

PORTAL
UNIVERSAL
GAMING



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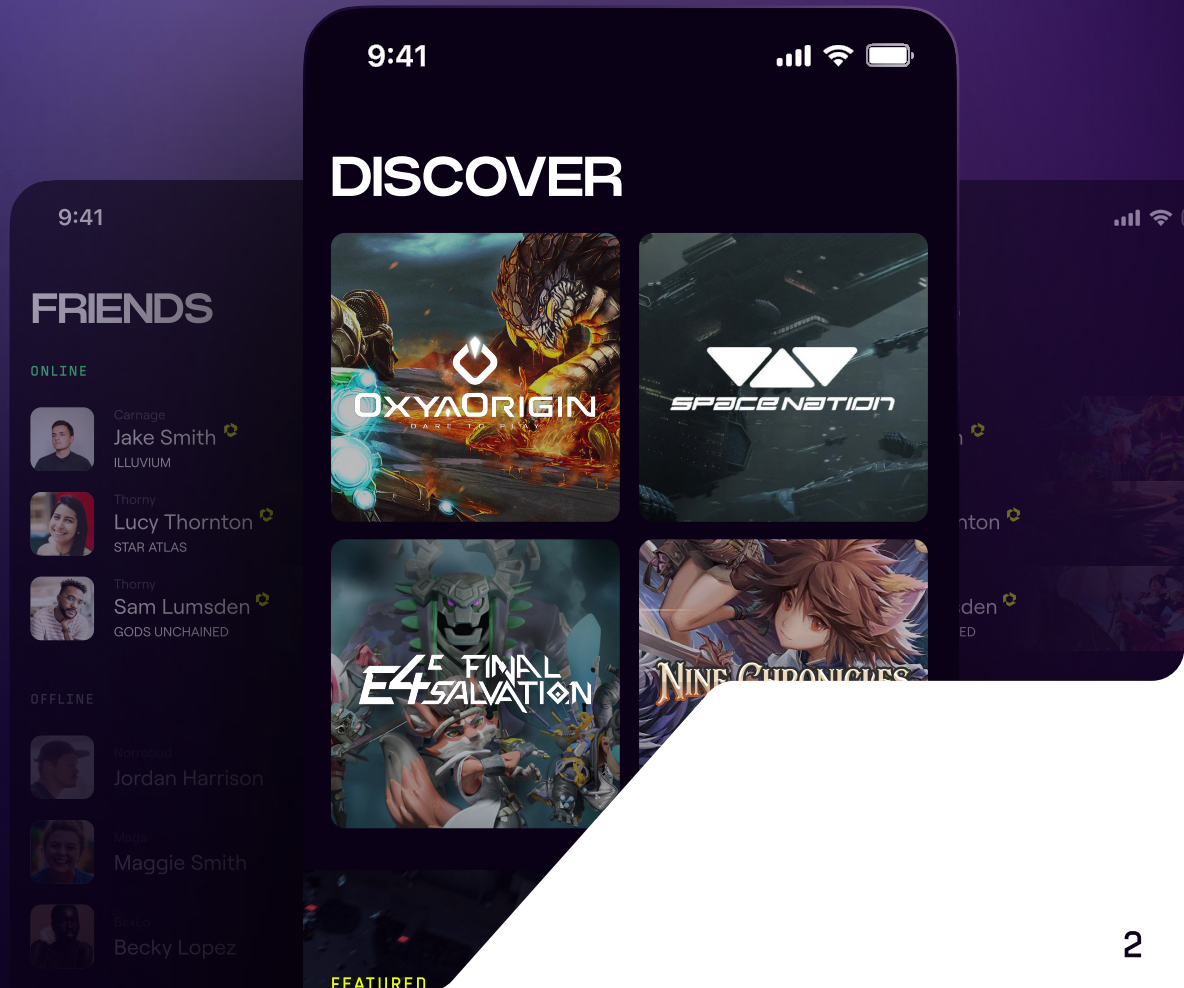


INTRODUCTION

Welcome! Portal aims to unite games and gamers from various blockchain networks on its cross-chain token platform, establishing a united Web3 gaming ecosystem.

Through its partnership with [LayerZero](#), Portal enables a seamless multi-chain experience for gamers, connecting siloed Web3 games with new players through a sleek user experience.

Portal's technology delivers gamer access and game distribution for a vast array of titles, paving the way for a smooth transition for Web2 gamers into the Web3 universe.



PORTAL FOUNDATION

The Portal Platform is being developed by the Portal Foundation.

The Portal Foundation is an organisation based in the Cayman Islands that is tasked with developing and nurturing the Portal ecosystem.

The Portal Foundation's mission is to support and promote the Portal ecosystem by enabling gamers, game developers, and decentralised governance.

PORTAL PLATFORM

Portal's platform offers players a unified access point for Web3 gaming and game-related transactions, removing the complexity of interacting with heterogeneous on-chain gaming environments.

A key feature is the Portal Passport, a one-stop login solution to consolidate gamer identities and assets across various games. It also introduces a middleware that smoothly manages on-chain transactions for games, elevating gameplay and allowing players to engage without needing in-depth Web3 knowledge.

Portal seamlessly connects gamers to an extensive library of over 200 games, fostering easy discovery and personalized recommendations. Championing a vibrant community, Portal facilitates meaningful connections between players, developers, and content creators, fostering the largest Web3 gaming ecosystem.

Safety is paramount with the goal to implement state-of-the-art security to protect user assets and ensure a safe gaming environment.

The platform also promotes easy discovery of new games and insights from content creators.

In essence, Portal aims to provide a seamless, social, and secure Web3 gaming experience, marking a new era of limitless gaming possibilities.



PORTAL TOKEN

Central to the design of the Portal Platform is the native Portal Token, \$PORTAL.

The portal token serves many purposes within the network:

- Transaction fees. Portal is used to pay for transaction fees and node validation services.
- Platform payments. Use portal in marketplaces such as MagicEden, or to buy and sell in-game assets in platform games.
- Governance. Vote and influence the future direction of the portal coin and platform.
- Staking. Stake portal to actively participate in game distribution and visibility on the platform.
- Exclusive Access. Access and purchase exclusive NFT's from our partner network.
- Node purchases. Purchase Nodes to power the core Portal infrastructure and platform.



PORTAL STACK



PORTAL WALLET

The Portal Wallet is designed to simplify the transition of players to the Web3 gaming world, granting users a unified identity that seamlessly integrates across all platform games.

Simple user onboarding is enabled through automated wallet services, removing complexities like managing seed phrases and private keys, ensuring a secure and hassle-free user experience. Users can quickly sign on to Web3 with a single click, compatible with major platforms like Discord and Google.

The platform's user ID matching system syncs wallets addresses with unique IDs, enabling the collection of comprehensive gamer data and analytics. Unlike centralized systems, Portal gamer data is controlled and monetized by gamers themselves, who can offer access to and withdraw consent to share data at any point based on their user ID.

COMPANION APP

The companion app is the “always on” player app bringing convenience and seamless connectivity to the Web3 gaming experience.

Gamers can leverage the app for:

- Discoverability. Users can browse featured games and content – constantly refreshing and keeping users up to date via cross-chain search and recommendation engines.
- Trading cross-chain assets. Ability to buy and sell game assets across chain.
- Social. Find friends to play with and chat.
- Staking-to-scale. Participate in visibility and attention for games on the Portal Platform.



CROSS-CHAIN FUNCTIONALITY

The portal platform features the portal token, built on the LayerZero protocol, aiming to link games within the Portal network using a unified system of exchange and the potential to adopt \$Portal as a default currency.

This vision hinges on an interoperable infrastructure that taps into various blockchains, optimizing their unique strengths.

The LayerZero protocol connects these isolated blockchains, enhancing network effects, security, speed, scalability, and liquidity, making cross-game transactions seamless. Interoperability, in essence, allows for unhindered data exchange across diverse systems.

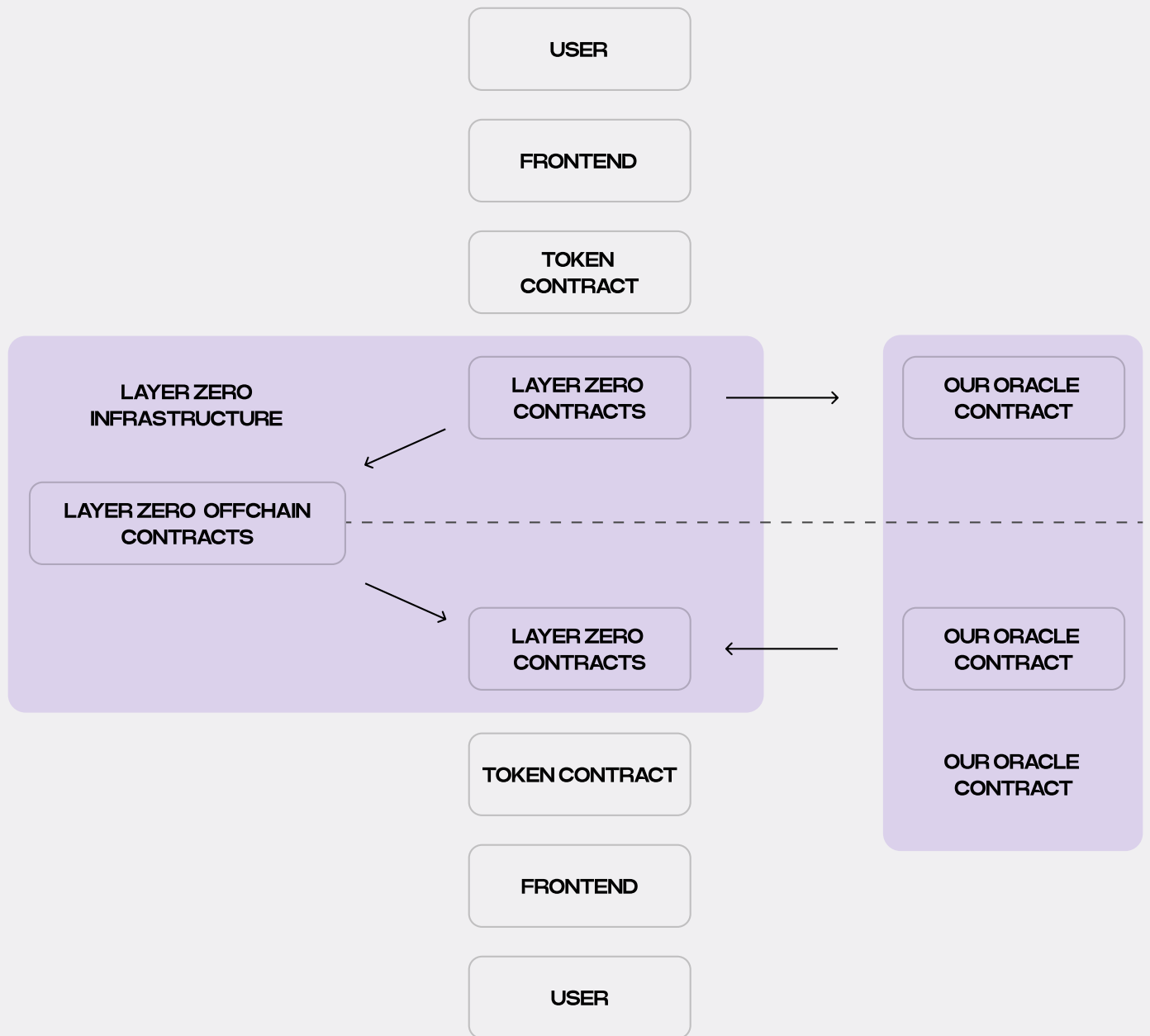
LayerZero offers an omnichain solution, standing out with its ultra-light node approach that combines security and cost-effectiveness for cross-chain data transfers.

In the gaming realm, interoperability currently faces limitations, but technologies like LayerZero can change this narrative for Web3 platforms. Since different games have unique needs and no single blockchain can cater to all, an interoperable approach is the solution.

Portal, being interoperable and cross-chain, can interact with a wide range of blockchains.

This ability positions Portal well to scale in Web3 gaming, utilizing the strengths of various chains, offering games the perfect environment tailored to their needs.





NETWORK NODE ARCHITECTURE

The Portal network's "Nodes" form a synchronization layer combining the Portal Web3 Engine and LayerZero Oracle/Relayers.

In practice, this means that Nodes provide a second layer of verification of cross-chain transactions supported by distributed infrastructure that is owned and operated by the Portal community.

Nodes can be operated either in the cloud or locally.

In exchange for the verification service they provide, nodes are eligible to accrue network rewards and fees, claimable at the end of 24-hour epochs.



\$PORTAL ECONOMICS OVERVIEW



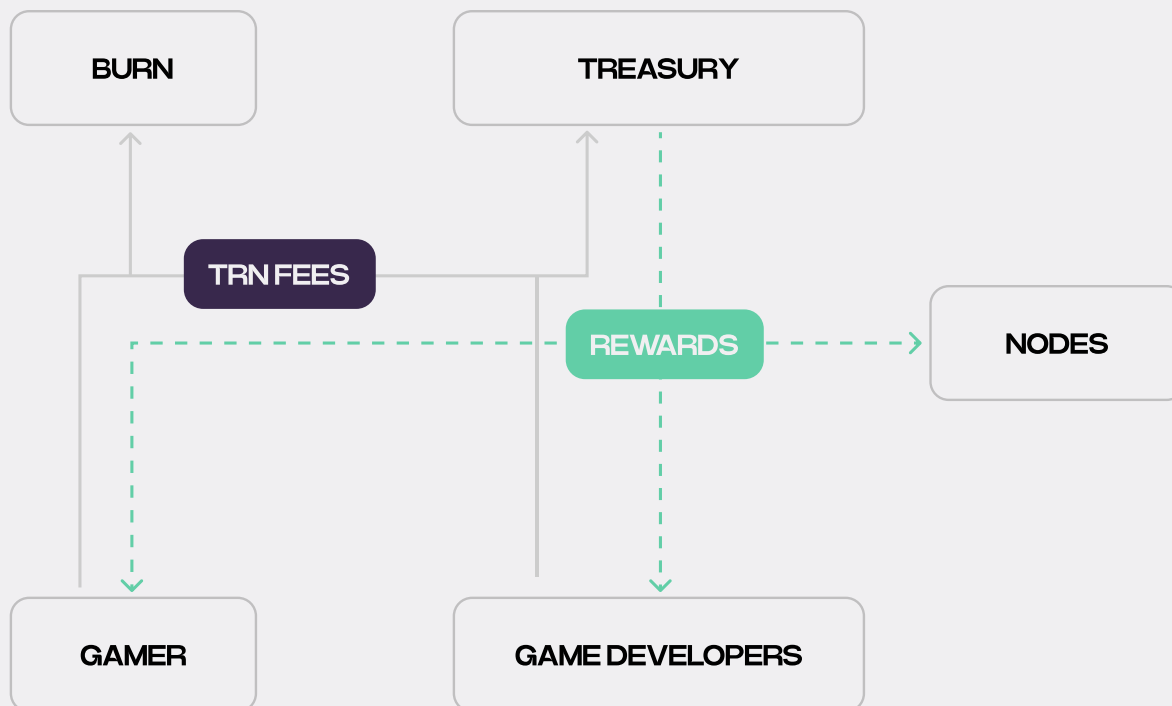
TRANSACTION FEES

\$PORTAL performs an important function as a payment and fee token on the Portal network.

Transaction fees on the Portal network are composed of cross-chain transactions validated by the Portal nodes and Portal network native fees. The fee structure will be calibrated following testing to allow for economically viable scaling.

All games that form part of the Portal network accept \$PORTAL as one of the payment options in-game or on game-related marketplaces, and all fees related to any cross-chain transaction through the Portal network are denominated in \$PORTAL.

\$PORTAL may also perform a natural role in providing central liquidity to game tokens and game assets on-chain, thereby capturing some of the economics of the Portal ecosystem as a whole.



STAKING REWARDS

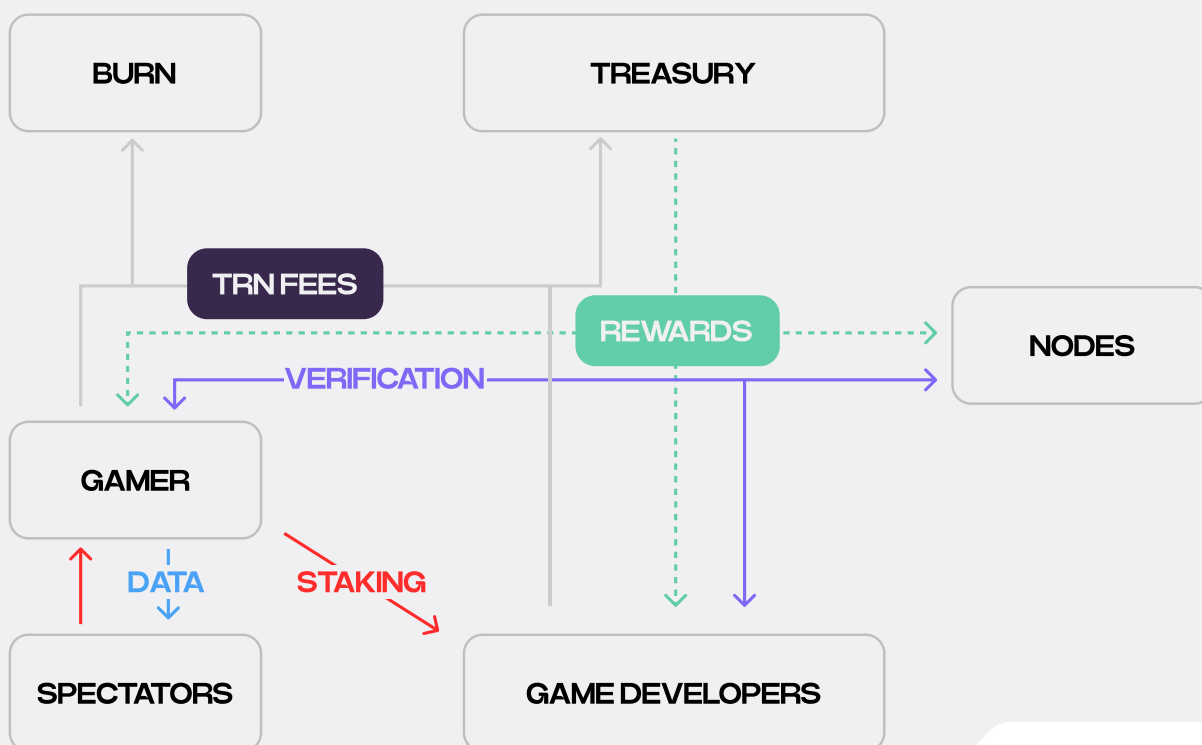
A primary utility of the \$PORTAL token is a vote-stake function to signal support for games on the Portal network. In essence, gamers and games can stake for rewards but can also signal their support for games by assigning a vote to their stake.

Voting for Games

In practice, signaling support for a game means that it receives increased visibility and attention on the Portal platform through rankings that reflect its relative level of staking (and other metrics) and more prominent visibility

within the application. In turn, this allows for the game to acquire Portal platform users to scale their player base and launch new game assets with reduced friction.

A game that joins the Portal ecosystem would be well incentivized, therefore, to stake Portal tokens to itself and it follows that gamers would want to signal their support by doing the same. This translates into what is effectively a nimble “stake-to-scale” system that decentralizes game distribution.



Platform Rewards

Stakers (staking gamers) are eligible to receive baseline minimum rewards directly from the Portal treasury for staking and exercising their vote for games. Game developers also receive platform-native rewards for the votes that they receive.

The baseline minimum rewards from the Portal treasury, that any stakers are eligible to receive, are paid in exchange for the vote and effective governance input of the stakers. The baseline rewards may depend on staked amount (weight of assigned vote) and other key factors around a staker's engagement as a gamer or as a Portal community member.

Platform rewards consist of \$PORTAL:

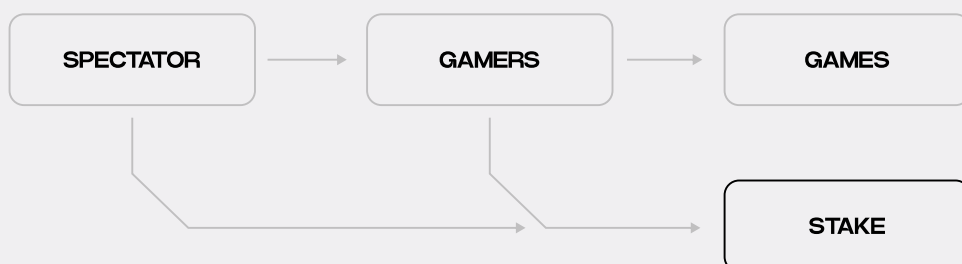
1. that has vested to the community treasury.
2. recycled from network native transaction fees earned by the token economy.

As Portal gains scale, platform data linked to gamer identities should become a valuable resource for data samplers (like games and brand) to acquire users. Data samplers (or "spectators") who wish to access gamer data will also be able to stake to gamers, compounding the gamer stakes in exchange for the permission to sample their individual data.

Global Effects

Staking acts as an economic control function. As well as weighting allocations for games, it performs two key functions:

1. Set the amount of recycled \$PORTAL for burning before distribution
2. Allocate the share of inflation between the treasury and games.



GOVERNANCE

Decentralising Portal

The Portal Foundation aims to introduce a formalized path to the decentralisation and autonomy of the Portal Platform.

More details on the governance architecture and functions of the portal tokenholders will be released soon.



\$PORTAL DISTRIBUTION



TOKEN SUPPLY

This is a single fungible token system consisting of a fixed maximum supply of 1 billion \$PORTAL tokens.

The total supply of \$PORTAL will be minted at genesis and vest to the community treasury on a periodic basis over time.



REWARD EMISSIONS

Reward Emission Rate

The reward emission rate is calculated and applied periodically to the \$PORTAL tokens in the community treasury.

A calibrated sigmoid population curve is employed, with $P(t)$:

$$P(t) = \frac{1}{1 + ke^{-ct}}$$

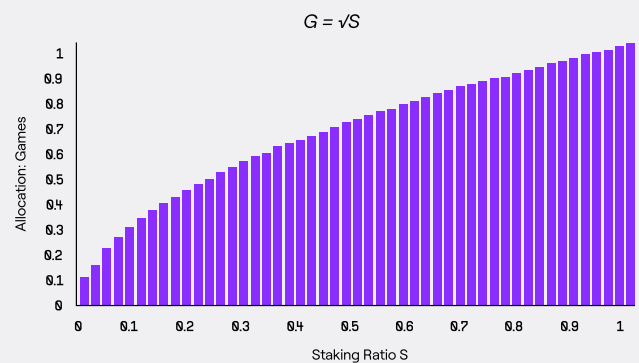
Where t is the calculation period counter ($t \in [0, \infty)$), k and c are constants to be resolved from the initial supply $P(0)$, and a half-life inflection point of the curve, expressed in calculation periods $t(0.5)$.

$$k = \frac{1}{P(0)} - 1, \quad c = \frac{\ln k}{t_{0.5}}$$

Rewards Distribution

The model considers staking as a proxy for engagement and increases and decreases the \$PORTAL allocation to games based on the staking ratio. The balance is allocated to the treasury.

Where S represents the proportion of all circulating \$PORTAL tokens that are staked, the allocation to games, G , is determined as:



The allocation to node operators, N : $N = 0.20 \cdot G$

And the balance is distributed to the treasury, T :

$$T = 1 - (G+N)$$



RECYCLED FEES

This happens live as transaction fees in \$PORTAL are paid. The staking ratio at that time is used to calculate how much of the acquired \$PORTAL is burnt prior to distribution. Where S is defined as above, the burn amount B is calculated as:

$$B = 1 - S$$

The balance is distributed as platform rewards.

BURN ADJUSTMENT

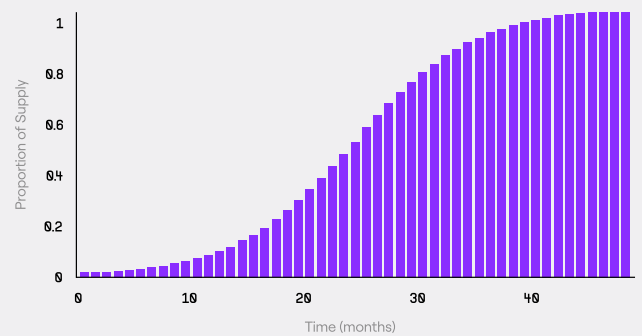
\$PORTAL tokens that have been burnt have the effect of reducing the maximum supply M permanently. And so M is potentially reduced at the end of every calculation period by this amount B and included this way in the curve calculations.

$$M_t = M_{t-1} - B_t$$

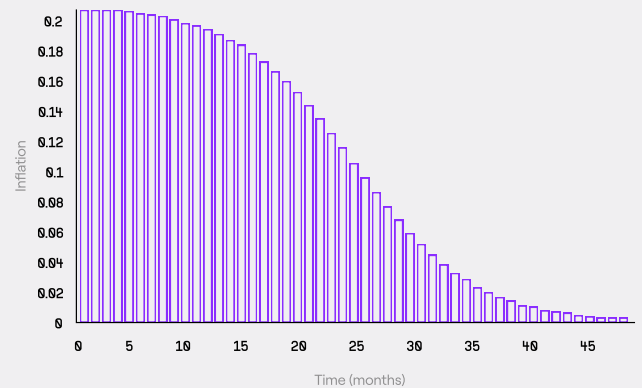
Table 1: Model Parameters

Parameter	Inputs
Initial supply (%)	1%
Half-life (months)	24

Table 1: Model Parameters



The reward emission rate is perpetual, since the curve is asymptotic tending to 100%, but becomes negligible in later years.



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