Kaiko Indices

Blockchain Ecosystem Ranking

Rulebook

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Version log	Date	Description
1.0	August 2025	• Documentation creation • Initial framework for blockchain ecosystem ranking • Five-category scoring methodology implementation

CONTENT

INTRODUCTION

The following document covers the methodology of the Kaiko Blockchain Ecosystem Ranking. The digital asset landscape is characterized by a diverse array of blockchain ecosystems, each offering different capabilities, security models, and regulatory compliance. With hundreds of blockchain networks available, selecting the appropriate ecosystem for digital asset deployment has become a critical strategic decision that can significantly impact project success, regulatory compliance, and long-term viability.

As a global digital asset market data provider, Kaiko monitors and analyzes numerous blockchain ecosystems. However, not all ecosystems offer the same level of standards in terms of regulatory compliance, security, integration, liquidity, or operational efficiency. This ranking model aims to evaluate blockchain ecosystems across multiple dimensions to provide decision-makers with a comprehensive framework for ecosystem selection.

The framework is designed to be use case neutral, applicable across various digital asset deployment scenarios, from institutional financial products to decentralized applications, enabling informed decision-making in the rapidly evolving blockchain landscape.

DATA SOURCES

Kaiko's blockchain ecosystem assessment is based on comprehensive data collection from multiple scattered sources.

Data Sources:

• Public blockchain data and APIs
• Governance documentation and proposal systems
• Regulatory filings and compliance reports
• Developer activity metrics from GitHub and other repositories
• Network performance and security audit reports
• TVL and adoption metrics from DeFi protocols
• Cross-chain bridge and interoperability data
• Institutional adoption and partnership announcements

METHODOLOGY

The Kaiko Blockchain Ecosystem Ranking is structured around five criteria with a proprietary scoring methodology internally developed and maintained by Kaiko's Indices team. Each criterion is broken down into sub-criteria and assigned specific weights to compute the Kaiko Blockchain Ecosystem Score that serves as the basis for the ranking.

Criteria	Weight	Sub-criteria
Governance Score	25%	Compliance
		Governance
Integration Score	15%	Composability
		Technical Development
Liquidity Score	25%	Adoption
		Network Effect
Operational Efficiency Score	10%	Cost Structure
		Performance
Security Score	25%	Operational Resilience
		Network Integrity

Each criterion is divided into sub-criteria, which are further broken down into metrics containing the raw data used for scoring. While each metric is given equal weight within its sub-criterion, both sub-criteria and main criteria are assigned specific weights by Kaiko.

Scoring follows these steps:
- Data collection: Gathering data through various sources, including Kaiko API, Public Blockchain data, and other bespoke sources
- Initial Scoring: For each blockchain ecosystem, each metric is attributed points based on data.
- Normalization: These raw scores are then normalized to a 0–10 scale, making them comparable across the entire ranking.

- Weighting: The normalized scores are multiplied by their respective weights (for both sub-criteria and criteria).
- Final Score: The weighted results are aggregated to produce the final Kaiko Blockchain Ecosystem Score out of 100.

Individual category scores and the overall score are displayed as rounded integers.

Additionally, the Kaiko Blockchain Ecosystem Rating rewards ecosystems with consistently high scores:

Kaiko Blockchain Ecosystem Rating™	Kaiko Blockchain Ecosystem Score™ at or above	Individual scores at or above
AAA	90	At least 3 over 90
AA	80	At least 3 over 80
A	70	At least 3 over 70
B	60	At least 3 over 60

A blockchain ecosystem is unrated if none of the above criteria are met.

SCORES

GOVERNANCE SCORE

The regulatory compliance and governance criterion evaluates the ecosystem's legal framework, governance structure, and regulatory standing across multiple jurisdictions. This assessment serves as a fundamental indicator of institutional viability and operational sustainability for digital asset deployment.

Sub-criteria:

1. Compliance

1.1 KYC/AML Integrations Available

Robust Know Your Customer (KYC) and Anti-Money Laundering (AML) integration capabilities within a blockchain ecosystem demonstrate its readiness to support regulatory compliance frameworks. The availability of comprehensive compliance infrastructure ensures adherence to international financial regulations, enables access to institutional markets, and mitigates regulatory risks associated with financial crime prevention for digital asset issuers operating in regulated environments.

1.2 Number of Jurisdictions Accepting Blockchain for Regulated Products

Regulatory acceptance across multiple jurisdictions quantifies the ecosystem's legal recognition for hosting regulated financial products. Broader jurisdictional acceptance directly correlates with expanded market opportunities, enhanced legal certainty, and increased addressable user base, making it a critical factor for institutional adoption and long-term ecosystem viability in the global financial landscape.

1.3 Number of Regulatory Enforcement Actions or Formal Warnings

Documented enforcement actions and official warnings from regulatory authorities provide crucial insights into the ecosystem's regulatory risk profile. A comprehensive enforcement history analysis reveals potential compliance challenges, as frequent regulatory interventions may signal ongoing legal instability that could deter institutional participation and threaten operational continuity.

2. Governance

2.1 Existence of Legal Entity

Formal legal entities (foundations, corporations, or similar structures) establish institutional accountability and provide clear frameworks for business relationships. The presence of recognized legal structures facilitates regulatory compliance processes, enables professional engagement with traditional financial institutions, and creates essential foundations for institutional legitimacy in established financial markets.

2.2 Location of Legal Entity

Jurisdictional incorporation determines the regulatory environment governing blockchain operations. Strategic registration in established financial centers—such as Switzerland, Luxembourg, Ireland, Singapore, USA (Delaware/NY), Germany, France, and the UK—provides significant advantages through regulatory clarity, favorable business environments, and enhanced credibility with institutional stakeholders and regulatory authorities.

2.3 Number of Governance Proposals Passed

Successful governance proposal implementation within defined timeframes demonstrates ecosystem responsiveness and stakeholder engagement. Active governance participation indicates adaptability to market changes, institutional requirements, and regulatory developments, serving as a critical indicator of long-term sustainability and the capacity for necessary improvements.

2.4 Governance Participation Rate

Participation percentages among eligible token holders in governance voting processes provide insight into the level of engagement within a protocol's decision-making framework. High engagement rates indicate robust democratic governance structures.

2.5 Upgrade Frequency

Implementation timelines for approved governance proposals reveal operational agility and responsiveness capabilities. Efficient upgrade processes demonstrate the ecosystem's ability to adapt to regulatory changes, market demands, and technological improvements, which are essential for maintaining competitive positioning and ensuring service continuity in dynamic environments.

2.6 Number of Protocol Changes/Forks

Protocol evolution through positive modifications and network forks indicates the balance between innovation and stability, chains that fail to innovate can be less suitable to future product deployment. Optimal development patterns suggest healthy technological progress without excessive instability, as frequent disruptions may signal governance challenges while insufficient evolution could indicate technological stagnation.

2.7 Number of Known Governance Takeovers or Attacks

Governance security incidents where malicious actors capture or unduly influence decision-making mechanisms represent critical threats to ecosystem integrity. Such events undermine stakeholder trust, threaten asset security, and demonstrate vulnerabilities in governance structures, making governance resilience essential for institutional confidence.

2.8 Native Token Concentration

Token distribution analysis through wallet concentration percentages reveals the degree of decentralization and potential manipulation risks. Excessive concentration among top holders creates centralization vulnerabilities that can undermine governance independence, increase market manipulation susceptibility, and reduce overall ecosystem resilience.

INTEGRATION SCORE

Technical connectivity capabilities and integration infrastructure form the foundation for cross-chain functionality, developer adoption, and institutional deployment scalability within blockchain ecosystems.

Sub-criteria:

1. Composability

1.1 Number of Major DeFi Protocols Supported

Native support for major decentralized finance protocols enables sophisticated financial product composability across the ecosystem. Extensive protocol integration allows digital assets to interact seamlessly with lending platforms, decentralized exchanges, and yield generation mechanisms, creating network effects that drive institutional utility and ecosystem value through enhanced financial functionality.

1.2 Number of Secure Cross-Chain Bridges

Independently audited bridge infrastructure connecting to major blockchain networks enables enhanced liquidity flows and asset mobility. Robust cross-chain connectivity provides essential interoperability capabilities for institutional operations requiring multi-chain asset management, broader DeFi access, and comprehensive trading opportunities across diverse blockchain ecosystems.

2. Technical Complexity & Development Resources

2.1 Availability of SDKs/APIs for Integration

Well-documented Software Development Kits and Application Programming Interfaces streamline third-party integration processes. Comprehensive developer tools, including services comparable to Infura, Blockdaemon, and Alchemy, significantly reduce technical onboarding complexity for institutional participants while accelerating deployment timelines and lowering integration costs through reliable connectivity infrastructure.

2.2 Availability of SDKs/APIs for Data Collection

Specialized data collection infrastructure through dedicated SDKs and APIs enables comprehensive ecosystem analysis and monitoring. Robust data capabilities, similar to services provided by Kaiko and Etherscan, support institutional compliance requirements, risk management frameworks, and operational analytics necessary for regulatory reporting and internal governance oversight.

2.3 Number of GitHub Repository Events

Development activity tracking through repository commit frequency over 12-month periods indicates ongoing innovation and maintenance commitment. Consistent technical evolution demonstrates active ecosystem health, continuous improvement capabilities, and sustained developer engagement, providing institutional confidence in long-term platform viability and security maintenance.

2.4 Number of Active Developers

Developer community strength through unique contributor quantification reflects ecosystem sustainability and innovation capacity. Active development participation, defined as contributors making commits equal to at least half the average monthly activity, ensures continued platform evolution, and faster problem resolution.

2.5 Availability of Developer Resources

Comprehensive educational infrastructure through accessible documentation, tutorials, and support systems facilitates efficient integration processes. Quality developer resources reduce implementation risks, enable rapid troubleshooting, and accelerate institutional adoption by minimizing operational friction for complex deployments and technical onboarding requirements.

LIQUIDITY SCORE

Ecosystem adoption metrics, user accessibility infrastructure, and network effects contribute fundamentally to liquidity generation and institutional market participation capabilities.

Sub-criteria:

1. Adoption

1.1 Total Dollar Value of Tokenized Assets Locked

Aggregate USD value of tokenized assets secured across ecosystem protocols demonstrates institutional trust and adoption maturity. Higher Total Value Locked indicates widespread confidence, robust secondary market potential, and sufficient liquidity pools for institutional-scale operations, serving as a fundamental indicator of ecosystem viability for professional asset management strategies.

1.2 TVL Coefficient of Variation

Statistical analysis of Total Value Locked variability through daily time series measurement reveals ecosystem stability patterns. Lower coefficient values indicate sustainable growth trajectories and operational stability, while excessive volatility may signal speculative activity or fundamental instabilities that could impact institutional deployment strategies.

1.3 YTD Growth of Number of Active Wallets

Year-to-date expansion in unique active wallet addresses demonstrates growing user adoption. Sustained growth patterns indicate increasing network effects, rising service utilization, and expanding market opportunities, providing institutional participants with confidence in continued liquidity development and user engagement sustainability.

2. Network Effect

2.1 Number of Institutional Players

Institutional participation through recognized entities (banks, investment funds, fintech companies) provides ecosystem credibility and operational validation. Professional involvement enhances liquidity provision, operational stability, and platform legitimacy, serving as critical validation for institutional decision-making processes and comprehensive risk assessment frameworks.

2.2 Concentration of TVL (HHI Score)

Herfindahl-Hirschman Index analysis of Total Value Locked distribution reveals decentralization quality and systemic risk exposure. Lower concentration scores indicate healthier ecosystem distribution and reduced dominance risks, while excessive centralization may create governance vulnerabilities and systemic risks that could impact institutional participation and operational resilience.

2.3 Integration with Legacy Finance

Traditional financial system connectivity through direct institutional integrations expands ecosystem utility and regulatory compliance capabilities. Seamless legacy finance integration enables traditional asset tokenization, facilitates regulatory adherence, and provides essential infrastructure bridging traditional and decentralized financial systems for institutional adoption.

2.4 Number of Stablecoin & Fiat On/Off Ramps

Operational service availability for seamless fund transfers between fiat currencies, stablecoins, and blockchain assets enables institutional accessibility. Comprehensive on/off-ramp—including the availability of fiat and stablecoin payment options—infrastructure supports efficient capital deployment, withdrawal processes, and practical adoption requirements essential for professional asset management and institutional trading operations.

OPERATIONAL EFFICIENCY SCORE

Economic and operational efficiency evaluation provide critical insights for ecosystem adoption for sustainable large-scale blockchain operations.

Sub-criteria:

1. Cost Structure

1.1 Average Transaction Fees in USD

Standard transaction execution costs directly impact the economic viability of institutional blockchain operations. Lower fee structures enhance ecosystem attractiveness for high-frequency activities, micro-transactions, and cost-sensitive applications, fundamentally influencing the overall cost-effectiveness and operational feasibility of various digital asset strategies and blockchain-based financial operations.

1.2 Transaction Fees Coefficient of Variation

Fee predictability analysis through statistical variation measurement ensures operational planning reliability for institutional participants. Consistent fee structures enable accurate cost projections, budget planning, and operational efficiency optimization, as excessive volatility can disrupt business models and create uncertainty in large-scale operational expense forecasting.

1.3 Native Token Price Volatility

Native token price stability over 90-day periods impacts transaction cost predictability and operational planning capabilities. Price consistency enables reliable operational expense forecasting, treasury management efficiency, and risk mitigation strategies, as excessive volatility complicates institutional financial planning processes and operational cost management frameworks.

2. Efficiency & Performance

2.1 Transactions per Second (TPS)

Average transaction processing capacity under typical conditions, measured by the number of transactions per second (TPS), determines scalability potential for institutional operations. High throughput capabilities support large-scale institutional activities, reduce network congestion risks, and eliminate performance bottlenecks that could impact high-volume digital asset operations requiring consistent performance and operational scalability.

2.2 Block Time

Average intervals between new block additions influence transaction finality speed and operational efficiency. Shorter block times enable rapid settlement confirmation, improved user experience, and enhanced operational efficiency, particularly important for institutional applications requiring quick settlement of high-value transactions and time-sensitive operational requirements.

SECURITY SCORE

Security infrastructure assessment and operational reliability evaluation form fundamental requirements for institutional asset protection and comprehensive system stability assurance.

Sub-criteria:

1. Operational Resilience

1.1 Past Breaches

Historical security incident documentation, , such as major cross-chain bridge exploits, reveals systematic vulnerability patterns and institutional risk exposure. Previous breaches indicate potential recurring weaknesses that could threaten asset security, significantly impacting institutional confidence and requiring comprehensive evaluation during due diligence processes and ongoing risk assessment frameworks.

1.2 Uptime

Network availability and accessibility over time demonstrate system reliability for institutional requirements. Exceptional uptime performance ensures continuous asset accessibility, uninterrupted trading capabilities, and operational consistency essential for institutional activities requiring reliable system availability and minimal service disruption risks.

2. Network Integrity

2.1 Number of Validators

Active validator node quantities securing network consensus mechanisms indicate decentralization strength and security resilience. Larger validator sets typically provide enhanced security through distributed consensus, improved resistance to coordinated attacks, and reduced single-point-of-failure risks, representing fundamental indicators of institutional-grade security infrastructure and network resilience.

2.2 Number of Audits

Independent security assessment frequency through professional third-party audits demonstrates proactive security commitment and risk mitigation practices. Regular audit schedules by reputable security firms provide verified security assessments, proactive vulnerability identification, and institutional confidence through documented security verification processes and comprehensive risk evaluation frameworks.

2.3 Nakamoto Coefficient

Minimum entity requirements for consensus mechanism compromise quantify decentralization strength and attack resistance capabilities. Higher coefficients indicate enhanced security against coordinated attacks, reduced network manipulation risks, and stronger resistance to centralized control or malicious interference, representing critical measures of network integrity and institutional security requirements.

REVIEW CALENDAR

SCHEDULED REVIEW

The scores are updated quarterly in January, April, July, and October, using the following review calendar:

Event	Date	Description
Cut-off	Last day of the month preceding scores update	Data collection for assessments stops on that day*
Effective	First business day of the scores publication month	New scores become effective

*For instance, if a 3-month metric calculation is required, the covered period will start 3 months before the cut-off date and end on the cut-off date (included).

EXTRAORDINARY REVIEW

Kaiko reserves the right to update scores outside of scheduled reviews. Such extraordinary events would occur if an ecosystem experiences:

• Major security breach or exploit
• Significant regulatory action or sanctions
• Material adverse events affecting ecosystem operations
• Governance attacks or protocol failures

In such cases, the Kaiko Steering Committee will organize an extraordinary session upon acknowledgement of such an event and will publish findings and update ecosystem scores within 3 days after initial public communication.

METHODOLOGY UPDATE

In a fast paced environment such as blockchain ecosystems, the methodology of this ranking is subject to be adjusted solely by Kaiko whenever deemed necessary.

Changes to methodology are submitted internally to the Kaiko Blockchain Monitoring Steering Committee for validation involving all relevant stakeholders. If validated and integrated into this document, the change will be logged as a new version of this document.

Depending on the extent of the impact, it will be at Kaiko's sole discretion to decide to communicate to ranked entities prior to the ranking publication.

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