Pathwyn

CROSS-CHAIN DECENTRALIZED EXCHANGE (DEX) AGGREGATOR

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A Pathwyn Whitepaper

Introduction: The Aggregation Chain That Brings All Chains Together

Cross-chain decentralized exchange (DEX) aggregators address two core pain points in the blockchain world: fragmentation and trading friction. Currently, each chain operates like an independent marketplace, with assets and liquidity separated. Users have to repeatedly bridge, swap, and bridge back across multiple protocols, making the process complex, costly, and likely to result in missed optimal prices.

Pathwyn's answer is a unified aggregation chain connecting liquidity across multiple blockchains. By integrating liquidity pools from multiple blockchains, it enables seamless asset exchange across chains. Users only need to click and sign once to complete cross-chain exchanges and automatically receive the best global price. It is the infrastructure that turns decentralized liquidity into aggregated efficiency, and a key channel for free capital flow in the multi-chain era.

Outlook: The trend of multi-chain coexistence is clear, cross-chain liquidity and cross-chain transaction demand are growing rapidly, and early-stage positioning offers a significant first-mover advantage.

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A truly cross-chain DEX aggregation platform, a single aggregation chain that brings all chains together

Project Overview

1.1 Project Positioning

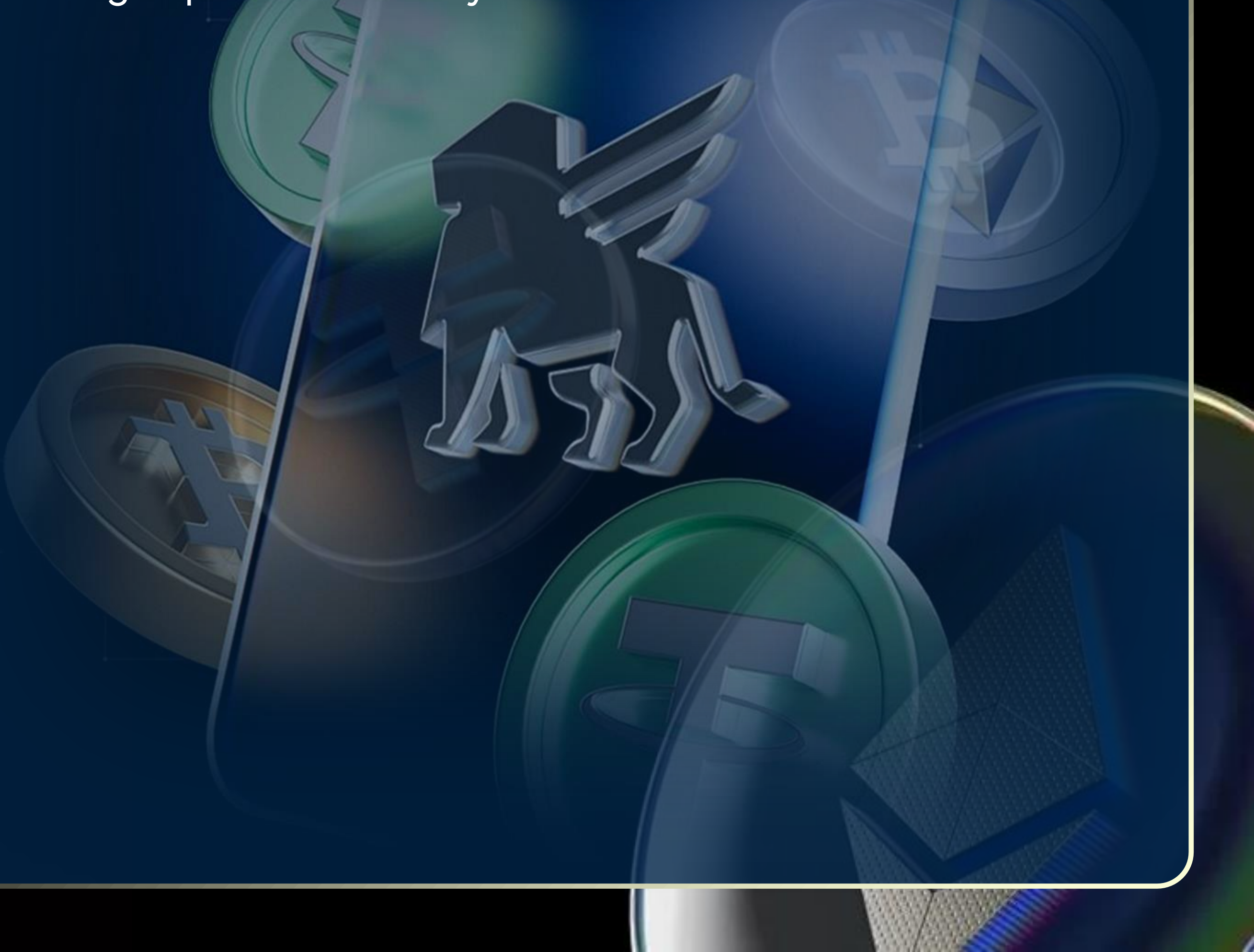
Pathwyn builds a truly cross-chain DEX aggregation platform, integrating liquidity pools from multiple blockchains to enable seamless asset exchange, improve trading efficiency, reduce user operational complexity, and promote collaborative development of the multi-chain ecosystem.

The platform token $PYWN is the ecosystem's value carrier: it serves as both a "membership card" for users to enjoy discounts and a "certificate of equity" for participating in governance and sharing growth. The more use cases and the larger the ecosystem $PYWN supports, the stronger its value.

1.2 Market Background: Multi-chain Fragmentation

Pattern

The blockchain industry has entered a stage of multi-chain coexistence: Ethereum and its Layer 2, BSC, Polygon, Arbitrum, Optimism, and other networks each carry independent DeFi ecosystems. Liquidity between chains is fragmented—the optimal price on a single chain is often not the true optimal price across the entire market. User assets are trapped on a single chain, limiting opportunities and causing capital inefficiency.



1.3 Five Major Structural Pain Points in Cross-Chain Transactions

- **Liquidity fragmentation**: Liquidity is fragmented across chains. Large orders suffer severe slippage on a single chain, unable to access the deeper liquidity available on others;
- **Complex operation**: Users must manually bridge, swap, and bridge back across multiple protocols, repeatedly signing transactions and paying gas fees each time;
- Inefficient price discovery: The lack of real-time cross-chain price comparison often causes users to miss optimal execution;
- **Cross-chain security risks**: Some bridges face risks such as centralized custody, contract vulnerabilities, and validator nodes, resulting in high trust costs for cross-chain assets;
- **Gas cost stacking**: Multi-chain processes require multiple payments, and cross-chain costs significantly erode revenue.

These pain points point to a common gap: the need for a unified cross-chain gateway—to aggregate liquidity, abstract complexity, and ensure asset security.

TWO

$PYWN Token function

A truly cross-chain DEX aggregation platform, a single aggregation chain that brings all chains together

$PYWN Token function

$PYWN is the platform's value carrier: it acts as a "membership card" that lets holders enjoy discounts, and as an "equity certificate" that lets them participate in governance and share in the platform's growth.

2.1 Transaction Fee Discounts

Paying fees with $PYWN earns discounts, dynamically adjusted based on holding tiers to incentivize real token usage.

2.2 Governance Rights

Holding $PYWN grants participation rights in platform governance—voting on protocol upgrades, parameter adjustments, new chain integrations, and other major matters—to achieve community autonomy.

The governance mechanism follows the open and transparent principle of "1 token, 1 vote": users who meet the token holding threshold can initiate proposals; community discussion is followed by on-chain voting; and once approved, execution is triggered after a time lock.

$PYWN Token function

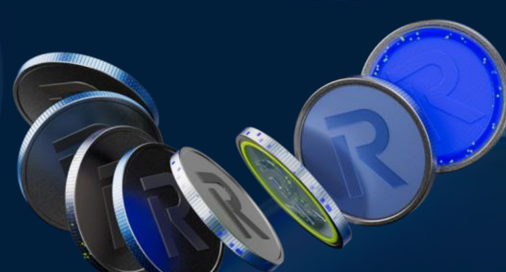
2.3 Liquidity Incentives

Holders can participate in liquidity mining by staking $PYWN and providing assets to cross-chain liquidity pools to earn additional token rewards.

Liquidity is the lifeblood of an aggregation trading platform. Through $PYWN incentives, the platform guides users to allocate funds to the cross-chain pools that need liquidity most, allowing providers to earn returns and traders to enjoy lower slippage—forming a virtuous cycle where contributors and users benefit together.

2.4 Income Distribution

Platform fees and part of the yield are distributed to $PYWN holders based on the token-to-staking ratio, allowing token holders to directly share in the platform's growth.



2.5 Cross-chain Bridge Fee Subsidies

Paying cross-chain bridge fees with $PYWN earns subsidies, making high-frequency, small-value cross-chain transfers more cost-effective and giving the token a role in every cross-chain action, expanding its practical use cases.

THREE

Token economic model

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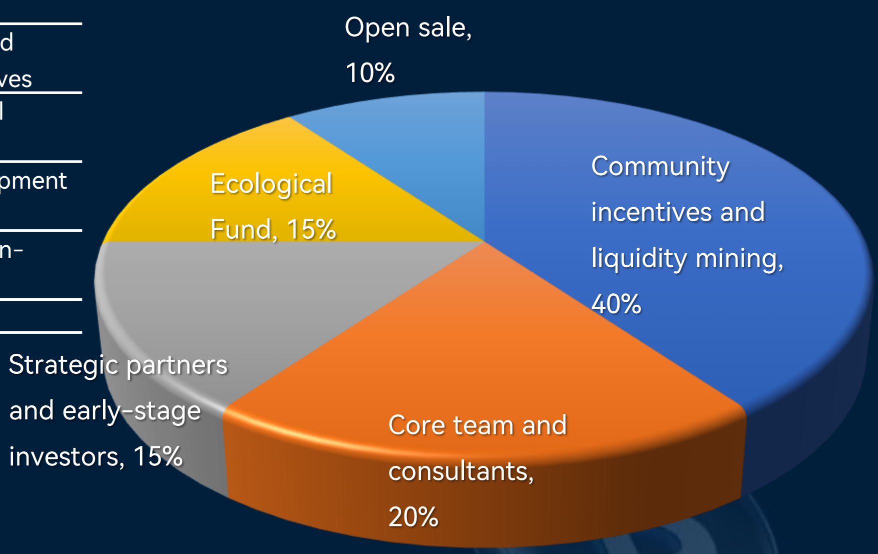
Token economic model

3.1 Total Circulation

1 billion $PYWN, with a fixed cap and no reissuance, ensuring the token's long-term scarcity from the source and avoiding uncontrolled inflation that dilutes holder rights.

3.2 Allocation Ratios And Unlock Arrangements

Explanation
Reserved for the community and ecosystem to drive user incentives
Locked for 4 years with gradual unlocking
Supports early platform development and ecosystem partnerships
Funds project incubation and on-chain rewards
Open for public purchase



Two principles of distribution logic:

- **Community First**: 40% of the largest share is invested in community incentives and liquidity mining, ensuring sufficient "ammunition" to attract users and liquidity after the ecosystem launches;
- **Long-term Binding**: Team and advisor shares are locked up for 4 years and gradually unlocked. Strategic partners and early investors also have lock-up periods to prevent early sell-offs, ensuring that all parties' interests align with the platform's long-term development.

3.3 Deflationary Mechanisms

Through buybacks, burns, and fee burning, the token supply gradually decreases, enhancing token scarcity.

- **Buyback and burning**: The platform buys back $PYWN on the open market using fee revenue, and the buyback portion is directly burned and withdrawn from circulation;
- **Fee burning**: A fixed percentage of fees paid in $PYWN is burned directly.

Deflation forms a positive flywheel: the more active the trading, the higher the platform's fee revenue; the higher the revenue, the more buybacks and burns; the more burns, the smaller the circulating supply; and the smaller the supply, the stronger the token's scarcity and value support.

FOUR

Incentive mechanisms and lock-up strategies

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Incentives and Lock-up

4.1 Liquidity Mining: Double Rewards

Users who provide multi-chain liquidity pool assets and stake $PYWN can earn double rewards:

- **$PYWN Rewards**: Distributed linearly based on the share of liquidity provided by users and staking duration; the greater the contribution and the longer the duration, the more they earn;
- **Platform fee dividends**: Trading fees generated in the pool are proportionally distributed to liquidity providers.

Dual rewards let users provide liquidity while enjoying both new-token incentives and real yield—attracting new users while retaining existing liquidity, and providing continuous support for the platform's trading depth.

4.2 Lock-up Reward tiers

Users who lock their tokens long-term can receive extra rewards. The longer the lock-up period, the higher the reward bonus:

Lock-up period	Increase multiplier	Additional benefits
30 days	1.2x	Base token rewards
90 days	1.5x	Basic rewards + fee dividends
180 days	2.0x	Basic rewards + dividends + governance airdrop
365 days	3.0x	Basic rewards + dividends + airdrop + exclusive governance rights

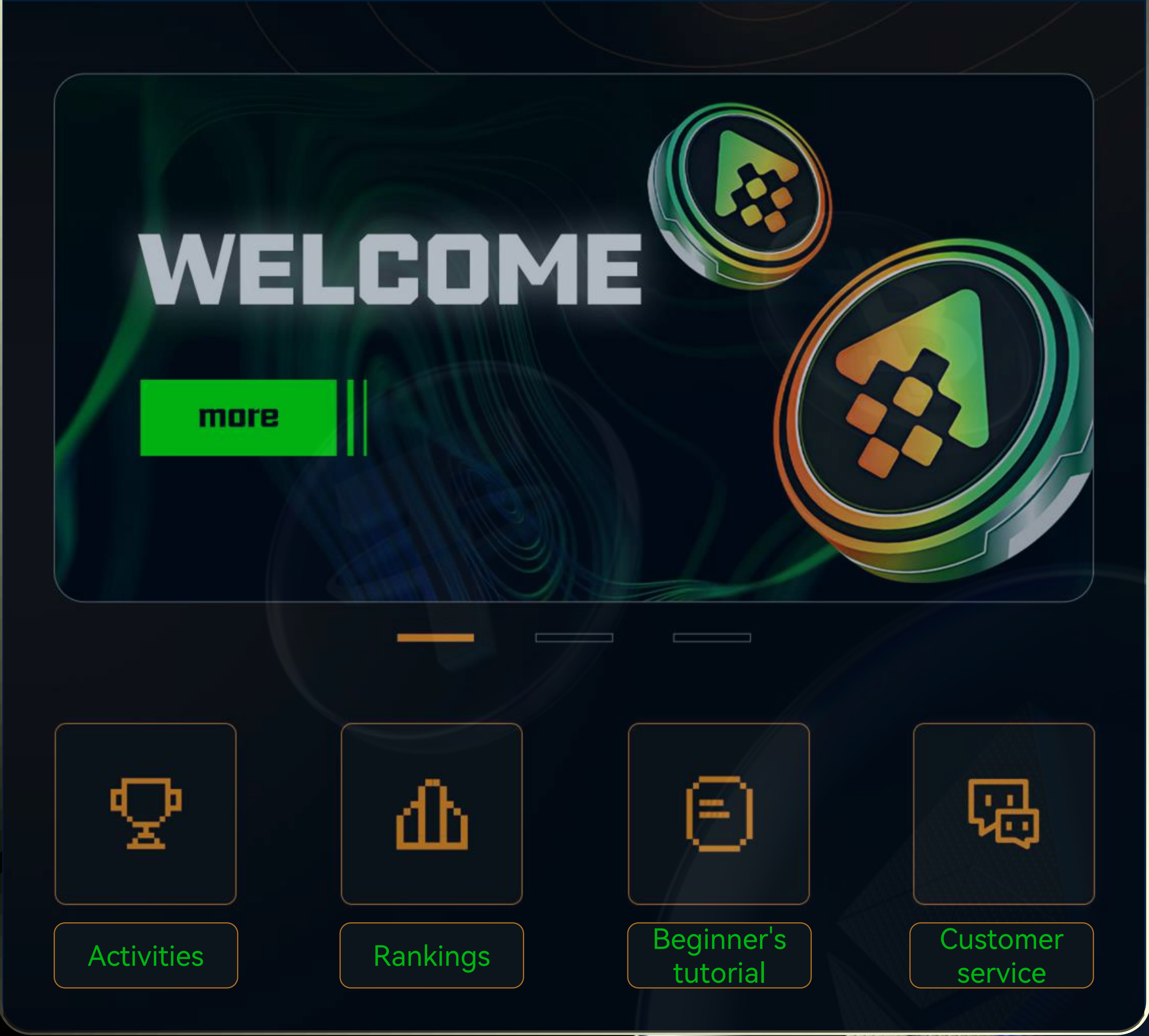
Long-term lock-up stabilizes holding expectations and reduces selling pressure. Bonus multipliers and additional benefits are dynamically adjusted through governance.

Incentives and Lock-up

4.3 Governance Participation Rewards

Users who meet the minimum token holding threshold will receive token rewards for each valid vote they participate in;

Continuous participation for more than six months earns exclusive governance badges and additional benefits, promoting long-term community activity.



FIVE

Technical and security assurance

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Technical and security assurance

5.1 Cross-Chain Bridge Support: Multi-Bridge Aggregation with Dynamic Selection, Avoiding Reliance on a Single Path

Step 1 · Integrate Multiple Bridge Solutions: The platform connects to several proven mainstream cross-chain bridges and continuously evaluates new solutions:

Solution	Features	Applicable scenarios
LayerZero	Full-chain interoperability and universal messaging	General-purpose cross-chain asset transfers
Axelar	Decentralized verification network with high security	Large asset cross-chain transfers
Wormhole	Multi-chain tokens and messaging	Special asset types
CCIP	Enterprise-level cross-chain infrastructure	High-value transactions
Chain-native bridges	Official solutions provided by each chain	Single-chain directional transfers

Step 2 · Four-Dimensional Dynamic Scoring: Before each cross-chain transaction, the system scores candidate bridges in real time and executes the plan with the highest overall score:

Rating dimensions	Assessment content	Weights (Example)
Security	Accident history, number of nodes, audit status	40%
Cost	Bridge fee + target chain gas	30%
Speed	Average cross-chain confirmation time	20%
Liquidity	Bridge pool depth and available capacity	10%

Technical and security assurance

Step 3 · Multiple Safety-Net Mechanisms:

- Single-transaction limit: Sets a maximum amount per bridge and per cross-chain transaction; exceeding the limit automatically switches to another bridge to avoid concentration risk;
- Circuit Breaker: If a bridge experiences prolonged unconfirmed transactions or triggers safety warnings, the system automatically downgrades its score and bypasses it until it recovers;
- Status verifiable: The status of each cross-chain transaction can be queried in the block explorer;
- Failure Handling: If a cross-chain transfer fails midway, the asset automatically rolls back to the source chain.

5.2 Smart Contract Audit: Code Trustworthiness Is the Foundation of Fund Security

The audit covers all fund-related contracts: $PYWN token contracts, cross-chain routing contracts (Router), liquidity custody contracts (Vault), cross-chain bridge aggregator contracts (BridgeAggregator), Price Oracle contracts (PriceOracle), and governance contracts.

Audit Process (Example):

Stage	Content
Phase 1 · Internal self-assessment	The development team completes unit testing, boundary testing, and internal reviews
Phase 2 · Third-party initial testing	Submitted to a third-party authoritative institution for the first round of audit
Phase 3 · Repair and retesting	Identified issues are fixed in stages, and high-risk issues undergo retesting until fully resolved
Phase 4 · Final review before launch	A final audit must be completed before going live, and the resulting audit report will be made public

Technical and security assurance

Triple Lines of Defense Beyond Auditing:

- **Development Specifications**: Built on the OpenZeppelin standard library, with built-in reentrancy protection and pause mechanisms. All external calls follow the Checks-Effects-Interactions (CEI) pattern—updating state before making external calls—eliminating common usage-related vulnerabilities;
- **Permission Constraints**: Contract management uses multi-signature authorization, with key upgrades and parameter changes subject to time-locks that give the community a window to review;
- **Emergency Response**: Deploys emergency suspension mechanisms and real-time risk control engines to monitor signals such as abnormally large orders and price deviations, immediately suspending affected trading pairs to minimize losses.
- **Open Source and Community Verification**: Core contract code is open source, allowing any developer and user to review it themselves. Security does not rely on "trust endorsement" but on "verifiability."

5.3 Transparency: All Key Actions Are Traced On-Chain

Cross-chain aggregation platforms handle large amounts of user funds, so transparency is not a bonus but a basic requirement. The platform commits to real-time on-chain disclosure of the following data:

Disclosure content	Explanation
Token allocation and unlock progress	The quota, release, and remaining amount for each allocation target can be checked on-chain
Liquidity pool status	Reserves, depth, fees, and real-time prices for each cross-chain pool
Fees and profit distribution	Fee flows, LP revenue sharing, and protocol revenue are open and transparent
Buyback and burn records	The full history of repurchase amounts, burn addresses, and changes in circulating supply is recorded

Supporting mechanisms:

- Block explorer verification: All key data can be verified through the block explorer, without needing to trust any third party;
- Transparency dashboard: An official visual dashboard aggregates token circulation, pool status, and protocol revenue;
- Regular Reporting: Periodically publishes transparency reports detailing repurchases, burns, incentive distributions, and the use of the ecosystem fund;
- Community Oversight: Anyone who discovers data anomalies can initiate discussions or governance proposals, with the community holding final oversight authority.

The value of transparency lies in the fact that every time users hand over assets to the platform, they can verify "where the assets are and where the money went," building trust rather than relying on advertising.

SIX

Community building and promotion

A truly cross-chain DEX aggregation platform, a single aggregation chain that brings all chains together

Community building and promotion

6.1 Community Governance Platform: Enables Every Token Holder to Easily Participate in Decision-Making

Why does the platform need a governance portal? On-chain voting itself has a threshold—reading contracts, connecting wallets, finding proposals—that makes it hard for ordinary users to participate. Pathwyn's governance portal turns these complex processes into interfaces that are simple to understand and easy to use.

Core functions of the portal:

- **Proposal Browsing**: Displays all proposals by status (under discussion/voting/approved/implemented), with background notes and impact analysis for each;
- **Community Discussion**: Each proposal includes a discussion area for community feedback and amendment suggestions, ensuring all viewpoints are heard during the discussion period;
- **One-click Voting**: Once a wallet is connected, users can vote with a single click, or delegate their voting rights to a trusted address if unfamiliar with the process;
- **Execution Tracking**: Once a vote passes, it enters a time-lock period, during which the portal displays a real-time execution countdown and on-chain results.

Community building and promotion

Three designs to lower the entry barrier:

- **Multilingual support**: Provides multilingual interfaces in Chinese, English, and other languages for the global community;
- **Mobile adaptation**: Governance actions can be completed on mobile devices;
- **Linkage with governance incentives**: Casting a valid vote on the portal automatically triggers governance participation rewards.

6.2 Incentive Program: Continuously Expand the User Base through Diverse Activities

Category 1 · New User Acquisition Campaigns:

- **Referral Reward**: Existing users invite new users to complete their first cross-chain transaction, and both parties receive $PYWN rewards;
- **Newbie Tasks**: New users who complete tasks such as registration, their first exchange, or initial liquidity provision will receive onboarding rewards;
- **Airdrop Plan**: Token airdrops targeting early users and ecosystem contributors to expand the early holder base.

Community building and promotion

Category 2 · Active Activities:

- **Trading Competitions**: Periodic leaderboards and prize pools, ranked by transaction volume, cross-chain activity, and other metrics, keep existing users engaged;
- **Liquidity Challenge**: Encourages users to provide liquidity to designated cross-chain pools, with bonus rewards based on contribution duration and size, helping strengthen pools with shallow depth;
- **Creative Incentives**: Encourages the community to produce tutorials, reviews, videos, and other content, with high-quality submissions rewarded—turning users into promoters.

Category 3 · Retention Activities:

- **Loyalty System**: Membership levels are divided by cumulative transaction volume and holding time; high-level users enjoy higher fee discounts and exclusive customer service;
- **Milestone Events**: Celebrations aligned with roadmap milestones help maintain community momentum;
- **Anti-Fraud and Compliance Safeguards**: All activities include built-in anti-fraud mechanisms and clearly defined compliance boundaries to ensure incentives reach genuine users.

Community building and promotion

6.3 Cooperative Ecosystem: Weaving the Cross-Chain "Web"

Even Larger

Cooperation Layer	Partners (examples)	Cooperation content
Public chain ecosystem	Ethereum,BSC,Polygon,Arbitrum,Optimism,Base	Access a broader range of on-chain assets, and pursue ecosystem funding and incubation support
DEX and DeFi Agreement	Uniswap,PancakeSwap、Curve,Balancer	Shared liquidity; Exploring new scenarios for $PYWN lending, derivatives, and more
Cross-chain infrastructure	Mainstream cross-chain bridges,oracles,and data service providers	Improving the transaction pipeline to enhance security and quote quality
Wallets and institutions	Mainstream wallets, market makers,custodians	Opening entry points that provide compliance services for large and institutional users
Developer ecosystem	Community developers and third-party teams	Providing SDKs/APIs/documentation and funding to co-build tools and products

Community building and promotion

How the cooperative ecosystem gives back to the platform and its token:

Each new chain integrated expands the platform's tradable asset range and increases $PYWN's use cases;

Every DEX/DeFi partnership may open up new use cases for $PYWN, while infrastructure partnerships enhance transaction security and quote quality—ultimately improving the overall user experience;

Ecosystem expansion follows a phased approach: first prioritizing partnerships with leading public blockchains and the DEXs with the deepest liquidity to quickly establish usability, then gradually expanding into the long-tail ecosystem. Throughout this process, access standards remain open—any eligible chain or protocol may apply, with the community deciding through governance whether it goes live.

SEVEN

Team and consultants

A truly cross-chain DEX aggregation platform, a single aggregation chain that brings all chains together

Team and consultants

7.1 Founding Team

Founder and CEO· Marcus Harrington:

A seasoned serial entrepreneur in DeFi and cross-chain, with years of experience building aggregation protocols and trading products. Responsible for overall strategy and fundraising.

Co-founder and CTO· Freya Lindqvist:

Early core developer of public chains and cross-chain protocols, with deep expertise in smart contracts and bridging technology. Responsible for technical architecture and R&D.

Co-founder and COO· Diego Fernandes:

Former Head of Operations at a leading digital asset trading platform. Responsible for platform operations and ecosystem partnerships.

Team and consultants

7.2 Advisory Team

Chief Security Advisor · Omar Haddad:

Former lead auditor at a leading security audit firm, having led audits for multiple major protocols. Responsible for security systems and risk control.

Cross-chain Infrastructure Consultant · Rafael Costa:

Deeply involved in cross-chain interoperability and blockchain infrastructure for many years, helping platforms connect with public chains and infrastructure ecosystems while driving technical partnerships.

Capital Markets and Institutional Advisor · Julian Moreau:

Background in large asset management institutions and digital asset funds, helping platforms connect market makers, custodians, and institutional channels, expanding institutional-level application scenarios.

Regulatory and Compliance Advisor · David Cohen:

Having worked for many years in international securities regulators and financial compliance, regularly alerting teams to policy risks to ensure the platform develops steadily within regulatory frameworks.

EIGHT

Conclusion

A truly cross-chain DEX aggregation platform, a single aggregation chain that brings all chains together

Conclusion

Cross-chain DEX aggregators address the core pain points of market fragmentation and trading friction, building an efficient, convenient platform for multi-chain wealth growth. As the multi-chain ecosystem continues to develop, demand for cross-chain trading will only grow—positioning $PYWN for substantial long-term value.

Pathwyn makes every cross-chain transaction simple, secure, and cost-effective—making $PYWN the key to unlocking the multi-chain wealth world.

PYWN

A TRULY CROSS-CHAIN DEX AGGREGATION PLATFORM—A SINGLE AGGREGATION CHAIN THAT BRINGS ALL CHAINS TOGETHER