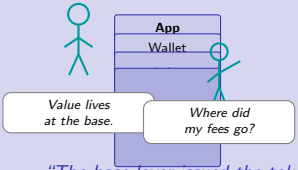
Blockchain Business Models

Where in the protocol-infra-app-wallet stack does value finally settle?

Digital Finance

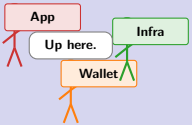
The Fat Protocol Promise



"The base layer issued the token.

vs.

The Fat Application Reality



The top layer kept the customer."

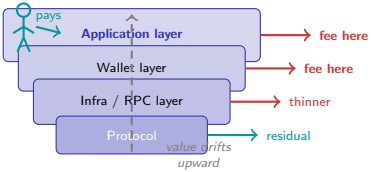
Why Does the Base Layer Issue the Token While the Top Layer Pockets the Fee?

The Stack-Friction Thesis

Crypto stacks promise that opening the base ledger collapses every layer above it. The friction the BM lens cares about is different: who actually sees the user, and who pays for the touchpoint.

The user reaches a venue, a wallet, or an analytics console; almost nobody types directly into a base-layer node. Each touchpoint above the protocol charges a take that the protocol cannot reach.

- **Distribution friction:** every layer above the protocol owns the customer relationship the protocol cannot.
- **Compliance friction:** each upper layer sells the regulated posture the protocol does not provide.
- **Custody friction:** qualified-custody requirements price the wallet and infrastructure layers, not the base ledger.



The Value Proposition block of the canvas ranks the friction the firm removes for the customer; in crypto, that ranking maps directly to which layer keeps the fee.

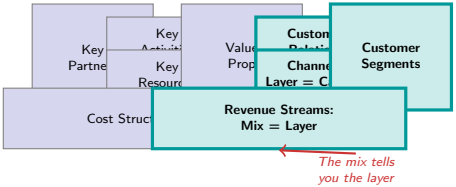
Which Canvas Blocks Decide Whether a Crypto Firm Captures Protocol or Application Value?

The Crypto BMC Pattern

Osterwalder's Business Model Canvas decomposes any venture into nine blocks. For a crypto firm, three blocks decide whether value is captured at the protocol or at the application layer.

- **Customer Segments:** retail traders, qualified institutions, developers, or compliance teams. Each segment lives at a different layer and pays for a different touchpoint.
- **Channels:** the venue console, the custody portal, the analytics dashboard, the wallet app. The channel *is* the layer where value capture happens.
- **Revenue Streams:** trading-fee, custody-fee, subscription, per-screening, or staking spread. The mix encodes which layer the firm positioned itself on.

The other six blocks (Key Partners, Key Resources, Key Activities, Customer Relationships, Cost Structure, Value Proposition) are structurally similar across crypto firms; the three highlighted blocks are where positioning shows up.



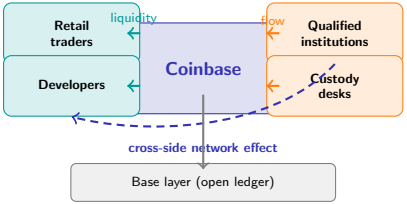
Channels, Customer Segments, and Revenue Streams encode which layer the firm sits on; the other six canvas blocks look largely the same across crypto firms.

How Does Coinbase Turn a Venue Role into a Fee-Capture Stack Across the Layers?

The Coinbase Stacking Case

Coinbase, the United-States-headquartered and publicly-listed crypto exchange, started as a single venue and progressively added layers above and below it. Each added layer is a new place to charge. The platform positions itself as the touchpoint for the customer at every layer.

- **Multi-sided platform:** retail traders on one side, qualified institutions on another, and developers on a third.
- **Cross-side network effects:** more retail liquidity attracts institutional flow, which deepens books, which attracts more retail.
- **Chicken-and-egg solution:** Coinbase seeded the retail side first, then layered an institutional venue and a developer toolkit on top of the same identity and compliance engine.
- **Layer absorption:** every additional layer (custody, staking, settlement, analytics) becomes a new fee surface that the pure protocol cannot reach.



Platform economics explains why a venue-led crypto firm tends toward winner-take-most outcomes: the more sides it serves, the more layers it can absorb, the more fee capture compounds.

How Does Kraken Add Staking, Custody, and Settlement Layers on Top of a Single Venue Wedge?

Unbundling = pulling one service out of a historical bundle and offering it alone; *rebundling* = stacking adjacent services onto that foothold once trust is established. Clayton Christensen (Harvard Business School) argued disruptors start narrow and cheap, earn trust, then expand upward — the unbundling phase followed by the rebundling phase.

Christensen's Cycle on a Crypto Stack

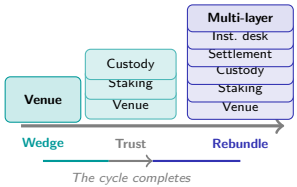
Kraken, the United-States-founded crypto exchange based in San Francisco, illustrates this cycle on an open-ledger base.

Phase One — Wedge: Kraken launched as a single matching engine wedge. No staking, no custody desk, no settlement service. One layer, one fee surface, solved well for one customer segment.

Phase Two — Trust earned: Customers began trusting the venue with adjacent layers. Switching costs accumulated through identity, compliance posture, and ergonomic familiarity rather than contracts.

Phase Three — Rebundling: A staking service, a qualified custody arm, an institutional desk, a settlement-and-clearing layer. The single-wedge venue became a multi-layer firm.

The endpoint of disruption is rebuilding the very stack that was disrupted. The survivors look remarkably like the multi-layer intermediaries they once attacked — only now they sit above the open ledger rather than the closed one.



Christensen's disruption theory predicts this cycle: entrants enter on a single layer and absorb adjacent layers to defend. The endpoint is a firm that mirrors the integrated incumbent it once attacked.

Where in the Analytics-and-Compliance Value Chain Does Chainalysis Collect Its Margin?

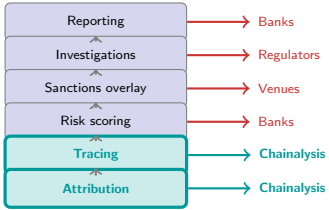
Value chain = the ordered sequence of activities a service passes through. Evans and Wurster (Boston Consulting Group) argued that when information is cheap, each link can be split off to a specialist — the chain *deconstructs* into independent layers.

The Crypto Compliance Value Chain

Chainalysis, the United-States-headquartered blockchain-data firm founded in New York, sells analytics and investigation services derived from on-chain address attribution. Crypto-native compliance is a textbook deconstruction: every link is now its own product market.

- **Address attribution** — mapping addresses to entities
- **Tracing** — following flows across protocols and chains
- **Risk scoring** — assigning a posture to a counterparty
- **Sanctions overlay** — screening against published lists
- **Investigations** — producing evidence for regulators
- **Reporting** — regulator-ready outputs and audit trails

The critical insight: Chainalysis owns the **attribution and tracing** links and licenses outputs to firms occupying the higher links. Owning the data foundation lets the firm price upward without displacing the regulated entities that use the outputs. The customer interface for end-users sits with banks, venues, and regulators; the data interface sits with Chainalysis.



Evans and Wurster argued that information-rich chains deconstruct. Chainalysis owns the foundation links (attribution, tracing) and licenses outputs to the firms above; owning data foundations is the durable margin position.

Is Fireblocks' MPC Custody Niche a Moat or a Temporary Licensing Gap?

Regulatory arbitrage = a firm earns profit specifically because it faces a lighter rulebook than its competitors, not because it is better at the underlying business; the edge lasts only as long as the rulebook gap does. A *moat* = a competitive advantage rivals cannot easily copy — arbitrage converts to a moat only if the apparatus built during the window outlasts the window itself.

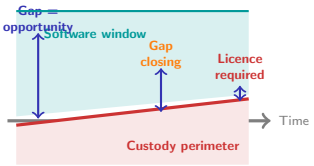
The Custody-Tech Arbitrage Tension

Fireblocks, the United-States-registered custody-tech vendor headquartered in New York and founded in Israel, exemplifies the arbitrage-to-moat pattern. Many crypto-infrastructure firms owe their early advantage to operating inside a regulatory window that classifies their service as software rather than as a regulated custodian:

- **MPC custody-tech vendors** sold key-management infrastructure without holding qualified-custody licences, since they did not have unilateral asset control.
- **Wallet-infrastructure providers** avoided being classified as money transmitters where the user retained signing authority.
- **Settlement-network operators** stayed outside payment-system oversight where they brokered atomic swaps rather than carried customer balances.

The tension: a software classification grants a head start, but regulators eventually treat substance over form. The window always narrows.

Fireblocks illustrates how the conversion can succeed. The firm built governance, audit, and policy controls around its key-management engine, so when regulators tightened scope to capture key-control firms, the compliance posture was already in place. The licensing gap became a licensing moat.



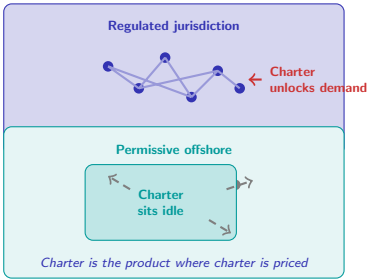
The best crypto-infra firms convert their software-window arbitrage into a regulated-custody moat by building governance, audit, and policy capability before the perimeter expands to capture them.

Why Do Qualified-Custody Platforms Like Anchorage Thrive in Regulated Jurisdictions but Stall Offshore?

The Anchorage Context Lesson

Anchorage Digital, the United-States-headquartered custody bank chartered by the Office of the Comptroller of the Currency, built its custody business inside the most demanding bank charter available for digital assets. The qualified-custodian posture is the product. The firm did not carry that product offshore because the value of the regulatory perimeter is jurisdiction-specific.

- In a heavily regulated jurisdiction, a qualified-custody charter unlocks demand from pension funds, insurance balance sheets, and registered investment advisers that cannot use lighter-licensed alternatives.
- In a permissive offshore jurisdiction, the same charter is irrelevant: the demand pool already accepts trust-company custody or wallet-infrastructure custody at a lower cost.
- The same business model fails in the offshore setting because the fee surface a charter unlocks does not exist; the customer segment that prices the charter highly simply is not present.
- The lesson: crypto BMs depend on which regulated buyers are in the market more than on which technology is on the chain.



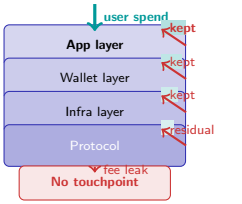
Anchorage's lesson: a regulated-custody business model captures value where regulated buyers exist; the same product is irrelevant where the buyer pool prices governance lightly.

Which Five Tests Separate a Value-Capturing Crypto Firm from a Fee Leak?

The Five-Test Synthesis (waterfall-stack-leak lens)

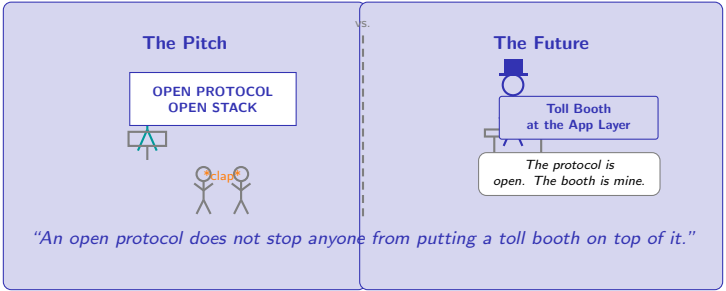
1. **Friction test:** does the firm own a touchpoint a customer pays for, or does it sit silently at a layer the customer never reaches? Layers the user does not see do not capture value.
2. **Platform test:** are there cross-side effects between liquidity-takers, liquidity-makers, and developers? A single-side venue caps at the highest fee one side will tolerate.
3. **Rebundling test:** can the firm absorb adjacent layers (custody, staking, settlement, analytics) once trust is established, or is its product structurally confined to one layer?
4. **Infrastructure test:** is the firm filling an absent layer in the regulated stack, or duplicating a layer already provided by an incumbent? Duplication competes on price; addition prices itself.
5. **Arbitrage test:** is the regulatory window the firm occupies widening, or is the perimeter expanding to capture it? A closing window is a depreciating asset unless converted to a charter.

A crypto firm that passes only the friction test occupies a single layer and watches value drift past it. A firm that passes three or more captures fees at multiple layers and can defend against the next entrant.



Pass three or more = stack capture

A crypto firm that passes only the friction test occupies a single layer and watches value drift past it; passing three of the five tests is the threshold for capturing fees across the stack.



"An open protocol does not stop anyone from putting a toll booth on top of it."