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Introduction

Lucky Pool is a decentralized lottery protocol built on the Arbitrum, offering users an automated and transparent experience. Through Lucky Pool, users can purchase

lottery tickets over a blockchain network, ensuring a fair and transparent lottery process. For those looking to purchase lottery tickets on the blockchain, Lucky Pool is an ideal choice.

Market info

According to a global lottery market report, as of the end of 2021, the global lottery market is valued at around \$80 billion and is expected to reach \$110 billion by 2026, with a compound annual growth rate of approximately 6%.

The Asia-Pacific region is the largest lottery market, accounting for more than 40% of the global market share. China, India, and Japan are the largest lottery markets in the region. In Western countries, the lottery markets in the United States and Europe are also significant, mainly dominated by lottery and digital lottery.

With the development of technology and social change, the lottery market has promising prospects. On the one hand, the rise of the digital currency lottery market brings more opportunities to the lottery industry. The application of blockchain technology can enhance the security and anonymity of the lottery market and strengthen the protection of data. On the other hand, as the economy develops and people's living standards improve, the demand for entertainment activities continues to increase, which will promote the development of the lottery market.

Although the prospects of the lottery market are promising, the market also faces some challenges. For example, the lottery market is restricted by regulations and supervision, with different regulations in different countries and regions, which may make it difficult for lottery companies to expand their business. In addition, with the application of more and more emerging technologies, the lottery market also needs to constantly adapt to market changes and find innovative ways to maintain market competitiveness.

Challenges and Opportunities

The transformation of a lottery using blockchain technology presents both challenges and opportunities. Some of them are:

Challenges

- **Regulatory and legal challenges**

One of the biggest challenges is navigating the regulatory and legal landscape, as the lottery industry is subject to strict regulations and licensing requirements in most jurisdictions. The implementation of blockchain technology may require adapting to new regulations and compliance requirements.

- **Technical challenges**

The implementation of blockchain technology requires expertise in coding, cryptography, and cybersecurity. Developing a secure and reliable blockchain-based lottery system requires a strong technical team with specialized skills.

- **User adoption**

Educating users about the benefits of blockchain-based lotteries and building trust in the system may be challenging as blockchain technology is still relatively new and not well understood by the general public.

Opportunities

- **Transparency and fairness**

Blockchain technology can increase transparency and fairness in the lottery industry by enabling a public ledger that is immutable and tamper-proof. This will help to increase trust and confidence among players.

- **Security and anonymity**

Blockchain technology can improve security and anonymity in the lottery industry by enabling secure, decentralized, and encrypted transactions. This will help to protect the privacy and security of user data and assets.

- **Global accessibility**

Blockchain-based lotteries have the potential to be accessible to anyone with an internet connection, regardless of their location or financial status. This will help to expand the lottery market and provide new opportunities for players around the world.

- **Lower transaction costs**

Blockchain technology can reduce transaction costs and eliminate intermediaries, resulting in lower fees for players and potentially higher payouts.

Overall, the transformation of a lottery using blockchain technology presents both challenges and opportunities. The implementation of blockchain-based lotteries

requires careful planning and consideration, but has the potential to revolutionize the lottery industry and provide new benefits to players and operators alike.

What is the difference between traditional lottery and blockchain lottery ?

In the web3 space, the importance of community participation in platform benefit sharing is undeniable, as evidenced by the competition between Blur and Open sea.

For Lucky Pool, it is essential to move away from the conventional lottery operating model.

1. To begin with, the fee revenue of the platform will be shared among the community members and all users.
2. Moreover, the community and users are given the right to partake in product decision-making, with users having governance rights.
3. Lastly, token economics will be implemented to encourage more users to get involved, resulting in higher liquidity of the prize pool, which is a crucial element in the product growth and market share.

Lucky Pool Use Case

Lucky Pool lottery protocol is a decentralized system that leverages blockchain technology to guarantee secure, transparent, and fair play. It utilizes smart contracts to automate the process, ensuring that the results are verifiably fair. Off-chain random number scheme, VRF, ensures the sync of true random numbers. Lucky Pool lottery protocol system also allows users to purchase lottery tickets through the blockchain, guaranteeing secure and confidential transactions. Furthermore, users benefit from reduced transaction costs as there is no need for the service of third-party intermediaries.

General lottery Features

- **Decentralized**

The LuckyPool is built on a decentralized platform, meaning that it is not controlled by any single entity or organization. This ensures that the lottery is fair and secure.

- **Transparency**

All transactions and results are publicly viewable on the blockchain, ensuring that the lottery is transparent and accountable.

- **Security**

The LuckyPool protocol is deployed on Arbitrum to ensure that all transactions are secure and tamper-proof.

- **High winning rate**

In future version upgrades, the percentage of award-winning users will be increased to enhance the sense of involvement and access for users

No-Loss Lottery Features

- **No-loss**

The mechanism of the No-loss lottery product is that the funds deposited by the user are stored in a third-party reliable Defi product and the interest is randomly distributed to the winners

- **Others**

The other features are the same as for regular lotteries; they are fair, transparent, secure, and decentralized.

What is Chainlink VRF?

LuckyPool has chosen Chainlink VRF as its random number solution, which provides a verifiable source of randomness for smart contract developers.

Random number generation (RNG) for smart contracts

- Produce fair and unbiased randomness for your blockchain-based application's outcome
- All random number results are verifiable before becoming available to consuming smart contracts
- Oracles are unable to manipulate the generated result, the only thing they can do is not respond

Provide your users with a more trustworthy experience

- Build better experiences by leveraging random outcomes in your blockchain-based application

- Provide users with cryptographic proof of your application's integrity to facilitate a high level of trust
- Broaden your user base by leveraging fair and unbiased randomness for your application's outcomes

Provably-fair and verifiable randomness

- On-chain block data is used as inputs to the RNG, which is combined with the oracle's private key to generate a random value and proof
- Each random result is verified on-chain with cryptographic proofs
- Malicious users, node operators, and smart contract admins cannot tamper with the resulting randomness

Randomness on a massive scale

- Lower gas fees with Subscription Management App while delegating access to the Subscription's balance to multiple consumer addresses
- Take advantage of the most configurable VRF experience by setting custom callback gas limits, block confirmation time
- Get even more randomness per request in an intuitive way

Why choose Arbitrum ?

The LuckyPool team deploy our dApps on Arbitrum for several reasons, including:

Features

- **Scalability**

Arbitrum is designed to improve the scalability of the Ethereum network by using Optimistic Rollup technology, which allows it to process a large number of transactions per second. This makes it easier for developers to build high-performance dApps that can handle a large user base.

- **Low fees**

Arbitrum's gas fees are significantly lower than those of the Ethereum mainnet, making it more cost-effective for developers and users to interact with dApps on the network.

- **Compatibility**

Arbitrum is fully compatible with Ethereum, which means that developers can easily port their existing dApps and smart contracts to the network without making significant changes.

- **Security**

Arbitrum uses advanced cryptographic techniques to ensure the security and integrity of its network. It has a robust consensus mechanism that is resistant to attacks, and it has been audited by reputable third-party security firms.

- **Ecosystem**

Arbitrum has a growing ecosystem of developers and users who are building and using dApps on the network. This makes it easier for developers to get started and to find support and resources as they build their dApps.

Lucky Pool Roadmap

Lucky Pool will always develop products around and focus on on-chain lotteries as the core product and distribute the platform fee revenue to all users holding the governance token \$Lucky through Lucky DAO to achieve the vision of community-driven, platform benefits shared with the community.

Q3-Q4 2022

- Product ideas
- Prototyping
- ui design

Q1 2023

- Lottery contract protocol dev
- Front-end dev
- Testnet launch

Q2 2023

- Public Sale
- Main-net launch

Q3 2023

- Product optimization
- No-Loss Lottery

Q4 2023

- Eco-building
 - Optimism
 - zkSync

Detailed product development and operational plans

Phase 1: Initial Development

In this phase, we will focus on building the core functionality of Lucky pool, which includes the development of a decentralized lottery protocol on the Arbitrum network.

- Develop the smart contract for the lottery protocol and deploy it on the Arbitrum network.
- Integrate Lucky pool with popular digital wallets and other cryptocurrency wallets.
- Create the Lucky pool website and user interface for players to buy lottery tickets and check their winnings.
- Conduct initial testing of the platform and seek feedback from the community.

Phase 2: Community Building and Expansion

In this phase, we will focus on building the Lucky pool community and expanding our reach to attract more users and partners.

- Launch a public beta version of Lucky pool and conduct a bug bounty program to incentivize community members to identify and report any issues.
- Launch a marketing campaign to attract new users and build a loyal community around Lucky pool.
- Partner with other blockchain-based projects to increase the adoption of Lucky pool.

- Introduce the governance token for Lucky pool and conduct an initial coin offering (ICO) to raise funds for further development and marketing.

Phase 3: Advanced Features and Integration

In this phase, we will focus on adding advanced features to Lucky pool and integrating it with other blockchain-based products and services.

- Integrate Lucky pool with other decentralized applications and blockchain protocols to expand its functionality and increase user adoption.
- Develop and launch new lottery games and products to attract more players.
- Add new features, such as yield farming and liquidity mining, to incentivize users to hold and use the governance token.
- Conduct regular audits and security checks to ensure the safety and security of user funds and the platform as a whole.

Conclusion

Lucky pool aims to provide a transparent and fair platform for players to participate in lotteries using blockchain technology. With a focus on community building, user experience, and innovation, Lucky pool is poised to become a leading player in the blockchain-based lottery industry. The roadmap outlined above will guide the development of Lucky pool and ensure that it remains competitive and relevant in the ever-evolving blockchain ecosystem.

Lucky DAO

Lucky DAO is a decentralized autonomous organization of the Lucky Pool lottery product protocol, aiming to provide users with a fairer, more transparent, and trustworthy lottery product experience through community governance and DAO.

As a decentralized autonomous organization, the community members make decisions and operations of Lucky DAO through voting. Community members can participate in voting by holding Lucky Pool tokens, which helps ensure that community members' rights are protected and allows community members to be directly involved in the decision making process of the product.

Lucky DAO's primary responsibilities are to oversee the operation and development of Lucky Pool, including but not limited to: developing lottery rules and prize pool allocation schemes, reviewing and selecting lottery contracts, and determining lottery sales cycles and draw schedules. In addition, the Lucky DAO will be responsible for

managing and distributing the commission revenue and jackpot funds received from Lucky Pool ticket sales, ensuring that all funds are distributed in a manner consistent with the interests and expectations of the community members.

In summary, Lucky DAO will provide an open, transparent and democratic community governance model for the development and operation of the Lucky Pool lottery product protocol, providing community members with better participation and decision-making rights that will facilitate the development and growth of the Lucky Pool lottery product.

The following is a specific plan for the governance of the Lucky DAO community, designed to provide Lucky Pool holders with more governance and participation while ensuring the long-term robustness of the protocol.

Governance model

Lucky DAO will adopt a token holder governance model, where token holders can participate in decisions on the platform through voting, including but not limited to decisions on prize pool rules, new features, and partners. Token holders can submit proposals for voting and obtain the corresponding governance rights.

Proposal Process

Token holders can submit proposals through Lucky DAO's governance platform, which will ensure that the proposals are transparent and fair. The governance platform will review and screen the proposals to ensure that they are in line with the interests of the community and the direction of the platform's development. Once a proposal is vetted and approved, token holders can vote on the proposal.

Voting Mechanism

Lucky DAO will adopt a weighted voting mechanism, and the voting result will be calculated according to the number of tokens held by token holders, the more tokens held by token holders, the more weight their votes will have. In addition, Lucky DAO will also set a certain voting threshold to ensure the fairness and validity of the voting results.

Reward mechanism

In order to encourage token holders to actively participate in community governance, Lucky DAO will set up a corresponding reward mechanism. Token holders can get corresponding token rewards by participating in voting and proposing proposals, etc. The number of rewards will be calculated according to their contribution in community governance.

Community Operation

In order to maintain the active and stable development of the community, Lucky DAO will organize regular community operation activities, including but not limited to AMA, community building, social media promotion, etc. Meanwhile, Lucky DAO will also actively cooperate with other projects to expand the community influence and development space.

Through the above community governance scheme, Lucky DAO will achieve true decentralized autonomy, and token holders will become the main governors of the platform to jointly promote the development and growth of the platform.

Conclusion

Lucky Pool is a decentralized lottery protocol built on blockchain technology that aims to provide users with a transparent, secure, and fair lottery buying and drawing experience. The protocol leverages blockchain technology and smart contracts to enable randomness, fairness, and security, while also employing a decentralized governance model that allows the community and users to participate in the protocol's decisions and operations.

Lucky Pool also improves the sustainability and market competitiveness of the product by introducing a token economy model that incentivizes users to provide more liquidity to the prize pool.

Lucky Pool will be a promising blockchain lottery protocol with the following features.

Decentralization

Decentralized operation and governance is achieved through blockchain technology and smart contracts, making the protocol more transparent and fair.

Randomness and fairness

Random number solutions such as Chainlink VRF are used to ensure the randomness and fairness of lottery draws.

Security

Blockchain technology and smart contracts are used to achieve secure fund management and transaction confirmation.

Token Economy Model

The introduction of a token economy model, which incentivizes users to participate in the operation of the protocol and provides liquidity to the prize pool, improves the sustainability and market competitiveness of the protocol.

With these features, Lucky Pool hopes to become a leader in the blockchain lottery market, providing users with a better lottery purchase and lottery experience, as well as providing a valuable case study for the application of blockchain technology in the lottery industry.