

WalletConnect: The Future of Payments

WalletConnect

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Abstract

In the not-too-distant future, all merchants will accept stablecoins and crypto. But today, the experience still falls short of the feature depth and reliability provided by traditional payment networks such as Visa, Mastercard, and Apple Pay.

This whitepaper outlines how WalletConnect intends to close the crypto payments feature gap. It examines the current limitations of crypto payments, identifies the essential capabilities required for parity with traditional systems, and proposes a roadmap through which WalletConnect can transform onchain commerce into a complete, merchant-ready alternative to legacy payment networks.

Critical capabilities - ranging from authorizations and recurring billing to loyalty systems, fraud mitigation, and point-of-sale compatibility remain either incomplete or entirely absent in today's self-custody crypto payment experiences. This gap not only constrains Payment Service Provider ("PSP") and merchant adoption but also limits user trust and convenience, slowing the broader transition toward onchain commerce.

WalletConnect aims not only to match the existing expectations of PSPs, merchants, and consumers but to surpass them, positioning crypto payments as a **superior, cost-efficient, and programmable alternative** to legacy financial systems. It also aligns with the x402 standard to enable both agent-first and embedded human checkout flows via seamless wallet integration and network abstraction.

WalletConnect's SDK is already embedded in over 700 different wallets, including the household names like MetaMask, OKX Wallet, Trust, Rainbow, and Ledger. Its track record in aligning the cross-chain crypto ecosystem to adopt new standards and user experiences, and its certification programmes, are set to ensure widespread interoperability and compatibility with the new payments standards outlined below.

1. Introduction

In 2025, WalletConnect will introduce the first version of WalletConnect Pay. This utilizes the v1 of wallet_pay. A standard WalletConnect has been created together with input from the payments and crypto ecosystems to reduce friction. The evolution from wallet_pay v1 to v2 will mark a progression from foundational abstractions - such as eliminating the need for token and network selection - to advanced capabilities like authorizations, agent-to-agent programmability, x402, and integration with global point-of-sale systems. Major PSPs like Shopify, Stripe, Shift4, DTC, and Coinbase Commerce, and others already enable WalletConnect-based checkout flows today - underscoring the need for more PSPs to come onchain.

Global Payments Ecosystem		
(UX) Feature	(Self-Custody) Crypto Payments Today	Card Rails Today
No need to select token/network in checkout experience	✗	✓
Authorizations	✗	✓
Token/Network/Stablecoin Abstraction/Aggregation	✗	✓
Agent-2-Agent Payments	✗	✗
x402 support through self-custody wallets	✗	✗
Express Checkout compliance (support shipping address integration etc)	✗	✗
Loyalty/Cashback	✗	✓
Compatible with Pix/Crypto/and other merchant-specific QR codes	✗	✗
Merchant Fraud Insurance & Chargebacks	✗	✓
Chain/Token Abstracted Subscription Payments	✗ <small>(only via approvals which are network specific or deposit contracts)</small>	✓
Share KYC information for purchasing restricted goods and services	✗	✗

Figure 1: Global Payments Ecosystem.

WalletConnect offers a systematic approach to closing this feature gap. By introducing chain-agnostic PSP-facing infrastructure & SDKs, compliance-ready primitives, network and token abstraction, and standardized interoperability with existing point-of-sale and QR-based systems, WalletConnect establishes a roadmap that will deliver parity with card rails while unlocking programmability unique to crypto.

In that context, the x402 standard provides an important complement: by activating HTTP-native payment flows, x402 allows both human users and agent-based systems to initiate payments seamlessly. For agent payments, wallets integrated via WalletConnect can be used by the user's chosen agent platform to execute on-demand payments via x402 flows. For human checkout flows on x402-gated sites, the WalletConnect Pay integration ensures that users can click "Pay" and complete the transaction in an embedded HTTP/crypto flow, sidestepping cumbersome token or network selection and aligning with the abstraction goals of WalletConnect.

Merchants and users alike expect more than basic value transfer. They require authorizations, fraud protection, loyalty rewards, subscription handling, regulatory compliance, and seamless checkout experiences, and they shouldn't need to care about which chain they are using or which stablecoin they have. These features, refined over decades in card-based ecosystems, have yet to be fully translated into the onchain context. As a result, crypto payments often remain confined to niche use cases, despite their potential to reduce costs, expand access, and enable programmable financial flows.

WalletConnect is uniquely positioned to address this challenge. It is already integrated with over 700 different wallets, and by acting as the connectivity layer between wallets, merchants, and PSPs, WalletConnect is expanding its offering to include a framework that abstracts the technical complexity of payments while delivering the missing primitives required for feature parity.

2. WalletConnect Pay

WalletConnect Pay is designed to progressively close the crypto payments feature gap. Today's self-custody crypto payments still require users to pick networks and tokens manually, offer no authorizations or agent-to-agent flows, and lack merchant-grade fraud protection or compliance-ready checkout. WalletConnect Pay takes these missing pieces and introduces them in stages.

2.1 Current State vs. WalletConnect Pay

The table below shows the progression from self-custody crypto payments today, through WalletConnect Pay v1, to WalletConnect Pay v2. It highlights how the roadmap delivers card-like features plus crypto-native advantages such as programmable agent-to-agent flows and stablecoin abstraction.


Current state vs.  WalletConnect Pay			
(UX) Feature	Self-Custody Crypto Payments - Today	WalletConnect Pay v1 - Q1 2026	WalletConnect Pay v2
Automatic Token and Network Selection	✗	✓	✓
Authorization Holds e.g. via Resource Locks	✗	✗	✓
Token/Network/Stablecoin Abstraction/Aggregation	✗	✗	✓
Agent-2-Agent Payments	✗	✗	✓
x402 support through self-custody wallets	⚠ many clicks	✓	✓
Express Checkout compliance (support shipping address integration etc)	✗	✗	✓
Loyalty/Cashback	✗	✗	✓
Compatible with Pix/Crypto/and other merchant-specific QR codes	✗	✗	✓
Merchant Fraud Insurance & Chargebacks	✗	✗	✓
Chain/Token Abstracted Subscription Payments	✗	✗	in design phase
Travel Rule Compliant without extra KYC	✗	✗	in design phase
No Manual Address/Amount Input	⚠ often used by applications	✓	✓

Figure 2: Current State vs. WalletConnect Pay.

2.2 Phase 1 (Q1 2026)

The first iteration of WalletConnect Pay focuses on the lowest-friction checkout experience.

- **Single interaction flow:** Instead of the typical “Connect → Select network/token → Checkout”, the user needs only one wallet interaction, as the “Connect” and “Checkout” steps are folded into a seamless experience.
- **Wallet-side network/token selection:** Because the wallet has full context of the user's balances across chains, it can choose the optimal network/token behind the scenes; the user doesn't need to know ahead of time which tokens they own on which networks.
- **Towards token aggregation:** With wallet-side network/token selection enabled, wallets can aggregate tokens across networks and perform bridging or swapping on the fly, enabling end-users to deploy their full spending power for purchases. (Latency improvements such as resource-locking may further enhance this.)

This evolution replaces today's multi-step self-custody crypto checkout flow (select network/token

→ connect wallet → back-and-forths between wallet and merchant/app) with a single-click (or tap) wallet approval. It enables wallet-side token/network aggregation (the wallet selects the optimal token/network behind the scenes) and dramatically reduces friction, improves conversion, and reduces drop-off — aligning the end-user experience much more closely with traditional card-based checkout flows.

2.3 Phase 2 and Beyond

Subsequent releases transition from abstraction to true merchant-grade features, gradually matching - and ultimately surpassing - card-rail capabilities:

- **Express checkout:** End-users can store their shipping address within the wallet and select shipping speed directly wallet-side; this enables WalletConnect Pay to integrate into PSPs' express-checkout sections, eliminating merchant-side address entry.
- **Merchant fraud insurance & merchant metadata:** WalletConnect will introduce a crypto-native analog to chargeback insurance, coupled with rich merchant identity metadata embedded in the payment payload - closing the trust gap between crypto payment flows and legacy payment rails.
- **Itemized purchase details:** Rather than showing only a total amount, wallets will display full line-item details (icons, SKUs, quantities, merchant name) so consumers see exactly what they're paying for - mirroring the clarity of card-based receipts.
- **QR compatibility & seamless off-ramp:** WalletConnect will enable self-custody wallets to integrate with existing payment QR-code ecosystems (for example, Pix in Brazil, Toast in the US, Mercado Pago in Argentina) - enabling a seamless crypto checkout experience that plugs into the infrastructure merchants already use.
- **Tap-to-Pay (NFC support):** WalletConnect will support mobile/terminal NFC payments where the wallet taps or waves a wallet, enabling in-store checkout without the friction of scanning a QR code.
- **Wallet-side KYC for required flows:** When regulatory flows require KYC, the wallet will handle KYC and identity verification **once**, removing the burden of each merchant needing separate KYC - simplifying merchant operations and enhancing user privacy.

2.4 Outcome

By sequencing capabilities in this way, WalletConnect Pay moves from today's fragmented crypto checkout experience to a unified, merchant-ready system. Merchants gain lower fees and crypto settlement without sacrificing features they expect from card rails, and users gain a frictionless, feature-rich onchain payment experience.

3. WalletConnect Pay Adoption

WalletConnect has been integrated by many PSPs actively working to develop self-custody crypto checkout flows. Merchants want to accept crypto in order to benefit from lower fees and to attract a new user base. Data from Stripe showed that one AI software company increased their revenue by 10% and cut payment processing fees by 66% after enabling crypto payments.

The rapid adoption of stablecoin cards have proved that end-users want to pay using crypto for a wide variety of reasons - often not just for cost savings but because there is no other way (for example, transaction amounts that exceed credit-card limits). So the primary drivers for crypto checkout aren't simply lower fees but the reality of end-users needing crypto acceptance.

4. WalletConnect as the Connectivity Layer

The transition to mainstream commerce depends on a dependable connectivity layer - one that bridges self-custody wallets, merchant/PSP checkout systems and regulatory/settlement rails. WalletConnect has played exactly that role in the crypto ecosystem moving over \$400B in 2025 between wallets and applications and now it will also be the bridge between wallets and PSPs / merchants.

- **Single merchant integration → access to all wallets.** With one integration into WalletConnect Pay, a merchant or PSP gains access to a vast ecosystem of self-custody wallets (mobile, desktop, hardware) without the need to integrate with each wallet individually.
- **Standardized payloads & security primitives.** By defining and enforcing standard data formats (payment intents, metadata, merchant identity), pushing wallet certification, and leveraging end-to-end encrypted infrastructure, WalletConnect gives merchants the operational guardrails they expect from card rails (fraud prevention, identity metadata, travel-rule support) while preserving self-custody.
- **Ecosystem alignment and growth support.** The WalletConnect Certified program ensures that wallets meet UX/security standards and solves the chicken-and-egg problem of bootstrapping adoption of the aforementioned features across merchants and wallets.

By serving as this closing layer, WalletConnect dissolves the adoption barrier between wallets and merchant flows - enabling the transformation from fragmented crypto checkout experiences to a unified, feature-rich, payments platform.

5. Summary

Onchain payments can only achieve mainstream status if they meet or exceed the capabilities of today's web2 systems. WalletConnect Pay closes this gap systematically through staged roadmap iterations: starting with abstraction and frictionless UX in v1, adding merchant-grade features, compliance hooks, and POS compatibility in v2, and culminating in programmable flows that surpass card-based capabilities.

- **Merchants** gain lower fees, direct crypto settlement, and fraud protection without sacrificing existing operational standards.
- **Wallets** get improved UX, loyalty, and cashback integration, and new monetization opportunities.
- **PSPs** can operate a dual-rail future where card and crypto acceptance coexist seamlessly.
- **Developers** receive open primitives to build entirely new payment applications and flows.

End state: onchain > card rails. By combining feature parity with programmable money, WalletConnect turns onchain payments from a novelty into a full-featured, merchant-ready payment standard.

6. Roadmap

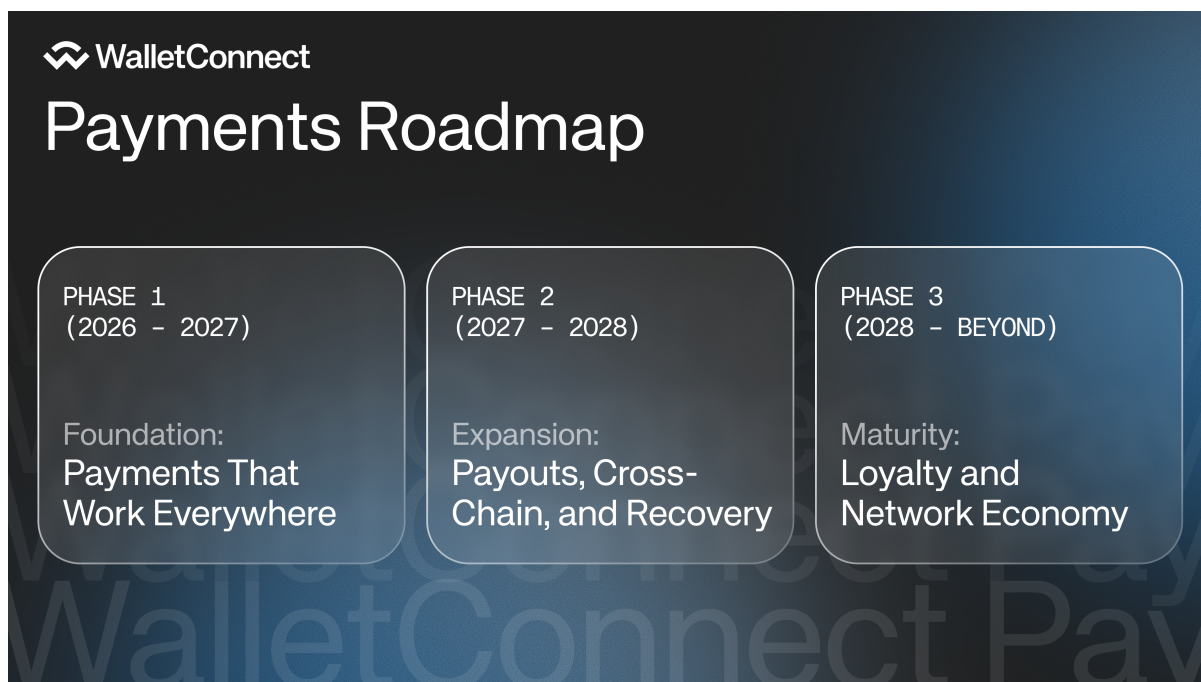


Figure 3: WalletConnect Pay roadmap showing progressive feature rollout.

Important Note The concepts, timelines, and examples described in this paper represent WalletConnect’s current product vision and anticipated development roadmap. They are provided for informational purposes only and are not commitments, guarantees, or offers of any kind. The evolution of WalletConnect Pay and related standards depends on ecosystem collaboration, technical feasibility, and regulatory developments, all of which may lead to changes in scope, approach and/or timing. Network metrics and historical activity cited here are illustrative of past usage and do not imply or predict future performance.