



NEURANODE

API Marketplace for Game Studios

WHITEPAPER

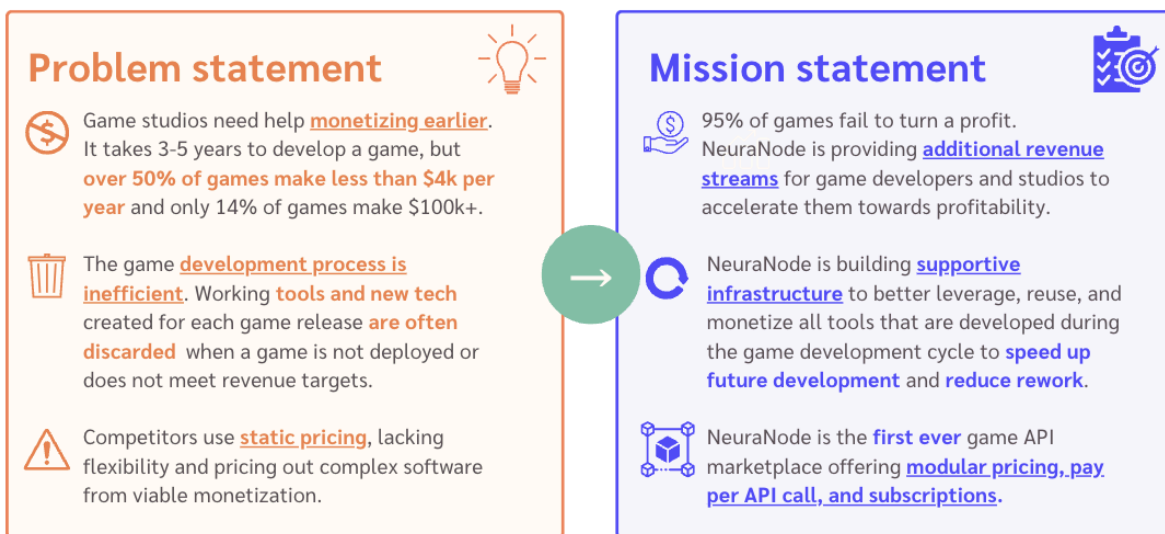
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Mission Statement

NeuraNode's mission extends beyond mere facilitation; we aim to revolutionise the independent gaming industry by addressing the critical challenges that stifle creativity and hinder growth. Independent game developers often craft innovative tools and software components that go unrecognised, lacking the platform to monetize these valuable assets.

We started from the hard truth about game publishing:



NeuraNode tackles this problem head-on by providing a **marketplace** that not only enables developers **repurpose** and **monetize** their creations

We recognize the obstacles of resource limitations and the absence of a supportive network that indie developers frequently encounter. NeuraNode is committed to dismantling these barriers with a platform that is as intuitive as it is powerful, streamlining the path from development to monetization. By leveraging blockchain technology, we ensure a space where transparency, security, and equity are paramount, enabling a fair and open market exchange.

Our vision is to create a space where the value of each developer's work is maximised, where the synergy between gaming and technology breeds innovation, and where the collective effort of a community can launch a multitude of success stories without necessarily launching an entire game. NeuraNode is not just a marketplace; it is a launchpad for indie studios to catapult their software to new heights, a nexus where the gaming industry's future is co-written by those who once stood on its periphery.

With every tool listed, every transaction made, and every partnership formed, we edge closer to a new epoch where the value of development is not just recognized but celebrated.

What is NeuraNode?

NeuraNode is a set of three structures, governed by one token.

The NeuraNode Marketplace

The Marketplace is the product where gaming and developer studios will be able to publish and monetize their software. It is owned by NeuraNode Studio

The NeuraNode Foundation

Is the entity that will issue Token Grants to further fund gaming studios, the foundation will also be the entity issuing the token and managing all the vesting.

NeuraNode Studio

The Studio will develop or purchase APIs from other studios and will publish them on the marketplace under the same terms as any other studio. The studio will also own the Marketplace IP

The NeuraNode Marketplace

Overview

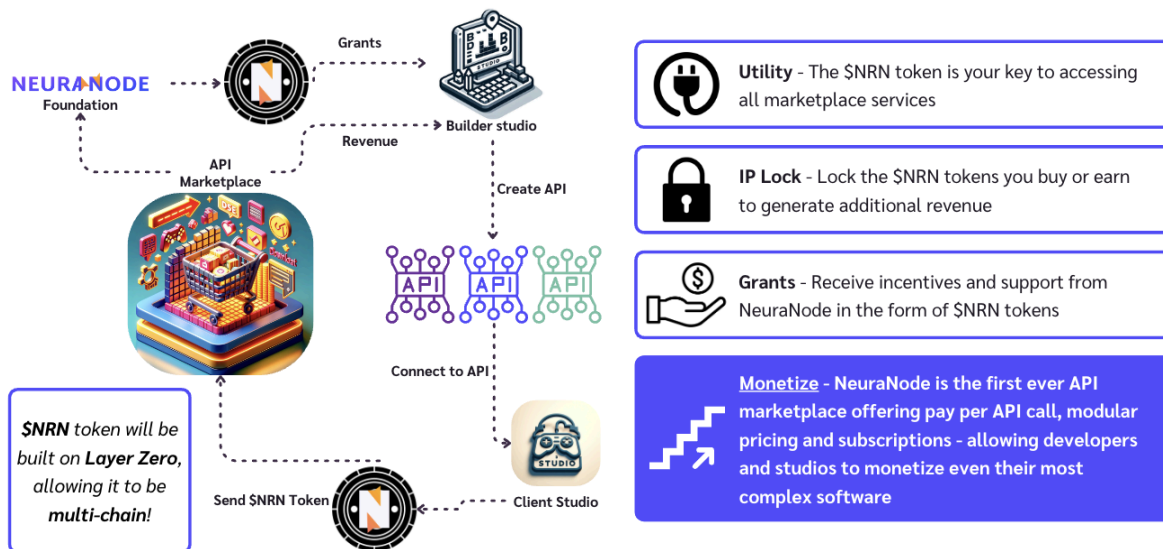
In the rapidly evolving world of game development, access to cutting-edge tools and technologies remains a significant challenge.

NeuraNode introduces a revolutionary solution: the first dedicated API marketplace aimed at revolutionising game development through secure, transparent transactions.

The NeuraNode Marketplace serves as a hub where game developers can access a wide range of services designed to enhance game creation and management.

This marketplace is designed to address critical pain points in the gaming industry, offering a centralised platform where developers can find, integrate, and monetize APIs with ease. It aims to provide a midway point to monetization for game studios and for software developers. Gaming projects take a long time to realise and even longer to monetize and NeuraNode is here to act as a brand new option for monetization.

Simple to use by design, the purpose is for software creators to easily connect their APIs to the platform and start earning revenue.



Capturing revenue

In order to prevent abuse in the platform, a mechanism will be in place that will require studios to lock tokens and accrue value in the platform in order to increase the revenue they can earn with their software.

This will be achieved by automatically storing crypto tokens under the Studio's profile every time their API gets paid for.

The amount of token revenue captured will gradually increase over time.

	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6	Tier 7	Tier 8	Tier 9	Tier 10
Token Locked (per API connected)	.	20,000	50,000	100,000	200,000	250,000	300,000	550,000	700,000	1,000,000
Revenue captured	0%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Staked revenue	100%	90%	80%	70%	60%	50%	40%	30%	20%	0%

	%Fees										
Example for x£ revenue		£1,000	£1,500	£2,250	£3,375	£5,063	£7,595	£11,393	£17,090	£25,635	£38,453
Marketplace fees	10.00%	100	150	225	338	506	760	1,139	1,709	2,564	3,845
Ecosystem contribution	5.00%	50	75	113	169	253	380	570	855	1,282	1,923
Available Studio Revenue		£850	£1,275	£1,913	£2,869	£4,304	£6,456	£9,684	£14,527	£21,790	£32,685
Cashed in by studio		£0	£128	£383	£861	£1,721	£3,228	£5,810	£10,169	£17,432	£32,685
Locked in Studio wallet		£850	£1,148	£1,530	£2,008	£2,582	£3,228	£3,874	£4,358	£4,358	£0

The table above is for illustration purposes only.

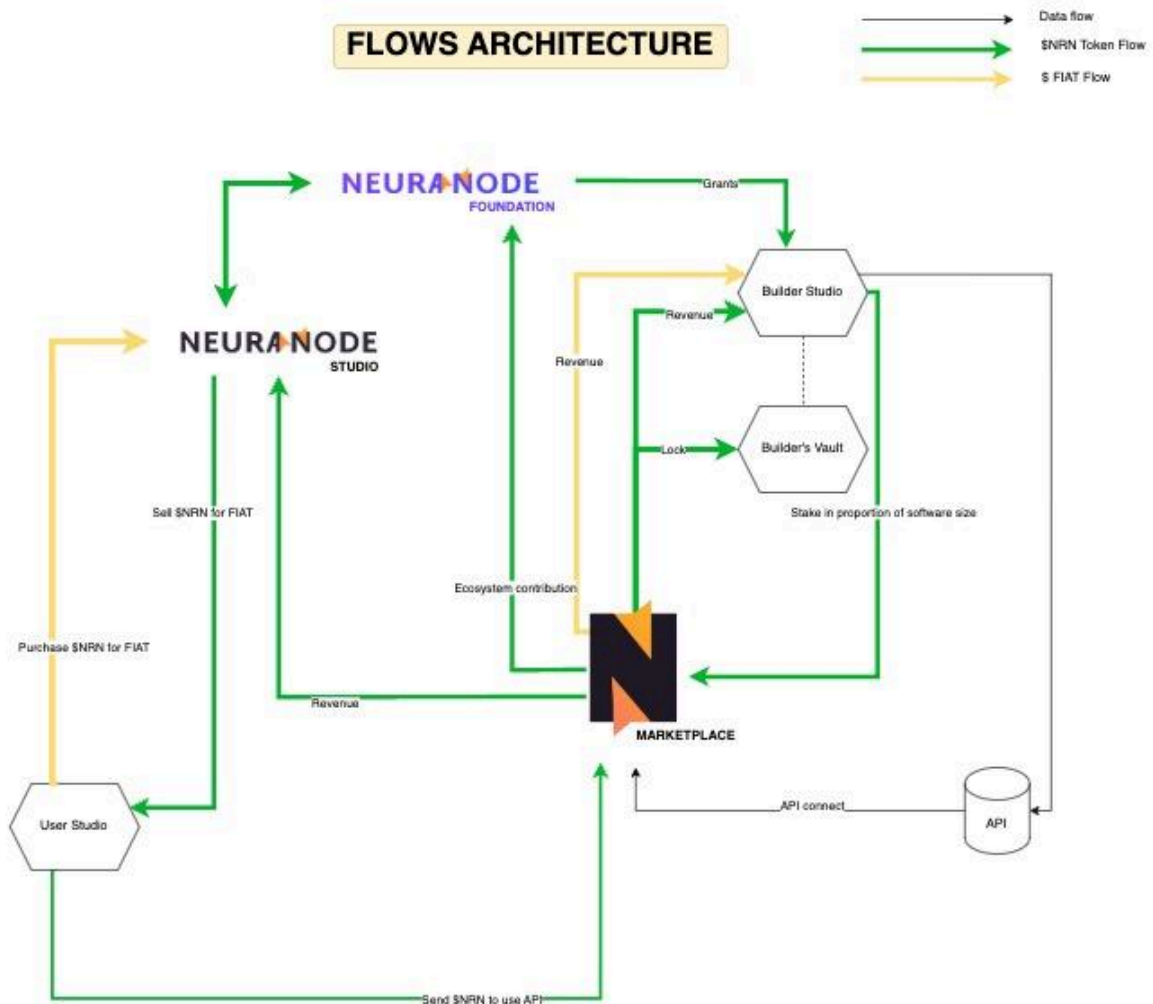
Total token to be locked will decrease as the number of APIs published on the marketplace increases.

This will allow for the platform to scale whilst ensuring sustainable token scarcity mechanism.

The \$NRN token

Token Overview and Purpose

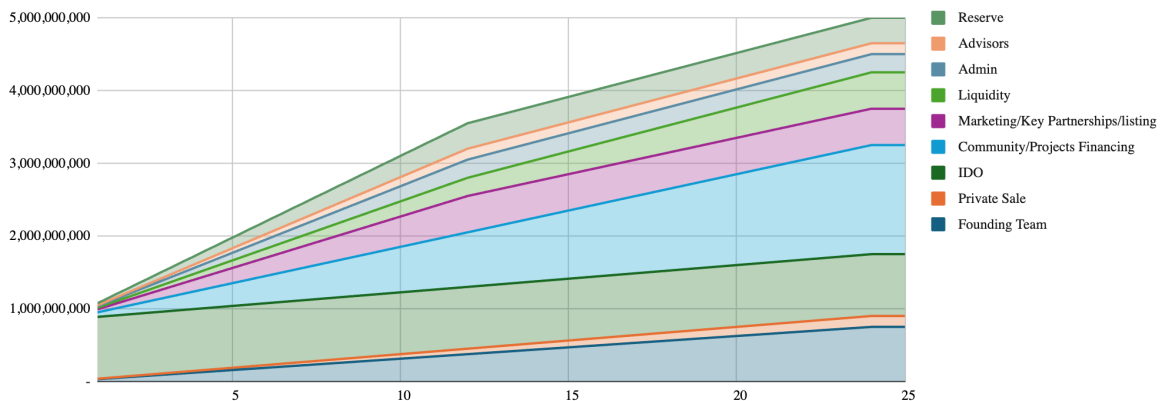
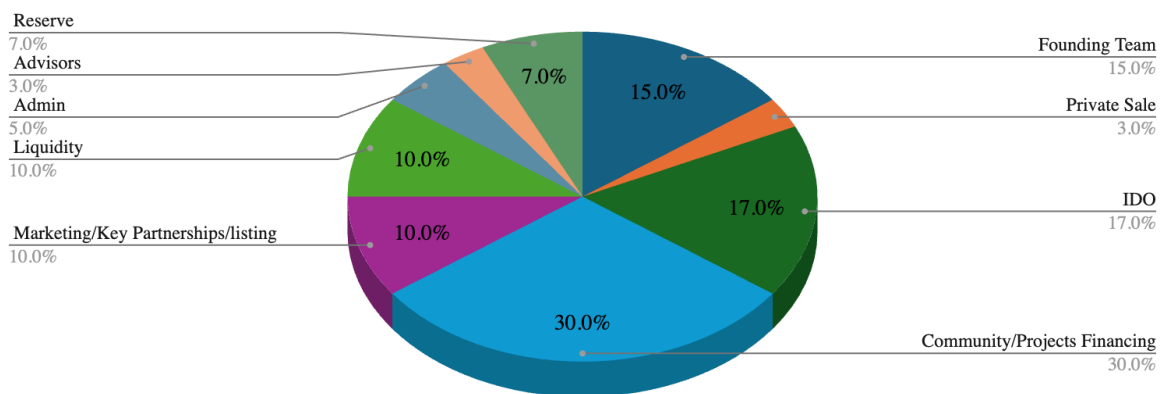
The \$NRN token is designed to be the lifeblood of the NeuraNode ecosystem, facilitating a seamless and secure exchange of value within the first API marketplace dedicated to game development. Its primary purpose is to enable transactions for API access, incentivize the creation and sharing of APIs, and provide a transparent and equitable distribution of rewards within the NeuraNode community.



Distribution

The distribution model for \$NRN tokens is crafted to ensure long-term sustainability and fairness. It encompasses allocations for the development team, early backers, and the community through airdrops or sales, with a significant portion reserved for future developer grants and ecosystem incentives.

NEURANODE TOKENOMICS



\$NRN token will be fully diluted over 24 months to ensure that the token circulation and value is not artificially driven by the time it takes to vest it.

The above tokenomics are still drafts and are subject to change as we get closer to token sale. We will make a specific note when the tokenomics are finalised.

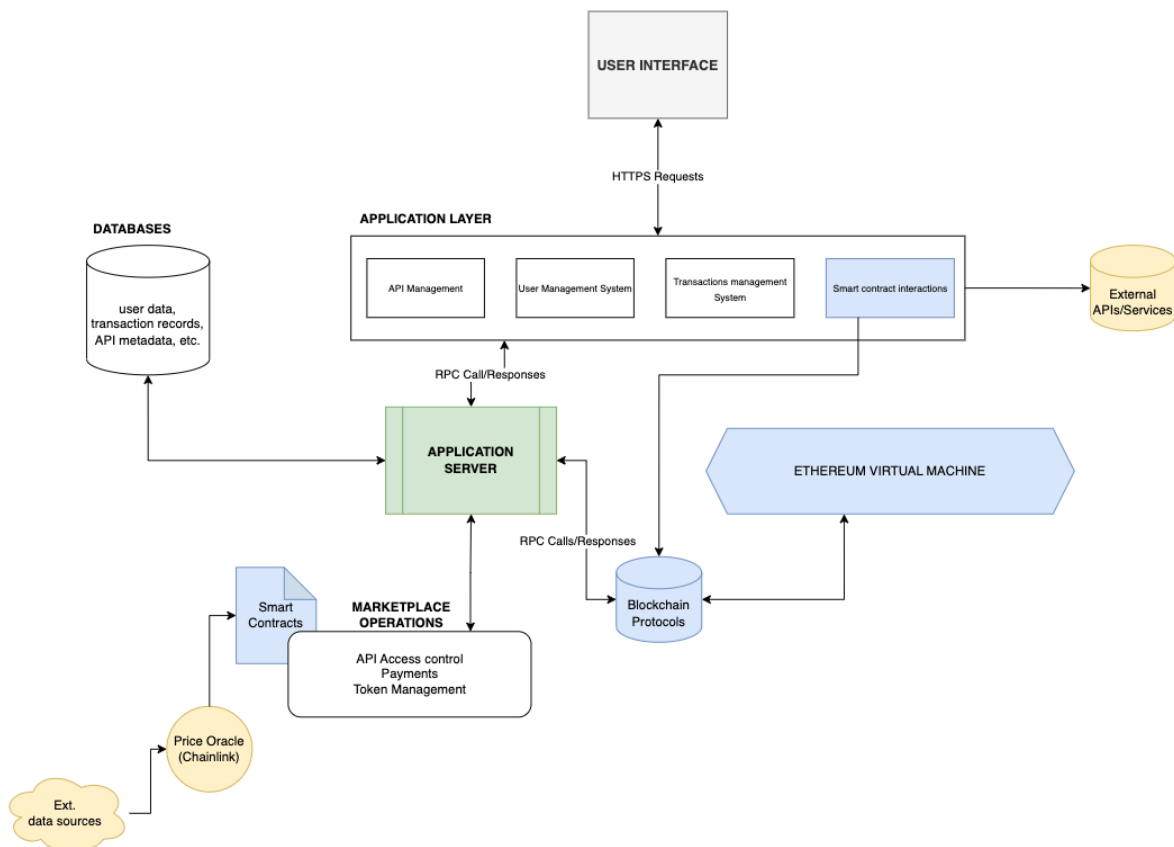
Architecture Overview

\$NRN tokens are built on a robust and scalable blockchain architecture, ensuring fast, secure, and low-cost transactions. The architecture supports essential features such as token transfers, payments for API usage, and rewards distribution, all while maintaining high security and interoperability standards.

The \$NRN token ensures security, transparency, and fair distribution of rewards, creating a supportive environment that empowers developers to push the boundaries of what's possible in game development.

In addition, \$NRN will be issued as a multichain token through Layer Zero protocol. Each chain where \$NRN wrapped will launch will go through a token sale event. Wrapped \$NRN in any chain will be recognised within the 5bn token supply.

It's expected that we will launch on 5 to 8 chains, starting with a main chain that we are still deciding for.



Purpose:

Ecosystem Token: The \$NRN token, is intended to be central to the NeuroNode ecosystem, facilitating transactions and incentivizing participation but also capturing the overall ecosystem value.

Pricing Mechanism: API payments are made primarily in Fiat Currency (USD\$, GBP£ and EUR€). Payment in fiat will always result in a converted \$NRN purchase in the background that will be invisible to the user. This approach can simplify transactions for users unfamiliar with crypto while still driving demand for \$NRN.

Flow of Tokens:

- Users pay for API services in \$NRN.
- A percentage of the token is allocated to the API developer based on his current locked token.
- A portion is sent to the marketplace as fees
- A portion is sent to the Foundation to be redistributed as Grants.

\$NRN Token Utility

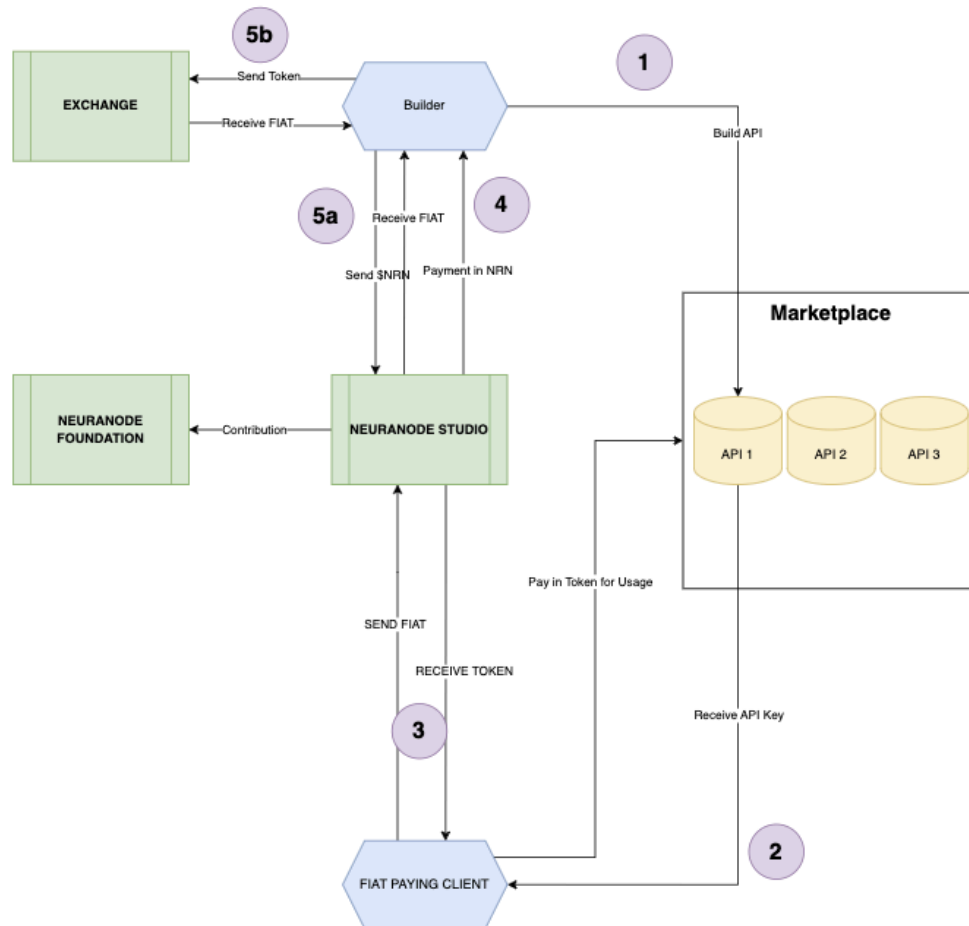
The \$NRN token is designed as a multifaceted utility token within the NeuroNode ecosystem. Its primary functions include:

- **Access:** \$NRN tokens are required to utilise the services offered on the NeuroNode platform. This creates a direct demand for the token, as developers need it to integrate our API features and services into their games.
- **Grants:** NeuroNode incentivizes the development of new APIs and tools by awarding grants in \$NRN tokens. This not only encourages innovation but also fosters a vibrant community of contributors.
- **IP Lock:** Developers Need to lock \$NRN tokens to secure a portion of the revenue generated by their APIs. This mechanism ensures that creators are rewarded for their contributions and encourages the development of high-quality, valuable APIs.

Removing the Volatility impact

It is primordial, from a conception point of view, that token mechanics remained invisible to the end user, so any developer, regardless of their appetite toward web3, could benefit from the value proposition of our Marketplace.

We have designed a token flow specifically for that purpose,



The schematic above outline the mechanics that we have designed to only process the token in the background, whilst removing any volatility impact that the token may be subject to to the end user.

Here is how it works:

A builder studio will submit its API to the Marketplace **(1)**, A client will be able to subscribe to it **(2)**. To do so, he will either directly send tokens to NeuraNode Studio, or use his/her debit card and pay with Fiat. **(3)**

By choosing to pay in cash, the Studio will send him/her a token amount calculated based on the spot market rate **(3)**. He will receive those tokens, and will be able to spend them, either on a pay per API call, or subscription basis, which trigger a transfer of token from the buyer, to the builder studio. **(4)**

The Builder studio can then choose to sell back its token to NeuraNode studio for Fiat and at the **same rate that was used when the token was purchased**. This guarantees that he receives the exact same amount of fiat, with zero token volatility, regardless of the token price changes between the purchase and sell time. **(5a)**

If the builder chooses too, he can waive this buy-back right to the studio, and choose to exchange his token at the market rate on external exchanges. **(5b)**

He will however, not be able to come back with different tokens to exercise a buy back option later. Once waived, the buyback right is lost.

Token Value Accrual

Primary Value Driver:

Increased usage of NeuroNode's APIs leads to higher demand for \$NRN, potentially driving up its value.

Secondary Value Driver:

API developers must hold a certain amount of \$NRN to qualify for higher revenue shares . Initially, developers are not required to hold \$NRN, but a portion of their fees is converted into \$NRN, which they must hold. After reaching a revenue threshold, a mandatory holding of \$NRN is expected, or they receive a lower fee share.

Ecosystem Impact

The \$NRN token is central to creating a sustainable and thriving ecosystem for game developers and users:

Developer Incentives: By rewarding developers with \$NRN tokens for their contributions, NeuraNode ensures a continuous influx of innovative services and APIs, enriching the platform's offerings.

Economic Model: The flow of \$NRN tokens between users, developers, and the platform creates a circular economy that supports growth and stability. A portion of the tokens used for transactions will be locked to manage supply, or redistributed within the ecosystem, depending on the strategic needs of the platform.

Economic Model

Token Pricing and Flow: Transactions within the NeuraNode ecosystem are priced in fiat but conducted in \$NRN, with a conversion mechanism at the point of transaction. This approach simplifies the user experience and revenue stability for the builder studios while enhancing the token's utility.

Distribution and Rewards: Developers who lock in \$NRN tokens to secure their IP revenue are rewarded with a higher percentage of the fees generated by their APIs. This creates a strong incentive for developers to invest and participate in the ecosystem.

Cross-chain operability

Integrating LayerZero into the \$NRN token's framework enhances cross-chain interoperability, allowing seamless transactions across different blockchain networks. This strategic choice enables NeuraNode's ecosystem to be accessible on multiple blockchains, expanding its reach and utility. Users and developers benefit from the flexibility to operate in their preferred blockchain environment without sacrificing the capabilities and services NeuraNode offers. LayerZero's technology ensures secure, efficient, and reliable cross-chain interactions, underpinning the \$NRN token's role as a versatile and valuable asset in the gaming and blockchain communities.

Choosing LayerZero for NeuraNode, as it allows seamless integration across multiple blockchain networks from the outset. This choice ensures NeuraNode's APIs and services can operate beyond the limitations of a single blockchain, catering to a broader audience. Cross-chain compatibility via LayerZero enhances NeuraNode's accessibility, making its innovative game development tools available across various ecosystems. This broadens the platform's reach, enabling developers to utilise NeuraNode's services on their preferred blockchain, thereby increasing utility and adoption of NeuraNode's offerings.

Tech and Security

The technical infrastructure of the \$NRN token is designed with a focus on security and efficiency. Utilising state-of-the-art cryptographic techniques and smart contract audits, the NeuraNode team ensures that the \$NRN tokens and transactions are secure from vulnerabilities and fraud.

Significant resources will also be spent to prevent fraudulent APIs to be published on the platform.

Team

Core Team

 <p>Tommy JAMET FOUNDER - LEAD/PRODUCT <i>Ex. Head of product Web3 gaming - Barclays, HSBC, Partner at Reply</i></p>	 <p>Thomas WILLIAMS STRATEGIC OPS <i>CEO EpochX / aDrop.ai, Ex. WeWork & Bloomberg</i></p>	 <p>Miklos HUBER BD & MARKETING <i>MIT Sloan, Multiple Web3 projects, Ex. McKinsey</i></p>	 <p>Leila NASSIRI-JAMET LEGAL <i>Ex. Chief Legal Officer at Ramp network, Forbes Women in tech, EU Observatory Forum</i></p>
 <p>Alex STANTON COO - EPOCH X</p>	 <p>POCH X <i>15 people studio, Epoch will lead the development of the Token and NeuraNode smart contracts.</i></p>	 <p>Roman Korzh VP DEVELOPMENT - ZFORT</p>	 <p>ZFORT GROUP <i>23 years old full cycle dev group with over 280 employees, Zfort will manage the development of the NeuraNode Marketplace</i></p>

Tech Team

Two of our Founder Studios believe in the vision and have committed to spearhead the technical development of NeuraNode



Team Total = 280 people

Ownership: Core Marketplace Lead and APIs

<https://www.zfort.com/>

ZFORT Group is a 23-year-old full-cycle IT services company focused on building web and mobile customized solutions with Artificial Intelligence, Blockchain, IoT, Big Data, and ML.



Team total = 15 people

Ownership: Token Lead and APIs

<https://www.epochx.tech/>

Epoch is a web3 and AI studio development focused on building products tailored for the digital era.

Roadmap

The launch roadmap for the \$NRN token outlines the strategic phases of token release, platform integration, and ecosystem expansion. Initial phases focus on establishing a strong foundation with secure, scalable technology, followed by broader distribution through public sales, partnerships, and community engagement initiatives. Future phases will introduce new features such as staking rewards, multi-chain integration, and enhanced developer grants, driving the continued growth and utility of the \$NRN token within the NeuraNode ecosystem.



APIs overview

API Name	Dev Studio	Link	Summary	Status
Perfect Balancer	ZFort	AI Game Balancer	A tool that leverages machine learning models to enhance game balancing.	In development
QuestPass	Epoch X	QuestPass - Easy Whitelisting	Automating the recognition process and rewards of early adopters	Ready to deploy
Tokenomics builder	NeuraNode Studio	Tokenomics builder	Utilises AI capability to design and maintain strong tokenomics from modelisation to live ops management	In development
aDrop - Gamified Airdrops	Epoch X	aDrop - Gamified Airdrops	Automatic multichain airdrop hunting tool	Ready for deployment
Communeflo	BananasZN	Communeflo - grow your community	Cultivating communities in a single thriving workspace	In development
50+ others	10+	Coming soon	We're discussing with 10 other studios that will each bring several powerful tools to the marketplace	In discussion

API #1: AI Game Balancer

By ZFort Group



Overview

This document proposes an architecture for an Artificial Intelligence (AI) game mechanics and balance testing system. The system will analyse gameplay data to identify overpowered or underpowered game elements (e.g. cards in a card game) as well as potential exploits on asset synergies where a single card may have average power on its own but becomes overpowered when combined with one or a few others.

In short, the platform helps game developers to keep a healthy META (Most Efficient Tactics Available).

The architecture consists of several key components:

Game Simulation Engine - Simulates games using current game data and AI agents.

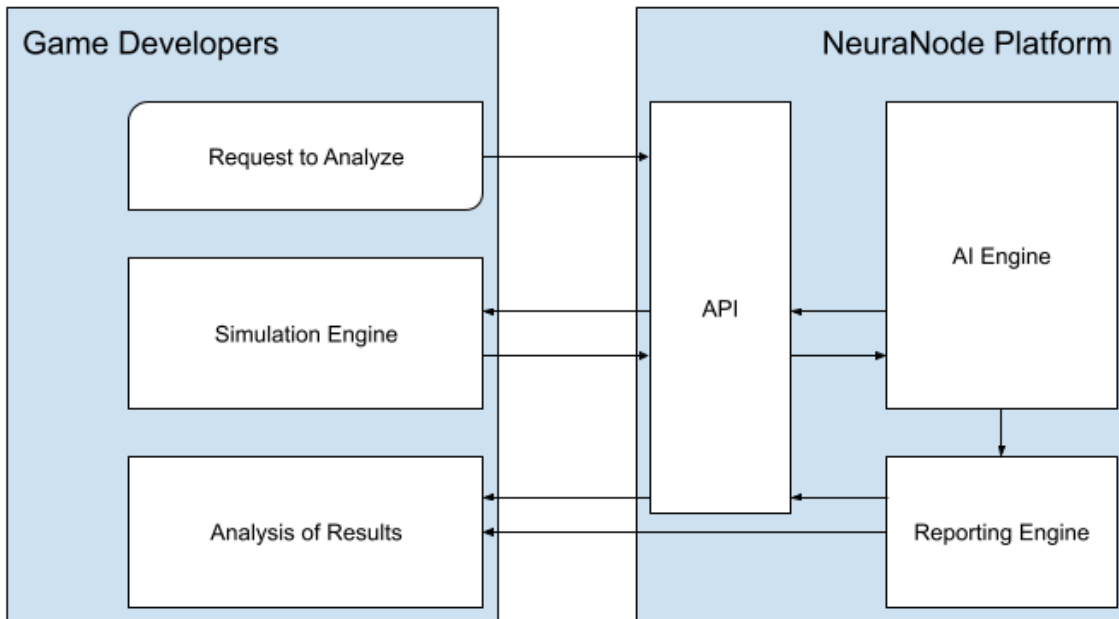
Gameplay Analytics - Collects metrics on simulation results.

Game Balance Tracker - Visualizes the meta implications and potential cascading effects from changes.

API - Allows game developers to integrate the system and access results.

System Architecture

The conceptual system architecture is presented on the following diagram:



Main Workflow

Here are the key steps taken by game developers (GD) to take advantage of the NeuraNode AI platform:

1. GD configures settings (game type, simulation type, etc)
2. GD provides access to a dataset of in-game assets that need to be balanced.
3. GD provides endpoints for the game's simulation environment.
4. The Simulation Engine runs numerous games using AI agents.
5. The Analytics module analyzes the results to detect over/under-powered assets and synergies.
6. The Reporting Engine prepares multiple reports based on the analyzed data. The reports are available via both web-based interface and downloadable data.
7. GD makes adjustments to the dataset and initiates a new round of simulations.

There are other workflows available as well.

Key Components

Simulation Engine

The Simulation Engine will emulate gameplay using the game data and intelligent AI agents. By simulating thousands of matches, we will observe the performance of each asset as well as multi-asset synergies and combos across a wide range of scenarios.

Depending on the project's characteristics, the engine will use one or more of the possible **Game Theory methodologies**:

- auction games
- zero-sum games
- matrix games
- dynamic games

- coalition games
- probability theory and statistics
- cooperative game theory

The initial focus will be on 1v1 gameplay modes. The engine will be extended to simulate complex multiplayer dynamics at a later stage.

Gameplay Analytics

This module aggregates metrics from the simulation results to assess the balance at many levels (deck, card, etc). Key metrics include:

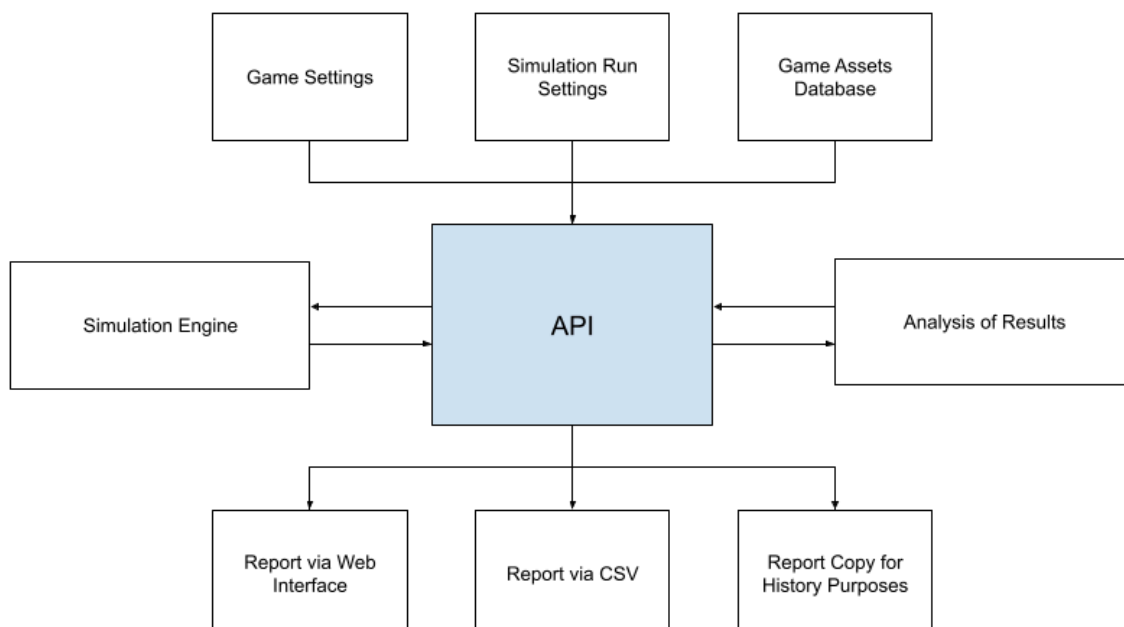
- Win rates
- Usage rates
- Adjusted power levels
- Head-to-head performance
- Battle round time

Game Balance Tracker

This module assists the decision makers in balance optimization by visualizing the current state of the in-game assets and potential adjustments to them. The module allows the user to keep a history of results from the past runs.

API

API is the centerpiece of the NeuraNode platform. It incorporates all of the input and produces all of the output. The API data flow diagram follows:



The API will utilize either GraphQL or REST interfaces wherever appropriate.

Enforcing Equilibrium by Removing Significant Imbalances

In the realm of gaming, whether it's card games or other types, achieving game balance is fundamentally rooted in the principles of equilibrium derived from game theory, particularly the concept of Nash equilibrium. Nash equilibrium denotes a state wherein all participants find their chosen strategies optimal, given the choices made by others, and thus have no unilateral incentive to deviate

from their current approach.

In an unbalanced game, certain strategies or mechanics overshadow others, disrupting the equilibrium. This results in a scenario where players gravitate towards exploiting these dominant strategies, leading to a lack of diversity in gameplay. Players naturally seek to maximize their chances of success, often adopting the most powerful or advantageous tactics available, leading to a homogeneous gaming experience.

To rectify this imbalance and reintroduce variety and balance, game developers must address the overpowered elements. This typically involves fine-tuning various aspects such as character abilities, weapon stats, or in the case of card games, adjusting attributes like mana costs, card effects, and card synergies. By carefully tweaking these elements, developers can ensure that a broader range of strategies remains viable, fostering a healthier and more diverse gaming environment.

Maintaining the perfect balance in a game, especially strategic ones, is often neither feasible nor desirable. Variation in the strength of different assets, whether they are cards, characters, or abilities, is integral to creating depth and complexity in gameplay. It allows players to explore different tactics and adapt their strategies based on the unique strengths and weaknesses of each element.

Game developers aim to steer clear of extreme imbalances that undermine the enjoyment of the game. While it's acceptable to have some assets slightly more powerful than others, excessively dominant elements can disrupt the game's dynamics, leading to frustration and diminishing player engagement.

Finding the right balance involves a delicate process of iteration and testing. Developers must gauge player feedback and analyze gameplay data to identify areas where adjustments are needed. By making careful tweaks to the game mechanics and assets, developers can maintain a dynamic equilibrium where multiple strategies remain viable, ensuring an enjoyable and rewarding experience for players.

Striving for absolute balance in a game isn't always the ultimate goal for developers. Instead, aiming for what's often called a "balanced imbalance" can offer its own set of benefits and enjoyment.

This approach recognizes that while it's important to avoid extreme dominance of certain strategies, decks, or cards, a certain level of imbalance can actually add depth and excitement to gameplay. In this scenario, players are encouraged to adapt and innovate as they navigate the dynamic landscape created by slightly imbalanced elements.

This state of "balanced imbalance" keeps the game fresh and engaging, inspiring players to explore new strategies and counter-strategies. It fosters a vibrant community that thrives on the evolving challenges presented by the game.

Moreover, it allows developers to introduce new content that shakes up the META, preventing the game from becoming stale. Achieving this delicate equilibrium requires ongoing adjustments and fine-tuning, aiming for a state where the game remains dynamic and enjoyable without striving for perfect equality.

Generating a Dominant META

While the goal is to balance gameplay and maintain an equilibrium where different strategies are equally viable, sometimes a dominant META emerges that disrupts this state. This often occurs when new cards or combos are introduced that prove to be excessively powerful in practice.

For example, let's assume a new card, "Super Soldier", enters the game. Its stats and abilities allow extremely fast and aggressive attack combos that can overwhelm conventional decks. Even if the card itself is balanced, players discover synergies when combining Super Soldier with other cards like "Energy Boost" and "Rapid Muster".

These Super Soldier combo decks completely change the game. They boast incredibly high win rates, even against counters intended to deal with aggressive strategies. Because of the sheer power of Super Soldier combos, players are heavily incentivized to switch to such deck archetypes. Over time, diversity in tournaments and ranked matches collapses as some variations of Super Soldier decks become dominant.

Despite attempts to tweak attributes of supporting cards, the overwhelming strength of ideal Super Soldier draws and attack sequences keeps its win rate and usage extremely high. Such a dominant, unbalanced meta emerges that players feel forced to abandon their preferred playstyles and adopt Super Soldier combo decks to remain competitive. Instead of a diverse equilibrium, a single archetype defined by the new card has a broken balance.

Resolving such issues requires revisiting not necessarily Super Soldier itself, but identifying and adjusting the explosive combo enablers that magnify its potency. Careful tweaks targeting its synergies can curb the deck's power enough that counterplay becomes reliable. While still strong, other archetypes can check its dominance and restore metagame diversity and equilibrium through gameplay adjustments targeting meta-warping interactions exposed by new card releases.

Mathematical Algorithms

There are several mathematical algorithms that can be used to detect game imbalances for both discrete and differential games. Here are some of the algorithms that may be used by the platform:

Nash Equilibrium

The concept of Nash equilibrium helps identify situations where no player has an incentive to unilaterally deviate from their chosen strategy. If a game has multiple Nash equilibria, it might indicate a balanced game. Deviations from Nash equilibria can indicate game imbalances.

Dominant Strategies

A dominant strategy occurs when one player has a strategy that provides a higher payoff, regardless of the opponent's choice. If one player consistently has a dominant strategy, it can indicate game imbalance.

Minimax Algorithm

Minimax is used in adversarial games to determine optimal strategies. It focuses on minimizing the maximum possible loss, assuming opponents act optimally. Analyzing the minimax algorithm can reveal imbalances or unfair advantages for certain players.

ELO Rating System

Although initially developed for ranking chess players, the ELO rating system can be applied to evaluate skill imbalances in various games. It calculates ratings based on wins, losses, and the relative skill level of opponents.

Markov Decision Processes (MDP)

MDPs are widely used in reinforcement learning settings. By modeling the game as an MDP, algorithms like Q-learning or Monte Carlo methods can be applied to estimate value functions that reflect imbalances or optimal strategies.

Game Theoretic Index (GTI)

GTI measures the degree of imbalance in a game. It quantifies the advantage one player has over another, considering both the rules of the game and the players' characteristics.

The choice of algorithm will vary depending on the specific game and context. Multiple algorithms can be combined.

Analysis Options

The platform offers three approaches to analyzing the game data and rules:

1. Dataset analysis
2. Simulation
3. Historical analysis

All approaches include methods powered by both Artificial Intelligence and traditional algorithmic analysis.

Dataset Analysis Approach

Game developers often need to analyze the dataset of in-game assets to identify the ranges of asset stats, buffs, and their combinations. This provides a different look at the game balance, often quicker and more cost-efficient and time-efficient.

The NeuraNode platform allows game developers to analyze a specific subset of the dataset. This is helpful for specific in-game events, such as tournaments with custom rules and limitations.

The list of analyzed stats and attributes includes parameters like in the following list:

- Class
- Type
- Rarity
- Health stats
- Attack stats
- Defense stats
- Mana stats
- Recovery rates
- Luck
- Critical chance
- Cost

In addition to analyzing stats on their own, the platform analyzes ratios between certain parameters, such as special attack to recovery rate.

The platform generates and analyzes all valid combinations of card + buff is applicable and produces a

separate report for that.

The dataset analysis approach, while being extremely efficient and quick, is rather theoretical and has limitations. The real dynamics emerge from human creativity finding unforeseen combinations and gameplay sequences.

Simulation Approach

By running AI agents against each other in gameplay simulations, we can directly observe which strategies prove most dominant.

The engine keeps track of all assets used in thousands of simulated battles and analyzes patterns and dependencies between stats and win ratios. Secondary parameters such as round duration in time or turns are also tracked and used in pattern detection.

The engine may initiate a number of battles with exactly the same initial configuration to provide a report on how much the in-game randomization affects every asset or combination.

The simulation approach, while being more effort-consuming, provides more insights on overpowered strategies, compared to the dataset analysis approach.

Historical Analysis Approach

Games that have a significant amount of battles already happening can benefit from historical analysis, where the platform ingests data from game sessions that actually happened and analyzes them similarly to the simulation approach.

In addition to the analysis parameters mentioned above, the historical analysis module also reviews usage spike patterns and identifies metas that live players came up with.

Game Phases and Analysis Methods

The following table showcases recommendations on what analysis approach to use at what stages of the game's lifecycle.

Stage	Tools to Use
Early planning phase	<ul style="list-style-type: none"> • Creativity and imagination
Late planning phase	<ul style="list-style-type: none"> • Dataset analysis for the initial in-game assets
Early development phase	<ul style="list-style-type: none"> • Dataset analysis for the in-game assets (multiple subsets) • Simulation analysis
Late development phase	<ul style="list-style-type: none"> • Dataset analysis for potential changes • Simulation analysis

Post-launch	<ul style="list-style-type: none">• Simulation analysis• Historical analysis
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Summary

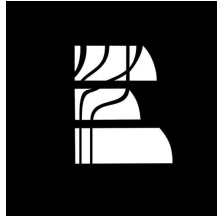
The NeuraNode platform offers significant value for game developers at different stages of game lifecycle, minimizing the time to market and increasing gameplay balance:

- Quick analysis of current database and rules
- Quick analysis of potential changes to the game
- Quick analysis of gameplay results
- Detection of exploits
- Less time and expenses for testing
- Less efforts on post-launch fixes and tweaks

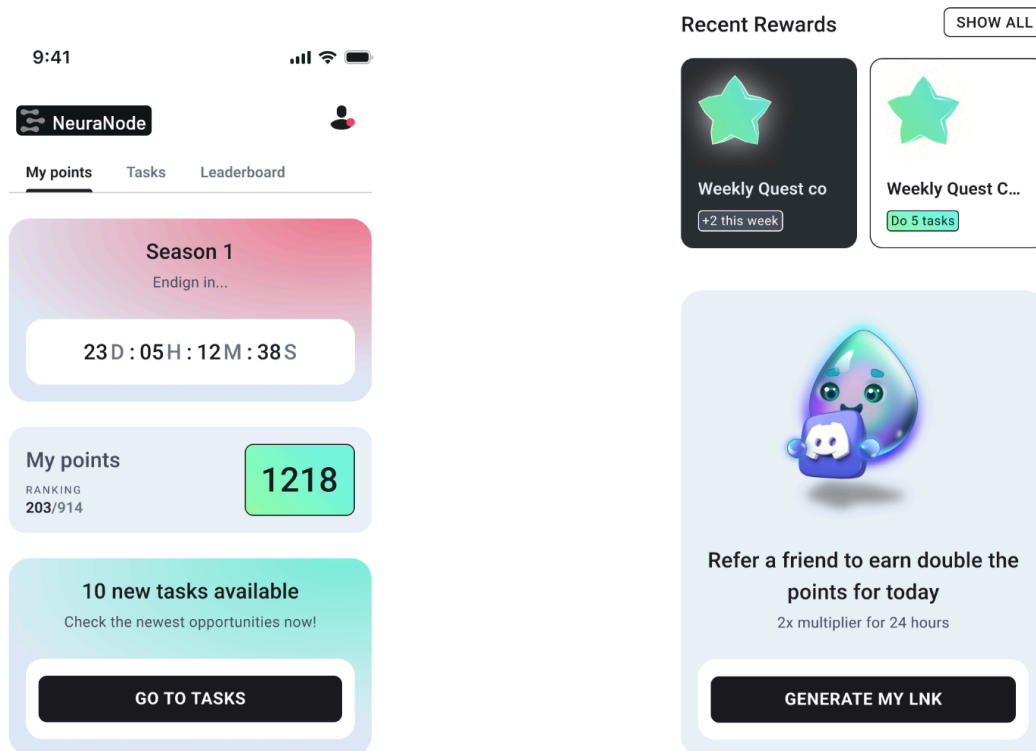
Better game balance leads to higher customer satisfaction and higher revenues for the game developers.

API #2: QuestPass - Easy Whitelisting

By Epoch X



The QuestPass API developed by EpochX represents a tool within the NeuraNode ecosystem, specifically designed to empower game developers, community leaders, and games themselves to recognize and reward their most dedicated supporters. This system is crucial for fostering a sense of belonging and appreciation within gaming communities, offering a direct way to acknowledge those who contribute significantly from the early stages of a game or community's development.



Detailed Overview

Purpose and Functionality: The core purpose of the Easy Whitelisting API is to streamline the process of identifying early adopters and supporters of games and gaming communities. By automating the recognition process, this system allows for the seamless acknowledgment of early fans through various rewards, including early sign-ups, exclusive airdrops, allocation of game points, or the distribution of unique Non-Fungible Tokens (NFTs).

Integration and Accessibility: Designed with user-friendliness in mind, the API can be easily integrated into existing game development frameworks or community platforms. It provides a set of intuitive tools for developers to set criteria for what constitutes an early

adopter, manage the list of recognized individuals, and distribute rewards in an automated and fair manner.

Reward Mechanisms: One of the key features of the Easy Whitelisting API is its flexibility in the type of rewards it can distribute. Developers have the liberty to choose the most fitting rewards for their early supporters, whether it's exclusive access to beta versions, special in-game items marked as NFTs, or points that can be used within the game's ecosystem. This versatility ensures that rewards can be tailored to the specific context and needs of each game or community.

Community Building and Engagement: By providing a tangible way to reward early supporters, the Easy Whitelisting API plays a significant role in building and maintaining vibrant, engaged communities around games. Recognizing and rewarding contributions early in a game's lifecycle can encourage ongoing support and advocacy from the community, leading to stronger, more sustainable growth.

Security and Compliance: In deploying rewards, especially in the form of cryptocurrencies or NFTs, the Easy Whitelisting API adheres to high standards of security and regulatory compliance. The system is designed to ensure that all transactions are secure, transparent, and in alignment with the latest standards in digital asset management.

Impact on the Gaming Ecosystem

The introduction of the Easy Whitelisting API by EpochX within the NeuraNode marketplace is set to have a transformative impact on the gaming industry. By enabling a direct, meaningful exchange between developers and their communities, it not only enhances the relationship between creators and fans but also paves the way for more dynamic, engaging gaming experiences. Through the strategic use of rewards, developers can motivate early adopters to become active participants in the growth of their games, creating a virtuous cycle of engagement and innovation.

In summary, the Easy Whitelisting API offers a comprehensive solution for recognizing and rewarding the foundational members of gaming communities, further enhancing the NeuraNode ecosystem's commitment to innovation, community, and collaboration in game development.

API #3: Tokenomics builder

By NeuraNode Studio

Building in Progress

API #4: aDrop: Gamified Airdrop

By Epoch X



The Ecosystem Growth API, or the Gamified Airdrop Hunting API by EpochX, is a cutting-edge innovation designed to merge the excitement of gaming with the lucrative potential of the decentralised finance (DeFi) ecosystem. It transforms the process of qualifying for airdrops into an interactive, game-like experience, where players' in-game actions are intricately linked to on-chain activities, thereby unlocking real-world value through airdrops, tokens, or blockchain-based interactions. This API is versatile, supporting automated airdrop participation directly tied to gaming achievements, and is built to work across multiple blockchains, ensuring broad accessibility and participation.

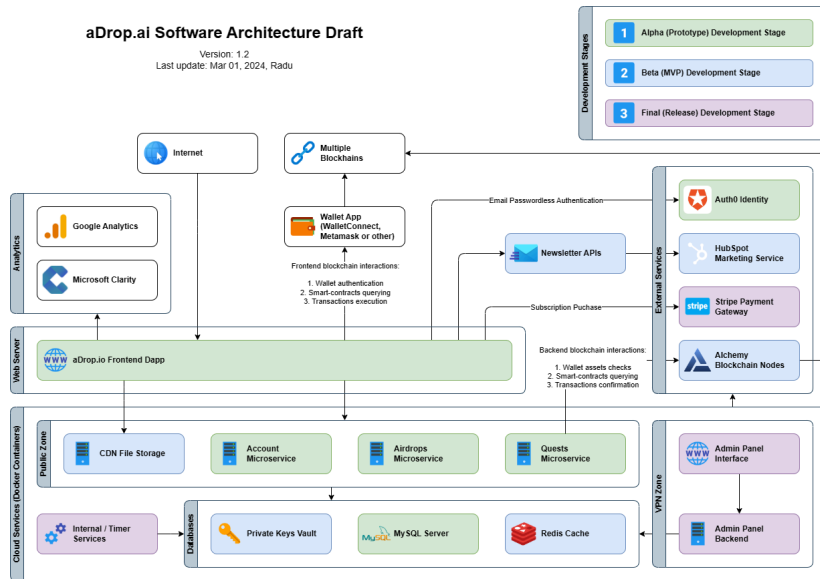
Key functionalities include an automated system that integrates gaming actions with blockchain transactions, enabling players to qualify for airdrops as they play. The API's design is chain agnostic, allowing for engagement across different blockchain networks without limitations. It introduces an innovative way for users to customise their airdrop hunting experience with filters for difficulty, category, network, and likelihood, ensuring a tailored approach that matches individual preferences and risk appetites.

Moreover, the Gamified Airdrop Hunting API prioritises security with non-invasive interactions, requiring only transaction signing from users, thereby safeguarding their wallets and assets. It enhances user experience with features like social login integration and progress tracking, making the platform accessible and user-friendly.

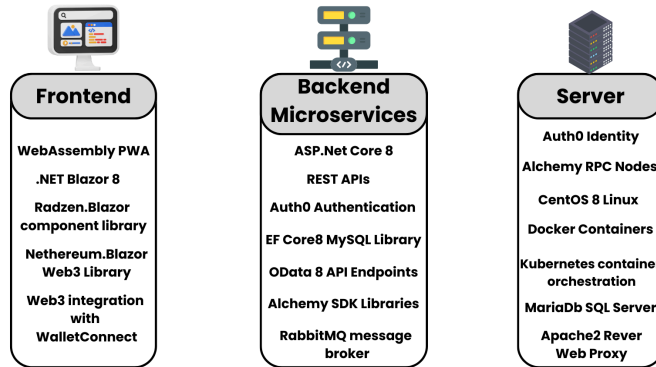
At its core, this API fosters a unique synergy between gaming activities and blockchain transactions. By embedding airdrop-qualified transactions within the gaming experience, it not only enriches gameplay with tangible rewards but also attracts a wider audience, including those from the DeFi space, to participate in gaming activities. This approach serves as a powerful tool for game developers and platforms, driving user engagement, retention, and opening up new revenue streams through strategic partnerships with DeFi projects.

The integration of the Gamified Airdrop Hunting API into game mechanics offers a profound value proposition, blending the virtual gaming world with real-world blockchain benefits. It promotes a more engaging and rewarding gaming experience, broadens the audience for

games, and supports the growth of both the gaming and DeFi communities by encouraging innovation and collaboration across ecosystems.



Tech Stack



API #5: Communeflo - AI to grow communities

By BananasNZ



Cultivating communities in a single thriving workspace

In the swiftly evolving gaming and web3 arena, the management of communities remains disparate and segmented across numerous platforms such as Discord, Twitter, and Telegram. This segmentation poses significant challenges in maintaining coherent engagement strategies, fully understanding the health of communities, and delivering personalised experiences on a large scale. Moreover, the absence of integrated rewards and quest systems leads to lost opportunities in deepening community engagement and loyalty.

CommuneFlo fills a critical void in community management tools for the gaming and web3 ecosystem. These projects thrive on active, engaged communities, yet lack streamlined tools for effective management, engagement, and insight-driven improvement. CommuneFlo will provide project owners and community managers with essential capabilities to cultivate vibrant communities, driving success and innovation in the web3 space.

Target Audience

CommuneFlo is designed for:

- **Gaming and Web3 Project Owners:** Who seek to effectively grow and manage their community's engagement across multiple digital platforms.
- **Community Managers:** In search of tools to streamline management tasks, engage members meaningfully, and measure the impact of their strategies.
- **Marketing Teams in the Web3 Space:** Aiming to leverage community insights for targeted campaigns, improve brand loyalty, and drive user acquisition through word-of-mouth and referral programmes.
- **Members of Web3 Communities:** Desiring a more integrated, rewarding, and engaging participation experience within their communities.

Service

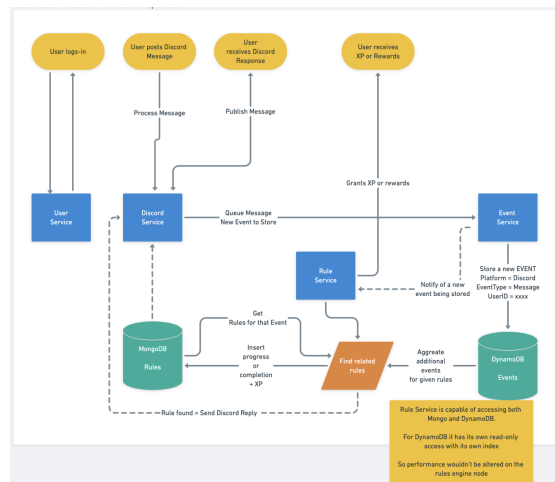
CommuneFlo will feature a concentrated set of functionalities crucial for effective community management, automation, and engagement.

The key feature made available as a service through NeuraNode will be the automation capability.

- **Automation Setup:** Allows the creation and management of automation rules to streamline community engagement and management processes.

- **Inputs & Outputs:** Define specific actions based on community interactions, including message sending, role assignment, and more, with the ability to tailor rules based on diverse inputs and desired outcomes.
- **Eligibility & Schedule:** Customise who can trigger automations and when they happen, ensuring relevance and timeliness of automated actions.

This will be made available through a combination of UI to setup the automations and webhooks to receive notifications when events are triggered through the automations.



Capabilities

Cross-Platform Support: CommuneFlo integrates with popular social and communication platforms, allowing for unified community management. This feature eliminates the need to switch between multiple tools, providing a centralised dashboard for all community engagement activities.

Real-Time Synchronisation: Our platform ensures real-time data synchronisation across all connected platforms. Whether it's a new member joining on Discord or a key conversation happening on Twitter, CommuneFlo captures and reflects these interactions instantly. This feature is critical for timely and relevant community engagement, allowing managers to act on opportunities or address issues without delay.

Automated Workflows Across Platforms: CommuneFlo's automation capabilities extend across the integrated platforms. Set up custom triggers and actions, such as automatic welcome messages for new members or role assignments based on specific activities. These automated workflows can be customised for each platform, ensuring that engagement strategies are optimised for the unique dynamics of each community space.

Legal

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NeuraNode offers a groundbreaking marketplace that revolutionizes how gaming and development studios create, share, and monetize APIs. NeuraNode Marketplace bridges the gap between innovative gaming technology and market demand, providing tools for repurposing software and driving new revenue streams. With NeuraNode, studios can leverage unused software, access advanced gaming infrastructures, and connect with a community eager to explore the latest in gaming tech.

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To access certain features of our Service, you may be required to create an account.

You represent that you are capable of entering into binding contracts, and you have the right, authority and capacity to accept these Terms and to abide by these Terms, and that you will do so.

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We are not responsible for delays or loss incurred as a result of an error in setting up or otherwise registering with Neuranode.

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Governing Law

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