



# **RIENGAL**

## The future of gaming

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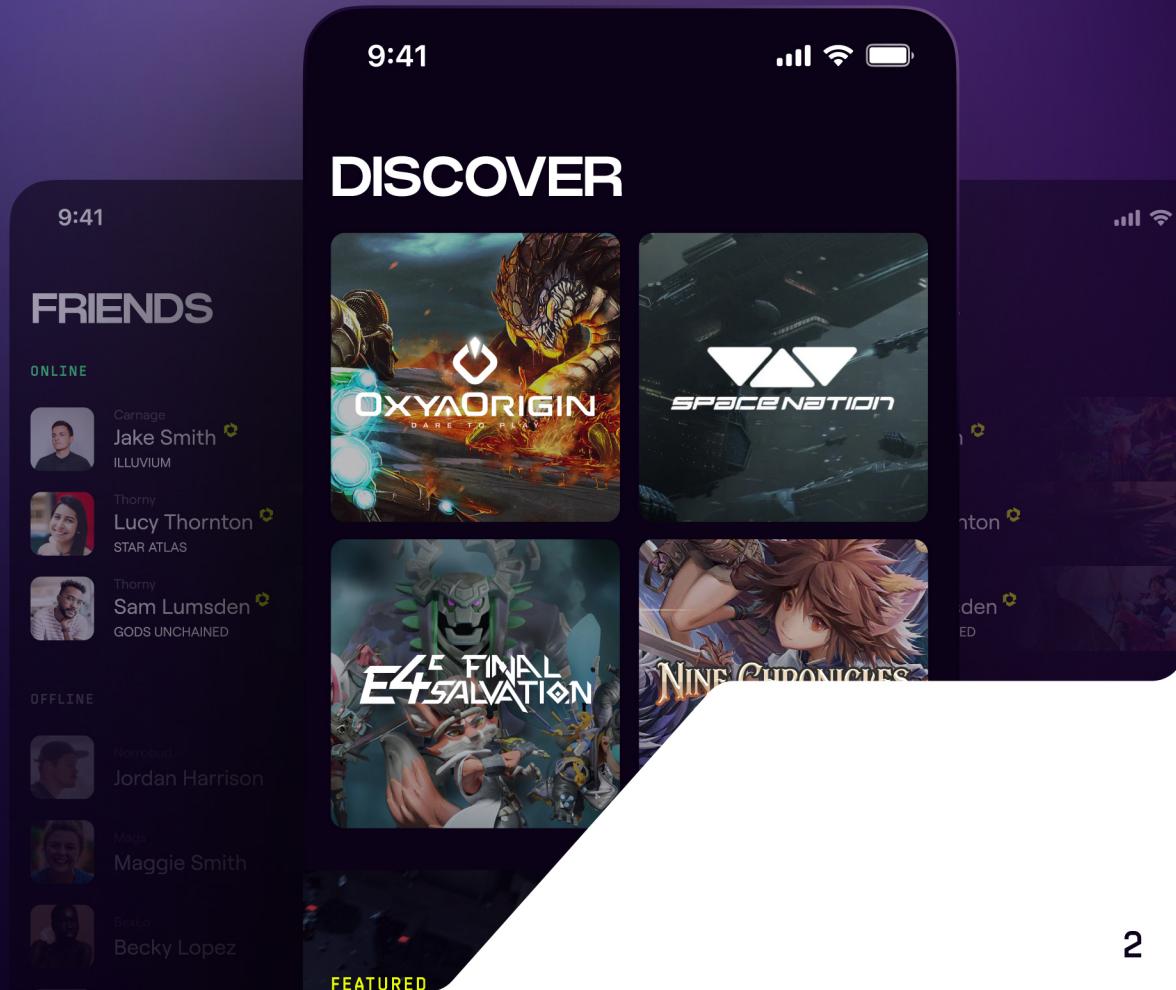


# INTRODUCTION

Welcome! Riengal 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](#), Riengal enables a seamless multi-chain experience for gamers, connecting siloed Web3 games with new players through a sleek user experience.

Riengal'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.



# RIENGAL FOUNDATION

The Riengal Platform is being developed by the Riengal Foundation

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

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

# RIENGAL PLATFORM

Riengal 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 Riengal 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.

Riengal seamlessly connects gamers to an extensive library of over 200 games, fostering easy discovery and personalized recommendations. Championing a vibrant community, Riengal 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, Riengal aims to provide a seamless, social, and secure Web3 gaming experience, marking a new era of limitless gaming possibilities.



# RIENGAL TOKEN

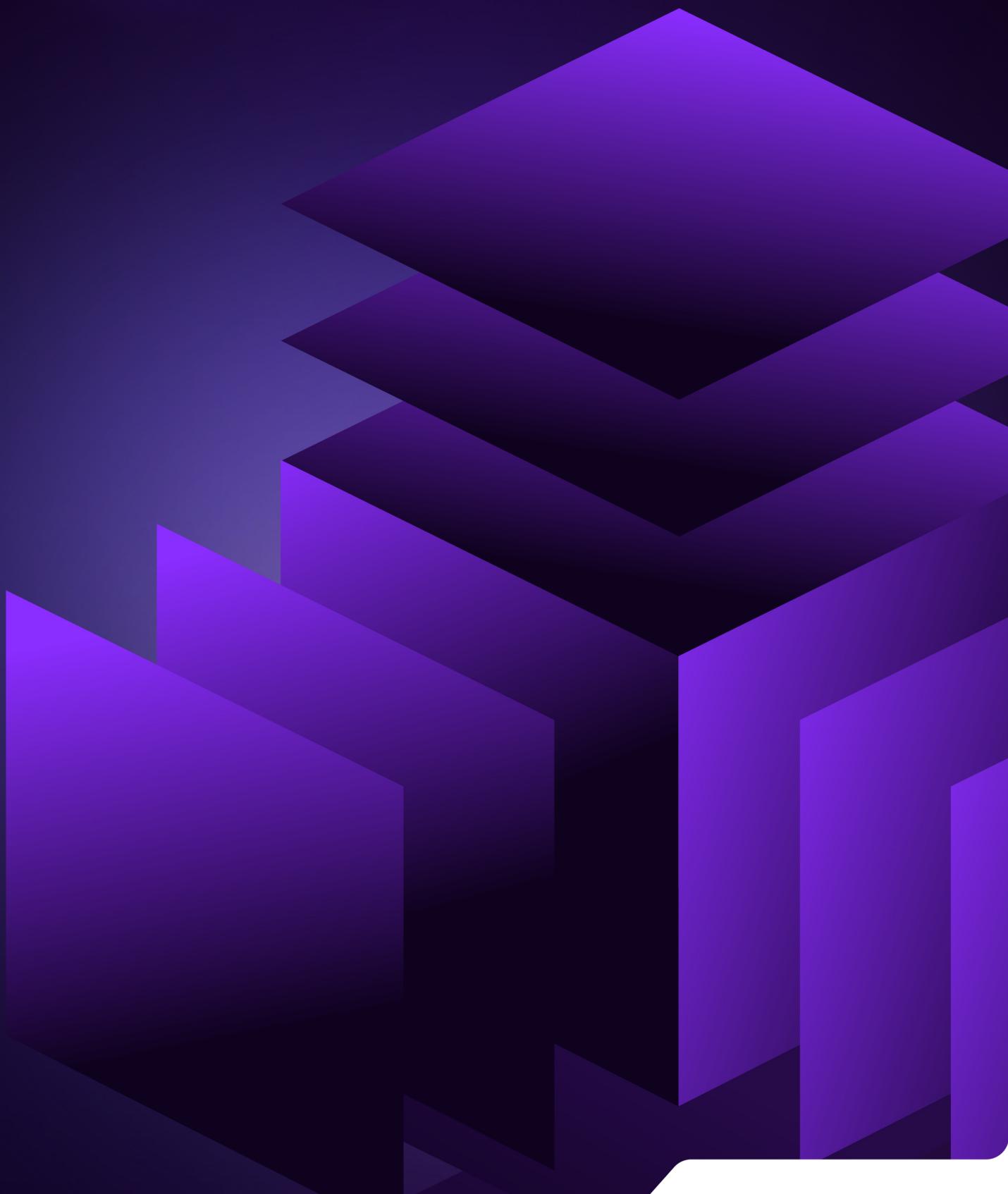
Central to the design of the Riengal Platform is the native Riengal Token \$RIENGAL.

The Riengal token serves many purposes within the network:

- Transaction fees. Riengal is used to pay for transaction fees and node validation services.
- Platform payments. Use Riengal 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 Riengal coin and platform.
- Staking. Stake Riengal 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 Riengal infrastructure and platform.



# RIENGAL STACK



# RIENGAL WALLET

The Riengal 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, Riengal 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 Riengal Platform



# CROSS-CHAIN FUNCTIONALITY

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

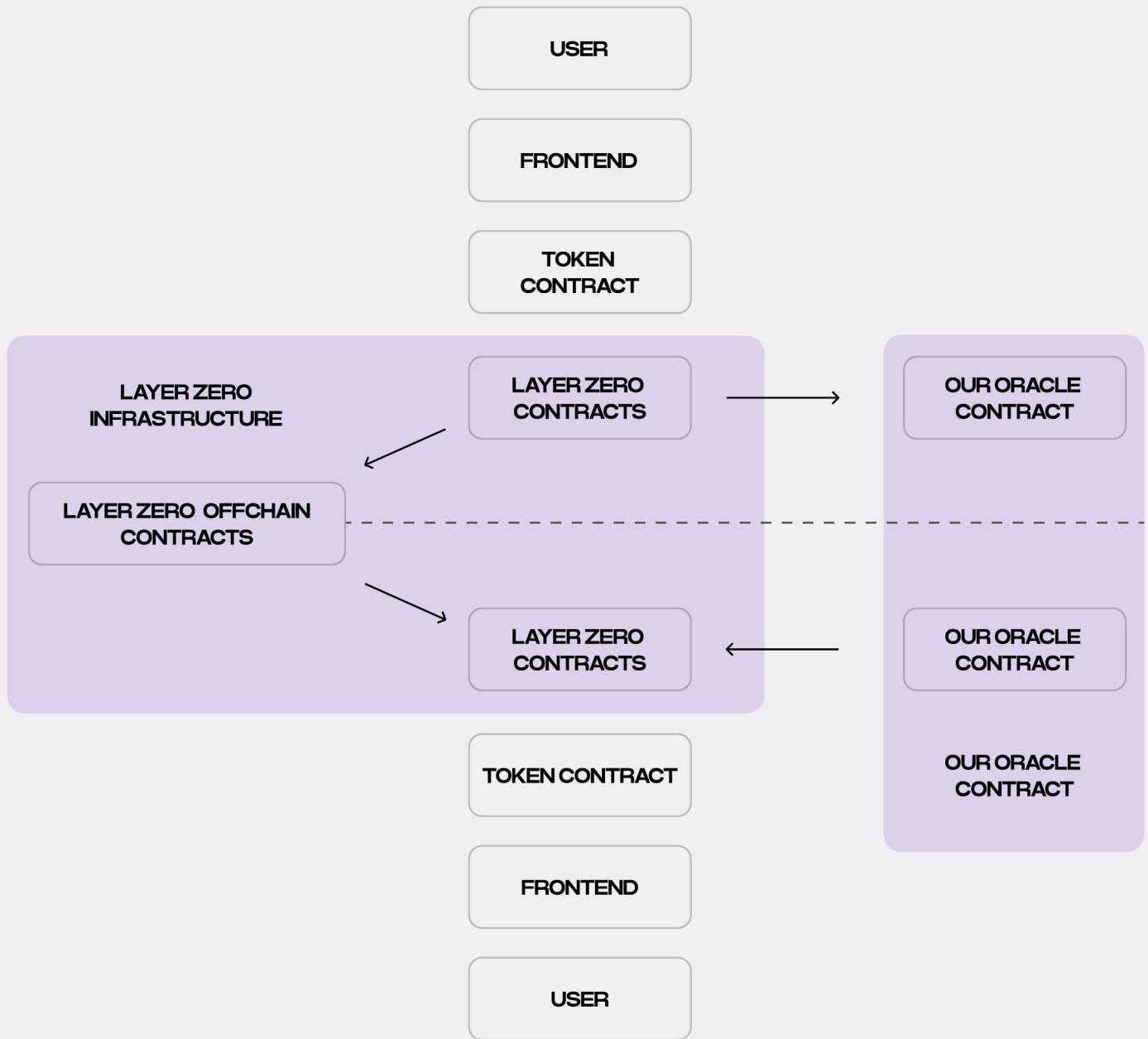
LayerZero offers an omnichain solution, standing out with its ultra-light node approach that combines security and cost-effectiveness for cross-chain data transfers.

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.

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

This ability positions Riengal 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 Riengal network's "Nodes" form a synchronization layer combining the Riengal 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 Riengal 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.



# \$RIENGAL ECONOMICS OVERVIEW



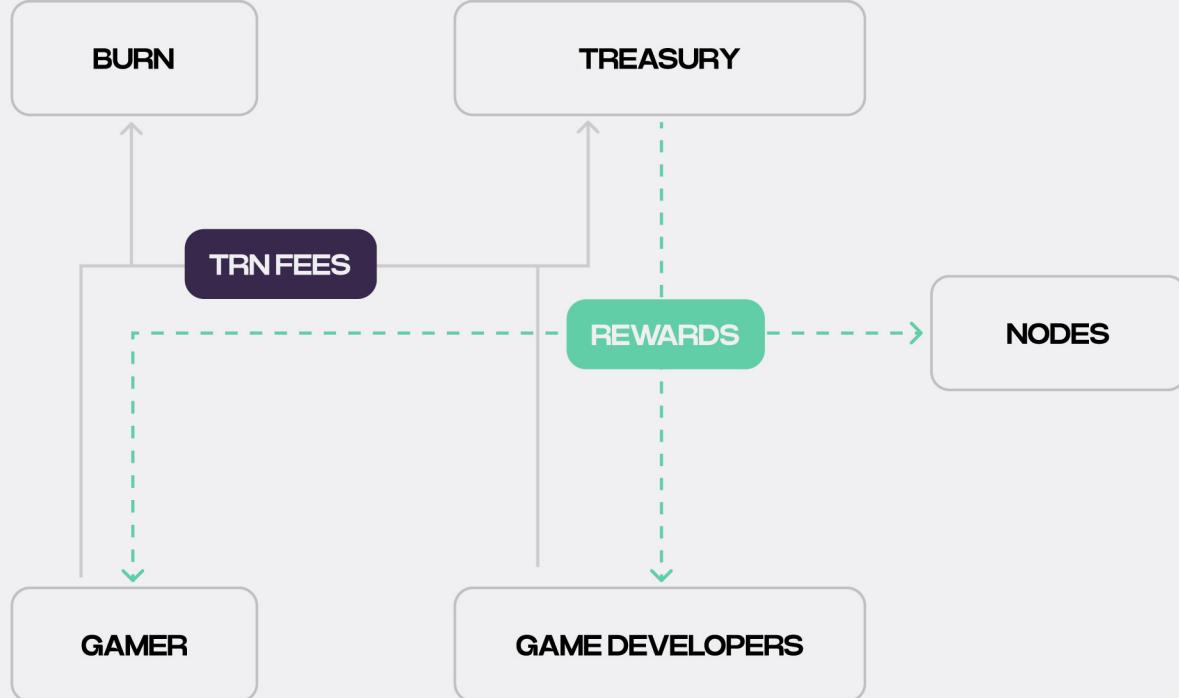
# TRANSACTION FEES

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

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

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

\$RIENGAL 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 Riengal ecosystem as a whole.



# STAKING REWARDS

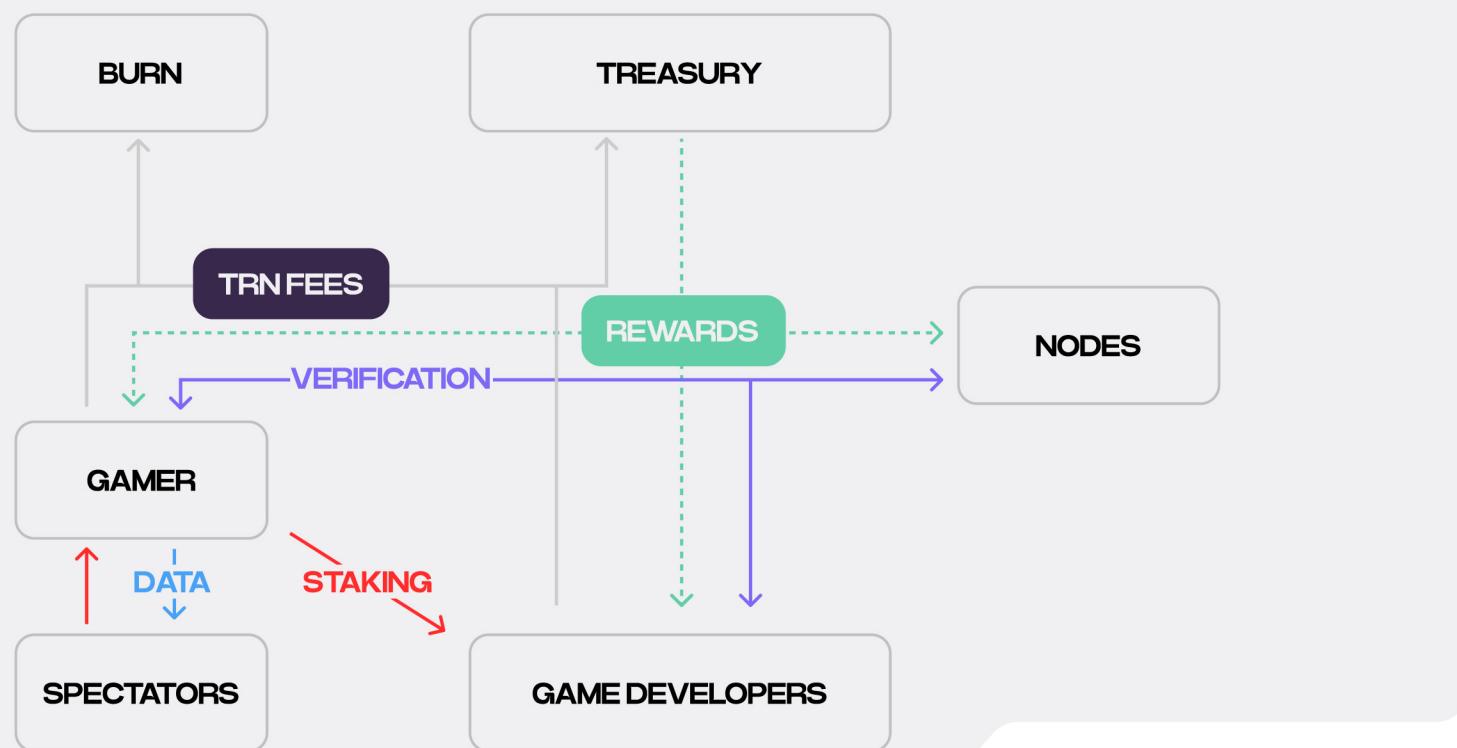
A primary utility of the \$RIENGAL token is a vote-stake function to signal support for games on the Riengal network. In essence, gamers and games can stake for rewards but can also signal their support for games by assigning a vote to their stake.

## Voting for Games

In practice, signaling support for a game means that it receives increased visibility and attention on the Riengal 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 Riengal platform users to scale their player base and launch new game assets with reduced friction.

A game that joins the Riengal ecosystem would be well incentivized, therefore, to stake Riengal 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 Riengal 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 Riengal 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 Riengal community member.

Platform rewards consist of \$RIENGAL.

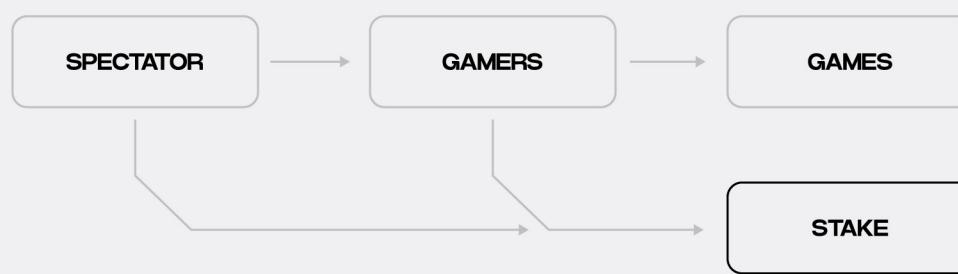
1. that has vested to the community treasury.
2. recycled from network native transaction fees earned by the token economy.

As Riengal 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 \$RIENGAL for burning before distribution
2. Allocate the share of inflation between the treasury and games.



# GOVERNANCE

## Decentralising Riengal

The Riengal foundation aims to introduce a formalized path to the decentralisation and autonomy of the Riengal platform

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



# \$RIENGAL DISTRIBUTION



# TOKEN SUPPLY

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

The total supply of \$RIENGAL 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 \$RIENGAL tokens in the community treasury.

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

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

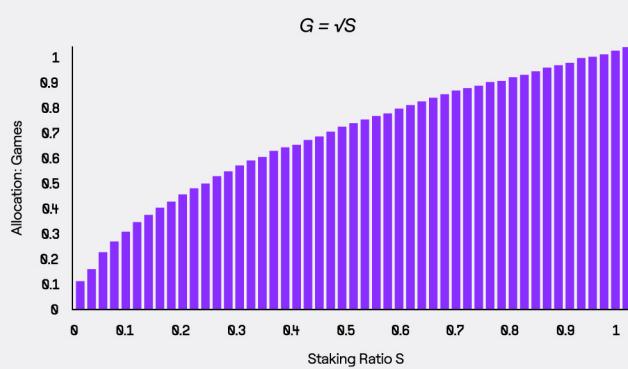
Where  $t$  is the calculation period counter ( $t \in [0, \infty)$ ),  $k$  and  $c$  are constants to be resolved from the initial supply  $R(0)$ , and a half-life inflection point of the curve, expressed in calculation periods  $t(0.5)$ .

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

## Rewards Distribution

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

Where  $S$  represents the proportion of all circulating \$RIENGAL 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 \$RIENGAL are paid. The staking ratio at that time is used to calculate how much of the acquired \$RIENGAL 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

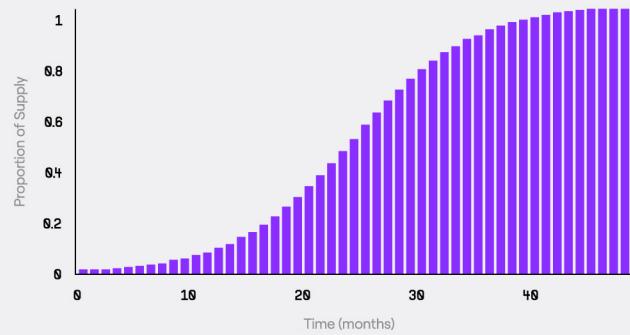
\$RIENGAL tokens that have been burnt have the effect of reducing the maximum supply M permanently. And so M is potentially reduced at the end of every calculation period by this amount B and included this way in the curve calculations.

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

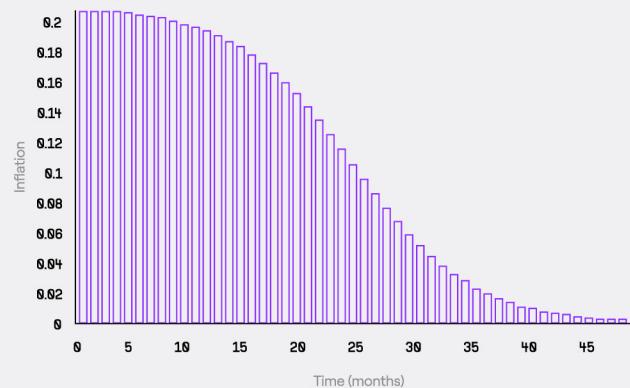
Table 1: Model Parameters

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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