

# Lotterypto

Platform Whitepaper  
V1.0

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## Abstract

This document describes the definitions and theory behind the Lotterypto Platform explaining the different aspect of the implementation and main concepts

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# Introduction

Lotterypto is a decentralized gaming platform designed to address the challenges and limitations of traditional, centralized gaming systems. By leveraging blockchain technology, Lotterypto offers a transparent, secure, and accessible gaming experience across various options, including decentralized lotteries, roll dice, coin toss, slots machines, and sports betting. This whitepaper presents the underlying concepts, core mechanics, and technologies that make Lotterypto a groundbreaking solution in the gaming industry. Through a comprehensive discussion of the platform's features, interoperability, and unique selling points, we aim to showcase the potential of Lotterypto as a powerful force in the future of decentralized gaming.

# Problem statement

The gaming industry has long been dominated by centralized systems and organizations, often leading to issues related to trust, fairness, and transparency<sup>[1]</sup>. Government-controlled gaming and centralized companies may suffer from conflicts of interest, lack of transparency in operations, and barriers to entry for players. In many cases, these centralized entities prioritize profit over the best interests of the players<sup>[2]</sup>.

One notable example is the 2017 case of Absolute Poker and Ultimate Bet, online poker sites that were found to be cheating their players through a "superuser" account, which could see the hole cards of all players at the table<sup>[3]</sup>. This scandal exposed the vulnerabilities and potential for manipulation in centralized gaming systems.

Attempts to address these problems within the blockchain and cryptocurrency space have also faced their own set of challenges. Many of these projects require users to purchase and use a specific project token, creating an additional barrier to entry for players. Furthermore, a lack of real on-chain draws and general transparency has resulted in a landscape plagued by cash grabs and ultimately superficial hype-driven products.

Lotterypto aims to tackle these issues head-on by providing a decentralized gaming platform that removes the need for a project token in order to access its gaming platform, reduce entry-barrier with multichain support as well as multitoken support (native L1 tokens as well as ERC-20 such as stablecoins and ERC-1155) and emphasizes transparency through on-chain operations, and promotes a fair and secure gaming environment.

## References

- [1] Gainsbury, S. M., & Wood, R. T. (2011). Internet gambling policy in critical comparative perspective: the effectiveness of existing regulatory frameworks. *International Gambling Studies*, 11(3), 309-323.
- [2] Hayer, T., & Meyer, G. (2011). Self-exclusion as a harm-minimization strategy: evidence for the casino sector from selected European countries. *Journal of Gambling Studies*, 27(4), 685-700.
- [3] Haley, L. (2008). Absolute Poker Scandal: An Inside Job. Retrieved from <https://upswingpoker.com/ultimate-bet-absolute-poker-scandal/>

# Decentralized Gaming Revolution

Decentralized gaming offers a promising alternative to traditional, centralized systems by addressing the issues of trust, fairness, and transparency. By leveraging the capabilities of blockchain technology, decentralized gaming platforms can eliminate single points of failure and reduce the potential for fraud or manipulation.

Blockchain technology allows for the creation of immutable records of transactions, ensuring that all operations within a gaming platform are transparent and auditable. This leads to a higher level of trust and integrity in the platform, as players can verify the fairness and legitimacy of the games they participate in.

Additionally, decentralized gaming platforms can minimize barriers to entry by eliminating the need for a project-specific token, enabling a more inclusive and accessible gaming experience for players across different socioeconomic backgrounds.

Lotterypeto embodies the decentralized gaming revolution, harnessing the power of blockchain technology to create a transparent, secure, and accessible gaming platform that caters to the diverse needs of players worldwide.

# Platform Overview

Lotterypto is a decentralized gaming platform with a focus on offering a wide range of gaming options such as decentralized lotteries, roll dice, coin toss, slots machines.

The platform leverages smart contracts at its core, Chainlink VRF<sup>[1][2]</sup>, Chainlink Automation<sup>[3]</sup>, and TheGraph protocol<sup>[4]</sup> to provide a provably fair, transparent, and trustless gaming experience.

To cater to a diverse user base, Lotterypto features attractive multipliers and allows users to select different bet amounts within a specific range. This flexibility ensures that players can customize their gaming experience to match their preferences and risk tolerance.

One of the key aspects of Lotterypto's offering is the ability to choose between lotteries and games with complex payout structures. This allows players to opt for riskier lotteries with higher potential prizes or less risky ones with lower prizes, providing a balanced gaming experience that caters to a wide range of players.

To foster mass adoption and simplify the onboarding process, Lotterypto will integrate fiat on-ramps using services such as Coinbase Pay and Changelly. These integrations will make it easier for users to convert their fiat currency into cryptocurrencies and participate in the platform's games.

By offering these features, Lotterypto aims to create an engaging and versatile gaming environment that appeals to a broad audience and drives mass adoption in the world of decentralized gaming.

Some of the games included in this version:

- Lotteries
- Roll Dice
- Coin Toss
- Slot Machines
- DeFi Games

## References

[1] Chainlink VRF. <https://docs.chain.link/vrf/v2/introduction/>

[2] Verifiable Random Function from wikipedia. [https://en.wikipedia.org/wiki/Verifiable\\_random\\_function](https://en.wikipedia.org/wiki/Verifiable_random_function)

[3] Chainlink Automation. <https://docs.chain.link/chainlink-automation/introduction>

[4] About TheGraph protocol. <https://thegraph.com/docs/en/about/>

## Lotteries

Lotterypoto provides a secure and transparent environment for players to participate in various lottery games with various payout structures for all levels of risks. This is critical to make lotteries more appealing allowing more players to win different portions of the jackpot.

The platform leverages Chainlink VRF to generate provably fair random numbers, ensuring the integrity and fairness of the lottery process.

## Dice Roll, Coin Toss and Slot machines

These are more exciting and fast-paced games where players can place different bets on the outcome. The platform utilizes Chainlink VRF for generating random numbers, offering a provably fair gaming experience.

## DeFi Games

Designed for games that occur over a longer timeframe, such as lotteries. In DeFi Games, the pooled funds are lent out via direct smart contract interactions with decentralized lending protocols such as AAVE and Compound, without human intervention or centralized server intermediary.

During the lending period, the pooled funds earn interest, which is then added to the total prize pool, resulting in extra rewards for participants, or used as jackpots, in which case the initial funds are returned to the players at the end of the game, participants do not lose their initial contributions.

Although the risks associated with decentralized lending protocols are relatively smaller compared to other forms of investment, they are not infallible and can be affected by hacks or significant market swings. As such, the additional rewards offered in DeFi Games serve as an incentive for players willing to take on this risk.

By incorporating DeFi Games into its platform, Lotterypoto allows players to benefit from the growing DeFi ecosystem while still enjoying the excitement of participating in longer-duration lottery games without the risk of losing their initial contributions.

## References

[1] Chainlink Data Feeds. <https://docs.chain.link/docs/data-feeds/>

# Core Mechanics and Technologies

Lotterypto's technical architecture is built upon a solid foundation of blockchain technology and a suite of advanced tools and services, which together ensure a secure, transparent, and efficient gaming experience. This chapter delves into the key components of Lotterypto's technical infrastructure:

## Smart Contracts

Lotterypto leverages the power of smart contracts to enable seamless deployment on multiple blockchain networks, such as Ethereum, Polygon, Binance Smart Chain, Avalanche, and Fantom.

## Chainlink VRF

Chainlink VRF (Verifiable Random Function) serves as the primary source of randomness in Lotterypto's games. It provides a provably fair and tamper-resistant random number generation process, ensuring the integrity and fairness of the gaming platform.

## Chainlink Automation

Chainlink Automation plays a crucial role in managing game lifecycles and facilitating complex computations across multiple transactions. This decentralized automation capability ensures Lotterypto remains flexible, efficient, and robust, promoting a seamless user experience and fostering trust in the platform.

## The Graph Protocol

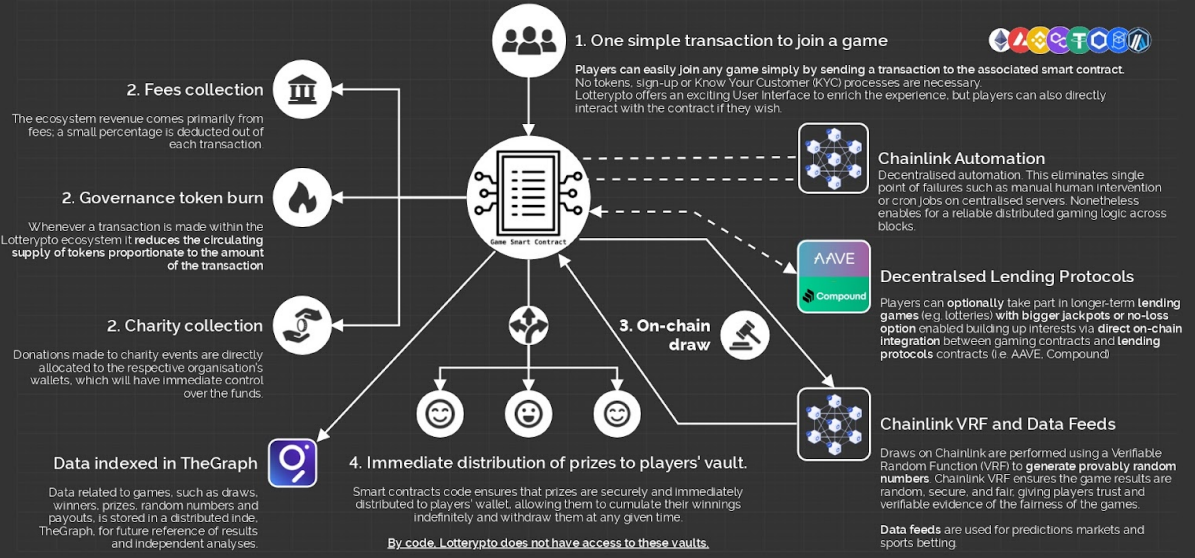
Lotterypto employs The Graph Protocol to index smart contract events, enhancing the platform's transparency and auditability. The Graph Protocol enables players to access and verify data from the platform's gaming operations, further promoting trust and confidence in Lotterypto.

## On-Chain Operations and Payments

Lotterypto utilizes on-chain operations for managing gaming pools, winnings, fees, and charity distributions. The platform incorporates OpenZeppelin Payments to ensure that funds are securely controlled by their respective recipients, mitigating the risk of malicious actions and protecting users' assets.



# Trust code not humans: a detailed overview



# Funds Management and Security

Lotterypto places a strong emphasis on the security and proper management of funds within its platform. This chapter outlines the key components and mechanisms that ensure the safe handling of funds and the protection of players' assets:

## On-chain operations only

All of Lotterypto's financial transactions and operations are conducted on-chain and are visible to anyone to see, providing an additional layer of transparency and security for players. This approach ensures that all financial data is readily accessible and verifiable by users, fostering trust in the platform. There's no secret handling of funds behind the scenes.

## Pull over Push Payments

Lotterypto incorporates OpenZeppelin Payments<sup>[1]</sup>, a library for managing secure vaults, to ensure the proper control of gaming pools, winnings, fees, and charity distributions. This ensures that funds are securely controlled by their respective recipients, minimizing the risk of malicious actions and protecting users' assets. This practice is known as the *pull over push* payment pattern<sup>[2]</sup>, which is a best practice in smart contract development. This approach reduces the risks associated with transferring funds by allowing recipients to withdraw their funds at their convenience, rather than having the contract push the funds to them directly.

## Static Analyzers Validation

All smart contracts are thoroughly tested using a pipeline of unit tests and static analysis tools to identify and rectify any potential vulnerabilities, bugs, or inefficiencies and comply with solidity Security Best Practices<sup>[3]</sup>.

## Smart Contract Audits

Lotterypto smart contracts will be subject to thorough security audits, which help identify and rectify potential vulnerabilities in the platform's code. By conducting regular audits, Lotterypto ensures that its platform remains secure and reliable for players.

By implementing these mechanisms and safeguards, Lotterypto aims to provide a secure and trustworthy gaming environment for players, offering peace of mind and protection for their assets.

## References

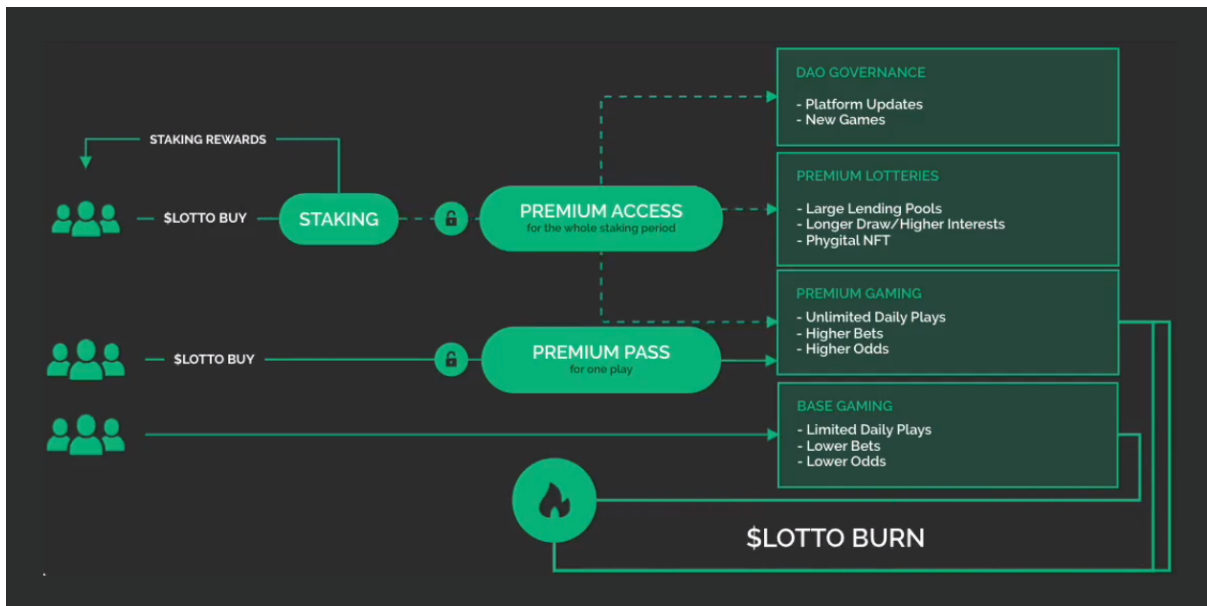
[1] <https://docs.openzeppelin.com/contracts/4.x/utilities#payment> docs.

[2] [https://fravoll.github.io/solidity-patterns/pull\\_over\\_push.html](https://fravoll.github.io/solidity-patterns/pull_over_push.html) pattern.

[3] Solidity security best practices. <https://consensys.github.io/smart-contract-best-practices/>

# Lotto Token

Lotterypto values its holders in shaping the platform's future while enjoying exclusive rewards.



## Premium Access

\$LOTTO token stakers gain permanent access to: Premium Lotteries, offering high interests and higher bets on no-loss draws. Access to Phygital NFT prizes. Premium Gaming, which offers higher odds/bets, unlimited plays and early access to new games. **Staking rewards**, by earning a passive income. **Governance**, to vote on Lotterypto's DAO proposals, influencing decisions such as platform updates, new games and so on.

## Premium Pass

Players who don't wish to stake \$LOTTO but just looking to quickly unlock higher odds/bets can simply buy the required amount of LOTTO to unlock higher limits for each plays, which are then sent to the gaming contract along with the bets and burnt.

## Burn Mechanism

The burning mechanism applies to all gaming transactions within the Lotterypto ecosystem.

Every time someone plays on Lotterypto contributes to the platform's growth by decreasing the token circulating supply.

\$LOTTO bought for Premium Pass are burned in addition to the base burn rate.

## Community Incentives

Lotto token can be used to incentivise community engagement, rewarding active participants who contribute to the platform's growth and success.

# Advantages of Lotterypto

Lotterypto's innovative decentralized gaming platform provides several key benefits and advantages for players and the broader gaming industry:

**True Decentralization:** Lotterypto offers a genuinely decentralized gaming experience by eliminating centralized control and relying on blockchain technology to manage and record all gaming operations.

## Flexible Gaming

Enjoy a range of games with no token requirement, or level up your gaming with Lotterypto tokens to access exclusive premium games and higher prizes.

Tokenless games reduces barriers to entry and allows for a more inclusive and accessible gaming experience.

## Multichain Support

Lotterypto's EVM-compatible smart contracts facilitate deployment on multiple blockchain networks, including Ethereum, Polygon, Binance Smart Chain, Avalanche, and Fantom. This multi-chain support broadens the platform's reach and caters to a diverse range of players. Lotterypto also commits to continuously integrate with other and future chains where provably fairness can be guaranteed.

## Multilanguage Support

Lotterypto's platform offers multi-language support, ensuring that players from various linguistic backgrounds can access and enjoy the gaming platform.

## Transparency and Fairness

By leveraging Chainlink VRF for random number generation and The Graph Protocol for indexing smart contract events, Lotterypto ensures a high level of transparency and fairness in its gaming operations.

## Complex Gaming Possibilities

The integration of Chainlink Automation enables Lotterypto to support complex gaming scenarios, including large-scale computations and distributed payouts across numerous blocks. This feature allows the platform to scale to accommodate a virtually unlimited number of players and facilitate complex payout structures.

These advantages combine to position Lotterypto as a revolutionary platform within the decentralized gaming landscape, offering players a secure, transparent, and engaging gaming experience.

# Future Development

Lotterypto is committed to continuous growth and development to provide an ever-improving gaming experience for players. The following roadmap outlines the key milestones and objectives for the platform's future development:

## Cross-Chain Interoperability

Lotterypto will work towards enabling cross-chain interoperability, allowing players from different chains to participate in the same pool using the Cross-Chain Interoperability Protocol (CCIP).

## Metaverse / Metahumans Gaming

Given the exponential progress in 3D computer graphics (i.e., Unreal Engine 5+), Lotterypto will prototype more captivating gaming experiences, such as virtual gaming floors and *metahumans*<sup>[1]</sup>.

## New Games

Lotterypto aims to continually enhance its gaming offerings by developing and introducing new, innovative game options for players to enjoy.

## New Chain Integrations

Lotterypto plans to expand its presence across more blockchain networks, further increasing its reach and accessibility for players worldwide.

## Strategic Partnerships

Lotterypto will seek strategic partnerships within the gaming and blockchain industries to foster growth, collaboration, and the development of new opportunities, aiming at becoming the backbone of the decentralized gaming industry.

## Community Engagement and Marketing

Lotterypto plans to strengthen its community engagement and marketing efforts to raise awareness of the platform, attract new players, and cultivate a vibrant, active user base.

By executing this roadmap, Lotterypto aims to solidify its position as a leading decentralized gaming platform, offering an unparalleled gaming experience that is secure, transparent, and accessible to players worldwide.

## References

[1] Unreal Engine Metahumans. <https://www.unrealengine.com/en-US/metahuman>

# Conclusion

Lotterypeto stands out as a truly decentralized gaming platform, offering a wide range of gaming options, including decentralized lotteries, roll dice, coin toss, slots machines, and sports betting. With its core mechanics powered by EVM contracts, Chainlink VRF, Chainlink Automation, and TheGraph protocol, Lotterypeto ensures a provably fair and transparent gaming experience.

The platform's unique selling points include true decentralization, multichain support, multilingual accessibility, and on-chain operations. Furthermore, Lotterypeto leverages advanced technologies like Chainlink's decentralized automation and data feeds to enable large-scale participation and complex payout structures.

By focusing on user experience, security, and continuous improvement, Lotterypeto aims to become the leading decentralized gaming platform in the industry. The future development roadmap highlights the platform's commitment to expanding its presence, adding new gaming options, enabling cross-chain interoperability, and exploring the possibilities of metaverse gaming.

Nonetheless, Lotterypeto presents an appealing opportunity for investors due to its well-structured token economy, designed for long term sustainability, which constantly drives the demand for the token based on real ecosystem needs getting away from the classic pump and dump schemes based on short-lived news while promoting sustainable long-term organic growth.

In summary, Lotterypeto strives to create a secure, transparent, and engaging gaming environment that caters to the evolving needs of its users and fosters trust and excitement in the world of decentralized gaming.