality with selective transparency

CPN will incorporate advanced confidentiality-enhancing features on public blockchains to protect transactional data designed to assist members with meeting their privacy and operational obligations. These mechanisms allow users to designate certain transactions as confidential, ensuring that sensitive payment information is not permanently visible on a public blockchain. This capability supports a broad range of applications, allowing businesses to maintain confidentiality for critical activities such as business payments, trade finance, and payroll processed through CPN.

Additionally, CPN will employ a confidentiality protocol—defined separately from this white paper—to enable selective disclosure. Under this protocol, transaction details will be accessible only to authorized parties, including transacting counterparties, law enforcement, regulators and auditors, and solely when required for compliance or legal purposes.

Expanding capabilities through composability and trusted interoperability

To expand the value of the network ecosystem, CPN enables pre-vetted third-party protocols to integrate and interoperate with its core infrastructure, enhancing the utility and versatility of its payment capabilities. Circle envisions a diverse range of integrations—including protocols for lending and credit, liquidity aggregation, institutional yield, escrow, subscription services, and more. Participation is limited to protocols that have been whitelisted, audited, and rigorously vetted by Circle, meeting stringent standards for regulatory compliance, security, and liquidity management. Through this composable architecture, CPN aims to unlock a secure, programmable foundation and third-party ecosystem for global payments, financial services, and technology-driven solutions.

CPN economic model

CPN economic model and incentives have been crafted to drive rapid early adoption while establishing a sustainable, long-term revenue strategy for all network members. It aligns incentives across network members, end users, builders, and service providers to encourage network growth and sustainability.

Transactions processed through CPN incur three primary fees: Payout Fees, which compensate BFIs for local fiat disbursement and processing; FX Spreads, reflecting liquidity risk and conversion costs; and CPN Network Fee—a variable basis-point charge, tiered by country group—to support core network functions including compliance, security, infrastructure, and development.

As CPN grows and new value-added services are introduced by Circle and third-party developers via a curated marketplace, additional usage-based fees will be implemented to support and sustain these offerings. These services may include tools for fraud detection, risk management, wallet infrastructure, escrow, billing, and advanced compliance capabilities. First-party (1P) and third-party (3P) service fees will create revenue opportunities for providers and enable financial institutions to tailor payment experiences through modular, plug-and-play offerings.

A portion of network and marketplace fees will be strategically reinvested into core priorities such as infrastructure upgrades, R&D, network operations, user acquisition incentives, and developer ecosystem growth—including grants for CPN integrations and new applications. This reinvestment approach is designed to strengthen platform resilience, drive innovation, and accelerate long-term network expansion.

Scan the QR code to learn more about Circle Payments Network

References

1. McKinsey & Company. (2024). Global payments in 2024: Simpler interfaces, complex reality. Retrieved from: https://www.mckinsey.com/industries/financial-services/our-insights/global-payments-in-2024-simpler-interfaces-complex-reality
2. World Bank. (2024). Remittance Prices Worldwide: Main Report and Annex (Q2 2024). Retrieved from: https://remittanceprices.worldbank.org/sites/default/files/rpw_main_report_and_annex_q224.pdf

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