

Pure-X

Pure-X DEX

Whitepaper

17 August 2023

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1. Legal disclaimer

There are risks and uncertainties associated with Pure-X and its' operations, the tokens of Pure-X platform (further Token or Tokens), the Initial Token Sale (each as referred to in this Whitepaper). You can find a description of the risk related to the Token Sale under the section 'Pure-X Platform Token Terms and Conditions', which should be read carefully. This Whitepaper, any part thereof and any copy thereof must not be taken or transmitted to any country where distribution or dissemination of Token Sale or Initial Coin Offering like the one described in this Whitepaper is prohibited or restricted. The Tokens are not intended to constitute securities in any jurisdiction. This Whitepaper cannot constitute a prospectus or offer document for investment in securities. This Whitepaper does not constitute or form part of any opinion on any advice to sell, or any solicitation of any offer to purchase any Tokens or give any help in any investment decision. You are not eligible you are not to purchase any Tokens in the Token Sale (as referred to in this Whitepaper) if you are a citizen, resident (tax or otherwise) of the countries where those operations are prohibited at the period of sale.

2. Executive Summary

2.1 Current State of Decentralized Crypto Exchanges

Crypto exchanges have evolved significantly over the years, with decentralized exchanges (DEXs) gaining prominence due to their enhanced security, transparency, and user autonomy. DEXs operate on blockchain-based platforms and coordinate large-scale trading of crypto assets among users through automated algorithms.

A recent report^[1] highlighted that the trade volume ratio between decentralized to centralized exchanges has reached a new all-time high.

DEXs are fundamentally different from traditional centralized exchanges. They operate on blockchain platforms and facilitate trades through automated algorithms without the need for intermediaries. This ensures that users retain control over their assets and can trade directly with one another.

The growing popularity of DEXs indicates a shift in user preferences towards more secure, transparent, and decentralized trading platforms. With advancements in blockchain technology and the rise of DeFi, DEXs are poised to play a pivotal role in the future of crypto trading.

2.2 The Pure-X Project Concept

Pure-X is a groundbreaking decentralized crypto exchange (DEX) that aims to revolutionize the way users trade and manage their digital assets. Unlike traditional centralized exchanges (CEX), Pure-X offers a seamless, secure, and transparent trading experience, ensuring users retain full control over their assets.

2.3 Why Choose Pure-X (DEX) Over Traditional CEX?

- **User Autonomy:** Users who understand the intricacies of DEX vs. CEX recognize the unparalleled freedom DEX offers. With Pure-X, there's no need for Know Your Customer (KYC) procedures. Simply connect your wallet on any supported chain, and you're in.
- **Funds Security:** Funds always remain in the user's wallet on Pure-X specialized blockchain, Pure-X guarantees a protocol-ensured method to withdraw funds, while blockchain is alive and blockchain is alive if at least three nodes are running. This means that even if unforeseen circumstances arise, such as the site shutting down or the development team facing legal challenges, users can still directly communicate with the underlying blockchain to access their assets.
- **Efficiency:** All users are running own node, which is also the user wallet. As this node (wallet) is part of gasless Pure-X chain, with Pure-X, users are assured of a verified protocol that guarantees the safety of their funds without compromising on efficiency.

2.4 Understanding the Pure-X Protocol

- **Definition:** Typically, a protocol is seen as a single smart contract or a set of interlinked smart contracts on one or multiple chains. These contracts operate autonomously without any centralized control. However, Pure-X expands on this definition.
- **Node-Based System:** Pure-X operates on a node-based system, similar to how Bitcoin or other blockchain networks function. This ensures that even if official nodes are compromised, the protocol remains alive and operational, provided there are active nodes.

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- **Specialized Blockchain:** Pure-X isn't just another blockchain; it's a specialized blockchain for DEX operations. This ensures that as the chain grows, its speed and scalability improve, making it more efficient over time.
 - **API Integration:** Each node in the Pure-X network supports specialized API calls, such as placing limit orders. This order-book based system ensures smooth and efficient trading.
 - **Open UI Development:** While Pure-X will have its official user interface (UI), the platform encourages developers to create alternative UIs, fostering a diverse and user-friendly ecosystem.

2.5 Vision

Pure-X envisions a decentralized trading platform where:

- Nodes are also users wallets.
- Nodes can process various types of orders, including limit, market, and stop orders.
- Nodes can handle transfers, both funding, and withdrawal.
- The system is integrated with bridges to various blockchains.

2.6 Architecture & Economics

- **Token Utility:** Users who purchase the Pure-X token benefit from reduced commissions and increased trading limits.
- **Node Ownership:** validators owners are incentivized through a share in the commissions.
- **Products:** Pure-X aims to expand services and products on the platform beyond spot trading in future. Nearest plans include futures trading, options trading and tokenized assets trading.

2.7 Project Rollout Approach

Pure-X's rollout strategy is methodical and user-centric. The project will prioritize security, user experience, and scalability, ensuring that as the platform grows, it remains at the forefront of decentralized trading solutions.

This executive summary provides an overview of the Pure-X project. The subsequent sections of the whitepaper will delve deeper into each aspect, providing detailed insights, technical specifications, and the roadmap for the project's future.

3. Decentralized Crypto Exchanges Space Outlook

3.1 Market Overview

Decentralized exchanges (DEXs) have gained significant traction over the last few years. Unlike centralized exchanges, DEXs allow users to trade directly with one another without the need for an intermediary. This provides enhanced security, privacy, and control over one's funds.

The total market cap of decentralized exchanges has witnessed substantial growth. As of now (August 2023), the combined market cap of all DEXs is approximately \$836 billion/year^[2].

More over, DEXes constantly increase their share (based on trade volume) comparing to CEXes ^[3].

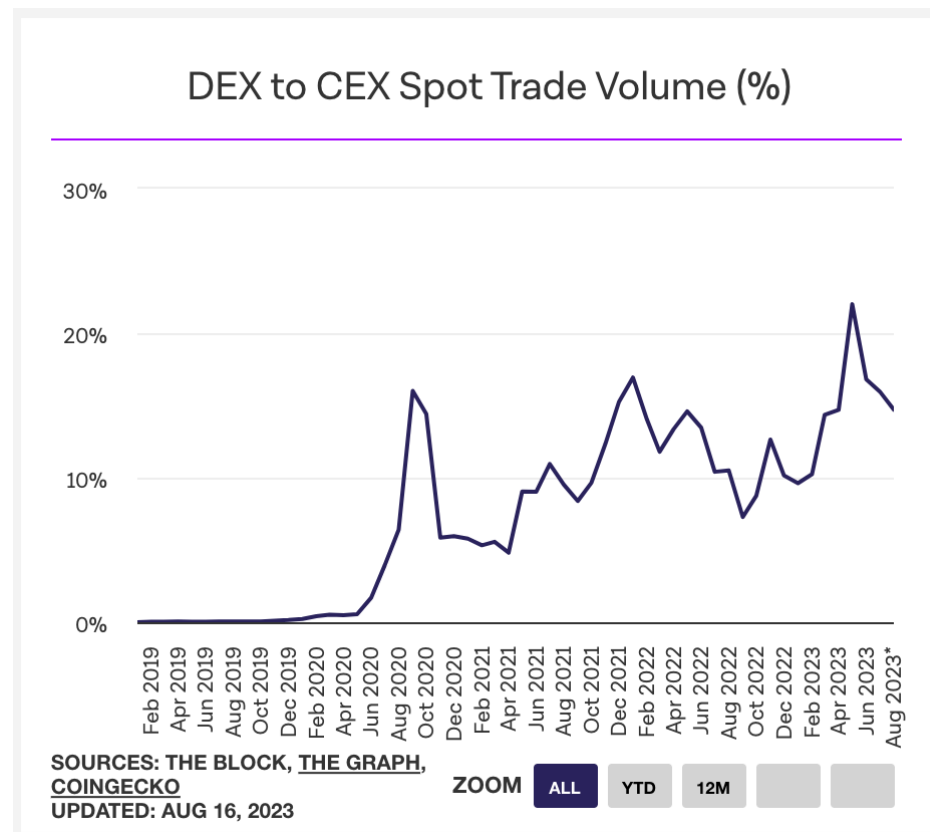


Figure 1. DEX to CEX Spot Trade Volume (%)

The user base for DEXs has been expanding rapidly. With the rise of DeFi (Decentralized Finance) and the increasing demand for decentralized solutions, more users are turning to DEXs for their trading needs^[2].

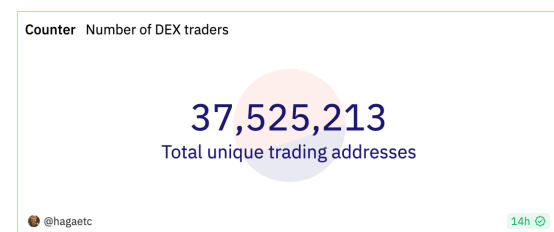


Figure 2. DEX unique users, as of August 2023

Based on chain used, Ethereum is the winner and taking more than 60%.

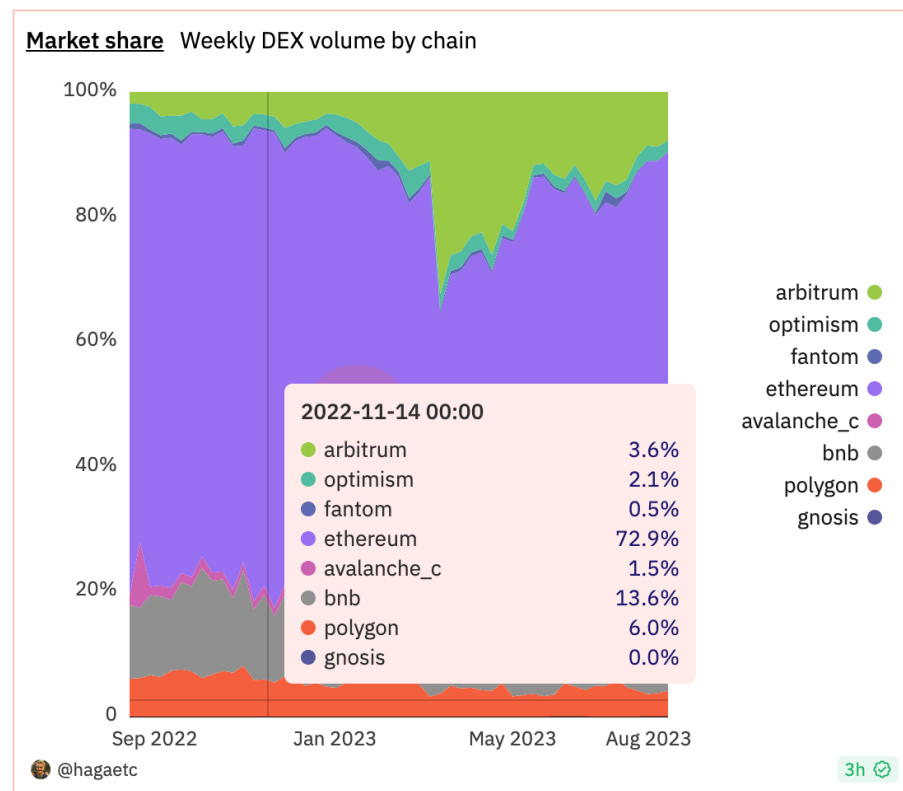


Figure 3. Weekly DEX volume by chain

Based on project, market is dominated by Uniswap (~50% of trading volume)^[2].

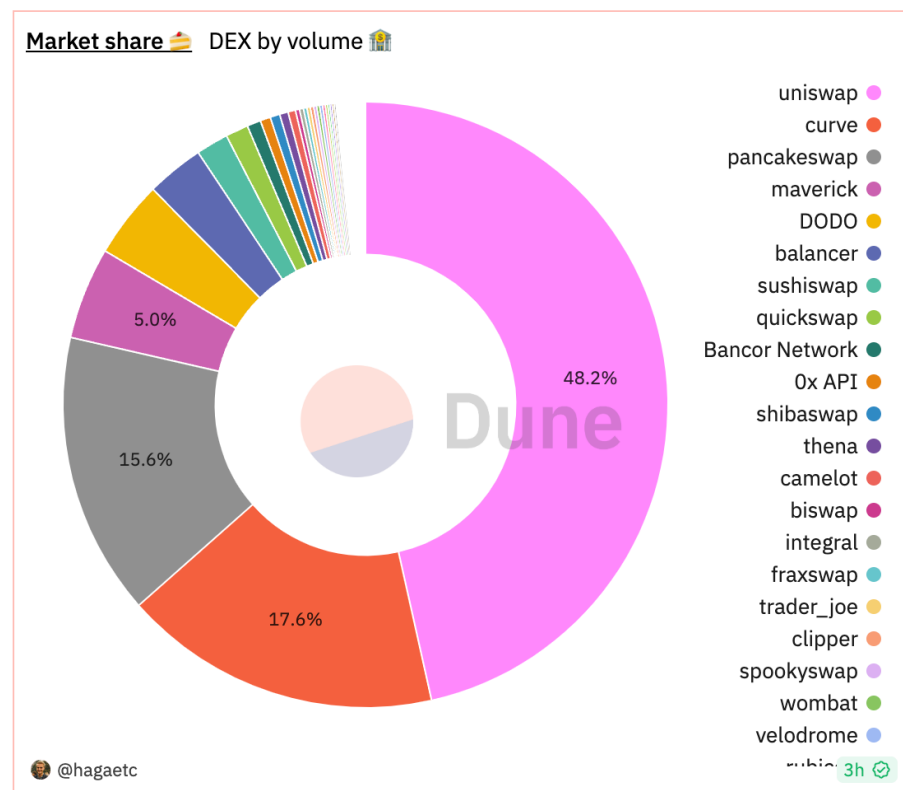


Figure 4. DEX by Trading Volume

3.2 Trends for the Last Three Years

Key trends of last three years are:

- **Rise of Automated Market Makers (AMMs):** Platforms like Uniswap and Sushiswap, which use AMMs instead of traditional order books, have become dominant players in the DEX space.
- **Layer 2 Solutions:** With Ethereum gas fees rising, many DEXs are exploring Layer 2 solutions to offer faster and cheaper transactions.
- **Cross-chain Interoperability:** DEXs are now focusing on enabling trades across different blockchains, enhancing liquidity and user experience.
- **Regulatory Scrutiny:** As DEXs gain popularity, they are also coming under the radar of regulators, leading to discussions about the future regulatory framework for DEXs.
- **Governance Tokens:** Many DEXs have introduced their governance tokens, allowing the community to have a say in the platform's direction.
- **Yield Farming:** Users are incentivized to provide liquidity on DEXs in return for yield, driving more liquidity to these platforms.
- **Integration with DeFi:** DEXs are becoming an integral part of the broader DeFi ecosystem, with many DeFi platforms integrating DEX functionalities.

3.3 Business Summary

The daily trading volume on DEXs has reached billions of dollars, with some days witnessing even higher volumes during volatile market conditions. User base reached 37 mln unique wallets (August 2023).

The number of unique liquidity providers has also been on the rise, indicating a growing interest in yield farming and earning passive income.

Based on last years data DEXes are on the rise. DEXs gain market share as users losing faith in centralized crypto exchanges.

Decentralized exchanges operate on the principle of peer-to-peer trading without intermediaries. They leverage blockchain technology to offer secure, transparent, and censorship-resistant trading platforms. With the broader adoption of cryptocurrencies and the rise of DeFi, DEXs are poised for further growth. However, they also face challenges in terms of scalability, regulatory concerns, and competition from centralized exchanges.

4. Pure-X Platform Description

4.1 Architecture strategic drivers

- Make DEX platform of first choice listing and trading crypto assets (in future – complex DeFi products, i.e. structured products, i.e. provide architecture which is extensible and allows partners to start their own products/services/businesses on platform, related to trading in fast and convenient manner.
 - Ensure platform scalability and readiness for high-load;
 - Ensure platform is enables easy upgrade/replacement of current features and development of new features;
 - Ensure platform can allow fast composition of new service/product;
 - Ensure platform can easily integrate with external API providers;
 - Ensure anonymity of users supported by communication protocol (no IP disclosure);
 - Ensure decentralization (i.e. no central body, only nodes anonymously connected with each other).
- Ensure use of optimal technologies, cost-effective approach to architecture, limit costs of development for internal team and perspective SAAS partners.
- Minimize dependency on specific stack, cloud provider.
- Ensure architecture provides advanced integration capabilities:
 - Integration with existing blockchains (bridges) for assets transfer.
 - Integration with liquidity providers.
 - Integration with external API providers of any kind.
- Allow the following platform “use-cases”
 - “Solo trader” runs own node and trade crypto assets.
 - Crypto trading startup runs node plus own bot(s) created with Platform SDK.
 - Hedge funds users Platform SDK to connect own platform with Pure-X.
 - Investor (private or business) works as liquidity provider and gets additional income.
 - And other user-cases will arise..

4.1.1 Anonymity as architecture driver

Platform will provide high level of anonymity. No personal data will be collected during user (wallet) registration. No personal data will be stored. Specific implementation of consensus algorithm will ensure that user-related transactions will not be accessible to other users (although will be accessible to validators). Communication protocol will not disclosure IP addresses of nodes, thus users personality disclosure based on wallet address will be complicated and will not be possible if users takes precautions and do not disclosure personal address to third parties.

4.1.2 Optimization as architecture driver

Internal blockchain solution allows to make all transactions “for free”, or “gasless”, as soon as transactions stays within platform. At the same time, in case of actual need, it is be possible to “extract” asset from platform to external blockchain (like Ethereum or BSC or any other to which bridge interface will be available).

4.2 Pure-X Platform Architecture

See scheme:

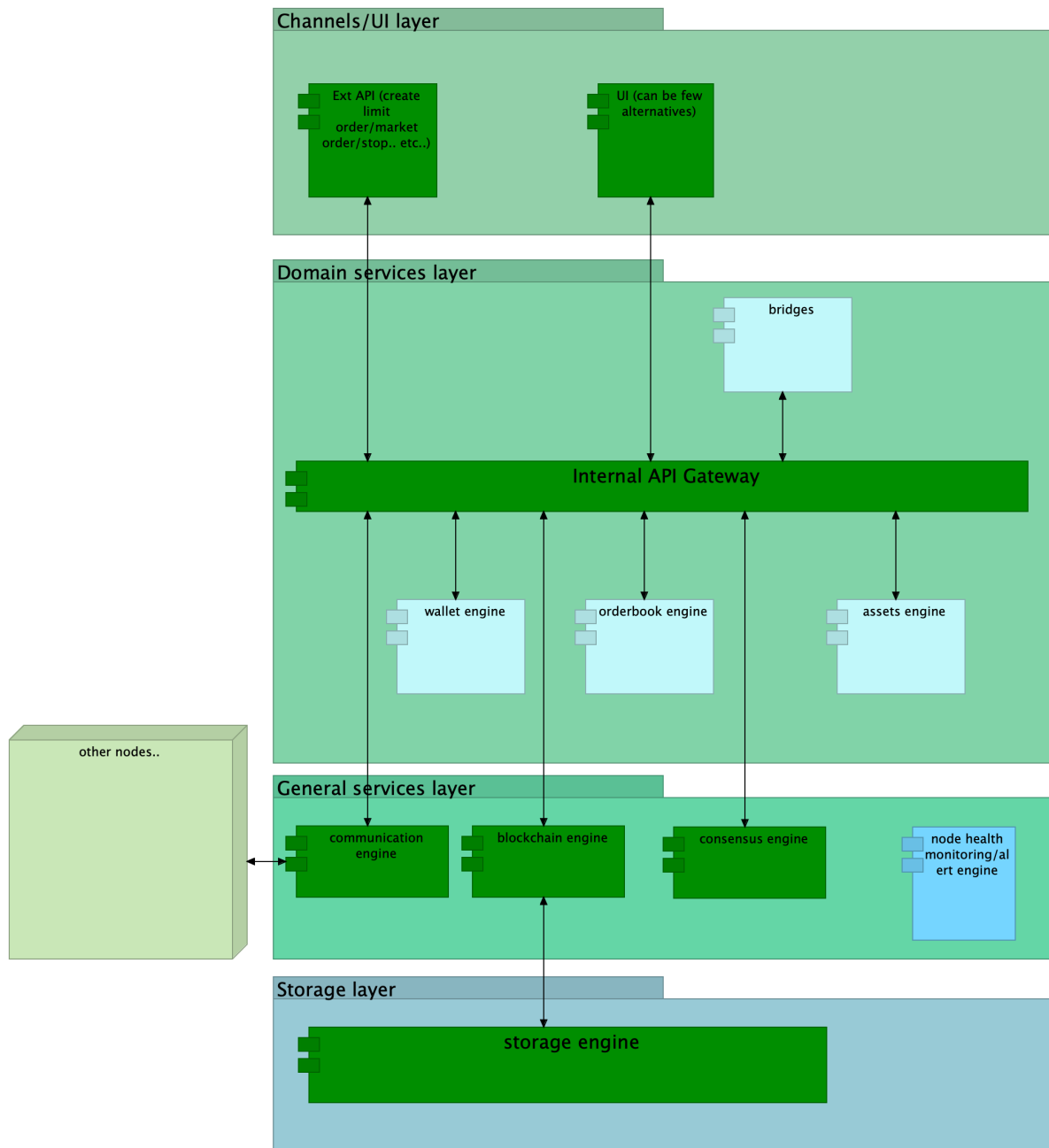


Figure 5. High-level architecture of Pure-X Platform (node)

You can find our target architecture above. See layers description below (see next page)

Layered architecture above is installed on the blockchain “nodes”. Nodes are communicating and supporting single version of **Storage layer**.

It is logical architecture, technically node software is implemented as monolith, can be run as single binary file or docker container.

Layer	Description
Channels/UI	<p>Channels/UI layer contains “client-facing” services, which are:</p> <ol style="list-style-type: none"> 1)External API for clients/partners/developers, most flexible option, allowing clients/partners to integrate platform services in their applications/trading bots/platforms. <p>API allows to use any of the platform services or their combination.</p> <ol style="list-style-type: none"> 2) UI – could be ‘native’ user interface app(s) which will be supported by platform or ‘alternative’ clients, which will be developed/supported by third party developers. <p>Any user (i.e. big trading company, or just solo user) needs to install full node. Node is light enough to be able to run on Android phone, for instance (in future respective app, which includes node software will be developed).</p>
Domain Services	<p>Domain services layer contains components for platform domain (DEX), although in many cases can be extrapolated to other similar domains. There is one specific component here API Gateway, which is considered universal, cross-layer component, but for convenience of representation is shown on Domain services layer.</p> <p>API Gateway is routing API requests between components.</p> <p>Specific to domain components are:</p> <ol style="list-style-type: none"> 1)wallet engine – responsible for user account information, wallet private & public keys, user balances, user orders (placement & history), user funding/withdrawal (and history) 2)bridges – allows deposit/withdraw assets from other chains, i.e. Ethereum, Bitcoin and so on 3)asset engine – responsible for listing of assets and keeping assets information across chain 4)orderbook engine – orders matching and execution
General Services	<p>General services layer contains “general purpose” services, not depended on platform domain. We have here:</p> <ol style="list-style-type: none"> 1)blockchain engine – is core specialized blockchain 2)communication engine – allows nodes to communicate by use of special protocol 3)consensus engine – supports consensus in blockchain 4) node health monitoring/alert engine – monitors node health
Storage	<p>On “Storage layer” we have storage engine which ensures persistence of blockchain information</p>

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4.3 Platform highlights

4.3.1 Pure-X token functionality

- Possible to buy and sell freely (with use of cryptocurrency).
- Possible to use for:
 - o Voting for governance/development decisions
 - o Voting as validator (pairs listing and other actions which concerns platform as a whole), requires specific number of tokens staked
 - o Payment for products/services on platform
 - o Other token use-cases may arise

4.3.2 Blockchain layer

Own blockchain with gas-less approach, with ability to move assets from/to other chains. This approach will allow very fast and gas-less transactions on platform. Also, as this layer is implemented “from scratch”, it has specialized functionality optimal for DEX. For instance, users orders or funds are not public to other users (as it will happen on any other blockchain, like Ethereum, Bitcoin, or any clone of popular public blockchain).

4.3.3 Core use-cases

- “Solo trader” runs own node and trade crypto assets.
- Crypto trading startup runs node plus own bot(s) created with Platform SDK.
- Hedge funds users Platform SDK to connect own platform with Pure-X.
- Investor (private or business) works as liquidity provider and gets additional income.
- And other user-cases will arise..

4.3.4 API Use Cases

Use-case	Description
Extension of existing DeFi or CEX to DEX option	Current trading company or CEX or can use platform API to provide their customers access to crypto trading. This way they will run one node for company and will split funds based on own platform logic between ‘own’ customers.
Advanced solo-trader use API to run bots	Solo-trader (or small trading startup) can use API & SDK to build own bots and trade own strategies.
Solo-trader or company (optionally owning a validator) works as market-maker (automated via API)	Market-making on platform by use of API & SDK. Being validator allows commission-free trading and other benefits.
Build your own custom solution based on platform capabilities	Any other business ideas which can arise, API has enough flexibility to enable them.

4.4 Assumptions/Constraints/Risks

4.4.1 Assumptions

- Crypto related projects stay within legal area in selected markets (or at least will stay in 'grey' zone).
- Token Sale will demonstrate investors interest to platform and needed budget will be collected.

4.4.2 Constraints

- GEO: Some markets could be closed or limited to platform, it will depend on regulation withing crypto area, which is quickly changing.

4.4.3 Risks

Area	Description	Strategy
Legal	Major prohibition of crypto-related project/activities in currently available jurisdictions	Accept risk (i.e., nothing else we can do). Develop architecture in flexible manner to be able to pivot solution
Budget	Budget is limited comparing to ambitions	Ensure that project starts from investment infrastructure to allow fundraising
Competition	Competition can start to build similar projects	Ensure fast start and delivery of functionality in staged manner for fast time to market but with limited functionality
Technological	Technology ban from cloud providers and similar issues	Use of vendor-independent technological stack and experienced development team

4.5 Business Processes coverage (high-level)

4.5.1 End-customer

- Start node with new wallet.
- Deposit/Withdraw assets through bridge.
- Trade - Place orders (limit/stop).

4.5.2 Validator

- Propose new base assets list.
- Vote for proposed base assets list (yes/no).

-
- Propose new pairs list.
 - Vote for proposed base assets list (yes/no).
 - Deposit/Withdraw assets through bridge.
 - Trade - Place orders (limit/stop).

4.5.3 Developer (Pure-X team or external)

- Develop new bots, UIs & API integrations with use of platform SDK.

4.5.4 Liquidity provider/Market maker

- Deposit/Withdraw assets through bridge.
- Trade - Place orders (limit/stop) – in automated mode by using developed bot.

4.5.5 Partner (integrated via API)

- Use platform as a service (PAAS) via API for own projects
- Order services from developers

4.5.6 Platform operations/developers in Pure-X team

- Develop updates to node software and related software.

4.6 Global Requirements

4.6.1 General

- Decentralization.
- Anonymity.
- Unlimited scalability on all levels.
- Easiness of customization.
- Open architecture.
- API integration possibilities.

4.6.2 Design

- Focus on user anonymity/privacy.

4.6.3 Performance Requirements/Performance Engineering

- Response time should not depend on load (auto-scaling based on number of requests/users).
- Disaster recovery procedures in place and tested.

4.6.4 Security

- Security standards compliance.

4.7 Business summary

- Own specialized blockchain and consensus engine enables users funds and operations privacy and fastest operations up-to-date in decentralized manner. Current metrics show 100 ms block finality in Pure-X blockchain (fastest known result up-to-date is 300 ms).
- Suggested architecture ensures decentralization, anonymity, scalability and readiness for high load on all levels. Even on communication level, nodes communicate without disclosure of IP addresses.
- Architecture is decoupled with components connected with **API Gateway**, which enables easy upgrade/replacement of current features and development of new features.
- Configurable (via API Gateway) components interactions, allows fast composition of new features.
- Suggested architecture is based on free, opensource, but optimal technologies up-to-date, allowing cost-effective development and support, limit costs for internal platform team and perspective partners.
- Architecture is built with approach allowing to minimize dependency on specific stack and cloud/hosting provider. It is possible to rollout platform on any existing cloud provider or on premises.

5. Platform financial model

5.1 Model

Platform financial model is based on information from market outlook. I.e. top down we estimate current market size and feasible market share we target (just 0.3%, to ensure we do not run into over-optimistic estimations).

Here we have cash-flow for first fully operational year (next year after rollout year). All next years after first one we can estimate based on some coefficient and build scenarios (conservative, pessimistic, optimistic).

1st commercial year (after rollout)

Year	Year1	year to year change		
total 'DEX' market size, users	37000000	optimistic	conservative	pessimistic
total 'DEX' market size, USD	\$ 850 000 000 000			
target market share	0,30%	market size 1,1	1,02	1
revenue from comission (funding)	0,50%	market share 2	1,2	1,1
effective tax on profit	25%			

REVENUE	
revenue from comission	\$12 750 000
total users	111 000

TOTAL REVENUE	\$ 12 750 000
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COSTS	
dev team - 5 core developers with average yearly salary \$500K	\$ 2 500 000
platform related marketing costs	\$ 500 000
dev infrastructure	\$ 150 000
TOTAL COSTS	\$ 3 150 000

REVENUE minus COSTS	\$ 9 600 000
AFTER TAXES	\$ 7 200 000

Figure 6. Financial models parameters & 1st commercial year (after rollout)

5.2 Conservative business valuation

We can make business valuation, here valuation is based on very conservative approach. As if we estimate grocery chain, not IT business in emerging technology space. It is done deliberately, to make our figures as safe for perspective investors, as possible.

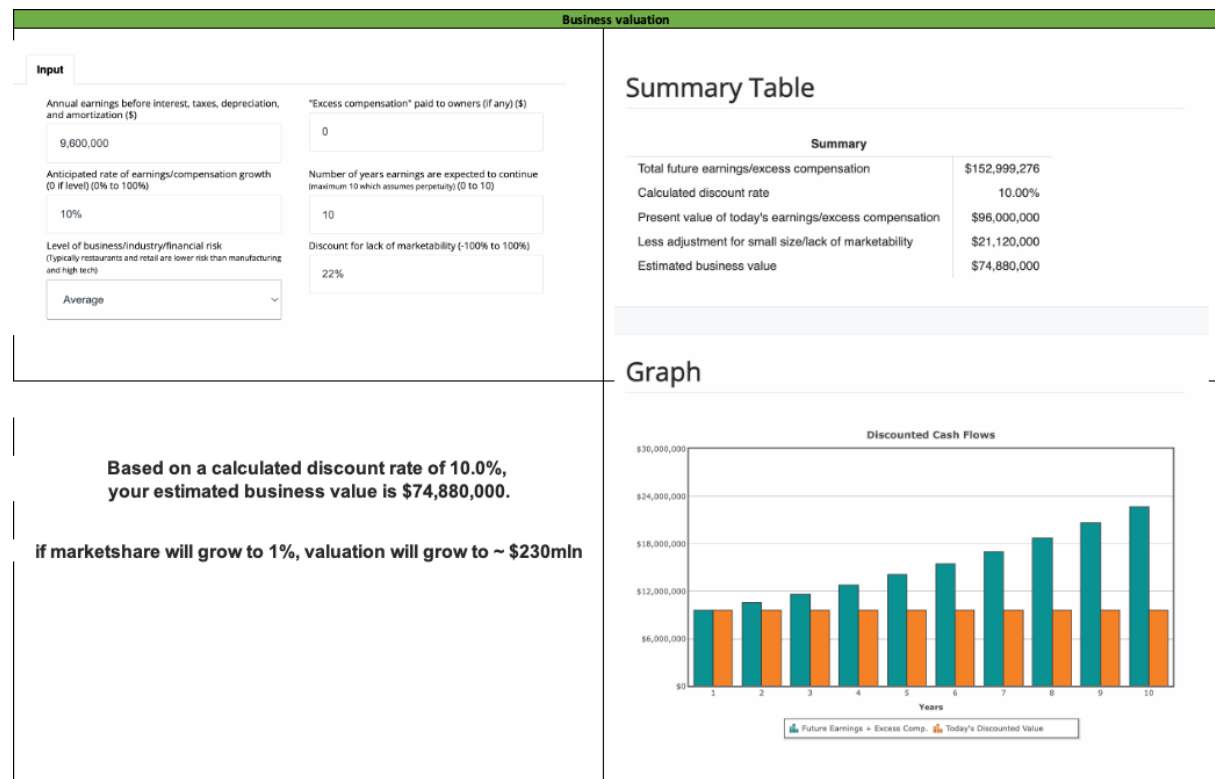


Figure 7. Business valuation

5.3 Financials from classic investing standpoint

Here, we estimate from classic investing standpoint the timeline for classic investor to return investment. I.e. we do not go here for scenario of shares costs growth, but just estimate return of investment from business profits. I.e. we do not target to build another 'Uber' (which is still in debts), with non-realistic valuation.

Investors fully returns investment, based on this (very conservative) approach, within five years.

But of course, investor can exit at any point, i.e. sell shares, which, based on current situation in the IT space, can grow significantly in price within 1-2 years after launch.

Can be sold from 5% up to
25% of the company
(total)

Company valuation (100%) \$ 74 000 000

Cost of 5% \$ 3 700 000

Expected growth (yearly) 20%

Share- change to
recalculate

5%	Development	conservative scenario, full investments recovery in 5 years				
Invested	\$ 3 000 000					
company income before taxes						
payback	investor share	Year1	Year2	Year3	Year4	Year5
	Accumulated total					
	Full recovery of invest	\$ 9 600 000	\$ 11 520 000	\$ 13 824 000	\$ 16 588 800	\$ 19 906 560
		\$ 480 000	\$ 576 000	\$ 691 200	\$ 829 440	\$ 995 328
		\$ 480 000	\$ 1 056 000	\$ 1 747 200	\$ 2 576 640	\$ 3 571 968

6. Pure-X Platform Key Principles

Platform will continuously support the following core principles.

Anonymity: Platform will provide high level of anonymity. No personal data will be collected during user (wallet) registration. No personal data will be stored. Specific implementation of consensus algorithm will ensure that user-related transactions will not be accessible to other users (although will be accessible to validators). Communication protocol will not disclosure IP addresses of nodes, thus users personality disclosure based on wallet address will be complicated and will not be possible if users takes precautions and do not disclosure personal address to third parties.

Open: Platform will have open SDK and will allow for extensions by third-party developers. Possible extensions could be alternative UIs, trading bots and so on.

Decentralization: Platform is based on specially developed blockchain, each user (wallet) runs own node. Node software is light enough to be able to run on Android phone, for instance (if needed). All changes to platform are voted by validators. Any node can become validator node, in case of respective number of tokens is staked. Our philosophy is to be as decentralized as possible.

Mission critical: Platform will provide industrial-grade accessibility and reliability in crypto trading space that operate 24/7 with minimal support requirements, based on decentralization.

6.1 Platform Governance

Platform governance here is considered for its' "post-implementation" phase. We need to insure platform vitality, further development, growth in best interest of customers, investors and partners.

In frame of Platform Governance, we agree on the following.

Platform Goals & Objectives

Platform goal is to provide reliable, transparent and easily accessible trading-related products and services for customers worldwide and to provide decentralized trading ecosystem across the globe.

Stakeholders

We agree that Platform governance involves roles including stakeholders, where the stakeholders may include organizations, boards, and other groupings that facilitate defining and assigning the responsibilities of governance. In defining stakeholders voting the following principle will be used - most weight have stakeholders with higher number of tokens owned.

Services

Platform provides services to end-customers and partners. We agree that Platform services need to be measured, specific metrics need to be created and controlled. Services need to have Service Level Agreement behind them. If services are covered by Partners, Platform governance will require from Partners to support Service Levels for end-customers.

Processes

Platform processes need to be documented, have consistent outcomes, optimized. Processes can be owned by partners or by Platform. Platform governance requires from Partners developing their own processes on Platform consistently with this approach.

Continuous Improvement

Platform adopts principle of continuous improvement based on customers best interest.

Vitality

We agree that Platform governance is an ongoing process that should have a feedback loop to keep it current and aligned with Platform goals. We agree that plan, define, implement, and monitor stages occur iteratively as part of the ongoing process of governance and to ensure vitality.

Open API Guidance and Usage

API exists on Channel layer of the Platform architecture. API gives access to the Platform functionality.

API Core Principles

There are few principles which we aim to support in our API.

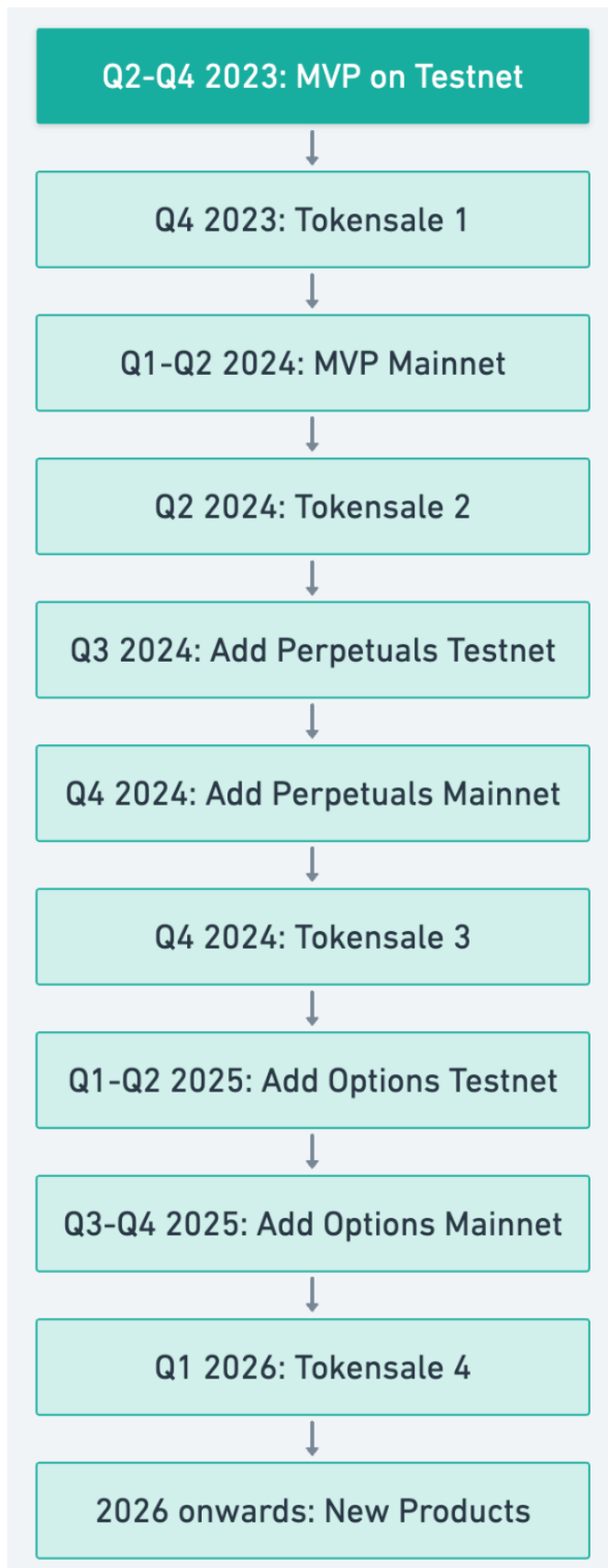
Backward compatibility – when we will rollout new API versions, all solutions which were developed based on previous versions will continue to function with only exception when transition is required based on security.

Isolation – API will be isolated from specific implementation details on other Architecture layers.

Completeness – API will fully cover all platform functionality.

Developer friendliness - our API will be covered by extensive documentation, examples and tutorials.

7. Pure-X Platform Roadmap



8. Summary

Decentralized crypto exchanges have seen significant evolution, with DEXs becoming more popular due to their enhanced security, transparency, and user autonomy. These exchanges operate on blockchain platforms, allowing users to trade directly without intermediaries. Recent data indicates that the trade volume ratio of DEXs compared to centralized exchanges has reached a new peak, signaling a shift in user preferences towards decentralized platforms.

The DEX market has grown substantially, with a combined market cap of approximately \$836 billion/year as of August 2023. The user base for DEXs is expanding, driven by the rise of DeFi and the increasing demand for decentralized solutions.

Pure-X is an innovative decentralized crypto exchange designed to transform how users trade and manage their digital assets. Unlike traditional centralized exchanges, Pure-X promises a secure, transparent, and seamless trading experience, ensuring users maintain full control over their assets.

- **User Autonomy:** No need for KYC procedures; users can connect their wallets and start trading.
- **Funds Security:** Funds remain in the user's wallet on the Pure-X blockchain, ensuring safety even in unforeseen circumstances.
- **Efficiency:** With all users running their node, Pure-X guarantees a protocol that ensures fund safety without compromising efficiency.

Pure-X's protocol expands beyond traditional definitions. It operates on a node-based system, similar to Bitcoin, ensuring its resilience even if official nodes are compromised. The platform also supports specialized API calls and encourages the development of alternative user interfaces.

Pure-X envisions a platform where nodes also function as user wallets, capable of processing various order types and handling transfers. The system will also integrate with bridges to different blockchains.

Pure-X stands by principles of anonymity, openness, decentralization, mission-critical reliability, and continuous improvement.

9. Pure-X Platform Token Terms and Conditions

9.1 General information

In order to fund the development of the Pure-X platform ecosystem, token will be sold to the public (further Token or Tokens), in exchange of cryptocurrencies. Party that intends to purchase Token (Token Purchaser) is subject to the acceptance of the Risks (see 8.3). Neither these Whitepaper nor any other material relating to platform or Tokens will be or have been filed with regard to legal standards such as the Federal Act on Stock Exchanges and Securities Trading law, the Financial Market Infrastructure Act, the Collective Investment Schemes Act, which are not applicable to this token sale. Therefore, laws and acts that ensure that investors are sold investments that include all the proper disclosures and are subject to regulatory scrutiny for the investors' protection, are not applicable in this case. Every Token Purchaser should receive proper advice in order to understand whether the purchase of the Token is appropriate for him or not. Anyone purchasing Tokens (Token Purchaser) expressly acknowledges and represents that she/he has carefully reviewed this white paper and fully understands the risks, costs and benefits associated with the purchase of Tokens.

9.2 Knowledge required

The Token Purchaser undertakes that she/he understands and has significant experience of cryptocurrencies, blockchain systems and services, and that she/he fully understands the risks associated with the token sale as well as the mechanism related to the use of cryptocurrencies (incl. storage). Pure-X Platform shall not be responsible for any loss of Tokens or situations making it impossible to access Tokens, which may result from any actions or omissions of the user or any person undertaking to acquire Tokens, as well as in case of hacker attacks.

9.3 Risks

Acquiring Tokens and storing them involves various risks for Token Purchaser, in particular the risk that team behind Pure-X Platform may not be able to launch its operations and develop its blockchain and provide the services promised. Therefore, and prior to acquiring Tokens, any person should carefully consider the risks, costs and benefits of acquiring Tokens in the context of the token sale and, if necessary, obtain any independent advice in this regard. Any interested person who is not in the position to accept or to understand the risks associated with the activity (incl. the risks related to the non-development of the Pure-X Platform) or any other risks should not acquire Tokens.

9.4 Important disclaimer

This white paper shall not and cannot be considered as an invitation to enter into an investment. It does not constitute or relate in any way nor should it be considered as an offering of securities in any jurisdiction. This white paper does not include or contain any information or indication that might be considered as a recommendation or that might be used as a basis for any investment decision. Team behind Pure-X platform is not to be considered as an advisor in any legal, tax or financial matters. Any information in the white paper is provided for general information purposes only and team behind Pure-X platform does not provide any warranty as to the accuracy and completeness of this information. Team behind Pure-X platform is not a financial intermediary and is not required to obtain any authorization for Anti Money Laundering purposes. Acquiring Tokens shall not grant any right or influence over Pure-X platform team and governance to the Purchasers. Regulatory authorities are carefully scrutinizing businesses and operations associated to cryptocurrencies in the world. In that respect, regulatory measures, investigations or actions may impact team behind Pure-X Platform and even limit or prevent it from developing its operations in the future. Any person undertaking to

acquire Tokens must be aware of the white paper may change or need to be modified because of new regulatory and compliance requirements from any applicable laws in any jurisdictions. In such a case, purchasers and anyone undertaking to acquire Tokens acknowledge and understand that neither team behind Pure-X platform nor any of its affiliates shall be held liable for any direct or indirect loss or damage caused by such changes. Team behind Pure-X platform will do its utmost to launch its operations and develop the Pure-X platform. Anyone undertaking to acquire Tokens acknowledges and understands that team behind Pure-X platform does not provide any guarantee that it will manage to achieve it. They acknowledge and understand therefore team behind Pure-X platform (incl. its bodies and employees) assumes no liability or responsibility for any loss or damage that would result from or relate to the incapacity to use Tokens, except in case of intentional misconduct or gross negligence.

9.5 Representation and warranties

By participating in the token sale, the Token Purchaser agrees to the above and in particular, they represent and warrant that they: have read carefully the white paper; agree to their full contents and accept to be legally bound by them; · are authorized and have full power to purchase Tokens according to the laws that apply in their jurisdiction of domicile; live in a jurisdiction which allows Pure-X team to sell Tokens through a token sale without requiring any local authorization; are familiar with all related regulations in the specific jurisdiction in which they are based and that purchasing cryptographic tokens in that jurisdiction is not prohibited, restricted or subject to additional conditions of any kind; will not use the token sale for any illegal activity, including but not limited to money laundering and the financing of terrorism; have sufficient knowledge about the nature of the cryptographic tokens and have significant experience with, and functional understanding of, the usage and intricacies of dealing with cryptographic tokens and currencies and blockchain-based systems and services; purchase Tokens because they wish to have access to the Pure-X platform limited functions for token owners in future; are not purchasing Tokens for the purpose of speculative investment or usage.

9.6 Governing and arbitration

The Token Purchaser acknowledges and accepts that the Pure-X platform token sale operation is taking place within legal environment that is still under development.

The Token Purchaser agrees to seek an amicable settlement without bringing any legal action. All disputes arising from or under these conditions shall be resolved by negotiations. The negotiations proceedings shall be conducted in English.

10. References

- [1] <https://cryptoslate.com/decentralized-to-centralized-exchange-trade-volume-ratio-sets-new-all-time-high-at-22/>
- [2] <https://dune.com/hagaetc/dex-metrics>
- [3] <https://www.theblock.co/data/decentralized-finance/dex-non-custodial>
- [4] M. Swan, *The Definitive Guide to DeFi: How Decentralized Finance is Disrupting the Financial System*. Apress, 2020.
- [5] V. Buterin, “Ethereum white paper,” 2013
- [6] T. Elbahrawy, A. E. El-Esawi, M. Elsherif, and A. Helmy, “Decentralized vs centralized exchanges: A comparative study,” in *2019 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)*. IEEE, 2019, pp. 139–148.
- [7] CoinGecko, “Coingecko,” 2023. [Online]. Available: <https://www.coingecko.com/en/exchanges>
- [8] [DODO, “Dodo whitepaper,” 2020. [Online]. Available: <https://dodoex.github.io/docs/docs/>
- [9] P. Daian, S. Goldfeder, A. Kell, I. Bentov, and A. Juels, “Flash boys 2.0: Frontrunning, transaction reordering, and consensus instability in decentralized exchanges,” in *Proceedings of the 27th USENIX Security Symposium*, 2020, pp. 2231–2248. [Online]. Available: <https://www.usenix.org/conference/usenixsecurity20/presentation/daian>
- [10] H. Adams and N. Zinsmeister, “Uniswap v3 whitepaper,” 2021. [Online]. Available: <https://uniswap.org/whitepaper-v3.pdf>
- [11] H. Adams, “Uniswap v2 whitepaper,” 2020. [Online]. Available: <https://uniswap.org/whitepaper.pdf>
- [12] J. Peterson, J. Krug, M. Zoltu, A. K. Williams, and S. Alexander, “Augur: a decentralized oracle and prediction market platform,” 2018. [Online]. Available: <http://rgdoi.net/10.13140/2.1.1431.4563>
- [13] C. M. Kahn and W. Roberds, “Real-time gross settlement and the costs of immediacy,” *Journal of Monetary Economics*, vol. 47, no. 2, pp. 299–319, 2001. [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S0304393201000472>
- [14] M. Labs, “Sui blockchain whitepaper,” 2022. [Online]. Available: <https://github.com/MystenLabs/sui/blob/main/doc/paper/sui.pdf>
- [15] R. Fritsch, “Concentrated liquidity in automated market makers,” in *Proceedings of the 2021 ACM CCS Workshop on Decentralized Finance and Security*, ser. DeFi ’21. New York, NY, USA: Association for Computing Machinery, 2021, p. 15–20. [Online]. Available: <https://doi.org/10.1145/3464967.3488590>