ARC: The Native Asset of the Economic OS

Circle*

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Abstract

Arc is a public Layer–1 blockchain designed as the *Economic OS for the internet*, a full-stack platform where economic contracts, stablecoins, tokenized assets, and global markets operate on shared, composable infrastructure. ARC is the network's native coordination asset: a utility-driven token that aligns participants with the long-term success of Arc through staking, governance, fee capture, and platform-wide utility. ARC's utility extends beyond the chain itself, spanning numerous protocols and products from Circle and ecosystem partners on the network. ARC exists because a global economic operating system cannot be coordinated by a single entity. It converts the participants who use Arc into the participants who sustain it.

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I. The OS Thesis

Before mobile operating systems existed, mobile phones worked. They made calls, sent texts, and ran applications built by the device manufacturer. Over time, the diversity of what people wanted to do with a mobile device grew and the limitations of fragmented, device-specific coordination became clear: hundreds of thousands of developers building for dozens of incompatible platforms, each with different rules and different economics.

The mobile operating system emerged because the new scale of activity demanded a shared, unambiguous environment in which many participants could build and operate alongside each other. iOS and Android did not replace the phone. They unlocked an entirely new scale of activity by giving any developer access to a shared platform with global reach. Services like ride-sharing, mobile banking, on-demand delivery, and social media emerged because developers could build on a common operating environment. The mobile operating system became the platform surface on which a new economy could be composed.

Cloud infrastructure followed the same pattern. Before AWS and later entrants, companies built and maintained their own servers, networking, and storage. This meant that each organization duplicated the same foundational efforts, and the barriers to building anything at scale were enormous. Cloud platforms created a shared infrastructure layer that anyone could build on, from a two-person startup to a global enterprise, with the same tools and reliability found in legacy models. The result was an explosion of software and services that would have been impossible if each builder had to provision their own stack.

There are many other examples that show this same pattern: beyond a certain threshold, progress is hindered by fragmentation and a shared infrastructure becomes necessary.

The global economy is reaching that threshold now.

Today's economic infrastructure is functional, but it resembles the state of computing before shared operating systems. Payments, lending, capital markets, and settlement each run on their own closed systems, built decades ago, with their own rules, their own intermediaries, and no common layer connecting them. A payment, a loan, and a currency conversion that are part of the same transaction still settle separately, often hours or days apart. A developer who wants to build a product that combines payments, lending, and currency conversion has to negotiate access, integrate separately with each system, and manage between them manually. Software has transformed nearly every other industry by letting developers build on shared, open platforms. Financial infrastructure hasn't had that moment yet. Three shifts in the last few years suggest that moment is arriving.

First, blockchains proved that money can work like software. Lending, trading, settlement, and asset issuance can live in the same environment, the assets can interact with each other directly, and settle in seconds. Anyone can build on them and anyone can participate. The programmable nature of this infrastructure is enabling entirely new forms of economic activity to emerge. These include autonomous agents transacting on behalf of users, tokenized real-world assets, corporate

governance executed onchain, and commercial contracts that execute as natively as software, all of which drive activity that today's infrastructure cannot support.

Second, stablecoins proved that real economic value belongs on these rails. Trillions of dollars now settle onchain annually. Stablecoins bridged the gap between the programmability of blockchains and the price stability that economic activity requires.

Third, regulatory frameworks are catching up with the utility of the technology. Across the globe, legislation is establishing clear rules for stablecoins, digital assets, and onchain financial activity. For the first time, institutions can see a credible path to participating in onchain infrastructure without regulatory ambiguity.

Taken together, these shifts make this the moment for an economic operating system to emerge. Blockchains established the technical foundation, stablecoins demonstrated real demand and real economic throughput, and regulatory progress is beginning to make institutional participation viable at scale. The conditions are now aligning around a shared financial platform. Arc was designed to accelerate that transition and provide the common foundation on which global economic activity can be built by functioning as the new Economic OS.

II. Arc: The Economic OS

Arc is designed to be the Economic OS for the internet: a public, open Layer–1 blockchain network purpose-built as shared infrastructure for economic activity. Its architecture spans core infrastructure, protocol services, developer kits, and applications, providing a common foundation with deterministic settlement, configurable privacy, and predictable stablecoin-native fees.

Platforms and services connect Arc to the broader financial and crypto ecosystem: crosschain transfers via CCTP, programmable wallets, FX infrastructure, and integration with Circle Mint and Circle Payments Network. Developer kits and application frameworks, made available via Skills and CLIs, allow builders to deploy lending, trading, payments, and agent-based services without building foundational infrastructure from scratch. Arc gives builders an open platform while connecting natively to a growing ecosystem of partners and to Circle's platform.

Arc launched its public testnet in October 2025, following the release of its litepaper in August 2025. As of May 5, 2026, the Arc testnet has processed 244.1M transactions. Mainnet launch is expected in the summer of 2026.

III. Introducing the ARC Token

The ARC token is the native coordination asset of the Arc network. Arc is a global blockchain network designed to serve as the economic operating system of the internet. ARC confers governance rights to a distributed participant set responsible for upholding the network's regulatory alignment, security posture, and infrastructural integrity — establishing the conditions under which institutions can rely on Arc for mission-critical applications and settlement. The system operates across

three layers: **the Arc network** provides the execution environment (deterministic settlement, stablecoin-denominated gas, configurable privacy, institutional validators); **stablecoins** provide the transactional medium (predictable, liquid, globally understood units of value); and **ARC** provides the coordination layer, the mechanism through which participants secure the network, govern its economics, and share in the value that network activity creates.

ARC is native to the network, open and accessible to any participant at any scale, and permissionless to hold, stake, and use. It is a utility-driven asset with multiple functions that together drive a reinforcing system in which network activity, economic alignment, governance, and platform growth compound one another.

At a high level, ARC serves five structural functions within the Economic OS. The following sections describe how ARC fulfills these roles in detail. Together, they form a reinforcing system in which network activity feeds all five, and each strengthens the conditions for more activity.

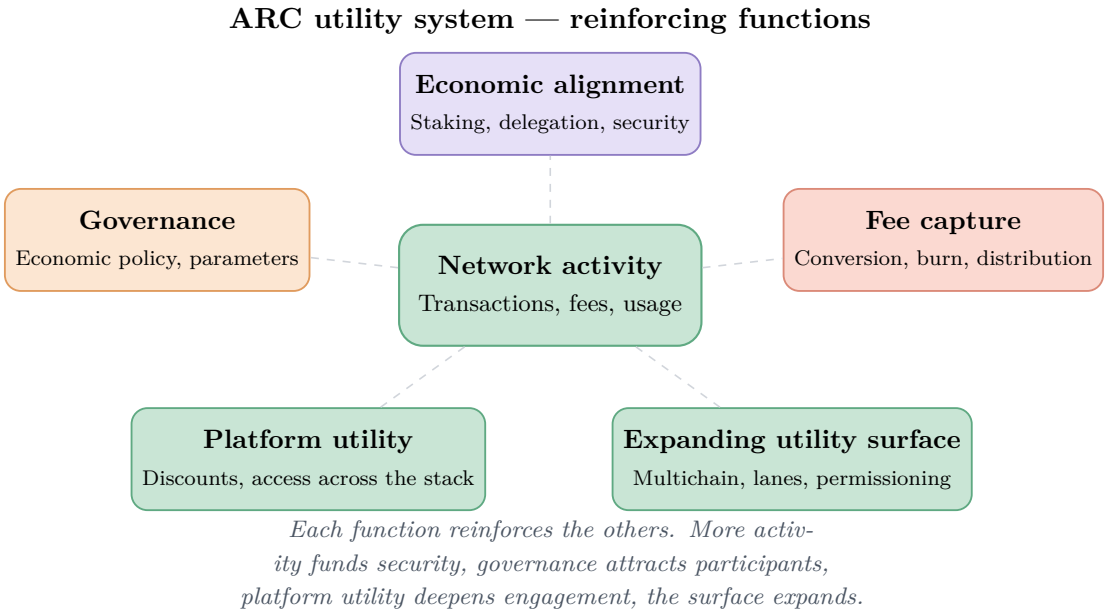


Figure 1: ARC's five functions are interconnected. Network activity feeds all five, and each strengthens the conditions for more activity.

Function	What it coordinates	Why it matters
Economic alignment	Token holders signal confidence when they stake ARC and earn staking rewards from fees and inflation	Participants have economic alignment with the network's success,[1] scaled by their level of activity
Platform utility	Reduced fees and preferential access across the full platform stack (network, services, kits, and applications)	ARC's value scales with a participant's depth of engagement across the Economic OS
Fee capture and distribution	Fees convert to ARC at the protocol level, split between validator and staker compensation and permanent burn	Network usage directly drives ARC demand and supply reduction, regardless of the payment asset
Governance	Token holders vote on economic parameters; validators enforce decisions	Participants shape the rules of the system they depend on through transparent, stake-weighted processes
Expanding utility surface	Examples of potential future designs include multichain coordination, multi-asset gas, specialized transaction lanes, etc.	ARC's relevance grows with the platform; each new capability widens the surface ARC coordinates

Table 1: The five structural functions of ARC.

The following sections provide detailed treatment of each function, the economic architecture that governs ARC's supply and demand, and the governance framework through which holders shape the system's evolution.

IV. ARC Utility in Depth

ARC is a productive asset, one that becomes more useful as a participant's engagement with the Economic OS deepens. A staker earns from network activity. An active token holder/staker who transacts, builds, and operates across the platform receives multiple benefits, such as reduced gas costs, lower fees on platform services, governance weight, and ecosystem access. The deeper the participation, the more ARC works for the holder.

Staking

The Arc network will transition from a Proof-of-Authority (PoA) consensus model to a Proof-of-Stake (PoS) consensus model. A permissioned set of validators produces blocks and maintains the network. The broader community of token holders participates by staking ARC, retaining custody while allocating economic weight that influences network health and reward distribution.

Rewards flow from two sources: inflation-funded issuance and fee-derived revenue converted into ARC at the protocol level. Validators retain a commission for operational performance; the remainder passes through to stakers proportional to their stake.

Economic security and permissioning

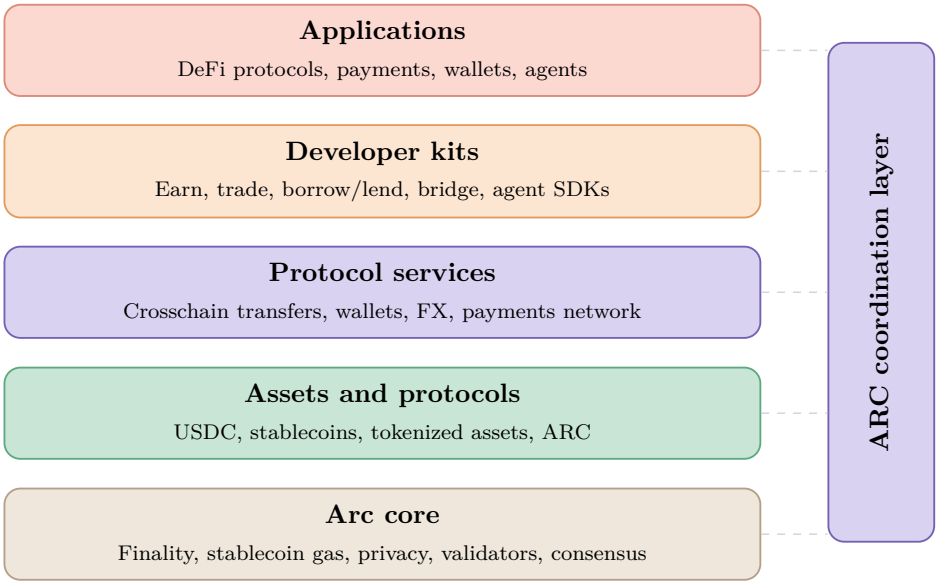
Arc's security model combines two layers. The permissioned validator set provides the *identity layer*. It ensures each operator is known, committed to minimum standards, and legally accountable. ARC staking provides the *economic layer*. Staking determines each validator's weight in proposer selection, reward flow, and what they stand to lose from underperformance and misbehavior.

This interplay is designed to deepen over time. In the early phases, permissioning is managed offchain and made public as validators join the network. As the network matures, functions like validator performance scoring, qualification thresholds, and access controls can progressively move onchain, coordinated through ARC staking and onchain data, while preserving the identity and accountability guarantees that the permissioning framework provides.

Platform-level utility

Arc is designed as a holistic platform that will expand over time, spanning core infrastructure, assets, protocol services, developer kits, and applications. ARC's utility runs through the entire stack.

ARC coordinates activity across the Economic OS stack



ARC runs through every layer of the stack. As new use cases, services, and applications emerge, each one expands the surface that ARC coordinates and captures value from.

Figure 2: The Economic OS spans five layers. ARC is the coordination asset that runs through all of them. Its utility grows as new capabilities emerge at any layer.

On the core layer, participants who stake ARC may access discounted transaction rates relative to others. Stakers receive partial or full gas subsidies, reducing the cost of active participation. These mechanics create a direct economic incentive to hold ARC proportional to transaction volume.

Above the core layer, ARC holders and stakers can be eligible for preferential access and reduced fees across services from various ecosystem partners, including services such as Circle's crosschain transfer operations, stablecoin mint and redemption services, payments infrastructure, and developer tooling. Additional services may also come online in the future, providing ARC holders with tangible economic benefits.

In practice, ARC becomes more valuable to a participant as their engagement with the Economic OS deepens. A holder who stakes earns from network activity. A staker who transacts pays less. A builder who deploys on the platform can gain access to ecosystem programs, grants, and distribution. An institution that integrates across the platform stack (payments, settlement, lending, FX) derives benefits from holding ARC at each layer. The relationship between the participant and the asset scales with the relationship between the participant and the platform.

Example utility possibilities	**Mechanism**	**Beneficiary**
Gas fee discount	Pay gas at reduced rates vs. traditional rates	ARC stakers transacting onchain
Staker gas subsidies	Partial or full gas subsidies for staked ARC holders	Validators and stakers
Platform service fee reduction	Reduced fees across crosschain transfers, mint/redemption, payments, and other platform services	ARC holders operating across the platform stack
Governance participation	Vote on economic parameters like fees, inflation, burn logic, etc.	ARC holders and stakers

Table 2: Illustrative utility possibilities for ARC across the Economic OS.

V. Economic Architecture

Supply and inflation

The core principle of ARC's supply design is that the network should fund its own operations through real economic activity. However, a network cannot generate meaningful fee revenue before it has participants, applications, and transaction volume. To bootstrap validators and stakers, ARC will have a decaying inflation model. ARC will have an initial supply of 10 billion tokens. In the early phases, new ARC is issued at a modest annual rate, expected to begin at approximately 2–3%, and distributed to validators and stakers as compensation for operating and securing the network. Over time, the inflation rate programmatically declines according to a predefined schedule subject to change by governance, and the share of compensation funded by fee-derived revenue grows.

The long-term objective is inflation neutrality, a state where burn from network activity fully offsets new issuance. This transition is not guaranteed by a fixed timeline. It depends on the pace of real network growth: transaction volume, the breadth of fee-generating activity, and the discipline of

governance in managing economic parameters.

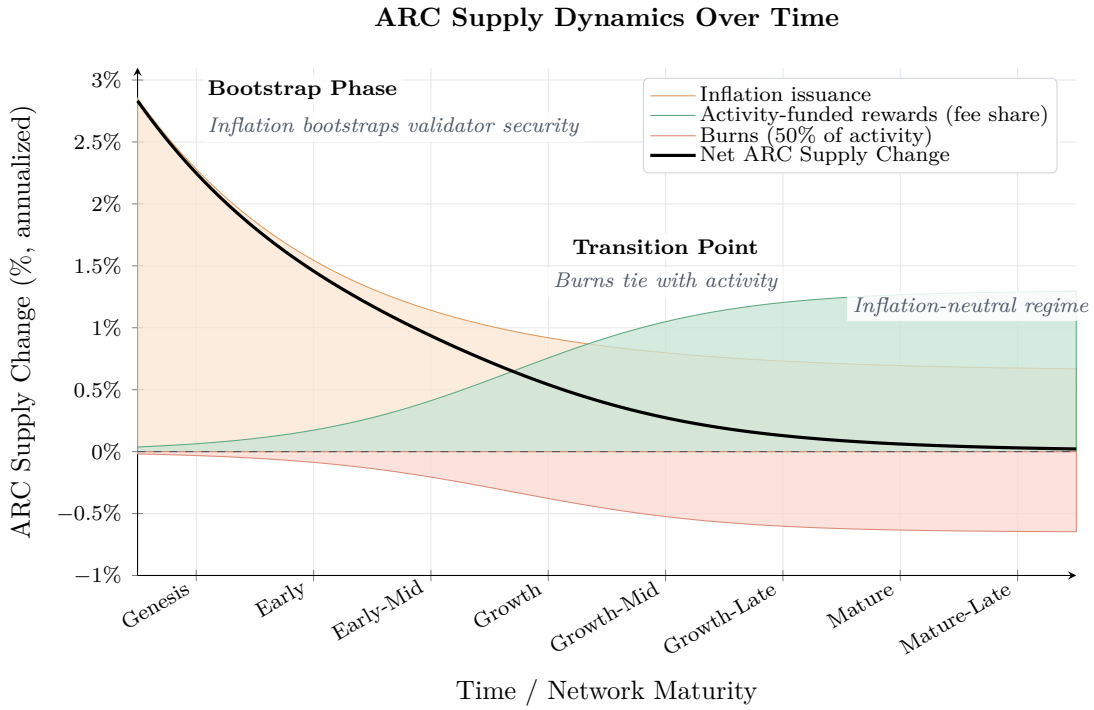


Figure 3: Illustrative view of decaying inflation; the green shaded band shows activity-funded rewards (fee-based compensation) growing with network maturity, and burns tied to the same fee series (here 50% for burn). Net supply change follows an inverted exponential path toward 0 as issuance falls toward a low threshold while burns scale with rewards. Values are illustrative, not projections or commitments.

Fee mechanics and conversion

The Arc network is designed so that protocol fees from its economic activity ultimately accrue to ARC, regardless of how participants pay for transactions.

Protocol fees on Arc are priced in reference to stablecoins for predictability. Regardless of which asset a participant uses to pay, protocol fees are programmatically converted into ARC at the protocol level prior to the reward cadence. The converted ARC is then split: a portion flows to validators and stakers as compensation, while a portion is burned, offsetting programmatic inflation.

The ratio between distribution and burn is configurable and may change over time as the network's economic profile evolves. The initial configuration prioritizes sufficient distribution to maintain competitive validator economics, with a meaningful portion directed to burn to begin offsetting issuance from the outset. These parameters are designed to be adjusted by governance over time as the network's economic profile evolves and as governance participants develop informed views on the optimal balance between operator compensation, supply management, and treasury needs.

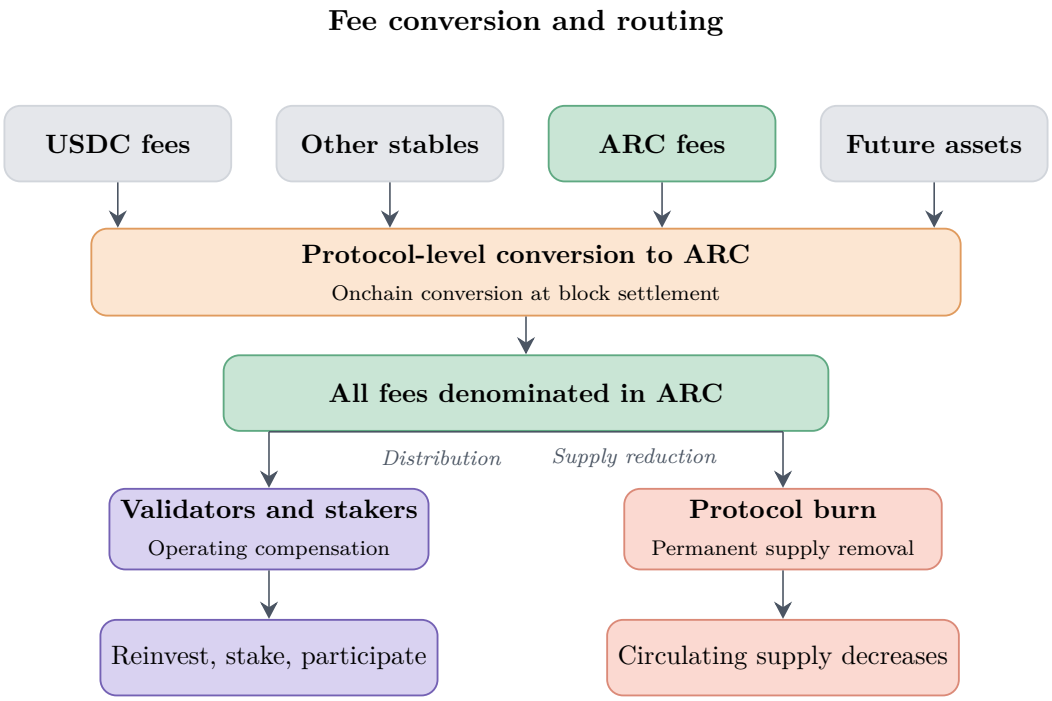


Figure 4: All fees, regardless of payment asset, are converted to ARC at the protocol level, then split between operator compensation and permanent burn.

Fee categories

ARC's path toward inflation neutrality is supported by multiple categories of network revenue, each of which feeds into the same conversion and burn infrastructure.

At launch, the network will be supported by base transaction fees and priority fees. MEV auction revenue is expected to be an additional significant source over time. Arc's approach to MEV addresses both user protection and value capture: private and encrypted mempools eliminate the information asymmetry that enables harmful MEV such as frontrunning and sandwich attacks, while TEE-based block building ensures verifiable, non-malicious transaction ordering. On the capture side, block builders compete in sealed-bid auctions for construction rights, and the resulting revenue is routed through the same ARC-denominated reward and burn mechanisms as transaction fees, accruing to stakers and contributing to supply reduction.

Over time, new fee categories are expected to emerge around specific use cases, such as privacy-preserving transactions or specialized transaction lanes. Each new category plugs into the existing conversion infrastructure without requiring changes to the protocol's core economic logic.

Token allocation

ARC's initial supply of 10 billion tokens is allocated across three categories, each corresponding to a structural role in the network's development and long-term operation. Exact unlock and release schedules will be announced in the coming months, but the high level categories are as follows:

- **60% — Ecosystem.** This is the largest allocation by design and encompasses token sales, developer grants, network growth programs, and broader participation mechanisms. The ecosystem allocation reflects a foundational commitment: the majority of ARC will be distributed to the participants who build on, use, and contribute to the network.
- **25% — Circle.** This allocation reflects Circle's role as the builder of the protocol and supports Circle's ongoing operations on the network. It ensures that Circle retains meaningful economic alignment with the network's long-term success while participating directly in staking and governance, and administering ecosystem programs.
- **15% — Long-Term Reserve.** The reserve exists for long-term resilience, strategic flexibility, and economic stabilization. It provides the network with a buffer against unforeseen conditions — a resource that can be deployed to address market dislocations, fund critical infrastructure, or support the network's stability during periods of stress.

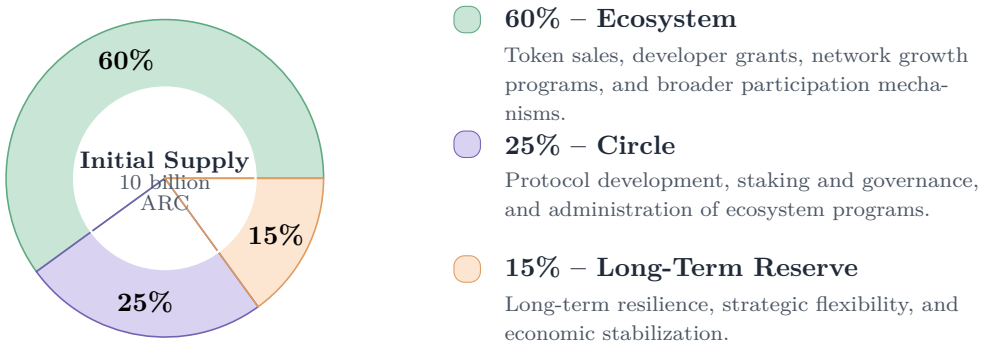


Figure 5: Indicative initial ARC token allocation. Exact unlock and release schedules will be announced in the coming months.

VI. Governance

Governance on Arc exists to solve a specific problem. It allows a globally distributed set of participants, including counterparties, competitors, and regulated entities across jurisdictions, to help shape the economic rules of a system they all depend on while avoiding the overhead, capture risk, and operational fragility that poorly scoped governance can create.

Purpose and principles

At the time of Arc's upgrade to a PoS model, Arc's intention is to place meaningful governance authority in the hands of the participants who are most committed to the network's success, particularly token holders. Certain decision-making powers over the system's economics, operations,

and evolution will shift from Circle towards the participants who depend on the network. The following principles will guide the distribution of different levers of authority:

1. **Participants govern what directly affects them.** Decisions that impact how participants operate, deploy capital, and earn from the network, such as fees, inflation, and burn parameters, are subject to token holder governance. Protocol development and implementation priorities remain with engineering teams accountable for execution.
2. **Some decisions require concentrated accountability.** Incident response, compliance actions, security patches, and validator membership require actors who can move quickly and be held directly responsible. These decisions are expected to sit with Circle and designated bodies until governance mechanisms mature enough to absorb them.
3. **Authority expands with readiness.** Decisions that start with Circle are expected to shift toward token holder governance as the network's participant base broadens, credibility is validated, and the system demonstrates it can handle the responsibility.

Governance actors

Actor	Role
Token holders	Economic participants with ARC exposure who vote on network parameters proportional to their commitment
Validators	Operators responsible for network uptime, block production, and enforcement of governance decisions
Circle	Initial steward, responsible for protocol development, compliance, and operational execution in the early phases
Builders and contributors	Ecosystem participants who advance the network through development, research, and applications

Table 3: Governance actors in the Arc ecosystem.

Governance scope

The governance model is structured as a shared responsibility framework. Each category of decision is assigned to the actor or actors best positioned to make it, with clear rationale for why that assignment exists.

Decision domain	Initial Governance model	Rationale
Economic parameters	Token holders decide, validators enforce	Fee structures, inflation, and burn logic directly affect participation and capital deployment
Protocol rules, features, and upgrades	Circle decides with broad input, validators adopt	Protocol iteration requires engineering judgment and low coordination overhead
Network stewardship and incidents	Circle decides, validators enforce	Speed and determinism take precedence over broad participation during security or compliance events
Validator membership	Circle decides	Membership implicates sanctions screening, jurisdictional limits, and compliance
Treasury and budgets	Circle with transparency obligations	Budgeting is operationally time-sensitive and requires alignment with long-term development goals

Table 4: Initial governance model for Arc.

As the network matures, new governance structures may emerge to support the progressive distribution of authority. For example, dedicated bodies combining validators, token holders, and independent experts may take on responsibilities like incident response or compliance coordination, reducing Circle's direct role while preserving the speed and accountability these decisions require. The specific structures will be shaped by practice and participation.

These structures serve the purpose of moving the network's coordination onchain, governed by the participants who depend on it, with Circle's direct role intended to narrow as distributed governance proves reliable.

VII. Closing

ARC exists because a global economic operating system cannot be coordinated by a single entity. It requires a mechanism native to the protocol that funds operations, aligns participants, distributes governance, and scales with the system's growth.

ARC is that mechanism. It converts the participants who use Arc into the participants who sustain it. Its utility is not fixed at launch — it expands as the platform grows, as new services come online, and as governance matures. The asset and the system are bound together: the more Arc does, the more ARC coordinates.

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