Cardano Foundation

# Our Cardano

Ethos and Principles for Cardano governance and our role in the Cardano ecosystem.

## Who we are

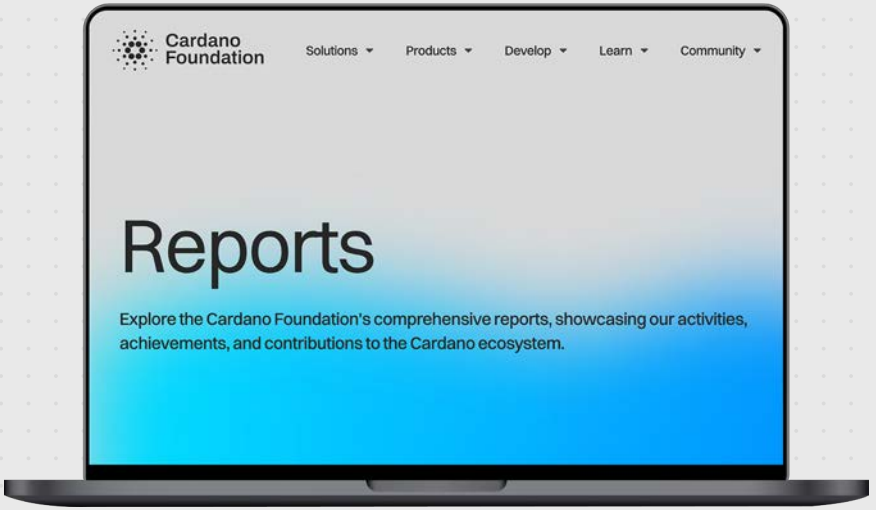
# The Cardano Foundation is an independent, Swiss-based not-for-profit organization tasked with advancing Cardano as a public digital infrastructure across a wide range of industries.

**Our mission: bridging Cardano and the world**
The Cardano Foundation works to progress Cardano as a public digital utility.

In order to achieve economic escape velocity for Cardano, on-chain activities must include a balanced mix of legacy and blockchain-native use cases. Scaling the **diversity, quality, and quantity of activities** on Cardano is therefore core to the Foundation's mission.

This goal faces a number of hurdles, from the cost and complexity of implementation and ownership to lack of comfort with blockchain. The Cardano Foundation addresses such gaps with targeted initiatives on operational resilience, education, and adoption.

**To read more about Cardano Foundation, please click here to see our reports**



Introduction

# This booklet provides the Cardano Foundation and our stakeholders with an understanding of the Ethos and Principles that inform and shape our participation in Cardano governance and our role in the Cardano ecosystem.

The Cardano Foundation's Ethos and Principles are designed to foster internal alignment on what we believe constitutes a thriving Cardano ecosystem. The Cardano Foundation's purpose calls for it to take an active role in the decentralized governance of Cardano. Consequently, the Cardano Foundation would like to clarify what it stands for to create accountability and offer a role model for other significant stakeholders in the Cardano ecosystem.

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# Cardano Foundation Ecosystem Ethos

## Cardano Foundation Ecosystem Ethos

**The following Ethos guides our decisions and actions as an active participant in the Cardano ecosystem and its governance. They reflect our commitment to the Cardano ecosystem participants and our partners without prioritizing one over another.**

### Collaboration

**Definition:** We work hand-in-hand with members of the Cardano ecosystem and our partners.

**Importance:** Collaboration harnesses collective knowledge and resources, strengthening the Cardano ecosystem.

### Innovation

**Definition:** We continuously seek and embrace new ideas and technologies.

**Importance:** Innovation drives the growth and evolution of the Cardano ecosystem.

### Integrity

**Definition:** We uphold high ethical standards, best practices, and take responsibility for our actions.

**Importance:** Integrity enables trust and reliability in all interactions.

### Transparency

**Definition:** We strive for openness in our work.

**Importance:** Transparency builds trust and fosters ecosystem engagement.

### Inclusivity

**Definition:** We foster an inclusive environment for diverse perspectives and backgrounds.

**Importance:** Inclusivity ensures the Cardano ecosystem benefits from a wide range of experiences and ideas.

### Sustainability

**Definition:** We are dedicated to promoting sustainable practices that benefit the Cardano ecosystem.

**Importance:** Sustainability demonstrates our commitment to building a future-proof infrastructure, striving for our efforts to benefit generations to come.

# Cardano Foundation Ecosystem Principles

## Cardano Foundation Ecosystem Principles

These Principles represent our criteria for a successful Cardano ecosystem. They outline the key elements to maintain a secure, inclusive, and sustainable blockchain network. By living up to these Principles, we aim to foster a transparent, decentralized, and resilient infrastructure that benefits all participants and promotes the adoption and growth of the Cardano ecosystem.

- Accessibility
- Governance
- Decentralization
- Security and Resilience
- Scalability
- Economics
- Education
- Core Development

# Accessibility

## The Cardano core protocol shall maintain its public and permissionless nature.

### Description and Importance

Access to Cardano should remain open and non-discriminatory. No single entity or group should control its governance, the ability to transact, contribute to data validation, or access and use ada. Transaction fees and deposits (e.g., for stake pool operators, delegated representatives, etc.) should remain as attainable as possible, deterministic and transparent wherever possible, while duly considering infrastructure security and economic sustainability.

Accessibility ensures that anyone wishing to participate in the Cardano ecosystem can freely transact on the Cardano infrastructure, build on top of it, and participate in its consensus and governance within the parameters set from time to time. It also mitigates concentration risks, particularly at the stake pool operator level.

### Example Metrics

**Transaction Fees:**
Affordable fixed and variable fees

**Stake Pool Registration Fees:**
Cost and accessibility

**Deposit Amounts:**
Stake key, DRep, SPO, and governance action deposits

**Transaction Volume:**
Number of transactions per day/epoch and transaction types

**Geographic Distribution:**
Spread of stake pools across different regions

**Network/Datacenter Distribution:**
Dependency on specific cloud providers

**Stake Distribution:**
Distribution of stake addresses

**Resource Requirements:**
Resources required to operate a node/pool

# Governance

## The governance processes of Cardano shall be accessible, transparent, decentralized and adaptable.

### Description and Importance

The Cardano infrastructure governance model should be based on a resilient yet adaptable system of checks and balances, using ada as a common anchor point and involving all groups designated to participate in the governance process, including the Constitutional Committee (CC), Stake Pool Operators (SPOs), and the Delegated Representatives (DReps). These roles should be protected by the Cardano Constitution. Delegated voting should be permissionless, and governance feedback loops should adhere to established Cardano Improvement Proposal standards.

Ecosystem-led governance is essential to build and maintain the trust of Cardano infrastructure participants and ensure effective decision-making. Accessible deliberation and decision-making foster mutual accountability. The Cardano governance model should allow for adaptation to evolving ecosystem needs. Any incentives should be sustainable and encourage active and constructive participation in governance.

### Example Metrics

**Buy-in:**
Live stake delegated to DReps and SPOs

**Participation:**
DReps, SPOs and CC members actively engaging with Governance proposals on- and off-chain

**Governance Actions:**
Number and quality of proposals and votes

**CIP Adherence:**
Standards compliance and integration of improvements

**Transparency:**
Availability of governance documents and voting records

**Decentralization:**
Distribution of delegated stake and diversity of decision-makers

**Feedback Loops:**
Accessibility and participation rates in feedback loops, frequency, and diversity of feedback received (languages, regions), implementation rates of governance improvements based on ecosystem participants feedback

# Decentralization

Strive for the decentralization of Cardano infrastructure operations and governance without undue trade-offs with accessibility, economic sustainability, security and performance.

## Description and Importance

We aim for balanced decentralization that maintains accessibility, economic sustainability, security and performance by fostering a diverse set of infrastructure operators and inclusive governance. This requires maintaining adequate geographical distribution and infrastructure diversity to manage centralization risks. Cardano governance should provide mechanisms that promote participation, protect against concentrations and abuse of power, and adapt to the evolving needs of the ecosystem.

Maintaining balanced decentralization is crucial for Cardano to remain secure, resilient, and economically sustainable. Excessive decentralization may hinder performance, while undue centralization can introduce security risks. A balanced approach strengthens the network's integrity, encourages responsible SPO operations, and fosters a fair and inclusive governance model that supports the infrastructure's long-term success.

## Example Metrics

**Decentralization:**
Nakamoto Coefficient, Gini Index, etc.

**Geographical Spread:**
Distribution of SPOs across different regions

**Governance Participation:**
Diversity and participation rates in governance roles

# Security and Resilience

## Cardano's development and operation shall prioritize security, reliability and resilience.

### Description and Importance

Cardano's development should balance strong security measures, such as formal methods, peer-reviewed research, and rigorous testing, to reduce vulnerabilities and defend against malicious actions. The infrastructure shall be designed to function consistently under normal and foreseeable conditions, maintaining reliably high performance and uptime. The ability to recover quickly from unforeseen events or disruptions, supported by open-source development, should be actively maintained.

Security and reliability ensure that those transacting and building on the infrastructure can trust that core functions (e.g., access and transfer of assets and data processing) remain available and perform consistently even under stress scenarios. Resilience allows the system to adapt and recover from unexpected disruptions.

### Example Metrics

**Network Uptime:**
Percentage of time the network is operational

**Block Propagation:**
Measuring block propagation times

**Proof coverage:**
Functional properties of tools and infrastructure covered by compiler-checked proofs

**Reliability:**
Reliability of blockchain access infrastructure

**Tooling Diversity:**
Diversity of entities providing blockchain tooling infrastructure

**Recovery Time:**
Time to recover from outages or disruptions

# Scalability

The Cardano protocol shall implement scalable on-chain and off-chain solutions to meet network demands without sacrificing accessibility, economic sustainability, security and performance.

## Description and Importance

Cardano should cater to both on-chain (e.g., changes to the protocol parameters or consensus) and off-chain (e.g., state channels, rollups, sidechains, etc.) scalability solutions. Any on-chain changes should prioritize security, accessibility, and performance. Any off-chain extensions should give due consideration to the economic sustainability of the Cardano infrastructure.

Scalability is necessary for Cardano to handle the growing demands on the infrastructure while maintaining security and performance. Interoperability and flexibility enable seamless interactions across social and financial systems and with other blockchains. Rigorous scientific research shall underpin all scaling efforts, particularly on-chain scaling efforts.

## Example Metrics

**Transaction Throughput:**
Number of recipient addresses per second

**Block Size and Limitations:**
Monitoring of block size and transaction limitations

**Transaction Finality:**
Time required for transactions to reach finality

**Resource Requirements:**
Resources required to operate a node/pool

**Energy Consumption:**
Metrics of kWh consumption of block-producing nodes per epoch

**Interoperability:**
Native asset standards supported and bridges to Cardano

**Validator Scripts:**
Number of validator scripts or script interactions per period

# Economics

## The implemented economic model shall promote Cardano's long-term viability, economic stability and sustainability.

### Description and Importance

Cardano should strive to achieve economic sustainability by ensuring network activity sufficiently compensates stake pool operators (SPOs) and delegators before on-chain reserve distributions fall below levels of sufficient economic incentivization while upholding network accessibility. Cardano's tokenomics policy should be predictable, avoiding inflation of the total supply whenever possible. Robust data sources and analytical tools should be utilized to test and model the impact of protocol changes and external economic factors.

Economic stability underpins the security and reliability of the Cardano protocol. Robust incentive mechanisms encourage favorable behavior and ensure the network's long-term viability. Predictable tokenomics build trust with ecosystem participants and investors, which is crucial for retaining and expanding ecosystem activity.

### Example Metrics

**Stake Yield:**
Average yield of stake addresses delegated to active stake pools

**Transaction Fees vs. Reserves:**
Ratio of transaction fees collected per epoch versus outflows from the on-chain reserves

**Ada Market Behavior:**
Compared to fiat currencies and other infrastructure tokens

**Treasury Balance:**
Ratio of treasury inflows to outflows over specific timeframes

**Compensation Metrics:**
Ratio of ada paid out to SPOs and delegators from reserves versus transaction fees

**Treasury Growth Rate:**
Measurement of how much ada flows from transaction fees, reserves and donations into the on-chain treasury

# Education

## High-quality and open-source educational resources in multiple languages shall be freely available at low or no cost.

### Description and Importance

Ecosystem participants should have access to reliable and high-quality educational resources. These resources should be multilingual, open-source, and accessible at low or zero cost, empowering individuals to deepen their knowledge and contribute meaningfully to the Cardano ecosystem.

Educational resources foster informed participation and support the long-term success of the Cardano ecosystem. Co-creating resources in different languages enables broader understanding and active knowledge-sharing. This democratizes knowledge, bridges educational gaps, and prepares future generations to build on Cardano.

### Example Metrics

**Educational Resource Availability:**
Number of educational materials and available languages

**Accessibility:**
Cost and ease of access

**Quality and Accuracy:**
Regular updates and accuracy checks

**Community Engagement:**
Participation rates in educational programs and diversity of contributors

**Learning Outcomes:**
User retention, conversion and adoption rates

# Core Development

The core infrastructure code of Cardano shall be developed in an open-source, collaborative methodology to promote security, resilience, accessibility and to mitigate centralization risks.

## Description and Importance

Any code repositories of material importance for the Cardano infrastructure should be developed in a collaborative manner by integrating ecosystem participant feedback and innovation while adhering to open-source principles. The main goal should be to balance security and efficiency in development while mitigating centralization risks. Multiple implementations mitigate single points of failure risks. Formal methods should be applied where possible and practical. A diverse range of tooling should be continuously developed to maintain accessibility and support ecosystem growth.

Open-source development lays the foundation for transparency and trust by allowing ecosystem participants and third parties to audit and understand the code. It strengthens security and transparency through participant scrutiny and contributions. An open, collaborative, and resilient infrastructure is vital for maintaining a decentralized, secure, and inclusive Cardano ecosystem.

## Example Metrics

**Number of Contributors:** Contributors to Cardano's core repositories

**Multiple Implementations:** Availability of multiple implementations for critical infrastructure components

**Formal Methods Specifications:** Application of formal methods to core infrastructure Core infrastructure is covered by formal specifications that enable reasoning about the system and its reliability while ignoring unimportant implementation details. Machine-checked proofs ensure that implementations match specifications

**Accessibility of Specifications:** Specifications should be readable by humans to understand system behavior (e.g. voting procedures), but also readable by machines to support interoperability and correctness proofs

**Ecosystem Development:** Number of tools and infrastructure components developed and maintained by ecosystem participants

**Open-Source Percentage:** Percentage of tools and infrastructure that are open-source

**Community Contributions:** Contributions to development and maintenance of core infrastructure and tooling

**Diversity of Contributors:** Diversity of individuals and organizations actively contributing to the open-source tooling

**Tool and Infrastructure Diversity:** Diversity of providers within the ecosystem

**Alternative Solutions:** Alternatives for key tools and components (e.g., diverse node clients)

**Oversight Mechanisms:** Ecosystem oversight and feedback mechanisms

Cardano Foundation

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