Cardano DeFi Ecosystem Audit

FOR DISTRIBUTION

PREPARED BY ALPHAGROWTH FOR THE CARDANO COMMUNITY AND THE PRIME OPERATING GROUP

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Outline

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How to read this report

FOR DISTRIBUTION

Scores measure distance from a defined benchmark. Each of the 25 categories is scored out of 100 against named reference implementations on other ecosystems, using the five-dimension rubric in Appendix A. The benchmark definitions were written before any Cardano data was entered, so scores are not set to a curve. A score below the benchmark means specific, listed capabilities were not observed in production.

Score bands:

- 🟢 (75 or above): indicates the category is at or near benchmark parity.
- 🟡 (55 to 74): indicates it is functional with identified capability, redundancy or adoption shortfalls.
- 🔴 (Below 55): indicates a material shortfall on one or more dimensions.

Of the 25 categories, 1 scores 75 or above, 12 score 55 to 74, and 12 score below 55.

Only production capability counts toward a score. Testnet, development-stage, announced and unverified capability is recorded separately and excluded from every dimension, uniformly across all 25 categories.

Findings are stated at the category level, and provider count is recorded separately from provider quality. Where a capability was not observed, the report describes the capability and the category rather than assessing an individual provider; a category served by one provider is recorded as having one provider, independently of any assessment of that provider's quality: several such categories contain a provider that is well run, and the concern is the dependency created by the absence of an alternative.

Primary evidence is the project inventory, chain and market data, and the capability comparison. Additionally, a first-party dependency survey of Cardano builder teams, covering approximately **56%** of tracked chain TVL, is used as corroborating evidence and is set out in Section 6.

Citation convention. Source IDs in the form S-0nn resolve to Appendix F; audit tables are cited by appendix and subsection. Gaps are referenced by their Section 2 number. Supporting register entries carry identifiers in the form G-0nn and are listed in Appendix D.

1. Executive summary

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/ 1.1 THE ASSESSMENT

The ecosystem's overall assessment is 51.3 out of 100, tier-weighted across 25 scored categories; the unweighted mean is 53.5. On the identical framework, Ethereum returns 96.3 and Sui 72.3.

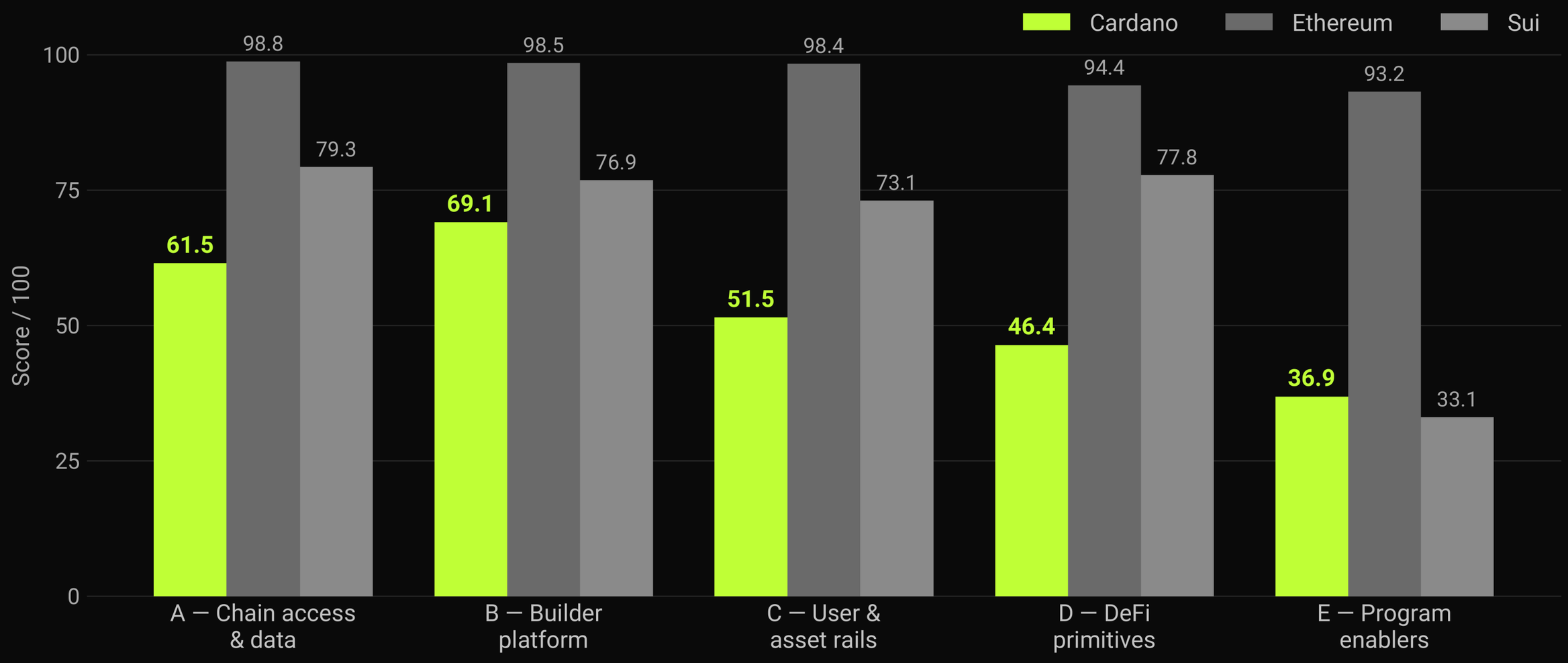

Figure 1: Category group scores against the two reference ecosystems, all three assessed on the identical framework.

/ 1.2 CORE GAPS IDENTIFIED

Eight gaps are recorded as core, in no order of importance. Each is set out in Section 2.

8 core gaps identified

01 Bridging
Dependable routing of external capital, with bridge redundancy.

02 Wallets (EVM + Cardano)
Reaching EVM users inside the wallet they already use.

03 Incentive Distribution
Programmatic incentives, attribution and external user acquisition.

04 Executor/Scooper Standard
Shared execution guarantees and multi-protocol transactions.

05 Vault standard
Portable yield positions and reusable vault integrations.

06 Curated Money Markets
Permissionless market creation and asset-specific risk configuration.

07 Concentrated Liquidity
Capital-efficient liquidity and professional market-making depth.

08 Automated Liquidity Manager
Delegated range management, rebalancing, passive CL deployment.

Figure 2: 8 core gaps identified.

Core gaps:

- Reliable EVM-to-Cardano bridging route (2.1)
- EVM + Cardano wallet (2.2)
- Advanced incentive campaign engine (2.3)
- Shared executor or scooper standard (2.4)
- Unified vault standard (2.5)
- Curated money-markets and per-market customization (2.6)
- Concentrated liquidity (2.7)
- Automated liquidity manager (2.8)

/ 1.3 ADDITIONAL GAPS IDENTIFIED

Sixteen further gaps are recorded, again in no order of importance, and are set out in Section 2.

16 additional gaps identified

01 Application composability

Common adapter, solver or intent standard across protocols.

02 Collateral rehypothecation

Yield-bearing collateral usable while posted in production.

03 Dominant dollar issuance

Native minting and redemption for dominant stablecoin on Cardano.

04 Yield-bearing stablecoins

Dollar stablecoin that earns yield while held.

05 Oracle concentration

Collateral pricing diversification and fallback options.

06 Derivatives and options

Options market and a second perpetuals venue.

07 Multisig

Smart-account layer above native multisig.

08 RWAs and on-chain credit

Tokenized treasury products and private-credit markets.

09 On-chain insurance

Claims-based or cover-pool market for smart-contract risk.

10 NFT marketplace

Marketplace operating at scale following the dominant venue's exit.

11 Launchpad

Production token launchpad for new ecosystem projects.

12 Agentic DeFi infrastructure

Agentic wallets, tokenized compute market and agent-facing integrations.

13 Runtime threat detection

Anomaly monitoring and automated incident response for live contracts.

14 Stablecoin issuance rail

Platform through which a third party can issue a fiat-backed stablecoin.

15 Tokenised compute markets

Compute, GPU and energy markets, and emerging-asset venues.

16 Yield-bearing ADA standard

Shared tokenized yield-bearing ADA standard.

Figure 3: Additional gaps 2.9 to 2.24.

Additional gaps:

- Application composability (2.9)
- Collateral rehypothecation (2.10):
- The dominant dollar issuance (2.11)
- Yield-bearing stablecoin (2.12)
- Collateral pricing concentration (2.13)
- Derivatives and options (2.14)

- Multisig (2.15)
- RWAs and on-chain credit markets (2.16)
- On-chain insurance (2.17)
- NFT marketplace (2.18)
- Launchpad (2.19)
- AI and agentic DeFi infrastructure (2.20)
- Runtime threat detection (2.21)
- Third-party stablecoin issuance (2.22)
- Tokenized compute and emerging-asset markets (2.23)
- Tokenized yield-bearing ADA standard (2.24)

/ 1.4 GLOBAL ADOPTION GAPS IDENTIFIED

Four global adoption gaps are recorded: demand the ecosystem has not yet addressed rather than capability its current users lack. They are set out in Section 2 in the same entry format and evidence standard.

Global adoption gaps:

- Business payment primitives (2.25)
- Enterprise integration pathway for Web2 businesses (2.26)
- Tokenized loyalty and gift-card rails (2.27)
- Five foundational financial functions (2.28)

/ 1.5 ECOSYSTEM POSITION

MEASURE	CARDANO	SUI	ETHEREUM	SOURCE
DeFi TVL	$67.41M	$400.39M	$40.94B	S-001; S-030
Stablecoin market capitalization	$67.12M	$450.74M	$147.12B	S-001; S-030
Stablecoin supply to TVL ratio	1.00	1.13	3.59	S-001; S-030
DEX volume, 7 days	$15.99M	$164.26M	$5.70B	S-001, S-031
Perpetuals volume, 7 days	$14.43M	$173.24M	$7.18B	S-001, S-032
Protocols tracked by the primary aggregator	63	147	1,968	S-001; S-030
Chain fees, 24 hours	$956	$1,935	$196,846	S-001; S-030
Application revenue, 24 hours	$2,324	$70,820	$2.32M	S-001; S-030
Active addresses, 24 hours	11,527	100,738	537,223	S-001; S-030
Native Token Market Cap (ADA / SUI / ETH)	$6.85B	$2.77B	$226B	S-001; S-030
DeFi TVL to market capitalization	~1.0%	~14.5%	~18.1%	S-001; S-030
Dominant stablecoin share of stablecoin market cap	65.8% (USDC)	60.7% (USDC)	49.7% (USDT)	S-001; DefiLlama

Figure 4: Ecosystem metrics comparison

Current Cardano DeFi TVL is $67.41M and total stablecoin supply is $67.12M, a ratio of 1.00 against a range of 1.08 to 3.59 across the comparison set in Appendix C.1.

DeFi TVL to ADA token market capitalization is 1.0%, the lowest in the comparison set, against 18.1% for Ethereum, 14.5% for Sui and 11.0% for Solana (S-001, S-030 to S-034).

Measured capital absorption capacity is $11.06M across the 28 markets and pools with finite estimates in Appendix C.2 (new capital deployable before organic yields compress by half).

The largest lending market holds $6.59M at 1.0% utilization, where the binding constraint is borrower demand (Appendix C.2).

/ 1.6 WHERE THE ECOSYSTEM IS AT OR NEAR BENCHMARK

- Smart contract languages, SDKs and libraries (5.1)
- Native staking yield inside DeFi positions (5.2)
- Synthetic BTC and ETH (5.3)
- Standards-based parity (5.4)
- Capability added in the preceding two quarters (5.5)

/ 1.7 CONCENTRATION

Ten of the fifteen dependency rows in Section 6.1 record zero or one independent production provider, and the count is lowest in the categories on which capital deployment most directly depends.

The largest single shared dependency is the general-purpose price feed at 2.13 — the concentration is an ecosystem-level finding rather than a risk any individual team reports carrying.

2. Flags of concern

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This section records the gaps the audit identified as material to the program's operating environment. Each entry states what was observed and what is not currently possible as a matter of observed capability.

The gaps are not listed in order of importance. The eight core gaps bear most directly on the program's operating environment; the sixteen additional gaps are recorded on the same evidence standard and set out more briefly; the four global adoption gaps (2.25 to 2.28) record demand the ecosystem has not yet addressed rather than capability its current users lack.

Each entry gives the scored category and its score out of 100, the nature of concern, the program phase from which the gap becomes material, and its sources. Category detail is in Appendix A.

The Type field records the nature of each gap:

- **Missing capability:** the capability was not observed in production anywhere in the category.
- **Adoption:** the capability exists in production but is not used at a level that makes it effective.
- **Concentration:** the capability exists but is served by a single provider or venue with no independent production alternative.
- **Dependency:** the ecosystem relies on a party, rail or asset it does not control.
- **Maturity:** the capability exists in early, unverified or thin form, so the constraint is stage of development rather than absence.
- **Capacity:** the provider serving the capability has withdrawn, or cannot serve at the scale required.
- **Opportunity:** the capability is absent and its absence constrains adoption rather than existing users.

/ 2.1 RELIABLE EVM-TO-CARDANO BRIDGING ROUTE

Current state:

General cross-chain message passing is in production across more than 150 EVM and non-EVM chains, and a canonical single-asset stablecoin route operates through the issuer's own attestation infrastructure.

Beyond those two, no reliable general-purpose route for moving arbitrary assets from EVM chains into Cardano was identified in production. Of the eight cross-chain projects inventoried, those two are the only ones with verified production status. Four further items sit outside the production score: two alternative routes recorded as degraded or inactive, one announced general-purpose route with integration in progress but not live at the data cut, and an announced asset-transfer expansion of the message-passing network.

Adoption is as thin as coverage. Production application integration of a bridge was not identified, and 89% of substantive survey respondents report no bridge dependency of any kind. Cross-chain infrastructure is therefore not a systemic risk on Cardano today; it is an unbuilt acquisition rail. One respondent named the absence of EVM chain integration as its single biggest infrastructure gap.

Against the benchmark:

The baseline definition — one working, reliable general-purpose asset bridge to a major EVM chain. No such route was observed.

The best-in-class definition — general message passing, a canonical stablecoin route, three or more independent bridges, a no-wrapped-asset design, and multi-asset EVM routes carrying liquidity with production application integrations.

At or near benchmark:

- General message passing, in production across more than 150 chains.
- A canonical stablecoin route.

Absent:

- Three or more independent live routes.
- Multi-asset EVM routes carrying liquidity, with production application integrations.
- Bridge aggregation or automatic route selection.

The result is 41.3 against 96.3 for Ethereum and 75.0 for Sui. Redundancy and adoption are what distinguish this from a merely immature category: the capability that exists is neither duplicated nor used.

What is not currently possible:

- Routing capital that sits on EVM chains into Cardano through a dependable general-purpose path, and providing asset-route redundancy if the single canonical rail is interrupted.
- Selecting between routes, or failing over automatically, since no aggregation or route-selection layer was identified.

Category: C3, Bridges and cross-chain messaging; Score: 41.3; Type: missing capability; Phase: 2; Sources: S-005 to S-007, S-024, S-053

/ 2.2 EVM + CARDANO WALLET

Current state:

Twelve independent software wallets, three hardware vendors and a standardized connection protocol are in production.

The wallets carrying Cardano DeFi adoption are Cardano-only, and no major EVM wallet supports Cardano. Multi-chain options covering both exist but carry limited Cardano DeFi adoption, so the gap is one of distribution rather than absence of capability. The wallet count also overstates effective redundancy for this purpose: few options cover the full DeFi, multi-chain and institutional workflow, which is why redundancy scores below coverage.

An EVM holder must install a new wallet and learn a different key model first, placing a wallet-installation step ahead of the liquidity step in any acquisition funnel, so every campaign pays for wallet onboarding before it pays for liquidity.

Emerging capability was recorded and excluded from the production score, including a wallet-as-a-service provider, a social-login route and an early-stage DeFi-oriented wallet. Survey evidence is consistent with the finding rather than additive to it, every respondent that answered the question listing Cardano-only wallets for user support.

Against the benchmark:

The baseline definition — two or more non-custodial wallets with dApp connection. It is met several times over.

The best-in-class definition — hardware support, mobile parity, standardized connection APIs, embedded or social-login onboarding, transaction simulation before signing, and one wallet covering both EVM and non-EVM chains.

At or near benchmark:

- Hardware support across three vendors.
- Mobile parity.
- A standardized dApp connection interface functionally equivalent to the EVM connection standard.

Absent:

- Transaction simulation before signing, which both reference wallets provide.
- Embedded or social-login onboarding at scale.
- A single wallet serving both user bases.

The result is 50.0 against 100 for Ethereum and 93.8 for Sui. The category carries Tier 3, the lowest tier weight, so it contributes comparatively little to the overall figure; it is recorded as core because of where it sits in an acquisition funnel rather than because of its weight.

What is not currently possible:

- Reaching an EVM asset holder inside the wallet they already use.
- Presenting a simulated transaction outcome before signature, the control that reduces signature-phishing loss on benchmark chains.

Category: C1, Wallets and key management; Score: 50.0; Type: adoption; Phase: 2; Sources: S-002, S-003, S-029

/ 2.3 ADVANCED INCENTIVE CAMPAIGN ENGINE

Current state:

Four distribution tools were identified, all of which dispense tokens: airdrops, claims and in-person QR campaigns. None provides campaign configuration, on-chain attribution of rewards to a campaign, verifiable reward accounting or public campaign reporting. No engine of the Merkl or Turtle Club class was identified, and the count of independent campaign and attribution engines on the chain is zero.

One partial capability is recorded: gauge or vote-escrow direction of incentives is emerging, so holders can point emissions at particular pools. What cannot be done is configure that spend as a campaign, attribute the capital it attracted, or report against it afterwards.

The distribution side is equally thin. The exchanges and ramps inventory records no incentive-distribution or user-acquisition provider, so incentive spend defaults to the audience already holding Cardano assets and is liable to recirculate existing liquidity rather than expand it. The most-cited infrastructure gap among survey respondents was liquidity, users and volume: the same constraint described from the builder side.

Against the benchmark:

The baseline definition — manual reward distribution. That is met, and nothing above it: against the four-capability benchmark, zero of four were observed in production.

The best-in-class definition — programmatic campaigns, on-chain attribution, verifiable reward accounting, public dashboards, and distribution partnerships across wallets, exchanges, ramps and cross-chain venues that acquire new users rather than reaching existing ones.

At or near benchmark:

- Airdrop and claim distribution, which the reference implementations also provide.
- Gauge or vote-escrow direction of incentives, recorded as emerging.

Absent:

- Programmatic campaign configuration.
- On-chain attribution of rewards to a campaign.
- Verifiable reward accounting.
- Public campaign reporting.
- Distribution partnerships across wallets, exchanges, ramps and cross-chain venues.

The result is 28.8 against 90 for Ethereum and 37.5 for Sui, with coverage, redundancy, capability and adoption all in the lowest assessment band. This is the one core gap where a reference ecosystem also sits in the lowest band, so the shortfall is against a specific class of tooling rather than against universal practice, and that tooling is not chain-specific in design.

What is not currently possible:

- Distributing incentives programmatically rather than manually.
- Demonstrating on-chain which capital was attributable to which campaign.
- Producing an auditable reconciliation of reward spend against a qualifying-TVL measure.
- Reaching users who do not already hold Cardano assets.

Category: E1, Incentive and points infrastructure; Score: 28.8; Type: missing capability; Phase: 3; Sources: S-003

/ 2.4 SHARED EXECUTOR OR SCOOPER STANDARD

Current state:

Every protocol requiring transaction execution builds or sources its own agent, and no shared interface connects them. On the benchmark chains the equivalent function is either not required per protocol or is served by a shared solver market.

Nine aggregation and routing implementations were inventoried, and multi-venue routing is real and adopted across at least four of them. What no two share is an execution interface: 33% of substantive respondents operate a batcher built in-house, 11% use a third-party batcher and 11% run a permissionless variant. The dependency register records no live alternative against this row, not because execution agents are absent, but because a shared standard is.

Under the eUTxO model execution is a service each protocol must arrange for itself, so a shared standard is the only route by which one protocol's execution behavior becomes legible to another. A supporting gap raises the cost further: the absence of an EVM-style event abstraction means an integrator synchronizes full blocks to locate relevant data rather than subscribing to events.

Against the benchmark:

The baseline definition — an aggregator routing across the main DEXs. It is met, and the routing layer is the strongest part of the category.

The best-in-class definition — MEV protection, batch auctions, intent-based routing, cross-chain routing, and a shared executor or solver standard with reusable protocol adapters, so that an integration is written once.

At or near benchmark:

- Multi-venue routing covering all major Cardano venues.
- Limit orders.
- A public API for integrators.
- MEV protection, recorded as partial (same as one reference implementation).

Absent:

- A shared executor or scooper standard.
- Reusable protocol adapters.
- Batch auction or uniform clearing.
- Cross-protocol composition beyond swaps.

Cross-chain routing was not verified either way and contributes nothing to the score. The result is 55.0 against 100 for Ethereum and 55.0 for Sui, the one core gap where Cardano matches a reference ecosystem. Coverage and redundancy are comparatively strong, but capability remains limited, leaving the category well provisioned yet structurally shallow.

What is not currently possible:

- For one protocol to rely on another protocol's execution guarantees, because no common interface expresses them, so multi-protocol transactions and collateral loops cannot be constructed with a shared assurance about how execution will behave.
- Writing one integration that serves every venue, since no reusable protocol adapter exists.

Category: D2, Aggregation, routing and order execution; Score: 55.0; Type: missing capability; Phase: 2; Sources: S-001, S-003

/ 2.5 UNIFIED VAULT STANDARD

Current state:

A shared vault interface analogous to ERC-4626 was not identified. Every vault is a bespoke integration with no common interface, so vault shares are not portable across lending, DEX and CDP venues, and each new integration is built from scratch rather than written once against an interface.

Nine vault and staking products were inventoried and vault TVL is in the low single-digit millions, fragmented. The largest yield-bearing position measured in the audit holds approximately $768K, around 1.1% of chain TVL, and the constraint on further capacity there is exit-pool depth rather than strategy capacity: the asset has no direct redemption, and its peg mechanism and its only exit route are the same liquidity pool.

The token-level evidence is consistent. Across the 28 ecosystem tokens assessed on six utility dimensions, vault or automated-strategy support is present for none, while cross-protocol composability is present for 18. Tokens do move between applications; what they do not do is arrive at one as a standardized yield-bearing claim. Standardization was named by a survey respondent as the single item most needing ecosystem attention.

Against the benchmark:

The baseline definition — staking plus one yield product. It is met.

The best-in-class definition — a shared vault standard, yield-bearing collateral usable across DeFi, an independent curator layer, automated liquidity management for concentrated positions, and auto-compounding at scale. The first three bear on this gap; automated liquidity management is recorded separately at 2.8.

At or near benchmark:

- Native staking yield retained inside the product.
- Auto-compounding, recorded as partial rather than operating at scale.

Absent:

- A shared vault standard.
- Vault shares usable as collateral elsewhere.
- An independent curator layer.
- Yield-bearing collateral with direct redemption.

The result is 36.3 against 100 for Ethereum and 83.8 for Sui. Capability and adoption each score the lowest: the products that exist are neither at parity nor materially used.

What is not currently possible:

- Presenting a yield position as a token another application accepts by default.
- Stacking one yield strategy on another.
- Productizing a multi-step strategy for passive capital.

Category: D7, Yield vaults, LSTs and staking products; Score: 36.3; Type: missing capability; Phase: 2; Sources: S-001, S-013

/ 2.6 CURATED MONEY-MARKETS AND PER-MARKET CUSTOMIZATION

Current state:

Lending is the deepest DeFi category by TVL on Cardano. Both pooled and isolated designs exist: the pooled design at the largest venue at $12.4M, the isolated design at one venue at approximately $3.3M.

Curated-vault layer and permissionless market creation were not identified, and per-market interest-rate curve or collateral-parameter customization was not found — caps, loan-to-value ratios and liquidation thresholds are protocol-wide governance parameters, so every new market is a governance action rather than a configuration.

A curated-vault layer is recorded as a program Phase 2 candidate and one credit market is announced; both are excluded from the production score.

Against the benchmark:

The baseline definition — a live lending market with multiple assets. It is met, and this is the highest-scoring of the eight core gaps.

The best-in-class definition — isolated alongside pooled designs, permissionless market creation, curated vaults with independent curators, published risk parameters, and per-market interest-rate curves and collateral parameter customization.

At or near benchmark:

- Pooled and isolated designs both live on chain.
- Published risk parameters.
- Stablecoin markets live.
- Collateral earning yield while posted, since supplied assets accrue and ADA retains staking.

Absent:

- Permissionless market creation.
- A curated-vault layer with independent curators.
- Per-market interest-rate curve and collateral parameter customization.
- Flash loans.
- Yield-bearing collateral, because no production yield-bearing asset exists to post (2.5, 2.12).

Oracle choice is recorded as partial: feeds are selected per asset but from a single provider set, so the largest oracle-dependent venues ultimately price against the same feed. The result is 61.3 against 100 for Ethereum and 83.8 for Sui, with core parity present but advanced capabilities still missing.

What is not currently possible:

- Listing new collateral through configuration rather than a governance process.
- Setting an interest-rate curve suited to a specific asset's liquidity profile.
- Independent risk curation, since there is no curated-vault layer to curate.

Category: D4, Money markets and lending; Score: 61.3; Type: missing capability; Phase: 2; Sources: S-001, S-003, S-040, S-049

/ 2.7 CONCENTRATED LIQUIDITY

Current state:

No production venue offers a Uniswap v3-style concentrated-liquidity model with programmable price ranges, and every spot venue identified is constant-product.

No order book with meaningful depth was identified either: of the three candidates inventoried, one is unverified, one is at Catalyst and testnet stage, and one holds approximately $8K in TVL. Two routes sit outside the production score, one announced concentrated-liquidity implementation and one order-book implementation at Catalyst and testnet stage. Nothing in the category is deprecated, so the capability has not been tried and withdrawn; it has not yet shipped.

The cost is measurable in the pool data. Of the 20 LP positions recorded in the absorption-capacity model, eleven are constrained by swap volume, with fee income dividing across whatever capital is added; seven by emissions, where rewards rather than organic fees make up the majority of headline APY, reaching 98% in one case; and two by non-recurring volume spikes. Depth on those pairs is rented rather than earned, which is the expected outcome when the only available market structure spreads liquidity across the full price curve.

With three Cardano native tokens, ADA included, holding tier-1 exchange access, price discovery for most ecosystem assets happens entirely against that depth.

Against the benchmark:

The baseline definition — any venue offering something beyond a constant-product pool. It was not met.

The best-in-class definition — a production concentrated-liquidity market maker or central limit order book, professional market-maker participation, and sub-10bps stable spreads.

At or near benchmark:

- Stableswap pools and multiple fee tiers.
- MEV protection.

Absent:

- Concentrated liquidity with programmable price ranges.
- An order book with meaningful depth.
- Custom pool logic or hooks.
- TWAP oracle output.
- Reusable integration adapters.

The result is 27.5, the lowest-scoring DeFi category, with coverage, redundancy, capability and adoption all in the lowest assessment band. Both reference ecosystems score 90, the only core gap where Ethereum and Sui return the same figure, so the shortfall is against general practice rather than against one chain's particular advantage.

What is not currently possible:

- Deploying liquidity against a defined price range rather than across the full curve.
- Achieving stable-pair spreads at the level professional market makers require.
- Obtaining depth per unit of incentive at the ratio a capital-efficient market type provides: incentive spend under a constant-product-only structure buys a fraction of the depth the same spend buys on a benchmark chain.

Category: D3, Order books, concentrated liquidity and market structure; Score: 27.5; Type: missing capability; Phase: 2; Sources: S-001, S-009, S-022

/ 2.8 AUTOMATED LIQUIDITY MANAGER

Current state:

No automated liquidity manager operates on Cardano. Providers that manage LP price ranges, rebalancing or auto-compounding on a depositor's behalf were not identified, so every LP position is either a passive constant-product deposit or is managed manually by its owner, and the count of independent automated liquidity managers in production is zero.

The absorption-capacity model records operator attention alongside liquidity as a constraint for this reason: a hand-managed position has a ceiling set by how much attention its owner can give it, and that is not a quantity that scales with incentives. The same finding appears at token level, where automated-strategy support is present for none of the 28 ecosystem tokens assessed.

This gap and 2.7 are linked. On a benchmark chain the two are deployed together, because range management is what makes concentrated liquidity usable by capital that is not actively managed. Were concentrated liquidity to ship as announced under 2.7 while this gap persists, the capability would be usable only by active managers, and the passive LP base is the cohort a liquidity program is most likely to attract.

Against the benchmark:

The baseline definition — staking plus one yield product. It is met; the automated-management capabilities above it are not.

The best-in-class definition — automated liquidity management for concentrated positions and auto-compounding at scale, the two rows this gap records, alongside the vault-standard capabilities recorded at 2.5.

At or near benchmark:

- Auto-compounding, recorded as partial rather than operating at scale.

Absent:

- Automated management of LP price ranges.
- Rebalancing on a depositor's behalf.
- Any independent provider offering delegated position management.

The category scores 36.3 against 100 for Ethereum and 83.8 for Sui, shared with 2.5. The two gaps describe one absence from two sides: neither an interface for a managed position to be expressed as, nor a manager to run one, was identified.

What is not currently possible:

- Delegating range and rebalancing decisions.
- Using a capital-efficient market structure at all for passive capital.

Category: D7, Yield vaults, LSTs and staking products; Score: 36.3; Type: missing capability; Phase: 2; Sources: S-001

/ 2.9 APPLICATION COMPOSABILITY

Common adapter, solver or intent standards connecting Cardano DeFi applications and reusable protocol adapters were not identified, so cross-protocol composition beyond swaps (e.g. a vault position accepted into a lending market, a collateral loop, a single-transaction multi-step route) was not observed in production.

The native token utility analysis records cross-protocol composability for 18 of 28 tokens, while the capability comparison records no reusable protocol adapters or cross-protocol composition beyond swaps (Appendix C.3).

What is not currently possible:

- Building the multi-step products sophisticated capital allocates to at an engineering cost comparable to a benchmark chain, since each integration is written per pair of protocols rather than once against a shared adapter.

Category: D2, Aggregation, routing and order execution; Score: 55.0; Type: missing capability; Phase: 2; Sources: Appendix C.3

/ 2.10 COLLATERAL REHYPOTHECATION

Collateral posted to the principal CDP venue is not rehypothecated and earns nothing beyond native staking, and no yield-bearing collateral is accepted anywhere in the category; both benchmark implementations accept yield-accruing collateral and pass that yield through.

What is not currently possible:

- Earning lending or vault yield on collateral while it is posted, which caps CDP position yield at the staking rate.
- Constructing the leveraged-carry and basis strategies that use rehypothecated collateral.

The gap is downstream of 2.5 and 2.12.

Category: D5, CDPs, synthetics and yield-bearing collateral; Score: 57.5; Type: missing capability; Phase: 2; Sources: S-041, S-048

/ 2.11 THE DOMINANT DOLLAR ISSUANCE

The chain's dominant dollar carries 65.8% of stablecoin market capitalization and cannot be minted on Cardano. Supply arrives and exits through an external issuer rail operating on the issuer's own attestation infrastructure rather than a third-party wrapped-asset bridge.

The concentration is a consequence of a capability gain rather than a deterioration: it rose because a canonical issuer route launched in February 2026, not because the alternatives failed.

What is not currently possible:

- Growing dollar supply independently of an external rail.
- Redeeming at scale without routing through it, which additionally inherits the asset-route gap at 2.1.

Category: C4, Stablecoins; Score: 66.3; Type: dependency; Phase: 2; Sources: S-005 to S-007, S-025

/ 2.12 YIELD-BEARING STABLECOIN

Five dollar stablecoins are live and none is yield-bearing. The credible route entered public testnet on 6 July 2026 and is excluded from the production score.

What is not currently possible:

- Holding a dollar on Cardano that earns while it sits.

The opportunity cost of holding dollars here is higher than on a chain offering an sUSDe or sUSDS-class asset — a measurable difference when the same liquidity provider is choosing between venues.

Category: C4, Stablecoins; Score: 66.3; Type: missing capability; Phase: 2; Sources: S-012, S-025

/ 2.13 COLLATERAL PRICING CONCENTRATION

There is one institutional general-purpose price feed in production carrying the majority of collateral pricing. A second production feed is deployed for a single derivatives venue and is not available as a general collateral-pricing alternative. Two further providers are flagged as maintenance-uncertain on direct builder feedback (S-051) and are excluded pending confirmation with their teams; their public sites and repositories remain live.

Effective independent feeds available for collateral pricing is therefore one, and approximately $16.3M of TVL (around 24% of chain TVL) prices off the dominant feed, computed in Section 6.

The available evidence does not indicate a quality problem with that feed: it is an institutional-grade provider, live since May 2026, with no incident reported. An earlier incident on a since-superseded feed affected one stablecoin price in April 2024; the consuming protocol's failsafe held and user loss was not recorded (S-047).

Against the benchmark, per-market feed selection, a service-level agreement covering feeds serving lending markets and proof-of-reserve support were not identified.

What is not currently possible:

- Launching a new lending, CDP or derivatives market with an independent price source.
- Diversifying feed exposure at the level of an individual market.

Category: A5, Oracles and price feeds; Score: 50.0; Type: concentration; Phase: 1–2; Sources: S-002, S-011, S-027, S-028, S-051, S-052

/ 2.14 DERIVATIVES AND OPTIONS

One production perpetuals venue constitutes the entire derivatives category, and no options market is in production.

The venue holds $1.71M in TVL against chain-wide 7-day perpetuals volume of $14.43M, and the available evidence indicates it is well run — audited by two firms within the preceding six months, operating its own execution agent, and reporting counterparty relationships that exceed what a venue of this size can absorb.

The gap is the absence of an alternative and of an options market, not the venue.

What is not currently possible:

- Hedging inventory on Cardano, the precondition for professional market making.

- Running the delta-neutral basis trade at size.

Category: D6, Perps, options and derivatives; Score: 30.0; Type: concentration; Phase: 2–3; Sources: S-001, S-011, S-022

/ 2.15 MULTISIG

Native Cardano multisig works and is in production across the ecosystem, institutional custody for native assets is evidenced at two major providers, and audited milestone-gated disbursement contracts are in production.

What was not identified is the layer between them: the benchmark smart-account implementation costs nothing to create an account, supports modules and spending policies, and is integrated across applications as a signer.

Against the four-capability institutional treasury benchmark, two of four were observed.

What is not currently possible:

- Operating a treasury under policy control at no account-level cost.
- Handing an allocator or auditor a policy-controlled disbursement trail by default.

Category: C2, Multisig, smart accounts and treasury tooling; Score: 43.8; Type: missing capability; Phase: 2; Sources: S-003, S-010, S-037, S-038

/ 2.16 RWAS AND ON-CHAIN CREDIT MARKETS

Tokenized treasury products and private-credit or receivables markets were not identified in production, and the category's credible anchor is on public testnet.

Of the eleven inventoried projects, most are directory listings with no verified product, TVL or audit, which is why redundancy scores below average and the long tail should not be cited as evidence of depth in either direction.

What is not currently possible:

- Posting a non-crypto-correlated collateral type, which constrains the size of position an allocator can take at a given risk budget.

Category: D8, RWA and tokenization; Score: 42.5; Type: maturity; Phase: 2; Sources: S-009, S-012

/ 2.17 ON-CHAIN INSURANCE

One production parametric insurance provider was identified, covering a small set of assets, but no claims-based or cover-pool market for smart-contract risk.

Independent investor-funded asset risk ratings are in production and recorded as a strength.

No provider performing parameter curation for live markets was identified: against a benchmark of three or more independent curators with published methodology, the count is zero.

What is not currently possible:

- Hedging or insuring a smart-contract loss on-chain, which leaves position size as an allocator's only risk control.
- Obtaining independently curated parameters for a market receiving incentivized deposits.

Category: E2, Risk management and parameter curation; Score: 45.0; Type: missing capability; Phase: 2; Sources: S-010, S-014

/ 2.18 NFT MARKETPLACE

The marketplace that carried the majority of Cardano NFT trading ceased operations during the audit period. Nine inventory rows in this area are minting or media tooling rather than trading venues.

What is not currently possible:

- A liquid venue for the assets a substantial retail cohort already holds.
- Exit liquidity for the NFT-collateralized lending that operates on the chain.

Category: NFT marketplaces and consumer; Score: not scored; Type: capacity; Phase: 2; Sources: S-003, S-042

/ 2.19 LAUNCHPAD

No launchpad was identified anywhere in the 274-row project inventory, cross-checked against the ecosystem category taxonomy, so new teams raise, distribute and list off-chain or on other chains.

A negative finding is only as complete as the inventory, and confirmation against a second independent directory is outstanding.

What is not currently possible:

- For a team launching on Cardano to keep its token distribution and initial liquidity on Cardano.

Category: Launchpads and token distribution; Score: not scored; Type: missing capability; Phase: 2; Sources: S-009

/ 2.20 AI AND AGENTIC DEFI INFRASTRUCTURE

One agent-payment network is live; an agentic wallet with policy-bounded keys, a tokenized compute market and agent-facing DeFi integration were not identified.

The benchmark reference set for this area is itself early on every chain in the comparison set.

What is not currently possible:

- Agent-initiated interaction with Cardano DeFi under bounded key policy.

Nothing is prevented for existing users today.

Category: AI and agentic infrastructure; Score: not scored; Type: missing capability; Phase: 2

/ 2.21 RUNTIME THREAT DETECTION

No runtime threat detection, anomaly monitoring or automated incident response for live smart contracts was identified in production, so protocols detect incidents through social channels rather than tooling.

The benchmark reference implementation monitors more than 70 chains across more than 300 risk types and executes defensive actions such as pausing contracts before losses finalize.

What is not currently possible:

- Automated detection or containment of an in-progress exploit on a market holding capital, which leaves time-to-detection bounded by social channels.

Category: B4, Security: audits, bug bounties, incident response; Score: 68.8; Type: missing capability; Phase: 2; Sources: S-054, S-055

/ 2.22 THIRD-PARTY STABLECOIN ISSUANCE

No platform through which a third party can issue and operate its own fiat-backed stablecoin on Cardano was identified.

The benchmark reference implementation operates as a regulated issuer across more than 25 chains and provisions new stablecoins with ramps, reporting and compliance controls at launch.

What is not currently possible:

- Launching a branded, fiat-backed stablecoin on Cardano through an existing issuance rail rather than building issuance, reserves and compliance from scratch.

Category: C4, Stablecoins; Score: 66.3; Type: missing capability; Phase: 2; Sources: S-054, S-056

/ 2.23 TOKENIZED COMPUTE AND EMERGING-ASSET MARKETS

Tokenized compute, GPU or energy markets were not identified in production, and no venue for financializing the asset base of other emerging industries appears in the project inventory.

The absence of a tokenized compute market is noted at 2.20 in the agentic context; it is recorded here as an asset-class gap. The pattern the category would serve — data centers, electricity, GPUs, inference and models each carrying financial instruments on-chain — has no Cardano implementation at any stage.

What is not currently possible:

- Holding, trading or collateralizing exposure to compute or comparable emerging-industry assets on Cardano.

Category: D8, RWA and tokenization; Score: 42.5; Type: missing capability; Phase: 2–3; Sources: S-009, S-054

/ 2.24 TOKENIZED YIELD-BEARING ADA STANDARD

Cardano's staking design leaves delegated ADA liquid in the holder's wallet, but once that ADA is deposited into a DeFi protocol, whether the staking yield still reaches the depositor is at each protocol's discretion: some venues pass it through (recorded as a strength at 5.2), while other venues can retain it or redelegate pooled ADA to stake pools of their own choosing.

One tokenized yield-bearing ADA product is in production, but its adoption is relatively thin.

What is not currently possible:

- Depositing ADA into any DeFi venue with staking yield reaching the depositor by construction rather than by that protocol's policy.
- Keeping the choice of stake pool while a liquid token representing the staked ADA circulates across lending, CDP and DEX venues.

Category: D7, Yield vaults, LSTs and staking products; Score: 36.3; Type: adoption; Phase: 2; Sources: S-013, S-041, S-045

/ 2.25 BUSINESS PAYMENT PRIMITIVES

No production primitives for invoicing, payment tracking, purchase orders or accounts-receivable and accounts-payable workflows were identified, so ordinary business payment processes cannot be run against the chain.

Cardano holds native support in the official x402 payments codebase, which provides the request-payment layer such workflows would build on; it is recorded as the emerging exception rather than as the workflow capability itself. Consumer fiat ramps are recorded separately at G-001.

What is not currently possible:

- Running an invoice-to-settlement cycle on Cardano: issue, track, settle, reconcile.
- Accepting or reconciling payments from incumbent consumer rails such as card networks and app-based wallets against Cardano settlement.

Category: C5, Fiat on/off ramps, cards and payments; Score: 47.5; Type: missing capability; Phase: 2; Sources: S-054, S-057

/ 2.26 ENTERPRISE INTEGRATION PATHWAY FOR WEB2 BUSINESSES

No onboarding path was identified through which a Web2 business can run ledger- and AI-driven efficiency experiments on Cardano.

A structured series of such experiments is the mechanism by which companies become acquisition, merger and partnership candidates for the ecosystem.

What is not currently possible:

- Adopting Cardano as a Web2 company through an established pathway rather than a bespoke engagement.

Category: Enterprise and Web2 integration; Score: not scored; Type: opportunity; Phase: 3; Sources: S-054

/ 2.27 TOKENIZED LOYALTY AND GIFT-CARD RAILS

No production rail was identified for issuing loyalty or gift-card value on Cardano that interoperates with incumbent programs; the gap is integration with the existing gift-card and rewards ecosystem, not a parallel system.

The reference implementations are incumbent Web2 programs that enable points or rewards to transfer across airline, hotel, merchant and other consumer loyalty ecosystems.

What is not currently possible:

- Issuing or redeeming loyalty value on Cardano that a consumer can move into the programs they already use.

Category: Loyalty and rewards; Score: not scored; Type: opportunity; Phase: 3; Sources: S-054, S-058

/ 2.28 FIVE FOUNDATIONAL FINANCIAL FUNCTIONS

No production provider was identified serving five financial functions the program treats as foundational: store of value, price discovery, rate discovery, secondary markets and regulatory arbitrage. The finding is recorded per function, so capability emerging against any one of them can be assessed against this entry.

The functions touch the scored set at the edges — price discovery is confined to on-chain venues (G-004), and the only rate formation observed is a single venue's utilization curve (2.6) — but no category in the framework carries any of the five as its primary object, which is why the entry is recorded as cross-cutting rather than against a scored category.

What is not currently possible:

- Packaging a store-of-value position on Cardano beyond holding the bare native asset.
- Price discovery for assets that do not already trade on a Cardano venue.
- Referencing a market-set benchmark interest rate.
- A secondary market for positions originated on Cardano outside the spot DEXs: vault shares, LP positions or RWA paper.
- Offering on Cardano a financial service whose off-chain equivalent is priced out by jurisdictional or regulatory cost.

Category: Cross-cutting; Score: not scored; Type: opportunity; Phase: 3; Sources: S-009, S-054

3. Cardano ecosystem snapshot

FOR DISTRIBUTION

/ 3.1 ECOSYSTEM-LEVEL METRICS

MEASURE	CARDANO	SUI	ETHEREUM	SOURCE
DeFi TVL	$67.41M	$400.39M	$40.94B	S-001; S-030
Stablecoin market capitalization	$67.12M	$450.74M	$147.12B	S-001; S-030
Stablecoin supply to TVL ratio	1.00	1.13	3.59	S-001; S-030
DEX volume, 7 days	$15.99M	$164.26M	$5.70B	S-001, S-031
Perpetuals volume, 7 days	$14.43M	$173.24M	$7.18B	S-001, S-032
Protocols tracked by the primary aggregator	63	147	1,968	S-001; S-030
Chain fees, 24 hours	$956	$1,935	$196,846	S-001; S-030
Application revenue, 24 hours	$2,324	$70,820	$2.32M	S-001; S-030
Active addresses, 24 hours	11,527	100,738	537,223	S-001; S-030
Native token market capitalization (ADA / SUI / ETH)	$6.85B	$2.77B	$226B	S-001; S-030
DeFi TVL to market capitalization	~1.0%	~14.5%	~18.1%	S-001; S-030
Dominant stablecoin share of stablecoin market cap	65.8% (USDC)	60.7% (USDC)	49.7% (USDT)	S-001; DefiLlama

Stablecoin supply and DeFi TVL are approximately equal. A ratio of 1.00, against a range of 1.08 to 3.59 across the comparison set in Appendix C.1, does not indicate a shortage of dollars relative to the size of the DeFi sector; it indicates that both are the same order of magnitude and both small relative to the chain's market capitalization.

Chain fees and application revenue, measured across the 63 protocols tracked by the primary aggregator, indicate economic throughput rather than protocol quality, and constrain what fee-funded infrastructure the ecosystem can sustain without external funding.

/ 3.2 THE TVL SNAPSHOT

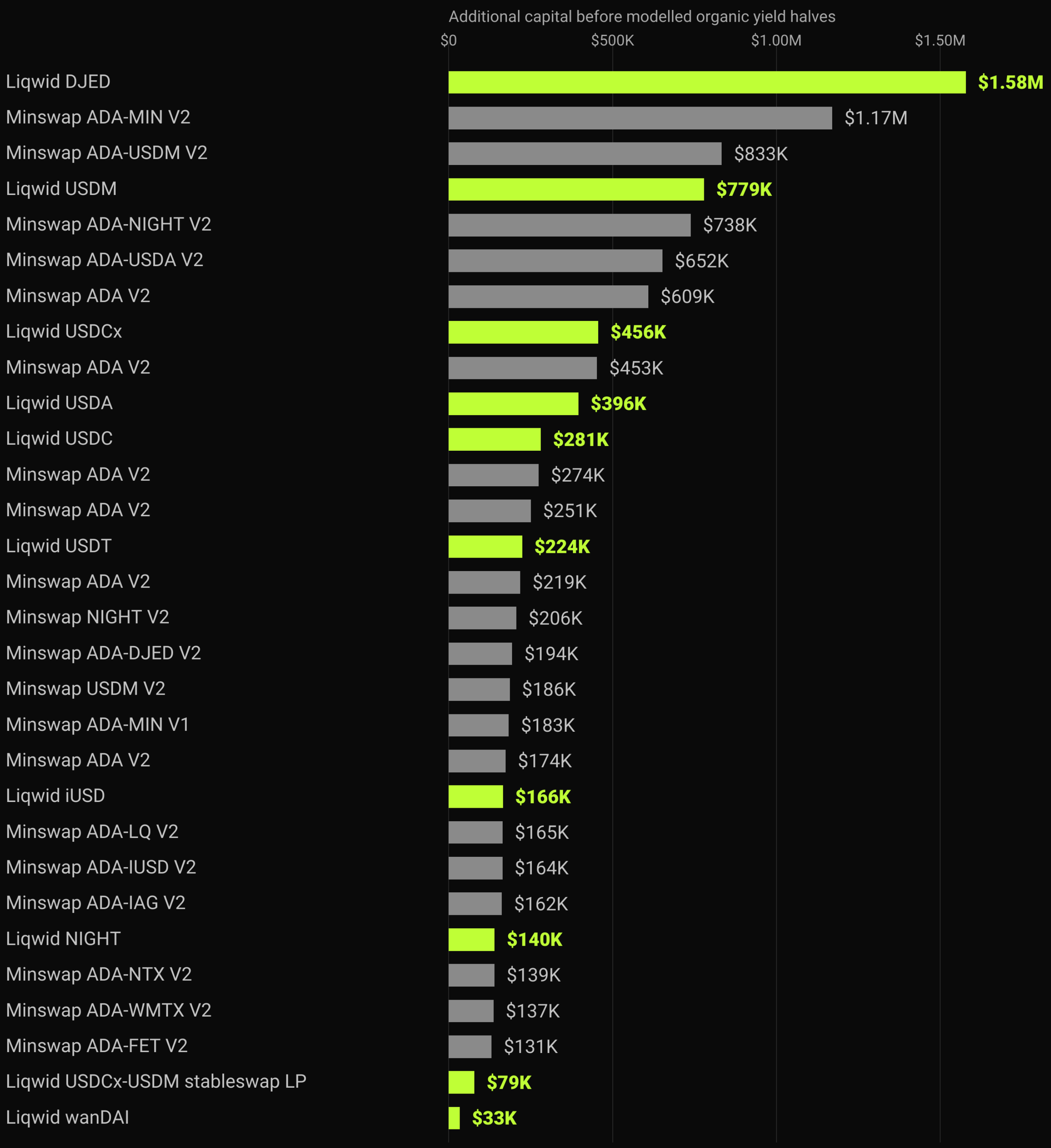
The audit's TVL snapshot is $67.41M, being Cardano DeFi TVL on the primary aggregator on 13 August 2026 (S-001).

It is a single-day aggregator measurement, made on that aggregator's inclusion rules, of a market whose daily DEX volume at the same date was $719,512.

/ 3.3 LIQUIDITY, YIELDS AND ABSORPTION CAPACITY

The audit recorded 29 markets and pools, all of which hold more than $100K.

Finite absorption capacity by market and pool



The finite estimates total $11.17M across 30 markets and pools under the report's static model. Venue names distinguish otherwise identical labels; the ADA market, sOADA and native-staking benchmark are outside this finite total.

Total measured absorption capacity is $11.06M — the additional capital deployable before organic yields compress by half. The model is static, holding fee income, emissions and borrow balances constant; market-level estimates and binding constraints are stated in Appendix C.2.

Utilization is the variable with the most dispersion. The largest lending market holds $6.59M at 1.0% utilization, where the binding constraint is borrower demand rather than any supply cap. Stablecoin markets at the same venue run from 29.8% to 91.7% utilization, and two comparable stablecoin markets in the same protocol, DJED and USDM, carry a

supply-yield spread of roughly four percentage points (Appendix C.2; S-049 for supply-cap policy, which documents the V2 parameter set rather than the state re-verified at the data cut). Every measured LP position is passive or manually managed, a direct consequence of 2.5 and 2.8, so realistic capacity is bounded by operator attention in addition to liquidity. Stable-pair capacity is separately capped by the market-structure gap at 2.7.

/ 3.4 NATIVE TOKEN UTILITY AND PROJECT INVENTORY

The audit assessed 28 ecosystem tokens across six utility dimensions (Appendix C.3). Collateral breadth is wider than commonly assumed: several tokens are already usable as lending collateral or borrowable assets in the largest lending market, and the principal CDP venue whitelists a Cardano-distributed asset and the bridged dollar (S-041, S-048). What limits further breadth is upstream — price-feed availability tracks trading volume rather than protocol significance, with no live feed found for several of the larger ecosystem tokens by market capitalization (S-046), linking collateral breadth to 2.13. Verified cross-protocol composability is recorded for 18 of the 28 tokens and automated strategy support for none; token utility does not establish the reusable application integrations discussed in 2.9.

The project inventory contains 274 projects. The status distribution is in Appendix C.6.

/ 3.5 POSITION RELATIVE TO PRIOR PERIODS

DeFi TVL of $67.41M at the data cut compares with $423.5M reported for the third quarter of 2025, and lending TVL at the largest venue of $12.4M with $101.6M over the same period (S-044). That source is a republication of third-party research and is recorded as Low confidence; it is cited to place the baseline in context rather than to fix a series. This report is a point-in-time capability assessment and does not attribute the change. The baseline recorded in Section 7 should be read against it.

4. Ecosystem scorecard and category overview

FOR DISTRIBUTION

/ 4.1 OVERALL SCORECARD

CATEGORY ID	CATEGORY	TIER	SCORE
A1	Node, RPC and API providers	2	🟡 66.3
A2	Indexers and data pipelines	2	🟡 66.3
A3	Block explorers	2	🟡 68.8
A4	Analytics and dashboards	2	🟡 56.3
A5	Oracles and price feeds	1	🔴 50.0
B1	Smart contract languages, SDKs and libraries	3	🟢 81.3
B2	Dev tooling: testing, simulation, monitoring	2	🔴 53.8
B3	Documentation and developer onboarding	3	🟡 72.5
B4	Security: audits, bug bounties, incident response	2	🟡 68.8
C1	Wallets and key management	3	🔴 50.0
C2	Multisig, smart accounts and treasury tooling	2	🔴 43.8
C3	Bridges and cross-chain messaging	1	🔴 41.3
C4	Stablecoins	1	🟡 66.3
C5	Fiat on/off ramps, cards and payments	1	🔴 47.5
C6	CEX listings, market makers and liquidity routing	1	🟡 60.0
D1	Spot DEXs and AMMs	1	🟡 61.3
D2	Aggregation, routing and order execution	2	🟡 55.0
D3	Order books, concentrated liquidity and market structure	1	🔴 27.5
D4	Money markets and lending	1	🟡 61.3
D5	CDPs, synthetics and yield-bearing collateral	2	🟡 57.5
D6	Perps, options and derivatives	1	🔴 30.0
D7	Yield vaults, LSTs and staking products	1	🔴 36.3
D8	RWA and tokenization	2	🔴 42.5
E1	Incentive and points infrastructure	1	🔴 28.8
E2	Risk management and parameter curation	1	🔴 45.0
—	Overall, tier-weighted	—	**51.3**

Tier denotes the weight applied in the overall figure:

- Tier 1 carries weight 3
- Tier 2 weight 2
- Tier 3 weight 1

The assignment reflects how directly a category governs capital deployment and was set before scoring. Benchmark definitions and provider summaries for every category are in Appendix A.

/ 4.2 GROUP COMMENTARY

Group A — Chain access and data (mean 61.5):

Read access is broadly served: nine production access paths including four independent hosted providers, ten indexer options and three independent full explorers.

The constraint is capability — no trace or webhook-notification endpoint tier, explorer contract verification and developer APIs at three of six benchmark checklist items, and a hosted standardized query layer or EVM-style event abstraction is absent.

Analytics is weakest at 56.3, the ecosystem's principal first-party DeFi analytics platform having wound down in June 2026 with nothing standardized identified in its place.

Sources: G-002, G-005, G-006, G-007, S-042

Group B — Builder platform (mean 69.1):

The highest-scoring group and the only one containing a category above 75.

Language and SDK coverage is competitive against any ecosystem in the comparison set and documentation is actively maintained, with the shortfall at protocol level.

Security scores on strong audit coverage against an absent reactive half — a funded public bug bounty and a published incident-response playbook were not identified, so two of four benchmark lifecycle stages are covered.

Development tooling is the outlier: local tooling is good, but zero of four production observability capabilities were identified.

Sources: G-003

Group C — User and asset rails (mean 51.5):

Five recorded gaps and the largest spread between coverage and effective capability, with wallets, multisig and bridges all scoring below their coverage.

Fiat access is the least-evidenced category in the report: one on-ramp route verified end to end and one documented ADA sell flow, but no verified off-ramp for native tokens or the bridged dollar, so one of four benchmark routes is verified.

ADA trades on all tier-1 venues and three Cardano native tokens, ADA included, have tier-1 access, while pricing power in liquidity negotiations sits with the counterparty.

Sources: S-016, S-039, G-001, S-043, G-004

Group D — DeFi primitives (mean 46.4):

The largest group and the lowest-scoring other than Group E, carrying seven recorded gaps.

Spot DEXs score on high venue count but thin, fragmented executable depth.

CDPs and synthetics carry both the report's clearest DeFi differentiator and 2.10.

Vaults and staking products are the composite of 2.5 and 2.8.

Derivatives (2.14) and market structure (2.7) are the two lowest DeFi scores in the report, both Tier 1.

Group E — Program enablers (mean 36.9):

Both categories bear directly on program operations and both are Tier 1 (2.3, 2.17), and with two constituent categories the mean is the most sensitive to a single score.

One comparison cuts against the general pattern: Sui scores 33.1 here against Cardano's 36.9 — the one group in which Cardano scores above the newer non-EVM comparator — while Ethereum scores 93.2.

Program-enabler infrastructure is a mature-ecosystem capability and its absence is not specific to Cardano.

5. Categories at or near benchmark

FOR DISTRIBUTION

An audit that records only shortfalls does not describe the current state. The capabilities below were found at or near benchmark on the same evidence standard applied in Section 2.

/ 5.1 SMART CONTRACT LANGUAGES, SDKS AND LIBRARIES

Eleven production languages, SDKs and libraries spanning Haskell, TypeScript, Python, Rust, Java and Scala, including a purpose-built contract language, with zero-knowledge verifier generation ahead of most non-EVM chains in the comparison set.

The category is at full production coverage, the strongest position recorded on that dimension anywhere in the report, and its constraint is developer supply rather than toolchain quality.

Documentation is the strongest category on maintenance in the report.

Sources: S-002

/ 5.2 NATIVE STAKING YIELD INSIDE DEFI POSITIONS

ADA earns network staking rewards while posted as collateral in both the largest lending market and the principal CDP venue — a structural property of the chain's staking design that no benchmark ecosystem offers without an intermediating liquid staking token, applying to every position using ADA as collateral. Pass-through is venue-discretionary rather than guaranteed by a token standard; the absence of that standard is recorded at 2.24.

The yield is inflation-funded and is reported separately from organic yield throughout.

Supplied assets at the largest lending market additionally accrue lending interest, where one benchmark implementation leaves collateral idle and the other requires a yield-bearing wrapper.

Sources: S-041, S-045

/ 5.3 SYNTHETIC BTC AND ETH

Synthetic BTC and ETH are issued natively; neither benchmark CDP implementation offers a synthetic non-USD asset, making this the clearest single capability present on Cardano and absent on both benchmarks.

Alongside it, the peg module converts the bridged dollar to the synthetic dollar 1:1, unlimited in the mint direction and slippage-free, the reverse direction being subject to module liquidity and disableable by governance — recorded as a governance dependency rather than a liquidity one.

Sources: S-048

/ 5.4 STANDARDS-BASED PARITY

Native assets require no approval transaction, removing a class of user risk that EVM ecosystems carry permanently.

Hardware wallet support across three vendors, mobile parity and a dApp connection interface met by every Cardano application assessed are parity items achieved through a standard rather than per-provider integration.

Audited milestone-gated treasury disbursement contracts are in production.

Sources: S-010

/ 5.5 CAPABILITY ADDED IN THE PRECEDING TWO QUARTERS

All in production at the data cut: a global dollar issued through the issuer's own attestation rail.

Institutional-grade price feeds and compliance screening.

Multi-collateral CDPs accepting the bridged dollar and a Cardano-distributed asset, plus the peg stabilization module.

Institutional custody for native assets at two providers.

The first Cardano native token listing on the broadest-reach tier-1 venue.

General cross-chain message passing across more than 150 chains.

Sources: S-005 to S-007, S-011, S-048, S-037, S-038, S-043, S-053

6. Cross-category dependencies and concentration

FOR DISTRIBUTION

Category scores measure each category in isolation. Ecosystem-level dependencies that cut across categories are recorded here, drawing on the project inventory and on the first-party dependency survey. Survey respondents represent approximately 56% of tracked chain TVL across spot DEX and AMM, lending, CDP and synthetics, perpetuals, bridge, stablecoin issuance and insurance. A dependency concentration summary is in Appendix C.4.

/ 6.1 PROVIDER AND IMPLEMENTATION CONCENTRATION

CATEGORY	INDEPENDENT PRODUCTION PROVIDERS OR IMPLEMENTATIONS
Oracles, general-purpose collateral pricing	1
Perpetuals and derivatives venues	1
CDP and synthetics venues	1
Concentrated-liquidity or deep order-book spot venues	0
Automated liquidity managers	0
Parameter curation providers	0
Launchpads	0
Campaign and attribution engines	0
Verified off-ramps for native tokens or the bridged dollar	0
Reliable general-purpose EVM asset routes	0
Hosted node and API providers	4
Indexer implementations	10
Full block explorers	3
Dollar stablecoin issuers	5
Software wallets	12, plus 3 hardware vendors

Ten of the fifteen rows show a count of zero or one, and the count is low precisely in the categories the program's operations depend on and high in those serving developers and existing users.

Where the count is one, provider quality is assessed separately: in the two most material cases — the general-purpose price feed and the derivatives venue — the available evidence indicates both are well run.

What the count of one describes is the absence of an alternative if either becomes unavailable, and the absence of a competitive alternative for a protocol or curator wanting to diversify.

/ 6.2 SHARED DEPENDENCIES

The largest shared dependency is the general-purpose price feed at 2.13, serving 67% of respondents that use an external oracle, including the two largest by TVL, and exposing approximately $16.3M (around 24% of chain TVL).

Mitigating configuration is partial: 50% of oracle consumers run automatic fallback to a secondary source and a further 17% run circuit breakers that pause the protocol on price deviation.

Below that, dependency concentrates in components teams have chosen to own rather than in external providers:

- 58% of respondents self-host a node and 50% run a custom in-house indexer — the indexer being also the most-named single point of failure — which is recorded as a capability signal rather than a concentration risk, one respondent citing hosted throughput limits as the reason.
- 56% of substantive respondents operate or depend on an execution agent with no shared interface between implementations (2.4).
- 67% use native Cardano multisig while 22% administer production contracts with a single key or plain admin key (2.15).
- 89% report no bridge dependency at all, so cross-chain infrastructure is currently a growth enabler rather than a systemic dependency (2.1).
- On security, 89% of substantive respondents have been audited and 67% within the preceding six months across ten distinct firms, but no respondent reported a funded public bug bounty.
- 44% have worked with market makers, liquid funds or OTC desks, one reporting terms that would have required the protocol to cover a counterparty's impermanent loss (G-004).

A dependency concentration summary is in Appendix C.4.

/ 6.3 ASSET, ISSUER AND EXIT CONCENTRATION

65.8% of stablecoin market capitalization sits in one bridged rail, supported by 67% of substantive respondents, with four alternative issuers live.

The concentration is in the asset with the deepest external liquidity and widest application support, which is why it is recorded as a dependency rather than a fragility (2.11).

Collateral at the principal CDP venue is overwhelmingly ADA notwithstanding the addition of the bridged dollar and a Cardano-distributed asset (S-048), so the category correlates with a single asset's price.

One yield-bearing asset's peg mechanism and its only exit route are the same liquidity pool, holding approximately $768K (S-013) — documented by the issuer as a design property, and the clearest instance of a position whose exit is a single venue.

Three Cardano native tokens, ADA included, have tier-1 exchange access and the remainder do not (S-035, S-036, S-043), so price discovery for most ecosystem assets is entirely on-chain, against the depth described at 2.7.

/ 6.4 SELF-REPORTED SINGLE POINTS OF FAILURE

Asked to name their own single point of failure, the largest share of respondents reported nothing external, the next largest the indexer, then the RPC or API provider.

No respondent named an oracle, a bridge or a wallet. The concentration at 2.13 is therefore an ecosystem-level finding computed across respondents rather than a risk any individual team reports carrying.

7. Baseline for future reassessment

FOR DISTRIBUTION

This report is the baseline record for a repeat assessment on the same framework.

Baseline dates:

- 13 August 2026 for Cardano chain-level metrics
- 14 August 2026 for comparator-chain metrics
- 18 August 2026 for market, yield and token-utility data
- 22 August 2026 for the dependency survey

Scope and method:

25 scored categories in five groups as listed in 4.1, plus eleven areas tracked but not scored, three of which carry recorded gaps and are set out in Appendix A.6 (2.18, 2.19, 2.20); the remaining eight are tracked in the project inventory only. The global adoption gaps (2.25 to 2.28) record demand-side findings: 2.25 against a scored category, 2.26 to 2.28 against areas outside both sets.

Five-dimension rubric, domain weights and tier weights as in Appendix A; benchmark set as in Appendix B; production-only scoring rule as in the front matter.

FIXED REASSESSMENT FRAMEWORK

25	5	5	11
scored categories	category groups	scoring dimensions	tracked but unscored areas

Several gaps are upstream of others and should be read in that order. The vault standard at 2.5 is a precondition for rehypothecation at 2.10; the executor standard at 2.4 is a precondition for the composability gap at 2.9; and concentrated liquidity at 2.7 and automated liquidity management at 2.8 are only useful to passive capital together. A reassessment should record whether an upstream gap closed before treating a downstream one as independently addressable.

Core metrics recorded for comparison:

- Overall tier-weighted score 51.3 and unweighted mean 53.5.
- Group means: A 61.5; B 69.1; C 51.5; D 46.4; E 36.9.
- All 25 category scores as listed in 4.1.
- DeFi TVL snapshot: $67.41M.
- Stablecoin market capitalization: $67.12M.
- Measured absorption capacity: $11.06M.
- Chain TVL exposed to the dominant price feed: $16.3M (24%).
- Project inventory: 274 rows, 233 live.
- Source register: 58 entries.
- Survey coverage: ~56% of tracked TVL.

Appendix A — Category definitions and benchmarks

FOR DISTRIBUTION

/ A.1 METHOD

Each of the 25 scored categories is assessed on five dimensions, each scored 0 to 4 against the definitions in A.2. The five dimension scores are combined using the domain weights in A.3 and multiplied by 25 to produce a score out of 100. Category scores are combined into the overall figure using the tier weights in A.4.

The benchmark definitions in A.6 (baseline capabilities, best-in-class capabilities, reference implementations and adoption thresholds) were written before any Cardano data was entered and were not revised during scoring. This is what allows the framework to be re-run in a later period and compared with this baseline: the measuring instrument is fixed independently of the thing measured.

Production-only rule. Testnet, development-stage, announced and unverified capability contributes nothing to any dimension. It is recorded separately per category and named where material.

Treatment of unavailable data. Where a dimension could not be evidenced, the audit scores conservatively against the available evidence and records the limitation. Adoption is the dimension most affected. No dimension was left unscored and no category was excluded for want of data.

Treatment of inactive capability. A capability is recorded as deprecated where there is neither a code commit nor an announcement within six months. Deprecated rows are excluded from all dimensions.

Cross-chain comparison rule. Benchmark chains are scored on the identical rubric, in the same pass, against the same benchmark definitions. Metric comparisons between chains use figures from the same source platform, with observation dates recorded in Appendix F. Capability differences arising from architecture rather than maturity are assessed on user-visible outcome, and are recorded as unmeasured rather than absent where the outcome was not measured.

/ A.2 THE FIVE DIMENSIONS

DIMENSION	0	1	2	3	4
Coverage (Does it exist?)	Nothing	Experimental or testnet only	One production option, basic cases	Multiple production options, most cases	Full production coverage
Redundancy (How many options?)	None	Single provider, no alternative	Two options, one dominant or a shared upstream	Three or more credible independents	Deep independent redundancy
Capability (How good is it?)	Nonexistent	Under 25% of benchmark capability	Core parity, advanced capabilities missing	Near parity	At or above benchmark
Adoption (Is anyone using it?)	None	Negligible	Real but thin	Healthy relative to chain size	Competitive in absolute terms
Maintenance (Is it reliable?)	Abandoned	Sporadic, unaudited, undocumented	Maintained, audited once	Active, audited, responsive contact	Recurring audits, published operations

Redundancy is the dimension most often misread. Two providers sharing an upstream dependency score 2, not 3, because the shared upstream is the effective point of failure. This is why lending does not reach the top of the redundancy scale despite a high venue count, and why the oracle category sits at the bottom of it (one production provider available).

/ A.3 DOMAIN WEIGHTS

DIMENSION	INFRASTRUCTURE CATEGORIES	DEFI CATEGORIES
Coverage	0.25	0.20
Redundancy	0.25	0.15
Capability	0.25	0.25
Adoption	0.10	0.30
Maintenance	0.15	0.10

Infrastructure is weighted toward existence and redundancy: infrastructure that exists and has alternatives is doing its job whether or not it is heavily used. DeFi is weighted toward adoption, at 0.30 the highest single weight in the framework, because a DeFi primitive with no users is not a functioning market regardless of its feature set. Seventeen categories are scored on the infrastructure weighting and eight on the DeFi weighting.

/ A.4 TIER WEIGHTS AND THE OVERALL FIGURE

Categories carry a tier reflecting how directly they govern capital deployment:

- Tier 1 weight 3
- Tier 2 weight 2
- Tier 3 weight 1.

Twelve categories are Tier 1, ten Tier 2 and three Tier 3, giving a total weight of 59. The overall figure of 51.3 is the tier-weighted mean; the unweighted mean is 53.5. Both are recorded so the size of the weighting effect is visible: 2.2 points, meaning the ecosystem scores slightly lower on the categories the framework treats as most consequential. Domain weights and tier weights are published in full, so any category score, group mean and the overall figure can be recomputed from the tables in this report.

/ A.5 STATUS CLASSIFICATION

Independently of score, each category carries a status. A category sits:

- in the highest band (🟢) where the score is 75 or above and no red flag is recorded;
- in the lowest band (🔴) where the score is below 55;
- in the middle band (🟡) otherwise, including where a good score carries a red flag. Red flags are recorded in the category entries in A.6 where they apply. No category scoring 75 or above carries one, so no band is changed by this rule in the present pass.

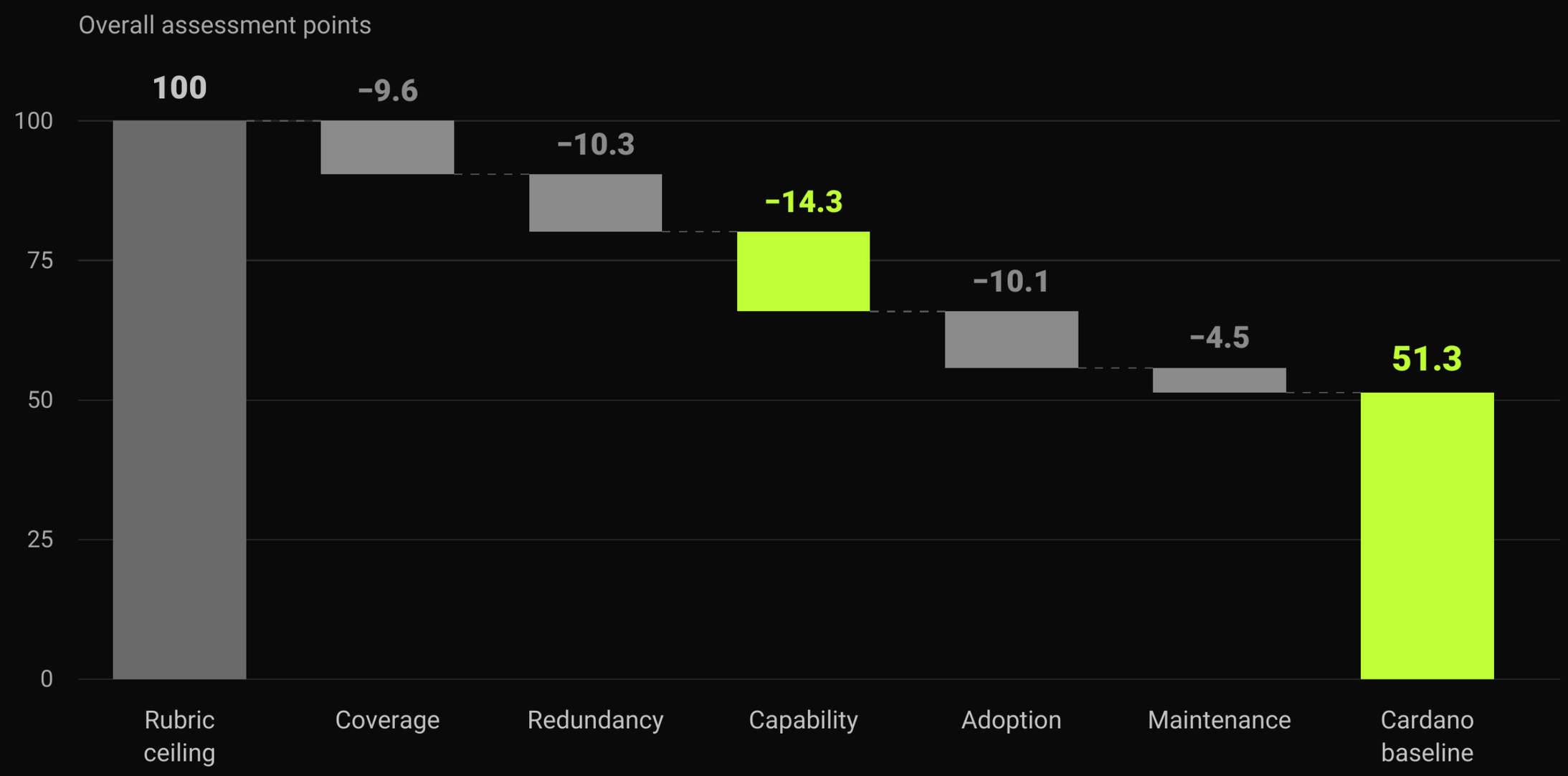
Red flags are recorded independently of score and include a single point of failure with no live alternative, a shared upstream serving the majority of a category, unaudited contracts holding material value, and a provider wind-down affecting category coverage.

/ A.6 CATEGORY DEFINITIONS AND DETAILED SCORECARDS

Each entry below combines the category's benchmark definition with its scoring inputs. The field **Gap recorded at** links the category to the entries in Section 2.

/ OVERVIEW

Advanced capability is the largest contributor to the score shortfall



Capability accounts for 29% of the measured shortfall.

Capability accounts for 14.3 of the 48.7 points between Cardano and the rubric ceiling, while maintenance accounts for 4.5. The decomposition applies the report’s domain and tier weights, with components rounded independently; it measures score shortfalls rather than the cost of closing them.

/ A1 — NODE, RPC AND API PROVIDERS

Why the category is assessed:

Determines whether a team can read chain state and submit transactions without running infrastructure on their own.

FIELD	VALUE
Cardano Score	🟡 66.3
Ethereum / Sui reference	100 / 87.5
Tier (weight)	2
Weighting applied	Infrastructure
Gap recorded at	—
Sources	*S-002, S-004, S-017, S-050*

Baseline capabilities:

Hosted REST/JSON-RPC read access; tx submission; testnet parity; free tier

Best-in-class capabilities:

Trace/debug APIs; webhooks and event notification; archival access; published SLA

Reference implementations:

Alchemy, QuickNode, Infura, Helius, dRPC

Position against benchmark:

Nine production access paths including four independent hosted providers. No trace/debug or webhook-notification tier identified; 58% of survey respondents self-host.

Evidence supporting the score:

- Nine production access paths including four independent hosted providers — coverage is genuinely broad.
- 58% of survey respondents self-host a node. One respondent reports doing so because hosted provider throughput limits are incompatible with high-volume chain synchronization.
- Two alternative node clients are at testnet and development stage and are excluded from production redundancy.

/ A2 — INDEXERS AND DATA PIPELINES

Why the category is assessed:

Determines whether historical state can be queried without every team rebuilding a pipeline.

FIELD	VALUE
Cardano Score	🟡 66.3
Ethereum / Sui reference	100 / 75
Tier (weight)	2
Weighting applied	Infrastructure
Gap recorded at	—
Sources	*S-002, S-004, S-050*

Baseline capabilities:

A maintained indexer producing queryable history

Best-in-class capabilities:

Hosted, standardized query layer; decentralized indexer marketplace; sub-second queries

Reference implementations:

The Graph, Goldsky, Envio, SubQuery, Ponder

Position against benchmark:

Ten production options, all self-hosted patterns. No hosted standardized query layer; 50% of survey respondents run a custom in-house indexer, and an EVM-style event abstraction was not identified.

Evidence supporting the score:

- Ten production options spanning Haskell, Rust and Java stacks.
- 50% of survey respondents run a custom in-house indexer, and the indexer is the most-named single point of failure among respondents.
- One respondent reports that the absence of an EVM-style event abstraction requires full block synchronization to locate relevant data.

/ A3 — BLOCK EXPLORERS

Why the category is assessed:

Determines whether users and integrators can independently verify what a contract did.

FIELD	VALUE
Cardano Score	🟡 68.8
Ethereum / Sui reference	93.8 / 90
Tier (weight)	2
Weighting applied	Infrastructure
Gap recorded at	—
Sources	*S-003, S-015*

Baseline capabilities:

Tx, address, block, token views; asset metadata

Best-in-class capabilities:

Verified contract source and bytecode; decoded calls; dev API; real-time event monitoring

Reference implementations:

Etherscan, Blockscout, Solscan, Routescan

Position against benchmark:

Three independent full explorers plus a visual one. Contract verification, bytecode visibility and developer APIs sit below Etherscan parity (3 of 6 checklist items).

Evidence supporting the score:

- Three independent full explorers plus a visual one — better redundancy than most chains.
- Contract verification, script/bytecode visibility and event-monitoring APIs are not at Etherscan parity.
- Widely used, but integrators still fall back to raw db-sync for anything advanced.

/ A4 — ANALYTICS AND DASHBOARDS

Why the category is assessed:

Determines whether allocators can measure the ecosystem in comparable terms.

FIELD	VALUE
Cardano Score	🟡 56.3
Ethereum / Sui reference	100 / 68.8
Tier (weight)	2
Weighting applied	Infrastructure
Gap recorded at	—
Sources	*S-001, S-003, S-042, S-050*

Baseline capabilities:

TVL and volume coverage on a major aggregator

Best-in-class capabilities:

SQL-queryable public dataset; standardized revenue/fee reporting; institutional data vendors

Reference implementations:

Dune, DefiLlama, Nansen, Token Terminal, Artemis, Allium

Position against benchmark:

Coverage remains workable through aggregators, but the ecosystem lost its main first-party DeFi analytics platform in June 2026 and has no standardized financial reporting. Red flag: a provider wind-down affecting category coverage.

Evidence supporting the score:

- DefiLlama covers 63 protocols and both Dune and the BigQuery dataset provide SQL access to chain data.
- The ecosystem's principal first-party DeFi analytics platform wound down in June 2026, removing the most-used analytics interface and its token API.
- No standardized financial reporting comparable to Token Terminal or Artemis was identified for Cardano.

/ A5 — ORACLES AND PRICE FEEDS

Why the category is assessed:

Determines whether collateral can be priced safely enough to lend against.

FIELD	VALUE
Cardano Score	🔴 50.0
Ethereum / Sui reference	100 / 75
Tier (weight)	1
Weighting applied	Infrastructure
Gap recorded at	2.13
Sources	*S-002, S-011, S-027, S-028, S-050, S-051, S-052*

Baseline capabilities:

At least one live price feed used in production

Best-in-class capabilities:

3+ independent feeds; sub-minute updates; institutional publishers; formal SLA; proof-of-reserve support

Reference implementations:

Chainlink, Pyth, RedStone, Chronicle, Switchboard

Position against benchmark:

Red flag: a single point of failure with no live alternative, and a shared upstream serving the majority of the category. One institutional general-purpose feed carries the majority of collateral pricing. The second production feed serves a single perps venue; two further providers are maintenance-flagged. Effective independent feeds for collateral pricing: 1.

Evidence supporting the score:

- Effective redundancy is one, not two: the second production feed serves a single perps venue and is not available as a general collateral-pricing alternative, and two further providers are maintenance-flagged and excluded from the production score.
- Approximately $16.3M of TVL prices off the single dominant feed — roughly 24% of chain TVL and 48% of oracle-dependent respondent TVL.
- Advanced capability is also missing against the benchmark: per-market feed choice, a formal SLA covering feeds serving lending markets, and proof-of-reserve support were not identified. Mitigating configuration: 50% of oracle consumers run automatic fallback and a further 17% run circuit breakers.

/ B1 — SMART CONTRACT LANGUAGES, SDKS AND LIBRARIES

Why the category is assessed:

Determines whether developers can write and ship contracts in a language they already know.

FIELD	VALUE
Cardano Score	🟢 81.3
Ethereum / Sui reference	100 / 85
Tier (weight)	3
Weighting applied	Infrastructure
Gap recorded at	—
Sources	*S-002*

Baseline capabilities:

One production contract language with a working toolchain

Best-in-class capabilities:

Multiple languages; typed eDSLs; multi-language SDKs; ZK primitives

Reference implementations:

Solidity + Foundry, viem/ethers, Anchor, Move

Position against benchmark:

Strongest category. Eleven actively maintained languages, SDKs and libraries across Haskell, TypeScript, Python, Rust, Java and Scala, plus ZK verifier generation.

Evidence supporting the score:

- Coverage spans Haskell, TypeScript, Python, Rust, Java and Scala with a purpose-built language (Aiken).
- ZK tooling (halo2/gnark verifier generation) is ahead of most non-EVM chains.
- Adoption is constrained by developer supply rather than by tooling quality.

/ B2 — DEV TOOLING: TESTING, SIMULATION, MONITORING

Why the category is assessed:

Determines whether a team can debug, simulate and monitor a live protocol.

FIELD	VALUE
Cardano Score	🔴 53.8
Ethereum / Sui reference	100 / 68.8
Tier (weight)	2
Weighting applied	Infrastructure
Gap recorded at	—
Sources	*S-002*

Baseline capabilities:

Local devnet and a debugger

Best-in-class capabilities:

Production tx simulation; monitoring and alerting; gas/exunit profiling; runtime threat detection

Reference implementations:

Tenderly, Anvil, Hardhat, Blocknative, Forta

Position against benchmark:

Local devnet and debugging tooling is genuinely good. Zero of four production observability capabilities: no simulation, monitoring, alerting or runtime threat detection.

Evidence supporting the score:

- Local devnet and debugging tooling (Yaci DevKit, Gastronomy) is genuinely good.
- No Tenderly-class transaction simulation, monitoring or alerting was identified — an operational gap.
- No runtime threat-monitoring (Forta analog), so protocols detect incidents socially rather than automatically.

/ B3 — DOCUMENTATION AND DEVELOPER ONBOARDING

Why the category is assessed:

Determines whether a competent outside developer can integrate without asking a human.

FIELD	VALUE
Cardano Score	🟡 72.5
Ethereum / Sui reference	93.8 / 78.8
Tier (weight)	3
Weighting applied	Infrastructure
Gap recorded at	—
Sources	*S-002, S-004*

Baseline capabilities:

Chain-level docs and a getting-started path

Best-in-class capabilities:

Per-protocol integration docs; reference architectures; runnable templates; maintained tool directory

Reference implementations:

Base docs, Uniswap docs, Solana Cookbook

Position against benchmark:

Chain-level documentation is strong and actively maintained; protocol-level integration documentation is inconsistent across teams.

Evidence supporting the score:

- The Developer Portal is actively maintained with a structured curriculum and runnable templates.
- Protocol-level docs (how to integrate a specific DEX or lending market) are inconsistent across teams.
- Documentation is concentrated in Cardano Foundation properties — little third-party redundancy.

/ B4 — SECURITY: AUDITS, BUG BOUNTIES, INCIDENT RESPONSE

Why the category is assessed:

Determines whether capital deployed into contracts is protected before and after launch.

FIELD	VALUE
Cardano Score	🟡 68.8
Ethereum / Sui reference	100 / 75
Tier (weight)	2
Weighting applied	Infrastructure
Gap recorded at	2.21
Sources	*S-008, S-011, S-018, S-019, S-020, S-021, S-050*

Baseline capabilities:

Independent audits available and used

Best-in-class capabilities:

Recurring audits; funded bug bounty; runtime monitoring; published incident response and disclosure

Reference implementations:

OpenZeppelin, Trail of Bits, Spearbit, Immunefi, Certora

Position against benchmark:

Audit coverage is strong: 89% of substantive respondents audited, 67% within six months, across ten firms. A funded public bounty was not reported and a published incident-response playbook was not found (2 of 4 lifecycle stages).

Evidence supporting the score:

- 89% of substantive respondents have been audited, 67% of them within the preceding six months, across ten distinct audit firms.
- 67% of substantive respondents run an informal or private bug bounty and 33% run none; no funded public program was reported.
- Two additional Cardano-active audit firms identified through the survey (No-Witness Labs, TxPipe), widening the provider set.

/ C1 — WALLETS AND KEY MANAGEMENT

Why the category is assessed:

Determines whether a user can custody assets and sign safely on any device.

FIELD	VALUE
Cardano Score	🔴 50.0
Ethereum / Sui reference	100 / 93.8
Tier (weight)	3
Weighting applied	Infrastructure
Gap recorded at	2.2
Sources	*S-002, S-003, S-029, S-050*

Baseline capabilities:

Two+ non-custodial wallets with dApp connection

Best-in-class capabilities:

Hardware support; mobile parity; embedded/social-login onboarding; standardized connection APIs; one wallet covering EVM and non-EVM chains; transaction simulation before signing

Reference implementations:

MetaMask, Rabby, Phantom, Privy, Ledger

Position against benchmark:

Many wallets, but none serves both the EVM and Cardano user bases: the wallets carrying Cardano DeFi adoption are Cardano-only and no major EVM wallet supports Cardano. Embedded, simulation-capable or institutional-grade options at scale are absent.

Evidence supporting the score:

- The wallets carrying Cardano DeFi adoption are Cardano-only, and no major EVM wallet supports Cardano. The multi-chain options that do exist (NuFi class) carry limited Cardano DeFi adoption, so the capability exists but the distribution does not.
- The large wallet count overstates effective redundancy: few options cover the full DeFi, multi-chain and institutional workflow, which is why redundancy scores below coverage.
- No production wallet combines transaction simulation, embedded or social login at scale and broad multi-chain onboarding. The strongest respondent baseline is closed-source, an additional continuity consideration for critical infrastructure.

/ C2 — MULTISIG, SMART ACCOUNTS AND TREASURY TOOLING

Why the category is assessed:

Determines whether an organization can hold and move funds under policy control.

FIELD	VALUE
Cardano Score	🔴 43.8
Ethereum / Sui reference	93.8 / 53.8
Tier (weight)	2
Weighting applied	Infrastructure
Gap recorded at	2.15
Sources	*S-003, S-010, S-037, S-038, S-050*

Baseline capabilities:

Working multisig

Best-in-class capabilities:

Smart accounts with modules; spending policies and roles; institutional custody; audited treasury contracts; no per-seat cost at the smart-account layer; broad application integration

Reference implementations:

Safe, Squads, Den, Fireblocks, Anchorage

Position against benchmark:

Native multisig in production at 67% of substantive respondents, plus institutional custody at two major providers. No free smart-account layer with modules or policy controls (2 of 4 capabilities).

Evidence supporting the score:

- Native multisig is in production at 67% of substantive respondents, so the base primitive is proven. What is missing is the operating layer: modules, spending policies, roles and audited disbursement.
- The benchmark smart-account layer is free at the account level and integrated across applications; the Cardano equivalents are either paid tooling or bespoke builds, so effective capability sits well below benchmark rather than merely behind it.
- Single-key administration remains in production at 22% of substantive respondents, one a top-five DEX by TVL, which raises operational risk and slows institutional deployment. Fireblocks and BitGo cover custody but do not replace a composable control plane for protocol teams.

/ C3 — BRIDGES AND CROSS-CHAIN MESSAGING

Why the category is assessed:

Determines whether assets and instructions can move between Cardano and where liquidity lives.

FIELD	VALUE
Cardano Score	🔴 41.3
Ethereum / Sui reference	96.3 / 75
Tier (weight)	1
Weighting applied	Infrastructure
Gap recorded at	2.1
Sources	*S-005, S-006, S-007, S-024, S-050, S-053*

Baseline capabilities:

One working, reliable general-purpose asset bridge to a major EVM chain

Best-in-class capabilities:

General message passing; canonical stablecoin route; 3+ independent bridges; no-wrapped-asset design; multi-asset EVM routes with liquidity and production application integrations

Reference implementations:

LayerZero, Wormhole, Chainlink CCIP, Circle CCTP, Across

Position against benchmark:

Red flag: a single point of failure with no live alternative. General message passing is live across more than 150 chains. A reliable general-purpose EVM-to-Cardano asset bridging route was not identified; the routes that would provide redundancy are recorded as degraded or inactive; the announced route was not live at the data cut. Two of four capabilities.

Evidence supporting the score:

- General message passing is in production (VIA Labs, 150+ chains), so the gap is dependable asset-route breadth, liquidity and application integration rather than total absence of cross-chain capability.
- The alternatives that would provide redundancy are degraded or inactive and are excluded from the production score; the single-issuer stablecoin rail (USDCx via Circle xReserve) is the only dependable asset route and it carries one asset.
- 89% of substantive respondents report no bridge dependency and one names the absence of EVM chain integration as its single biggest infrastructure gap — bridges are not yet embedded as acquisition or liquidity rails.

/ C4 — STABLECOINS

Why the category is assessed:

Determines whether there is a dollar on the chain deep enough to price and lend against.

FIELD	VALUE
Cardano Score	🟡 66.3
Ethereum / Sui reference	100 / 87.5
Tier (weight)	1
Weighting applied	Infrastructure
Gap recorded at	2.11, 2.12 and 2.22
Sources	*S-001, S-005, S-006, S-007, S-012, S-025*

Baseline capabilities:

One live dollar stablecoin

Best-in-class capabilities:

Global issuer presence; 3+ issuers; native mint/redeem; yield-bearing variant; deep DEX pairs

Reference implementations:

USDC + CCTP, USDT, USDS/DAI, USDe

Position against benchmark:

Five live issuers and roughly $67M total supply, about equal to total DeFi TVL. The dominant dollar (65.8% of market cap) is bridged rather than natively issued, and no yield-bearing dollar is in production.

Evidence supporting the score:

- USDCx (Feb 2026) connected Cardano to USDC liquidity through Circle's own attestation infrastructure — a genuine win, and the reason concentration is high.
- USDCx cannot be minted on Cardano. Supply arrives by bridging and exits the same way, so native issuance capacity is outside Cardano control and the rail inherits the bridge constraint in C3.
- No yield-bearing stablecoin (sUSDe / sUSDS analog) is in production; RealFi sUSDr is the credible route and remains on public testnet. Total supply of roughly $67M — about equal to total DeFi TVL — remains the binding constraint downstream.

/ C5 — FIAT ON/OFF RAMPS, CARDS AND PAYMENTS

Why the category is assessed:

Determines whether ordinary users and institutions can get money in and out.

FIELD	VALUE
Cardano Score	🔴 47.5
Ethereum / Sui reference	100 / 53.8
Tier (weight)	1
Weighting applied	Infrastructure
Gap recorded at	2.25
Sources	*S-016, S-026*

Baseline capabilities:

One verified fiat on-ramp

Best-in-class capabilities:

Verified off-ramp; multi-region coverage; native-token and stablecoin support; cards; merchant payments

Reference implementations:

MoonPay, Transak, Banxa, Coinbase Onramp, Bridge.xyz

Position against benchmark:

One fiat on-ramp verified end to end. No verified off-ramp for Cardano-native tokens or the bridged dollar (one of four routes), and a crypto card or merchant-payment option beyond a plugin and a gateway is absent.

Evidence supporting the score:

- One fiat route to a Cardano address was verified end to end, and one provider documents an ADA sell flow.
- No verified off-ramp for Cardano-native tokens or USDCx — capital that cannot exit will not enter at size.
- No crypto card or merchant-payment option identified beyond a WordPress plugin and a payment gateway.

/ C6 — CEX LISTINGS, MARKET MAKERS AND LIQUIDITY ROUTING

Why the category is assessed:

Determines whether the ecosystem's own assets have liquidity beyond its own DEXs.

FIELD	VALUE
Cardano Score	🟡 60.0
Ethereum / Sui reference	100 / 75
Tier (weight)	1
Weighting applied	Infrastructure
Gap recorded at	—
Sources	*S-002, S-003, S-035, S-050*

Baseline capabilities:

Chain token listed on major CEXs

Best-in-class capabilities:

Native tokens on tier-1 venues; professional market makers; CEX-DEX arbitrage; institutional access

Reference implementations:

Binance/Coinbase native listings; Wintermute, GSR, Keyrock

Position against benchmark:

ADA is on all tier-1 venues and three Cardano native tokens, ADA included, have tier-1 access. Market makers are engaging, but no integrated funnel links listings, wallets, ramps and campaigns.

Evidence supporting the score:

- ADA and a small number of native tokens have meaningful exchange reach; most ecosystem assets do not.
- Market-maker relationships exist, but they improve liquidity for selected assets rather than solving ecosystem-wide user acquisition.
- Without coordinated wallet, exchange, ramp and campaign integrations, incentives risk recirculating among existing users instead of expanding demand.

/ D1 — SPOT DEXS / AMMS

Why the category is assessed:

Determines whether a trade of meaningful size can be executed at a reasonable price.

FIELD	VALUE
Cardano Score	🟡 61.3
Ethereum / Sui reference	96.3 / 83.8
Tier (weight)	1
Weighting applied	DeFi
Gap recorded at	—
Sources	*S-001, S-003*

Baseline capabilities:

A working AMM with real liquidity

Best-in-class capabilities:

Deep stable pairs; multiple pool types incl. concentrated liquidity; automated liquidity management for passive LPs; low slippage at $100K; sustainable fee capture

Reference implementations:

Uniswap v3/v4, Curve, Aerodrome, Orca

Position against benchmark:

Many constant-product venues with thin, fragmented liquidity; 30-day volume in the tens of millions. Concentrated liquidity in production and an automated liquidity manager to range or rebalance LP capital were not identified.

Evidence supporting the score:

- Venue count is high, but only a few exchanges hold meaningful liquidity, so nominal redundancy overstates executable depth.
- No production DEX supports position-level liquidity ranges comparable to Uniswap V3; SundaeSwap V4 is the announced route and is excluded from the production score.
- With an automated liquidity manager and a shared adapter layer both absent, low turnover and limited cross-protocol composition reduce the usable liquidity that grants can create.

/ D2 — AGGREGATION, ROUTING AND ORDER EXECUTION

Why the category is assessed:

Determines whether users get the best available price without shopping venues manually.

FIELD	VALUE
Cardano Score	🟡 55.0
Ethereum / Sui reference	100 / 55
Tier (weight)	2
Weighting applied	DeFi
Gap recorded at	2.4 and 2.9
Sources	*S-001, S-003, S-050*

Baseline capabilities:

An aggregator routing across the main DEXs

Best-in-class capabilities:

MEV protection; batch auctions; intent-based routing; cross-chain routing; a shared executor/solver standard and reusable protocol adapters so an integration is written once

Reference implementations:

1inch, CoWSwap, Jupiter, LlamaSwap, Odos

Position against benchmark:

Multi-venue routing is real and adopted — 1 of 4 benchmark capabilities. MEV protection is partial, provided by the batcher-based settlement model. Batch auction or uniform clearing, cross-chain routing, a shared executor/scooper standard and reusable protocol adapters are all absent.

Evidence supporting the score:

- Multi-venue routing is real and adopted (Minswap Aggregator, DexHunter, SteelSwap, FetchSwap), which is 1 of the 4 benchmark execution capabilities; MEV protection and intent-based execution are recorded as present, while batch auction or uniform clearing and cross-chain routing are absent.
- Every protocol needing execution builds or sources its own agent: 33% operate a batcher built in-house, 11% use a third-party batcher and 11% run a permissionless variant, with no shared interface between them.
- Respondents named composability, and the willingness of others to integrate, as the area most needing ecosystem attention. A shared standard is the prerequisite for safe rehypothecation and for cross-protocol strategies.

/ D3 — ORDER BOOKS, CONCENTRATED LIQUIDITY AND MARKET STRUCTURE

Why the category is assessed:

Determines whether liquidity can be deployed capital-efficiently rather than spread thin.

FIELD	VALUE
Cardano Score	🔴 27.5
Ethereum / Sui reference	90 / 90
Tier (weight)	1
Weighting applied	DeFi
Gap recorded at	2.7
Sources	*S-001, S-009, S-022*

Baseline capabilities:

Any venue offering something beyond a constant-product pool

Best-in-class capabilities:

Production CLMM or CLOB; professional market-maker participation; sub-10bps stable spreads

Reference implementations:

Uniswap v3 CL, Hyperliquid CLOB, Phoenix, v4 hooks

Position against benchmark:

A production CLMM and an order book with meaningful depth were not identified; candidates are unverified, Catalyst-stage or sub-$10K TVL. SundaeSwap V4 is the announced route and is excluded from the score.

Evidence supporting the score:

- The audit found no production DEX with programmable price ranges comparable to Uniswap V3. SundaeSwap V4 is the announced route and is the item to track into Phase 2.
- Order-book candidates remain unverified, early-stage or negligible in TVL and cannot provide meaningful redundancy.
- Even when concentrated liquidity ships, no automated liquidity manager exists to manage ranges for passive capital, so the capability would initially be usable only by active managers.

/ D4 — MONEY MARKETS / LENDING

Why the category is assessed:

Determines whether deposits can earn yield and assets can be borrowed against.

FIELD	VALUE
Cardano Score	🟡 61.3
Ethereum / Sui reference	100 / 83.8
Tier (weight)	1
Weighting applied	DeFi
Gap recorded at	2.6
Sources	*S-001, S-003, S-010, S-040, S-049, S-050*

Baseline capabilities:

A live lending market with multiple assets

Best-in-class capabilities:

Isolated and pooled designs; permissionless market creation; curated vaults with independent curators; published risk parameters; per-market interest-rate curves (kink) and collateral parameter customization

Reference implementations:

Aave v3, Morpho Blue, Euler v2, Fluid, Kamino

Position against benchmark:

Red flag: a shared upstream serving the majority of the category, the largest oracle-dependent venues pricing against one feed. Pooled design at the largest venue plus isolated markets at one small venue (~$3.3M). Curated-vault layer, permissionless market creation and per-market interest-rate curve or collateral-parameter customization were not identified. Total lending TVL in the tens of millions.

Evidence supporting the score:

- Both pooled and isolated designs exist (pooled at the largest venue; isolated at roughly $3.3M), so the design space is proven on Cardano but not at scale.
- A curated-vault or permissionless-market-creation layer (Morpho Blue / Euler v2 analog) was not found, and per-market interest-rate curve or collateral-parameter customization was not identified, so every new market is a governance action rather than a configuration.
- The largest oracle-dependent venues share one price feed, so redundancy is capped by a shared upstream regardless of venue count.

/ D5 — CDPS, SYNTHETICS AND YIELD-BEARING COLLATERAL

Why the category is assessed:

Determines whether users can get exposure and leverage without leaving the chain.

FIELD	VALUE
Cardano Score	🟡 57.5
Ethereum / Sui reference	100 / 75
Tier (weight)	2
Weighting applied	DeFi
Gap recorded at	2.10
Sources	*S-001, S-009, S-012, S-041, S-048*

Baseline capabilities:

A working CDP or synthetic asset system

Best-in-class capabilities:

Multi-collateral incl. non-native; yield-bearing collateral; collateral rehypothecation; deep synthetic liquidity; robust liquidations

Reference implementations:

Sky (MakerDAO), Liquity v2, Ethena, Synthetix

Position against benchmark:

Multi-collateral CDP is live and includes USDCx and NIGHT, and synthetic BTC/ETH exposure is a genuine differentiator. Collateral is not rehypothecated, no yield-bearing collateral is accepted, and collateral is overwhelmingly ADA.

Evidence supporting the score:

- Indigo delivers synthetic USD, BTC and ETH exposure natively, which few non-EVM chains manage, and V3 widened collateral to include USDCx and NIGHT.
- Posted collateral is not rehypothecated, so a CDP position earns no lending or vault yield on the locked asset, while benchmark venues accept yield-bearing collateral and pass that yield through.
- One production venue carries the category and the alternatives are unverified, so redundancy rests on a single team and a single price feed; collateral remains overwhelmingly ADA, correlating the whole category with one asset's price.

/ D6 — PERPS, OPTIONS AND DERIVATIVES

Why the category is assessed:

Determines whether professional liquidity can hedge, which is what makes market making viable.

FIELD	VALUE
Cardano Score	🔴 30.0
Ethereum / Sui reference	71.3 / 83.8
Tier (weight)	1
Weighting applied	DeFi
Gap recorded at	2.14
Sources	*S-001, S-011, S-022, S-050*

Baseline capabilities:

One live perps venue

Best-in-class capabilities:

Multiple venues; options; deep order books; institutional-grade risk engine

Reference implementations:

Hyperliquid, GMX, dYdX, Jupiter Perps, Derive

Position against benchmark:

One production perps venue, audited and operationally sound on the evidence available. A second venue and an options market anywhere in production were not identified. Red flag: a single point of failure with no live alternative. The reference implementations for this category sit on app-chains and layer twos rather than on Ethereum layer one, which the rubric scores at chain level; this is why the Ethereum reference is below its figure elsewhere in the report.

Evidence supporting the score:

- The single venue is well run on the evidence available: audits by two firms within the preceding six months, its own batcher, and no external single point of failure reported.
- The demand side exists ahead of venue capacity: the venue reports working relationships with CEX market makers, on-chain market makers and liquid funds.
- No options venue is in production, so market makers cannot hedge inventory on-chain — the reason the category stays small even where demand is evidenced.

/ D7 — YIELD VAULTS, LSTS AND STAKING PRODUCTS

Why the category is assessed:

Determines whether idle capital can earn without active management.

FIELD	VALUE
Cardano Score	🔴 36.3
Ethereum / Sui reference	100 / 83.8
Tier (weight)	1
Weighting applied	DeFi
Gap recorded at	2.5, 2.8 and 2.24
Sources	*S-001, S-013, S-023, S-050*

Baseline capabilities:

Staking plus one yield product

Best-in-class capabilities:

A shared vault standard (ERC-4626 analog); yield-bearing collateral usable across DeFi; independent curator layer; automated liquidity management for concentrated positions; auto-compounding at scale

Reference implementations:

Yearn v3, Beefy, Morpho vaults, Lido, Jito; ALM: Gamma, Arrakis, Steer

Position against benchmark:

Native ADA staking is strong. A unified vault standard, an independent curator layer and an automated liquidity manager were not identified; the leading yield-bearing collateral has no direct redemption and exits through a single pool.

Evidence supporting the score:

- Native ADA staking is strong but does not substitute for automated strategy infrastructure that applications can integrate.
- No shared vault interface (ERC-4626 analog) exists, so vault shares are not portable across lending, DEX and CDP venues; standardization was named by a respondent as the single item most needing ecosystem attention.
- No automated liquidity manager operates on Cardano, so LPs cannot delegate range and rebalancing decisions — the capability that makes concentrated liquidity usable for passive capital. OADA/sOADA is the leading yield-bearing option and its peg and only exit both run through one Splash pool.

/ D8 — RWA AND TOKENIZATION

Why the category is assessed:

Determines whether off-chain value can be represented, financed and lent against on chain.

FIELD	VALUE
Cardano Score	🔴 42.5
Ethereum / Sui reference	97.5 / 67.5
Tier (weight)	2
Weighting applied	DeFi
Gap recorded at	2.16 and 2.23
Sources	*S-009, S-012*

Baseline capabilities:

One live tokenized asset with real backing

Best-in-class capabilities:

Tokenized treasuries; on-chain credit and receivables markets; regulated issuance; institutional custody; secondary liquidity

Reference implementations:

BlackRock BUIDL, Ondo, Superstate, Centrifuge, Maple, Goldfinch

Position against benchmark:

Thin verified supply: the credible anchor is on testnet and most inventory rows are directory listings with no verified product. A tokenized treasury and an on-chain credit market were not identified.

Evidence supporting the score:

- RealFi is credible (IOG-backed, public testnet since 6 Jul 2026) and is the category's realistic anchor, but it is testnet and excluded from the production score.
- Most RWA projects found are directory listings with no verified product, TVL or audit, so production redundancy is thin rather than broad.
- Tokenized-treasury products and private-credit or receivables markets were not identified: the two most-demanded institutional RWA primitives.

/ E1 — INCENTIVE AND POINTS INFRASTRUCTURE

Why the category is assessed:

Determines whether an incentive program can be run, attributed and audited. Directly gates PRIME.

FIELD	VALUE
Cardano Score	🔴 28.8
Ethereum / Sui reference	90 / 37.5
Tier (weight)	1
Weighting applied	Infrastructure
Gap recorded at	2.3
Sources	*S-003, S-050*

Baseline capabilities:

Manual reward distribution

Best-in-class capabilities:

Programmatic campaigns; on-chain attribution; verifiable reward accounting; public dashboards; distribution partnerships across wallets, exchanges, ramps and cross-chain venues that acquire new users rather than reaching existing ones

Reference implementations:

Merkl, Turtle, Royco, Galxe

Position against benchmark:

Airdrop, claim and in-person distribution tools only — zero of four campaign capabilities. A programmatic campaign engine with on-chain attribution and a user-acquisition distribution platform were not identified.

Evidence supporting the score:

- The tools that exist dispense tokens (airdrops, claims, in-person QR campaigns). None provides campaign configuration, on-chain attribution, verifiable reward accounting or public reporting, so this is an absence rather than a weaker alternative.
- A Merkl/Turtle-class engine and a user-acquisition platform were not identified on Cardano, so incentives reach existing wallets by default and risk recirculating among current users rather than expanding demand.
- Without wallet, exchange, ramp and cross-chain distribution partners, campaign reach is limited to the audience Cardano already has — the same constraint the survey's most-cited gap (liquidity, users and volume) describes from the builder side.

/ E2 — RISK MANAGEMENT AND PARAMETER CURATION

Why the category is assessed:

Determines whether someone independent is sizing the risk before capital is deployed, and whether that risk can be transferred. Directly gates PRIME.

FIELD	VALUE
Cardano Score	🔴 45.0
Ethereum / Sui reference	96.3 / 28.8
Tier (weight)	1
Weighting applied	Infrastructure
Gap recorded at	2.17
Sources	*S-010, S-014, S-050*

Baseline capabilities:

Some independent risk information available

Best-in-class capabilities:

Parameter curation for live markets; stress testing; multiple independent curators; published methodology; a cover market for smart-contract risk

Reference implementations:

Gauntlet, Chaos Labs, Steakhouse, Block Analitica, LlamaRisk; cover: Nexus Mutual, Sherlock

Position against benchmark:

Independent investor-funded ratings plus one early-stage parametric insurance protocol. Zero providers performing parameter curation for live markets, and no claims-based or cover-pool market for smart-contract risk.

Evidence supporting the score:

- Independent investor-funded ratings exist and one production parametric insurance protocol was identified through the survey, so the category is not empty — but neither performs parameter curation.
- Zero providers do parameter curation for live markets, against a benchmark of three or more independent curators with published methodology.
- No claims-based or cover-pool insurance market (Nexus Mutual class) for protocol risk was identified. The single parametric provider is early-stage and offers coverage on a small set of assets, so risk transfer capacity is not yet material.

/ AREAS OUTSIDE THE SCORED SET

Three areas carry recorded gaps but sit outside the 25 scored categories under the audit scope. Benchmarks are recorded on the same basis so they can be assessed comparably in a future pass.

/ NFT MARKETPLACES

Why the area is recorded:

Determines whether the assets retail users already hold have a liquid venue, which is a common first touchpoint before DeFi.

Baseline capabilities:

One marketplace with real volume and wallet integration

Best-in-class capabilities:

Multiple marketplaces; aggregated order flow; royalty and collection tooling; lending against collection floor

Reference implementations:

OpenSea, Blur, Magic Eden, Tensor

Position at the data cut:

The dominant marketplace ceased operations and the named successor is unproven at scale; nine inventory rows are minting or media tooling rather than trading venues.

/ LAUNCHPADS AND TOKEN DISTRIBUTION

Why the area is recorded:

Determines whether a new team can raise, distribute and list a token without leaving the ecosystem.

Baseline capabilities:

One launchpad with completed public sales

Best-in-class capabilities:

Multiple launchpads; vesting and lockup tooling; liquidity bootstrapping pools; compliance screening

Reference implementations:

Legion, Fjord Foundry, Echo, Camelot

Position at the data cut:

No launchpad was identified anywhere in the 274-row inventory; new tokens raise and list off-chain or on other chains.

/ AI AND AGENTIC INFRASTRUCTURE

Why the area is recorded:

Determines whether agents can hold keys, pay for compute and transact — an emerging demand source for blockspace and liquidity.

Baseline capabilities:

Agent payment rails with a working integration

Best-in-class capabilities:

Agentic wallets with policy-bounded keys; tokenized compute markets; agent-to-agent settlement; MCP-style tool access to chain state

Reference implementations:

Coinbase AgentKit, Fetch.ai, Autonolas, Akash, io.net

Position at the data cut:

One agent-payment network is live. An agentic wallet, a tokenized compute market and agent-facing DeFi integration were not identified.

Appendix B — Benchmark calibration

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Benchmark definitions, capability lists, reference implementations and adoption thresholds for all 25 categories are in Appendix A. Capability-level comparison tables are in Appendix C. This appendix states the benchmark method and the results that bear on the report's findings.

/ B.1 BENCHMARK SELECTION

Two ecosystems were scored on the identical framework, and four further chains were compared on like-for-like volume and size metrics only.

Ethereum is scored as the reference standard. It is the ecosystem in which the majority of the benchmark reference implementations in Appendix A originate, which makes it the natural calibration point for a capability rubric. It is not presented as a near-term comparator.

Sui is scored as the closest structural peer to the ecosystem's stated ambition: a newer non-EVM chain that built a DeFi stack quickly. Where Cardano and Sui diverge, the divergence is more informative than the Ethereum comparison because both chains face the non-EVM tooling constraint.

Solana is included in the metric comparison as the most-cited example of a non-EVM chain that built deep DeFi.

Base is included as a mature comparator for tooling completeness; it has no native token, so it is excluded from the TVL-to-market-capitalization comparison.

Algorand and **Tezos** are included as peer Layer 1s of comparable vintage and research culture, and are the closest true peers on absolute size.

Cardano figures are dated 13 August 2026 and comparator-chain figures 14 August 2026 (S-001, S-030 to S-034). Capability differences behind the metric differences are recorded per category in Appendix A rather than inferred from the metrics.

/ B.2 ECOSYSTEM-LEVEL COMPARISON

CHAIN	DEFI TVL	STABLECOIN MCAP	DEX VOLUME 7D	PROTOCOLS	TVL / MCAP
Ethereum	$40.94B	$147.12B	$5.70B	1,968	18.1%
Solana	$4.83B	$15.52B	$10.54B	596	11.0%
Base	$4.61B	$4.98B	$3.53B	1,065	n/a
Sui	$400.39M	$450.74M	$164.26M	147	14.5%
Cardano	**$67.41M**	**$67.12M**	**$15.99M**	**63**	**1.0%**
Algorand	$27.43M	$41.93M	$1.05M	35	3.8%
Tezos	$18.61M	$48.59M	$558	19	8.7%

Appendix C — Detailed ecosystem data

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/ C.1 CHAIN COMPARISON

CHAIN	DEFI TVL	STABLECOIN MCAP	STABLE/TVL	DEX VOL 7D	PERPS VOL 7D	PROTOCOLS	ACTIVE ADDR 24H	TOKEN MCAP	TVL/MCAP
Cardano	$67.41M	$67.12M	1.00	$15.99M	$14.43M	63	11,527	$6.85B	1.0%
Ethereum	$40.94B	$147.12B	3.59	$5.70B	$7.18B	1,968	537,223	$226.00B	18.1%
Solana	$4.83B	$15.52B	3.21	$10.54B	$7.59B	596	2,130,000	$44.00B	11.0%
Base	$4.61B	$4.98B	1.08	$3.53B	$723.45M	1,065	294,135	—	n/a
Sui	$400.39M	$450.74M	1.13	$164.26M	$173.24M	147	100,738	$2.77B	14.5%
Algorand	$27.43M	$41.93M	1.53	$1.05M	$0	35	27,018	$716.58M	3.8%
Tezos	$18.61M	$48.59M	2.61	$558	$0	19	1,163	$214.56M	8.7%

Cardano figures are dated 13 August 2026 and comparator-chain figures 14 August 2026 (S-001, S-030 to S-034). Base has no native token, so its TVL-to-market-capitalization ratio is not applicable.

/ C.2 ORGANIC YIELDS AND ABSORPTION CAPACITY

29 markets and pools above $100K, ordered by TVL. **Organic APY** is interest and fees paid by borrowers and traders; **reward APY** is the emissions component. **Capacity** is the additional capital deployable before organic yield in that market halves. Utilization is shown for lending markets only.

CAT	VENUE	MARKET	ORGANIC APY	REWARD APY	TVL	UTILIZATION	DROP 50% CAPACITY	BINDING CONSTRAINT
D4	Liqwid	ADA market	2.08%	0.00%	$6.59M	1.0%	No finite threshold	Borrower demand; 1.0% of the book is utilized
D4	Liqwid	DJED market	12.79%	0.00%	$3.22M	67.29%	$1.58M	Borrower demand at 67% utilization
D4	Liqwid	USDM market	8.68%	0.00%	$1.54M	54.96%	$779K	Borrower demand at 55% utilization
D1	Minswap	ADA-MIN pool V2	3.51%	0.83%	$1.17M	n/a	$1.17M	Swap volume; fees split across added LP capital
D4	Liqwid	USDA market	16.65%	0.00%	$847K	75.19%	$396K	Borrower demand at 75% utilization
D4	Liqwid	USDCx market	5.79%	0.00%	$835K	91.71%	$456K	At or above the 90% borrow cap, at 91.7% utilization
D1	Minswap	ADA-USDM pool V2	29.21%	7.20%	$833K	n/a	$833K	Swap volume; fees split across added LP capital
D1	Minswap	ADA-NIGHT pool V2	90.49%	0.42%	$738K	n/a	$738K	Volume spike; fee APY not sustainable at steady volume
D1	Minswap	ADA-USDA pool V2	4.50%	13.04%	$652K	n/a	$652K	Emissions; 74% of APY is rewards
D1	Minswap	ADA pool V2	0.46%	27.75%	$609K	n/a	$609K	Emissions; 98% of APY is rewards
D4	Liqwid	USDC market	4.34%	0.00%	$510K	37.81%	$281K	Borrower demand at 38% utilization
D4	Liqwid	USDT market	19.54%	0.00%	$480K	78.79%	$224K	Borrower demand at 79% utilization
D1	Minswap	ADA pool V2	13.14%	0.93%	$453K	n/a	$453K	Swap volume; fees split across added LP capital

CAT	VENUE	MARKET	ORGANIC APY	REWARD APY	TVL	UTILIZATION	DROP 50% CAPACITY	BINDING CONSTRAINT
D4	Liqwid	NIGHT market	0.01%	0.00%	$338K	5.98%	$140K	Borrower demand at 6.0% utilization
D4	Liqwid	iUSD market	3.53%	0.00%	$308K	29.77%	$166K	Borrower demand at 29.8% utilization
D1	Minswap	ADA pool V2	17.66%	23.07%	$274K	n/a	$274K	Emissions; 57% of APY is rewards
D1	Minswap	ADA pool V2	1.68%	1.03%	$251K	n/a	$251K	Swap volume; fees split across added LP capital
D1	Minswap	ADA pool V2	2.25%	0.53%	$219K	n/a	$219K	Swap volume; fees split across added LP capital
D1	Minswap	NIGHT pool V2	87.44%	3.07%	$206K	n/a	$206K	Volume spike; fee APY not sustainable at steady volume
D1	Minswap	ADA-DJED pool V2	9.47%	0.80%	$194K	n/a	$194K	Swap volume; fees split across added LP capital
D1	Minswap	USDM pool V2	5.32%	4.61%	$186K	n/a	$186K	Swap volume; fees split across added LP capital
D1	Minswap	ADA-MIN pool V1	2.29%	0.00%	$183K	n/a	$183K	Swap volume; fees split across added LP capital
D1	Minswap	ADA pool V2 [67dccb2c]	5.45%	23.68%	$174K	n/a	$174K	Emissions; 81% of APY is rewards
D1	Minswap	ADA-LQ pool V2	2.93%	3.00%	$165K	n/a	$165K	Emissions; 51% of APY is rewards
D1	Minswap	ADA-IUSD pool V2	11.69%	3.17%	$164K	n/a	$164K	Swap volume; fees split across added LP capital
D1	Minswap	ADA-IAG pool V2	17.38%	0.01%	$162K	n/a	$162K	Swap volume; fees split across added LP capital
D1	Minswap	ADA-NTX pool V2	1.98%	4.80%	$139K	n/a	$139K	Emissions; 71% of APY is rewards
D1	Minswap	ADA-WMTX pool V2	15.13%	0.56%	$137K	n/a	$137K	Swap volume; fees split across added LP capital
D1	Minswap	ADA-FET pool V2	3.39%	3.92%	$131K	n/a	$131K	Emissions; 54% of APY is rewards
—	—	**Total measured capacity**	—	—	—	—	**$11.06M**	—

Several Minswap V2 pools share a display name in the source data and are distinguished here by TVL. One row carries no finite capacity figure: the Liqwid ADA market. The $11.06M total sums the finite estimates for the other 28 rows.

/ C.3 NATIVE TOKEN UTILITY

Twenty-eight Cardano ecosystem tokens were assessed across the six utility dimensions most relevant to capital deployment (S-041, S-046, S-048). The results are summarized below.

UTILITY DIMENSION	PRESENT	PARTIAL, PROPOSED OR PLANNED	NOT VERIFIED	NOT APPLICABLE
Lending collateral	10	10	8	0
CDP collateral	3	2	19	4
Derivatives	6	1	21	0
Vault / automated strategy	0	6	22	0
Cross-protocol composability	18	10	0	0
Cross-chain utility	8	5	15	0

Assessed token count: 28. The pattern across the matrix is that cross-protocol composability is present for 18 tokens, lending and CDP collateral utility are present for a minority, and automated strategy support is not verified for any token in the set.

/ C.4 DEPENDENCY CONCENTRATION

Computed from the first-party dependency survey. Twelve responses, nine substantive, representing approximately 56% of tracked chain TVL.

DEPENDENCY	TYPE	SHARE OF RELEVANT RESPONDENTS	TVL EXPOSED	LIVE ALTERNATIVE
General-purpose institutional price feed	Oracle	67% of external-oracle users	$16.33M (24.2% of chain TVL)	Yes, but not general-purpose
Self-hosted node	RPC / API	58% of all respondents	n/a	Yes, hosted providers exist
Most-used hosted provider	RPC / API	33% of all respondents	n/a	Yes, four independents
Custom in-house indexer	Indexer	50% of all respondents	n/a	Yes, ten implementations
Bridged dollar rail	Stablecoin	67% of substantive respondents	65.8% of stablecoin market cap	Yes, four other issuers
Single-pool exit for a yield-bearing asset	Exit liquidity	One protocol	$768K (1.1% of chain TVL)	No
Cross-chain infrastructure	Bridge	11% of substantive respondents	n/a	Yes
Native multisig	Treasury	67% of substantive respondents	n/a	Yes, three alternatives
Own or third-party execution agent	Execution	56% of substantive respondents	n/a	No shared standard
Funded public bug bounty	Security	None reported	n/a	n/a

/ C.5 EXCHANGES, RAMPS AND CUSTODY

The column that matters for this audit is support for Cardano-native tokens, not support for ADA. **Not verified** means the provider's published asset list does not resolve the question either way.

VENUE OR PROVIDER	TYPE	NATIVE TOKENS SUPPORTED (ASIDE FROM ADA)	STATUS
Binance	CEX	NIGHT (S-043)	Live
Coinbase	CEX + on-ramp	None identified	Live
Kraken	CEX + on/off-ramp	SNEK	Live
Crypto.com	CEX + on-ramp	SNEK	Live
KuCoin	CEX	SNEK, MIN	Live
MEXC	CEX	SNEK, MIN	Live

VENUE OR PROVIDER	TYPE	NATIVE TOKENS SUPPORTED (ASIDE FROM ADA)	STATUS
Bitget	CEX	SNEK	Live
Gate.io	CEX	SNEK	Live
HTX	CEX	SNEK	Live
OKX	CEX	None identified	Live
Bybit	CEX	None — confirmed absent	Live
Upbit	CEX	None identified	Live
Bitrue	CEX	DJED	Live
Banxa	On/off-ramp	No	Live
Guardarian	On-ramp (fiat to ADA)	No	Live
MoonPay	On/off-ramp	Not verified	Not verified
Transak	On/off-ramp	None identified	Live
Ramp Network	On/off-ramp	None identified	Live
Onramper	Ramp aggregator	Not verified	Not verified
NOWPayments	Payment gateway	None identified	Live
Fireblocks	Institutional custody / MPC	Yes — Cardano Native Tokens via RAW signing	Live
BitGo	Institutional custody (qualified custodian)	Yes — SNEK, WMTx, IAGON, Djed, USDA, Minswap	Live
Iagon	Enterprise node / API provider	Yes (enables CNT operations)	Live
Anchorage Digital / Copper / Hex Trust / Zodia / Komainu	Institutional custody	None identified	Live

/ C.6 PROJECT INVENTORY BY STATUS

STATUS	PROJECTS	SHARE
Live	233	85.0%
Unverified	27	9.9%
Testnet	6	2.2%
Announced	4	1.5%
Beta	2	0.7%
Deprecated	2	0.7%
Total	274	100%

Inventory count by scored category runs from 19 projects in spot DEXs to 1 in perpetuals and derivatives, and is not a proxy for capability: the category with the most projects scores 61.3 and the one with the fewest scores 30.0, both driven by capability and adoption rather than count. Eleven further areas are tracked outside the scored set, three of which carry recorded gaps and are set out in Appendix A.6; the remaining eight are tracked in the project inventory only.

Appendix D — Gap register

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The twenty-eight gaps set out in Section 2, indexed by section number. Seven further supporting gaps carry register identifiers in the form G-0nn; they are referenced in the body where they contribute to a Section 2 gap, and are summarized below the table. Neither block is ordered by importance.

REF	GAP	CATEGORY	MATERIAL FROM
2.1	Reliable EVM-to-Cardano bridging route	C3	Phase 2
2.2	EVM + Cardano wallet	C1	Phase 2
2.3	Advanced incentive campaign engine	E1	Phase 3
2.4	Shared executor or scooper standard	D2	Phase 2
2.5	Unified vault standard	D7	Phase 2
2.6	Curated money-markets and per-market customization	D4	Phase 2
2.7	Concentrated liquidity	D3	Phase 2
2.8	Automated liquidity manager	D7	Phase 2
2.9	Application composability	D2	Phase 2
2.10	Collateral rehypothecation	D5	Phase 2
2.11	The dominant dollar issuance	C4	Phase 2
2.12	Yield-bearing stablecoin	C4	Phase 2
2.13	Collateral pricing concentration	A5	Phase 1–2
2.14	Derivatives and options	D6	Phase 2–3
2.15	Multisig	C2	Phase 2
2.16	RWAs and on-chain credit markets	D8	Phase 2
2.17	On-chain insurance	E2	Phase 2
2.18	NFT marketplace	NFT marketplaces	Phase 2
2.19	Launchpad	Launchpads	Phase 2
2.20	AI and agentic DeFi infrastructure	AI and agentic	Phase 2
2.21	Runtime threat detection	B4	Phase 2
2.22	Third-party stablecoin issuance	C4	Phase 2
2.23	Tokenized compute and emerging-asset markets	D8	Phase 2–3
2.24	Tokenized yield-bearing ADA standard	D7	Phase 2
2.25	Business payment primitives	C5	Phase 2
2.26	Enterprise integration pathway for Web2 businesses	Enterprise and Web2	Phase 3

REF	GAP	CATEGORY	MATERIAL FROM
2.27	Tokenized loyalty and gift-card rails	Loyalty and rewards	Phase 3
2.28	Five foundational financial functions	Cross-cutting	Phase 3

Refs **2.1 to 2.8** are the core gaps; **2.9 to 2.24** are the additional gaps identified; **2.25 to 2.28** are the global adoption gaps.

/ SUPPORTING GAPS

G-001 — Fiat on/off ramps, cards and payments (C5). One fiat on-ramp route to a Cardano address was verified end to end, and one provider documents an ADA sell flow. No verified off-ramp was established for Cardano-native tokens or for the bridged dollar; against a four-route benchmark, one of four routes is verified. Four major ramp providers are recorded as unverified rather than absent. Not currently possible: demonstrating an exit route for an institutional position held in native assets or the dominant dollar. Evidence: S-016, S-026, S-039.

G-002 — Indexers and data pipelines (A2). Fifty percent of survey respondents run a custom in-house indexer, and the indexer is the most-named single point of failure among respondents. One respondent reports running its own node because hosted provider throughput limits are incompatible with high-volume chain synchronization, and that the absence of an EVM-style event abstraction requires full block synchronization to locate relevant data. Not currently possible: integrating a hosted indexing layer at production throughput, or subscribing to events rather than scanning blocks. Contributes to the composability gaps at 2.4 and 2.9 by raising the cost of every integration. Evidence: S-050.

G-003 — Dev tooling: testing, simulation and monitoring (B2). No production observability capability was identified: transaction simulation, monitoring, alerting and runtime threat detection are all absent, against a four-capability benchmark. Not currently possible: automated detection of an incident in a live market. Protocols detect incidents through social channels, which lengthens time-to-detection on any market holding capital. Evidence: S-002.

G-004 — CEX listings, market makers and liquidity routing (C6). Narrowed on survey evidence. Market makers are engaging: 44% of substantive respondents have worked with CEX market makers, on-chain market makers, liquid funds or OTC desks. The residual gap is narrower — pricing power in those negotiations sits with the counterparty, and one respondent reports being offered terms requiring the protocol to cover a counterparty's impermanent loss. Native-token tier-1 listings remain concentrated in three assets. Not currently possible: price discovery for most ecosystem assets anywhere other than on-chain. Contributes to the distribution gap at 2.3. Evidence: S-002, S-003, S-050.

G-005 — Analytics and dashboards (A4). A public SQL-queryable dataset appears in the ecosystem application directory, but the depth of its Cardano tables was not confirmed. If shallow, the ecosystem has no SQL-grade public analytics layer following the June 2026 wind-down of its principal first-party analytics platform. Not currently possible: independent verification of the figures in this report by a third party without direct chain access or an equivalent dataset. Evidence: S-003.

G-006 — Block explorers (A3). Explorers meet three of six benchmark checklist items. Contract verification, script and bytecode visibility, and developer APIs sit below the benchmark. Not currently possible: independently verifying from an explorer what a given contract did, or building an integration against explorer-provided event data. Evidence: S-003, S-015.

G-007 — Node, RPC and API providers (A1). No trace-API or webhook and notification-class endpoint tier was identified among hosted providers. Not currently possible: push-based integrations, and debugging workflows that depend on trace endpoints. Recorded as unconfirmed rather than absent: one or more hosted providers may offer this and not publish it. Evidence: S-002, S-004.

Appendix E — Glossary

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Absorption capacity. The additional capital deployable into a market before organic yield in that market compresses by half. Modeled per market; estimates and binding constraints are stated in Appendix C.2.

ALM — automated liquidity manager. A service that manages a liquidity provider's price ranges, rebalancing and compounding on the provider's behalf. Required for passive capital to use a concentrated-liquidity market structure.

Attribution. The ability to demonstrate on-chain which capital or activity resulted from a specific incentive campaign.

Batcher / scooper / executor. An off-chain agent that constructs and submits transactions on behalf of a protocol, aggregating user orders. In eUTxO architectures this function is generally required per protocol rather than served by a shared market.

CDP — collateralized debt position. A position in which a user locks collateral to mint a synthetic or stable asset against it.

CLMM — concentrated liquidity market maker. A market design in which liquidity is deployed across a defined price range rather than the full price curve, increasing depth per unit of capital within that range.

CLOB — central limit order book. An order-matching venue in which bids and offers are posted at specific prices.

Coverage (rubric dimension). Whether a capability exists at all, scored 0 to 4 from nothing through experimental to at-or-above benchmark.

Curated vault. A lending or yield vault whose risk parameters are set and maintained by an identified third party rather than by protocol-wide governance.

eUTxO. Cardano's extended unspent transaction output model. It differs from account-based execution in ways that affect composability, execution and indexing, and several capability differences in this report are consequences of it rather than of implementation quality.

ERC-4626. The Ethereum standard interface for tokenized vaults. Cited throughout as the benchmark for a shared vault interface; no Cardano analog was identified.

Isolated market. A lending market whose collateral risk is contained within that market rather than shared across a pooled protocol.

Kink. The utilization point at which a lending market's interest-rate curve steepens. Per-market kink customization allows a rate curve to be fitted to a specific asset's liquidity profile.

Maintenance (rubric dimension). Whether a capability is actively maintained, audited and supported, scored 0 to 4.

Organic yield. Interest and fees paid by borrowers and traders. Excludes token emissions, liquidity mining, points and inflation-funded staking rewards.

Peg stabilization module (PSM). A mechanism allowing conversion between a stablecoin and a reference asset at a fixed rate, independent of market liquidity.

Redundancy (rubric dimension). How many independent options serve a capability, scored 0 to 4. A shared upstream dependency caps this dimension regardless of the number of downstream providers.

Rehypothecation. Deploying posted collateral to earn yield while it remains posted, with the yield accruing to the depositor.

RWA — real-world asset. An off-chain asset represented on-chain, such as a tokenized treasury bill or a receivable.

Tier (category weight). The weight a category carries in the overall figure, from 1 to 3, reflecting how directly it governs capital deployment. Tier 1 carries weight 3.

TVL — total value locked. The dollar value of assets held in a protocol's contracts, as measured by the primary aggregator.

Utilization. In a lending market, the share of supplied assets currently borrowed. Low utilization indicates supply exceeding borrower demand.

Appendix F — Source register

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Source identifiers resolve to the entries below and run consecutively. Audit calculations and comparisons are recorded in the report and appendices. URLs are linked where provided; limitations are stated in the source entries and alongside the relevant claims.

Confidence is recorded as:

- **High** (primary source or first-party documentation)
- **Medium** (single credible secondary source, or a vendor's own page)
- **Low** (directory listing, dated material, competitor-authored comparison, or an aggregated summary).

No finding in this report rests on a Low-confidence source alone, and where one is load-bearing the report says so at the point of the claim.

ID	CLAIM SUPPORTED	PUBLISHER	TYPE	DATA AS-OF	CONFIDENCE	URL
S-001	DefiLlama reports Cardano's DeFi total value locked (TVL), trading volumes, fees, protocol list, and TVL by protocol.	DefiLlama	Aggregator	2026-08-13	High	link
S-002	The Cardano Foundation lists 94 curated builder tools covering software development kits, indexers, oracles, node access, and development environments.	Cardano Foundation	Primary docs	2026-08-13	High	link
S-003	The Cardano Foundation lists 107 curated mainnet applications with their 30-day on-chain transaction counts.	Cardano Foundation	Primary docs	2026-08-13	High	link
S-004	The Cardano Foundation describes five layers of production infrastructure and the trade-offs between providers.	Cardano Foundation	Primary docs	2026-07-03	High	link
S-005	Input Output announces USDCx's launch on Cardano and explains its mechanism, interoperability through xReserve, Gateway, and CCTP, and launch integrations.	Input Output	Primary announcement	2026-02-27	High	link
S-006	Circle announces USDCx availability on Cardano through Circle xReserve and explains its trust model.	Circle	Primary announcement	2026-02-27	High	link
S-007	Essential Cardano explains why USDCx is not a third-party bridge and compares its model with native stablecoin issuance.	Essential Cardano	Primary docs	2026-03-11	High	link
S-008	CIP-52 provides audit best-practice guidelines and a list of Cardano auditors.	CIPs	Standards	2022-04-25	High	link
S-009	CardanoCube maps the Cardano ecosystem by category and includes smaller projects.	CardanoCube	Aggregator	2026-08-13	Med	link
S-010	DRep Forum reviews treasury proposals covering Midgard, Leios, oversight committees, Pogun, and Sundae treasury contracts.	DRep Forum (Substack)	Governance	2026-04-23	Med	link
S-011	The Cardano Foundation reports that Pyth Pro is live on Cardano and covers the Scorechain compliance integration and Draper Dragon Orion Fund.	Cardano Foundation	Primary announcement	2026-05-31	High	link
S-012	RealFi announces a public testnet, explains the USDr and sUSDr design, and plans to launch on Cardano before Ethereum.	CoinDesk (press release)	Primary announcement	2026-07-06	Med	link
S-013	Optim Finance explains OADA and sOADA, algorithmic market operations, their dependency on Splash stableswap, and the absence of direct redemption.	Optim Finance docs	Primary docs	2026-08-13	High	link
S-014	Xerberus provides independent DeFi risk ratings using more than 300 subscores across more than 85 mechanisms.	Xerberus	Primary docs	2026-08-13	High	link
S-015	Coherent Market Insights compares the AdaStat, Cardanoscan, and Cexplorer block explorers.	Coherent Market Insights	News	2026-05-29	Low	link
S-016	Guardarian advertises ADA purchases delivered to a Cardano address using cards, SEPA, SWIFT, or Faster Payments.	Guardarian	Primary docs	2026-08-13	Med	link

ID	CLAIM SUPPORTED	PUBLISHER	TYPE	DATA AS-OF	CONFIDENCE	URL
S-017	CompareNodes lists 32 Cardano RPC, node, and API providers and offers latency and uptime comparison tools.	CompareNodes	Aggregator	2026-08-13	Med	link
S-018	Tweag reviews more than 20 Cardano audits over five years, covering 276 findings and recurring eUTxO pitfalls.	Tweag / Modus Create	Primary docs	2026-07-23	High	link
S-019	Vacuumlabs publishes Cardano audit reports and identifies Invariant0 as the continuation of its auditing team.	Vacuumlabs (GitHub)	GitHub	2026-08-13	High	link
S-020	Anastasia Labs offers Cardano auditing and engineering services using Plinth, Aiken, Plutarch, and Helios.	Anastasia Labs	Primary docs	2026-08-13	Med	link
S-021	MLabs explains audit failure modes specific to eUTxO, including multiple satisfaction.	MLabs	Primary docs	2025-09-24	High	link
S-022	DeltaDeFi's Catalyst proposal describes an eUTxO-native order book and options protocol, including its design rationale.	Lido Nation (Catalyst)	Governance	2026-08-13	Med	link
S-023	Milkomeda documents the mechanics of liquid staking through mADA and stMADA.	Milkomeda docs	Primary docs	2026-08-13	Med	link
S-024	A Cardano Forum community report describes unstable Milkomeda RPC endpoints and no active Rosen routes from Cardano.	Cardano Forum	Community	2026-03-03	Low	link
S-025	Cardano.org lists five native stablecoins on Cardano: USDCx, USDM, USDA, DJED, and iUSD.	Cardano.org	Primary docs	2026-08-13	High	link
S-026	Spark compares crypto on-ramp and off-ramp providers and their reported licensing status in 2026.	Spark	Aggregator	2026-08-13	Low	link
S-027	The Cardano Foundation describes Orcfax as an eUTxO-native oracle with heartbeat and on-demand publication models.	Cardano Foundation	Primary docs	2026-08-13	High	link
S-028	Charli3 describes its push and pull oracles, Cardano API, and Dendrite offering.	Charli3	Primary docs	2026-08-13	Med	link
S-029	Built on Cardano provides a directory of Cardano wallets.	Built on Cardano	Aggregator	2026-08-13	Low	link
S-030	DefiLlama compares Ethereum, Solana, Base, and Sui using TVL, protocol counts, stablecoin market capitalization, 24-hour chain fees, application revenue, active addresses, and the market-cap-to-DeFi-TVL ratio where available.	DefiLlama	Aggregator	2026-08-14	High	link
S-031	DefiLlama reports decentralized exchange (DEX) trading volume by chain over 24 hours, 7 days, and 30 days.	DefiLlama	Aggregator	2026-08-14	High	link
S-032	DefiLlama reports perpetual futures trading volume by chain over 24 hours, 7 days, and 30 days, alongside open interest.	DefiLlama	Aggregator	2026-08-14	High	link
S-033	DefiLlama tracks 35 Algorand protocols and reports TVL, stablecoin market capitalization, USDC dominance, fees, DEX volume, active addresses, and ALGO market capitalization.	DefiLlama	Aggregator	2026-08-14	High	link
S-034	DefiLlama tracks 19 Tezos protocols and reports TVL, stablecoin market capitalization, USDT dominance, fees, DEX volume, active addresses, and XTZ market capitalization.	DefiLlama	Aggregator	2026-08-14	High	link
S-035	CoinMarketCap lists SNEK trading venues including Kraken, Crypto.com, KuCoin, HTX, Gate, Bitget, and MEXC.	CoinMarketCap	Aggregator	2026-08-14	Med	link
S-036	CoinGecko lists MIN on MEXC and KuCoin and identifies Minswap's MIN/ADA pair as its most active trading venue.	CoinGecko	Aggregator	2026-08-14	Med	link
S-037	BitGo announces custody support for ADA, Snek, World Mobile Token X, IAGON, Djed, USDA, and Minswap, plus NIGHT through a Midnight Foundation partnership.	BitGo	Primary announcement	2026-08-14	High	link
S-038	Crypto Briefing reports that Fireblocks integrated RAW signing with Iagon's enterprise Cardano nodes and Insights API in May 2026, enabling institutional custody, ADA staking, governance voting, and native-token management through multiparty computation. It also reports ADA support since August 2021 and NYDFS regulation of Fireblocks Trust.	Crypto Briefing	News	2026-05-13	Med	link

ID	CLAIM SUPPORTED	PUBLISHER	TYPE	DATA AS-OF	CONFIDENCE	URL
S-039	Banxa advertises ADA sales with bank-transfer or card payouts, coverage across more than 180 countries and 30 fiat currencies, and integrations with Kraken, Trust Wallet, and KuCoin. It states that delegated ADA remains liquid and describes Ledger and Trezor use through Yoroi, Eternl, or Lace.	Banxa	Primary docs	2026-06-21	Med	link
S-040	Liqwid documents qTokens, its utilization-ratio definition, supply and borrow caps introduced in version 2, and collateral requirements.	Liqwid Labs	Primary docs	2026-08-18	High	link
S-041	Indigo V3 supports whitelisted collateral, including named Cardano native tokens USDCx and NIGHT, with one collateral type per position. Each pair has liquidation, maintenance, and redemption ratios plus price and interest-rate oracles. Minting incurs a 0.5% debt fee, and interest accrues as iAsset debt.	Indigo Protocol	Primary docs	2026-06-25	High	link
S-042	The Defiant reports that TapTools began winding down around 3 June 2026 after losing five senior executives within a year, and that JPG.Store ceased operations on 23 May 2026. It also reports Hoskinson's warning of further Cardano project failures in the second half of 2026 and concerns about older projects' investability.	The Defiant	News	2026-06-03	Med	link
S-043	TapTools reports that NIGHT became the first Cardano native token listed on Binance on 11 March 2026, while SNEK and IAG already had tier-1 exchange listings.	TapTools	News	2026-03-12	Med	link
S-044	MEXC's republication of Messari's Q3 2025 report records Cardano DeFi TVL of $423.5 million, up 28.7% quarter over quarter; Liqwid TVL of $101.6 million versus Minswap's $53.4 million; stablecoin supply of $38.1 million; and Minswap's share of DEX volume at roughly three-quarters.	MEXC republishing Messari	News	2025-10	Low	link
S-045	TapTools states that ADA suppliers on Liqwid earn lending interest and native Cardano staking rewards in the same position, and that suppliers of ADA, DJED, SHEN, iUSD, USDC, and USDT can earn LQ rewards.	TapTools	News	2025-08-29	Low	link
S-046	Charli3's feed listings identify mainnet feeds for ADA/USD, BTC/ADA, SNEK/ADA, HOSKY/ADA, PALM/ADA, USDM/USD, USDM/ADA, and USDM/RESERVES.	Charli3	Primary docs	2026-08-18	Med	link
S-047	Charli3's incident report confirms that Liqwid consumed its DJED, SHEN, and iUSD feeds. It states that an April 2024 incident compromised DJED/USD pricing and that Liqwid's failsafe prevented user losses.	Charli3	Primary docs	2024-11-28	High	link
S-048	Indigo V3 documentation specifies unlimited, slippage-free USDCx-to-iUSD swaps at 1:1, with reverse swaps limited by peg stability module liquidity; migration of all oracles to Pyth; up to eight non-ADA collateral assets per iAsset; a 40% Stability Pool, 20% liquidity-provider, and 40% treasury interest split; and a 0.5% minting fee. It describes migration to zero INDY emissions, a 25 million maximum INDY supply with 10 million reserved for a possible burn, a bidirectional order book, and a Plutus V3 upgrade. Rollout tranches cover NIGHT collateral for iUSD, an iUSD/USDCx module, and iJPY/iEUR; then NIGHT and USDCx collateral for iJPY/iEUR and iUSD/USDM and iUSD/USDA modules; then NIGHT and USDCx collateral for iBTC/iETH.	Indigo Protocol	Primary docs	2026-06-25	High	link
S-049	Liqwid's V2 overview specifies borrow caps of 80% for ADA and 90% for stablecoin pools, following Aave V3, with supply caps disabled for those pools. New native-token pools are sized using DEX liquidity, centralized-exchange volume, and market capitalization. Efficiency mode assigns one-month and three-month ADA bond tokens liquidation loan-to-value ratios of 93% and 90%, respectively, and the DAO can change caps.	Liqwid Labs	Primary docs	2023-10-16	Med	link
S-050	AlphaGrowth's Cardano infrastructure survey covers oracles, RPC providers, indexers, failover configuration, wallets, aggregators, stablecoins, bridges, auditors, bug bounties, treasury tooling, batchers, self-reported single points of failure, liquidity counterparties, and infrastructure gaps.	AlphaGrowth (first-party survey)	Primary — first-party	2026-08-22	High	link

ID	CLAIM SUPPORTED	PUBLISHER	TYPE	DATA AS-OF	CONFIDENCE	URL
S-051	Direct builder feedback reports that Charli3 and Orcfax are no longer maintained and that Dingo and Amaru are available only on testnet.	Cardano builder team (direct feedback)	Primary — direct	2026-08-22	Med	Not provided
S-052	Strike Finance reports through the survey that it uses Stork in production on Cardano for perpetuals pricing.	Strike Finance via survey	Primary — first-party	2026-08-22	Med	link
S-053	VIA Labs reports through the survey that its network is deployed on Cardano and supports general message passing across more than 150 EVM and non-EVM chains.	VIA Labs via survey	Primary — first-party	2026-08-22	High	link
S-054	AlphaGrowth program planning call recording the global adoption gap set: runtime threat detection, third-party stablecoin issuance, emerging-industry financialization, business payment primitives, Web2 enterprise integration, tokenized loyalty rails, and the five financial functions recorded at 2.28.	AlphaGrowth (planning call, direct)	Primary — direct	2026-09	Med	Not provided
S-055	Hypernative describes real-time monitoring and automated response across more than 70 chains, detection across more than 300 risk types, and defensive actions such as pausing contracts executed before losses finalize.	Hypernative	Primary docs	2026-09-17	Med	link
S-056	Brale describes a US-regulated stablecoin issuance and orchestration platform through which businesses launch and operate fiat-backed stablecoins across more than 25 blockchains, with Brale acting as the legal issuer; Cardano is not among the supported chains.	Brale	Primary docs	2026-09-17	Med	link
S-057	U.Today reports that Cardano received native support in the official x402 payments codebase, contributed by Cardano Foundation engineers, covering client, server and facilitator components with examples across mainnet, preprod and preview.	U.Today (via TradingView)	News	2026-09-14	Med	link
S-058	Bilt Rewards documents point transfers at par into more than twenty incumbent airline and hotel loyalty programs, including United MileagePlus, Marriott Bonvoy and Hilton Honors.	Bilt Rewards	Primary docs	2026-09-17	Med	link