Ruby SDK

Straightforward Web3 App Development

Whitepaper - October 2025

Executive Summary

Web3 bypassed Web2 entirely, spending a decade on speculation rather than rebuilding applications billions actually use. The complexity wasn't a bug - it was infrastructure waiting for something that could make it accessible.

Smart contracts, token economics, and DeFi protocols weren't too complex for mainstream adoption - they were too complex for humans to operate directly. They needed better interfaces.

With AI-assisted development tools now in the hands of 10 million builders, Web3's potential becomes clear: it's coordination infrastructure that can finally be accessed without blockchain expertise.

But Web3 forgot one critical thing: **privacy**. You cannot rebuild real applications on transparent blockchains where every transaction is public forever. And you certainly cannot build the Post Web - where agents handle our economic lives - without privacy by default.

Ruby SDK lets you build decentralized applications through simple REST APIs. As easy to integrate as Stripe or Supabase - just make API calls from your code.

Add tokens, escrow payments, private user data, and notifications to your app. No blockchain code. No complex setup. No expertise needed.

Two-Tier Architecture

Privacy-native chains (Secret Network, Oasis, Phala, Fhenix): Our primary focus and launch priority. Maximum privacy including all transaction activity. This is where we plant our flag.

Standard chains with privacy layer (Ethereum, Base, Arbitrum, Polygon, Solana, Cosmos): Market expansion from our privacy-first foundation. Encrypted user data and business logic, with transparent token transfers where appropriate.

We lead with privacy, then expand outward. Privacy-native chains represent our core competency and strongest differentiation.

Simple Economics

Builders pay for what they use. 100% of fees flow to Ruby token holders in USDC. No speculation. No complexity. No grift.

Build Web3 apps as easily as Web2 apps. Privacy included. Works on every major blockchain.

Market Opportunity

The Paradigm Shift: From Attention to Intention Economy

The consumer internet optimized for attention - endless scrolling and platform intermediaries. The emerging paradigm optimizes for intention - where builders using AI tools rapidly create applications that solve specific needs.

Ruby SDK provides privacy-preserving primitives that enable this shift. When builders describe what they want and AI coding assistants help them integrate our APIs, they create applications with sophisticated functionality - tokens, payments, private data - without writing any blockchain code.

The Web2-to-Web3 Migration That Never Materialized

Web3 lacked privacy and practicality. You cannot rebuild real applications on transparent blockchains where every transaction is public forever. Mainstream users couldn't understand the speculation. Web2 engineers never bothered migrating - nothing was broken in their eyes.

But something has shifted. Over 10 million builders now wield AI-assisted coding tools - Replit, Windsurf, Lovable, Bolt.new, Devin. They include non-technical founders and experienced engineers. They don't care about "Web3 migration." They want to build useful applications.

When peers build for each other, decentralized paradigms make sense: user ownership, censorship resistance, no platform taking 30% cuts. But despite having AI tools, these builders haven't adopted Web3 due to complexity barriers.

AI-assisted development platforms can technically guide users through blockchain deployment, but they require builders to learn specialized smart contract development frameworks, network configurations, wallet setup, and chain-specific tooling - exactly the blockchain expertise barrier preventing Web3 adoption.

Ruby SDK solves this. Builders working with AI coding assistants describe what they want - "add escrow payments to my marketplace" - and the AI helps them integrate Ruby SDK, which handles everything: contracts, deployment, chain selection, privacy layer. No specialized frameworks. No manual wallet configuration. The builder gets working code that integrates our APIs.

But Ruby SDK isn't just for non-technical builders. Experienced software engineers skip months of blockchain development, avoid expensive security audits, eliminate multi-chain deployment complexity, and add privacy features that would require specialized cryptography expertise.

Web3 infrastructure as simple as Web2. The coordination layer now accessible through clean REST APIs to anyone who can describe what they want - or to experienced engineers who want production-ready infrastructure. On any blockchain they choose.

Building for the AI-Assisted Development Era

Sam Altman describes "the death of apps" - a shift from standalone applications to fluid, intent-driven experiences. While fully autonomous AI agents remain largely theoretical, AI-assisted development is exploding right now.

Ruby SDK is infrastructure built for this reality - accessible to both non-technical builders working with AI assistance and experienced engineers who want production-ready blockchain infrastructure without overhead.

Our APIs aren't apps - they're composable building blocks that any builder can integrate on any blockchain. A non-technical builder describes outcomes and their AI assistant helps write integration code. An experienced engineer integrates directly, saving months of development. Either way: no blockchain code written, no specialized framework configuration, no complexity exposed.

This is the third major revolution in computing interfaces: from keyboard-and-mouse to touchscreens to natural language assistance. Simple, well-documented APIs serve both audiences.

As AI-assisted development makes building more accessible and applications become intent-driven, complexity gets abstracted away. Ruby SDK's privacy-preserving infrastructure enables this shift with privacy by default, multi-chain support ensuring no platform controls access, and simple integration requiring no blockchain expertise.

Proof of Future: Privacy Built In, Not Bolted On

We envision a 2027 where:

Privacy is default everywhere. Builders select from privacy-native chains for maximum privacy or add encryption layers to standard chains - all through a single SDK. Works on Ethereum, Solana, Cosmos, Base, Secret Network, anywhere.

Applications are accessible to builders at every skill level. Non-technical founders using AI tools build marketplaces, social platforms, and financial tools. Experienced engineers integrate the same infrastructure in minutes. No blockchain expertise needed for the former. Massive time savings for the latter.

Multi-chain resilience is reality. Builders deploy across privacy-native chains or add privacy layers to standard chains - all through one interface. Applications are resilient, users have choice, the blockchain ecosystem thrives together.

Utility has replaced speculation. Projects are judged on solving real problems. Ruby SDK powers thousands of applications generating millions in revenue from actual usage across every major blockchain.

Building is invisible. Non-technical builders create sophisticated decentralized applications without knowing Solidity or Rust, without understanding gas optimization, without configuring deployment frameworks. They work with AI coding assistants to integrate Ruby SDK through standard APIs. Experienced engineers get the same benefits with even less friction. Chain selection becomes a preference, not a technical barrier.

Why We're Different: Real Utility Over Hopium

We've lived through empty promises: ICO boom, crypto winter, DeFi summer, NFT mania, meme coin euphoria.

Ruby SDK is different because we're not selling hopium.

We're not promising 100x returns or paying influencers. We're not manufacturing FOMO or artificial scarcity. We're building real coordination infrastructure that solves real problems for real builders - on every blockchain that matters.

Our value proposition: Builders pay us when they use our APIs because we save them months of development time, tens of thousands in security audits, and the complexity of learning specialized blockchain tools. They pay because what we provide is worth more than what we charge.

Our token doesn't derive value from speculation or governance theater. It derives value from distributing 100% of actual fees from actual usage across every chain. Perfect alignment.

This is the anti-thesis of hype-driven Web3. We're the anti-grift option. We're not trying to go viral or manufacturing a cult. We're building something that works on every blockchain, pricing it fairly, letting quality speak for itself. We're establishing sustainable economics and yield.

The Economic Opportunity and Market Expansion

The opportunity is significant because we're not limiting ourselves to privacy-native chains. By supporting both privacy-native blockchains AND adding privacy layers to standard chains (Ethereum, Base, Arbitrum, Polygon, Solana, Cosmos), we access orders of magnitude more developers and users.

Our addressable market includes both non-technical builders using AI assistance and experienced software engineers. For non-technical builders, we eliminate the blockchain expertise barrier entirely. For experienced engineers, we provide production-ready infrastructure saving months of development time and tens of thousands in security costs. Both segments gain tremendous value.

If 10 million builders globally are interested in building applications, capturing even 1-2% with average annual spending of 150 −200 represents $15-40 million in potential revenue.

This is more achievable than privacy-chain-only solutions because we meet builders where they already are.

Our multi-chain approach provides three critical advantages:

Market Access: EVM chains, Solana, and Cosmos have exponentially more developers than privacy-native chains. We access this market immediately.

Use Case Flexibility: Not everything needs chain-level privacy. Builders choose their privacy/transparency tradeoff based on use case.

Competitive Differentiation: We become the ONLY multi-chain privacy SDK that works across both privacy-native chains AND standard chains with encryption layers.

But there's a larger opportunity emerging. Outlier Ventures, with a 400-company portfolio including early AI and blockchain investments, observes that AI-assisted development combined with Web3 infrastructure is creating new possibilities. With 210 DeAI and DePin startups representing $50 billion in combined market cap, this integration is accelerating.

Ruby SDK is positioned at this intersection: privacy-preserving infrastructure that AI coding assistants can help builders integrate through natural language on any blockchain.

The Infrastructure Gap

The Web3 developer tools landscape is mature for experienced blockchain developers but inadequate for everyone else. OpenZeppelin provides excellent libraries, but you need to know Solidity, understand deployment, and manage infrastructure. Alchemy and Infura offer node infrastructure, but you still need to write and deploy code. thirdweb has made progress on developer experience but focuses on EVM chains and lacks comprehensive privacy features.

More importantly, none of these solutions makes Web3 accessible through AI-assisted development. They're designed for people who already understand blockchain development. They still require learning specialized frameworks and deployment tools.

Research confirms the problem: AI coding assistants like Windsurf and Devin can guide users through blockchain deployment, but only if users first learn complex development frameworks, network configurations, and wallet setup - exactly the blockchain expertise that non-technical builders don't have.

This is precisely the problem Ruby SDK solves. We target people who don't want to understand blockchain development - they just want AI coding assistants to help them add decentralized features with the same ease as any other API.

Before Supabase, deploying a backend meant managing PostgreSQL on AWS, writing your own APIs, handling your own security. Supabase abstracted that complexity behind a clean API that AI coding assistants could easily integrate, grew to 500,000 developers in three years, and generates over $100 million annually.

Ruby SDK does the same for Web3. You don't maintain infrastructure because blockchains handle it. We provide production-ready infrastructure deployed and maintained across privacy-native chains and providing encryption layers for standard chains, accessible through REST APIs. Builders use our SDK without ever writing blockchain code, deploying anything, learning specialized frameworks, or worrying about security, redundancy, and performance at scale.

Market Dynamics and Timing

Three converging trends make this the ideal moment:

AI-assisted development is experiencing explosive growth, with 300% year-over-year increases in users of platforms like Replit and Windsurf.

Web3 is maturing beyond speculation into utility, with real applications in capital markets, payments, identity, supply chain, and social platforms.

Privacy concerns are intensifying, driven by regulatory pressure and user awareness, creating demand for privacy-preserving infrastructure that transparent blockchains cannot provide.

The competitive landscape reinforces our opportunity. No one specifically targets builders at all skill levels with a complete, multi-chain, privacy-preserving smart contract platform accessible through AI-assisted development that works on both privacy-native chains and standard chains.

Our two-tier architecture dramatically expands addressable market:

- **Privacy-native chains:** Full privacy for use cases requiring maximum guarantees
- **Standard chains with privacy layer:** Meeting builders where they already are

We estimate our serviceable obtainable market at $100 million over five years, representing realistic penetration of the simplified Web3 infrastructure segment across all major blockchains. Reaching 50,000-100,000 active builders with 1,000 −2,000 in average annual spend would achieve this scale. While Supabase serves half a million developers, we target a more specialized segment - but one where we can access the entire blockchain ecosystem.

Product and Technology

The Complete API Library

Ruby SDK provides four core APIs addressing fundamental needs of decentralized applications. These are production-ready and deployed across two architectures: privacy-native blockchains with maximum privacy, and standard blockchains with encryption layers. All complexity is abstracted through simple API calls that work consistently across any supported chain.

Token Factory lets applications create both fungible tokens and NFTs from a single API. Unlike traditional approaches requiring separate deployments for each new token, our factory allows unlimited token types with configurable properties including decimals, supply, minting permissions, and privacy settings. Applications can issue loyalty points, create membership NFTs, or launch utility tokens without writing any blockchain code. The factory includes built-in fee collection, granular permission systems, and privacy-preserving balance queries on privacy-native chains.

Escrow System provides secure multi-party transactions with sophisticated execution logic across any blockchain. Applications create escrows requiring deposits from multiple parties, specify complex payout structures, include arbitration for dispute resolution, and support automatic partial execution when conditions are met. This powers peer-to-peer marketplaces, supply chain payments, and decentralized exchanges. The partial fill functionality enables automatic execution of portions of large orders as liquidity arrives, enabling continuous trading without manual intervention.

Metadata Service solves the challenge of storing and retrieving decentralized metadata with privacy controls. Applications store media on IPFS through our Pinata integration, reference content on-chain with access controls and encryption. On privacy-native chains, all metadata remains encrypted on-chain. On standard chains with our privacy layer, we provide encryption for sensitive data while leveraging the chain's transparency for discoverability when appropriate.

Notification Hub creates event-driven architecture for decentralized applications on any blockchain. Applications subscribe to events and notifications are delivered through our API with optional sponsor models where applications subsidize their users' fees. This solves one of the most challenging aspects of Web3 UX - how to notify users of on-chain events without requiring them to constantly poll the blockchain.

Two-Tier Privacy Architecture: Technology Diversity as Competitive Moat

Our decision to support both privacy-native blockchains AND provide encryption layers for standard blockchains is central to our competitive differentiation. But our strategic priority is clear: **we lead with privacy-native chains, establishing ourselves as privacy infrastructure experts, then expand to standard chains from that position of strength.**

Privacy-Native Chains: Our Core Competency and Launch Priority

Privacy-native chains represent a small fraction of blockchain activity, but they are where we plant our flag. This is our niche, our differentiation, our strongest signal to the market.

Why privacy-native chains come first:

- **Strong differentiation:** This is genuinely hard to do well. Most Web3 infrastructure providers ignore privacy or treat it as an afterthought. We make it our foundation.
- **Clear positioning:** We're the privacy infrastructure experts. This is a defensible niche with limited competition.

- **Technical moat:** Deep expertise in TEEs, FHE, and privacy-preserving smart contracts creates barriers to entry.
- **Enterprise appeal:** Healthcare, finance, and enterprise use cases requiring genuine privacy represent high-value customers willing to pay premium rates.

Market Expansion Without Compromise

Once established as privacy infrastructure experts, we expand to standard chains with encryption layers. This expansion provides:

Privacy-Native Chains (Secret Network, Oasis, Phala, Fhenix):

- Our launch priority and core competency
- Maximum privacy including all transaction activity
- Mature infrastructure with proven privacy guarantees
- Ideal for financial applications, healthcare, enterprise use cases
- Where we establish our reputation and expertise

Standard Chains with Privacy Layer (Ethereum, Base, Arbitrum, Polygon, Solana, Cosmos):

- Market expansion from our privacy-first foundation
- Encrypted user data and business logic
- Token transfers remain transparent (appropriate for most use cases)
- Access to exponentially larger developer communities
- Builders deploy where they're already comfortable
- Where we expand once privacy expertise is established

This positions Ruby SDK as privacy infrastructure that works everywhere. We establish ourselves as privacy experts first, then bring that expertise to broader markets. Builders get both credibility and reach.

Use Case Optimization

Different applications have different privacy requirements. Our two-tier approach lets builders optimize:

Maximum Privacy Use Cases → Deploy to privacy-native chains:

- Healthcare applications with patient data
- Financial services requiring transaction privacy
- Enterprise applications with confidentiality requirements
- Applications where even metadata must be private

Selective Privacy Use Cases → Deploy to standard chains with encryption layer:

- Marketplaces where transactions are transparent but user profiles are private
- Social platforms where posts are public but DMs are encrypted

- NFT platforms where ownership is transparent but bidding history is private
- Supply chain tracking where shipments are visible but supplier terms are confidential

Rather than forcing users onto a single privacy model, we provide informed choice. Our documentation clearly explains tradeoffs, helping builders select the right architecture - whether directly or through AI coding assistant recommendations.

Technology Hedging Across Privacy Approaches

The privacy-preserving blockchain space is rapidly evolving with multiple competing approaches. By supporting multiple privacy technologies, we ensure Ruby SDK remains relevant regardless of which approach gains dominance:

- **Secret Network:** Trusted Execution Environments (TEEs) with Intel SGX, providing mature privacy-preserving smart contracts
- **Oasis Network:** TEEs with different architectural approach and stronger enterprise positioning
- **Phala Network:** TEEs within the Polkadot ecosystem, offering cross-chain interoperability
- **Fhenix:** Fully Homomorphic Encryption (FHE) - breakthrough cryptographic approach allowing computations on encrypted data without decryption, representing the cutting edge without hardware dependencies

If Intel SGX proves problematic, we have FHE-based alternatives. If FHE remains computationally prohibitive, we have mature TEE options. If one network loses developer mindshare, we maintain presence on three others.

For standard chains, our self-managed encryption layer provides privacy guarantees without depending on chain-level privacy features. This diversification protects against both technological obsolescence and market concentration risks.

Unified Developer Experience Across All Chains

Our SDK provides a consistent interface across all architectures. Builders write the same code regardless of whether they deploy to privacy-native chains or standard chains with encryption layers and can switch with minimal changes. Chain selection becomes a configuration parameter rather than a development barrier.

Through integrations optimized for AI-assisted development, AI coding assistants can recommend optimal chain selection. A builder describes “create a marketplace with private user data” and the AI can suggest:

- High privacy requirements? → Secret Network or Fhenix
- Need EVM ecosystem access? → Ethereum/Base with encryption layer
- Want Solana performance? → Solana with encryption layer
- Enterprise compliance focus? → Oasis Network

Builders learn Ruby SDK once and deploy anywhere, while the underlying multi-chain approach provides resilience and choice without adding complexity.

Ecosystem Diversification

By participating in both privacy-native chains and major standard chains, we:

- Reduce dependence on any single network's success
- Lead with deep privacy expertise as our core differentiation
- Access multiple communities across the entire blockchain landscape
- Benefit from marketing and partnership opportunities across all major ecosystems
- Demonstrate serious technical sophistication and long-term commitment
- Expand from a position of strength rather than diluting focus
- Avoid the "privacy chain adoption" bottleneck while maintaining privacy as our primary value proposition

This diversification is particularly valuable given Web3's unpredictable evolution. By supporting both privacy-native architectures and providing privacy layers for standard chains, we position Ruby SDK as coordination infrastructure that works regardless of which chains succeed. But we lead with privacy, establish expertise there first, then expand outward.

Privacy as Fundamental Architecture

All architectures we support enable use cases impossible on completely transparent blockchains. Consider a marketplace application: on a transparent blockchain, every transaction - purchase, price negotiation, message between buyer and seller - is publicly visible forever. This is unacceptable for most real-world applications.

With Ruby SDK, applications choose their privacy model:

Privacy-Native Chains: Applications can build marketplaces where only transaction parties see details, where access can be granted selectively, and where privacy is fundamental at the blockchain level. Each chain implements this differently - some use secure hardware, others use advanced cryptography - but all provide genuine privacy by default.

Standard Chains with Privacy Layer: Applications gain encryption for sensitive data (user profiles, messages, business logic) while maintaining transparent token transfers (appropriate for most financial use cases and regulatory compliance). The privacy layer provides practical confidentiality without requiring chain-level privacy features.

This flexibility becomes increasingly valuable as Web3 adoption grows beyond early adopters. Consumers expect privacy. Businesses require confidentiality. Regulations increasingly mandate data protection. We provide privacy at the appropriate level - full chain-level privacy where needed, selective encryption where appropriate - with no additional complexity for builders.

Integration Simplicity and AI-Optimized Development

The technical sophistication of our multi-chain approach is invisible to builders. They interact with Ruby SDK through standard REST APIs using familiar authentication mechanisms like API keys and JWTs. They integrate our SDK the same way they integrate Supabase, Stripe, or SendGrid - clear documentation, example code, HTTP or TypeScript requests.

Chain selection can be as simple as a configuration parameter. Builders specify their preferred chain explicitly, or we route requests intelligently based on use case, privacy requirements, and current network conditions. Advanced users deploy across multiple chains for maximum resilience; simple users rely on our defaults and never think about underlying infrastructure.

Our focus is AI-assisted code development - making Ruby SDK the easiest Web3 infrastructure to integrate when working with AI coding assistants. While we support MCP (Model Context Protocol) for future scenarios where AI agents interact directly with APIs, our primary target is builders working with tools like Windsurf and Replit. They describe what they want, the AI helps them write code that integrates our APIs, and they get working applications without blockchain expertise.

But the infrastructure serves everyone: Experienced software engineers gain the same value without needing AI assistance - they integrate our clean REST APIs directly, saving months of contract development, eliminating security audit costs, and avoiding multi-chain deployment complexity.

Current reality: AI coding assistants can guide builders through blockchain deployment, but only if builders first learn complex smart contract development frameworks, network configurations, wallet setup, and chain-specific tooling. This massive barrier prevents Web3 adoption among non-technical builders.

Ruby SDK eliminates this barrier:

A builder working with their AI assistant describes: “Add escrow payments to my marketplace with maximum privacy”

The AI assistant helps them:

1. Write code that integrates Ruby SDK through our REST API
2. Configure optimal chain selection (potentially Fhenix for FHE-based privacy, or Ethereum with encryption layer for ecosystem access)
3. Handle authentication and API calls in their application code
4. Implement complete escrow workflow through our SDK
5. Configure privacy settings appropriately

Zero specialized frameworks. Zero complex configurations. Zero blockchain expertise required. The builder gets working application code that integrates our infrastructure.

An experienced engineer achieves the same integration in less time by reading our documentation and making API calls directly - no AI needed, just excellent developer experience and production-ready infrastructure.

This approach is critical as AI coding tools become more prevalent. We're building for builders who collaborate with AI assistants that help them write application code integrating our infrastructure. But excellent API design means traditional engineers get tremendous value too: they integrate faster, ship more securely, and avoid months of blockchain-specific development work.

The combination of powerful APIs deployed across privacy-native chains, privacy layers for standard chains, unified developer experience, and excellent API design creates infrastructure for the next wave of Web3 adoption - where builders of all skill levels can add decentralized features through clean APIs, whether working with AI coding assistants or integrating directly. Simple REST APIs replace complex blockchain expertise requirements. On any blockchain that matters.

Team and Advisors

Our team has deep expertise in blockchain privacy technologies, having worked on privacy-preserving infrastructure through multiple market cycles. We've seen the hype, lived through the crashes, and maintained focus on building real infrastructure that solves real problems.

We're supported by advisors with experience in Web3 infrastructure, AI-assisted development platforms, and enterprise blockchain adoption. Our network spans privacy-focused blockchain communities, major dApp ecosystems, and AI development tool platforms.

Privacy and practicality for Web3. Build Web3 apps as easily as Web2 apps. Works on every chain without blockchain complexity.

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For more information contact the founding team.