

# **PANDEXCHANGE**



**Invest Wisely, Stay  
Decentralized with  
PandExchange's DCA  
Approach**

# PROBLEM

## No fully decentralized Dollar-Cost Averaging investment DApp

**Dollar-Cost Averaging (DCA)** is an extensively adopted and effective investment strategy for cryptocurrencies. It involves regularly investing a fixed amount of one asset into another asset over **predetermined intervals**. However, the current challenge lies in the absence of a fully decentralized application that enables users to employ DCA while **maintaining complete decentralization**.

The primary reason behind this limitation is the inherent inability of a smart contract to schedule and execute functions at predetermined future dates. Consequently, **external interventions become necessary** to facilitate such functionality. The problem is then how to decentralize these external interventions?



# SOLUTION

## PandExchange

**PandExchange** emerges as the **optimal solution** to the challenge at hand by decentralizing the external interventions necessary for executing functions on specific dates. Our objective is the absolute **decentralization of our services**, guaranteeing uninterrupted access to Dollar-Cost Averaging investments and forthcoming features.



**PandExchange** is here to become a major investment decentralized application with a heavy focus on **Dollar-Cost Averaging investment** and users-centric features. Through this Whitepaper, you will be able to learn exactly what, why and how we plan to do that. By delving into the details, you will gain a comprehensive understanding of our vision, our purpose, and our plans for creating a truly remarkable **decentralized investment experience** for all users across the globe.

For any remaining questions, please do not hesitate to contact us on social media or by email, contact information are at the end of the whitepaper.

# VISION

## Enabling Seamless and Secure Decentralized Investing

At **PandExchange**, our team is dedicated to providing efficient decentralized tools that empower users in their cryptocurrency journey. Decentralization lies at the heart of our vision, as we believe it fosters **trust**, **security**, and **resilience** within the ever-evolving crypto landscape. We also place immense value on **user feedback**, as it serves as a guiding force for our continuous improvement and ensures that our offerings align with the needs and expectations of our community, do not hesitate to reach out to us for any concerns, questions or ideas you may have.

We have chosen to work on Dollar Cost Averaging (DCA) because in our view it stands out as one of the best investment strategies, particularly for beginners, due to its simplicity and potential for long-term gains for users. By promoting DCA and cultivating a beginner-friendly environment, we aim to contribute to the worldwide adoption of cryptocurrencies, enabling individuals from all walks of life to access and benefit from this exciting ecosystem. That is why we are doing PandExchange.

While we are not the first to propose on-chain DCA, our implementation is the first to propose **full decentralization** natively. With our design, even in the unlikely events our team ceased to operate PandExchange will be able to continue operating on its own thanks to its decentralized design.

# COMMITMENT

## Our pledge to the community

The **PandExchange** team is deeply committed to building a **strong and vibrant community**. Our foremost priority is ensuring the **security** and **protection** of our users' assets and data. We employ rigorous security measures and best practices to **safeguard the integrity of our platform**, including regular security audits and continuous monitoring and unit testing. Furthermore, we are dedicated to the **long-term development** and evolution of **PandExchange** with our team that consists of passionate engineers believing in blockchain technology and its potential for transformative change.

With a user-centric approach, we want to actively **engage with our community**, fostering open communication channels and providing timely support. We strongly believe that by nurturing a collaborative environment, placing the community's interests at the core of our operations and working hard on our end, **PandExchange** will flourish as a trusted and reliable investment platform for years to come, and for you to enjoy.



# CONCEPT

## Decentralization of external functions execution

Investing with **Dollar-Cost Averaging** involves **executing exchanges** at regular intervals according to each user's DCA investment plan. However, pure execution on a **Smart Contract** is not feasible as explained before. **PandExchange** addresses this limitation by redistributing the execution of these functions to users known as "**Validators**." Any user has the opportunity to become a Validator. In return for covering the gas fees associated with executing these functions, Validators **receive rewards** from the owner of the DCA investment plan, who prepaid the gas fees for all future transactions required. This innovative approach ensures the seamless execution of DCA strategies while incentivizing active participation from Validators and providing a fair and transparent system for gas fee compensation. This not only allow for automated DCA, but many other features requiring automation from an end user point of view.

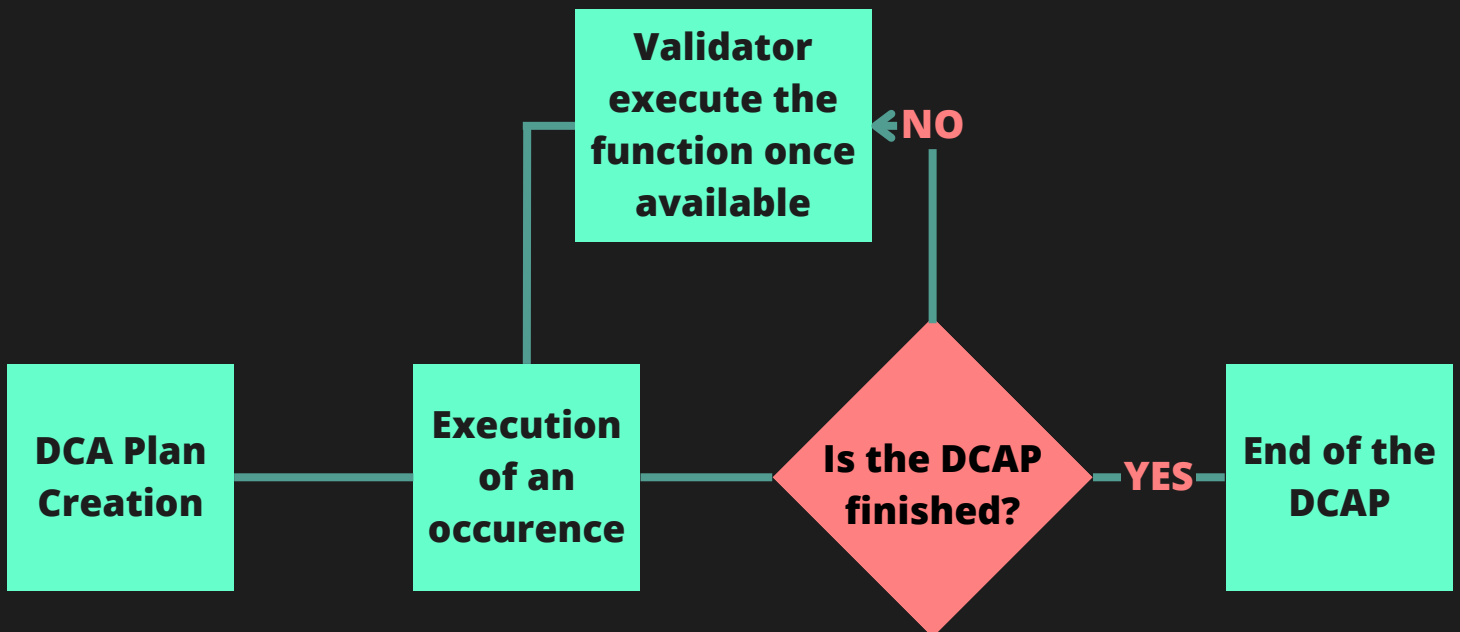


# CONCEPT

## DCA Plan with Validators

**PandExchange Validator** feature works with the DCA Plans in the following way. A DCA Plan includes generally multiple occurrences, which have to be executed at a set interval from outside of the Smart Contract. Validators are able to retrieve which occurrences are ready to be executed, along with how much they will be paid for doing so, and then execute them to perform the DCA Plans occurrences of any users. This implies that to be executed, a transaction need to be worth, meaning the reward outweigh the gas cost.

As stated before, this is just the first use case of the Validators system for the Beta, and it will be extended to work with many other real-world applications in the long run with a general API directly from the launch of the official release.



# FEATURES

## Major features

PandExchange will incorporate the following features:

- Dollar-Cost Averaging Plans
- Price aggregation
- Validators Program
- Crypto Portfolio Handler
- Standardisation and expansion of the Validators system to general use cases
- PandExchange as a DEX

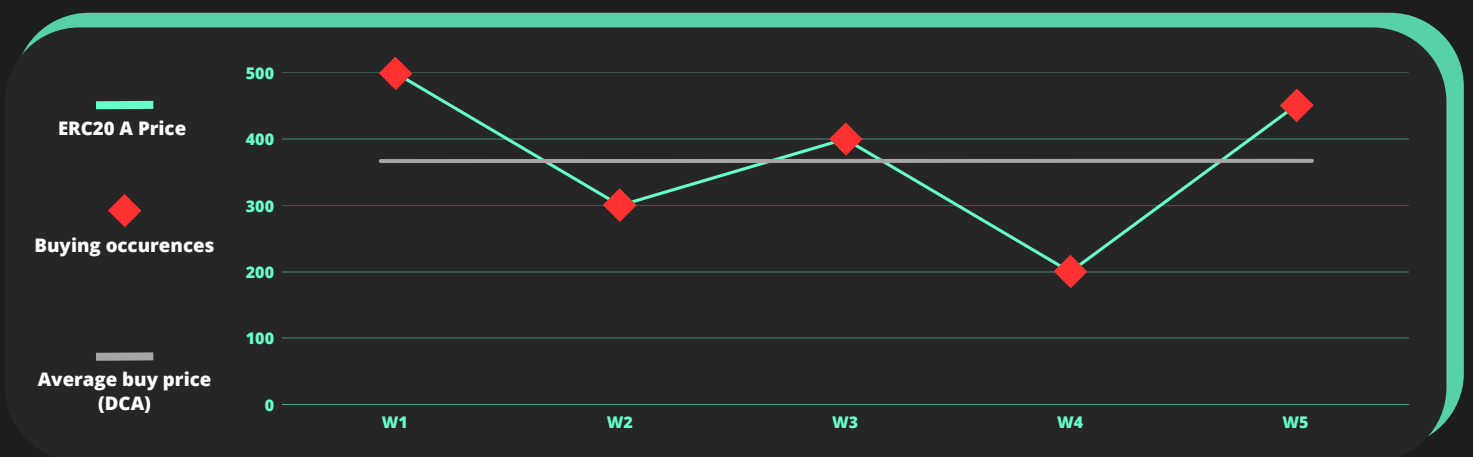
These are the core features of **PandExchange** and they will be rolled out over time according to our roadmap down below. The **DCA investment plans** and Validator Program features are already implemented in **PandExchange Beta version**, as well as the backbone of the **Achievement NFT System**. All these feature will be supported by the PandEx ERC20 token, the utility token of PandExchange.



# FEATURES

## Decentralized DCA plans

**PandExchange** introduces a groundbreaking decentralized Dollar-Cost Averaging (DCA) investment feature, revolutionizing the way users invest in cryptocurrencies. Through its **decentralized architecture**, PandExchange enables users to seamlessly implement DCA strategies while ensuring complete autonomy and security. Unlike traditional centralized platforms, PandExchange leverages smart contracts and a distributed network of Validators to **execute transactions at predefined intervals**. This decentralized approach eliminates the need for external intermediaries and provides users with full control over their investments. By decentralizing the DCA investment process, PandExchange empowers users to accumulate assets systematically, mitigate market volatility, and harness the benefits of long-term investment growth in a trustless and transparent environment.



# FEATURES

## Decentralized DCA plans

**PandExchange DCA investment** plans are already available in PandExchange Beta. It includes the following features:

- Fully decentralized exchange automation
- Ability to perform each DCA Plan through the DEX of your choice, from a curated list for each network
- Monitoring of your DCA Plans and capabilities to update certain parameters on the go, such as the slippage tolerance

The **decentralized DCA Plans** feature will be further enhanced with the following features and even more to come:

- Ability to create DCA Plan between a cryptocurrency and a list of assets, either predefined or according to certain characteristics such as the 3 assets with the most market cap for example



# FEATURES

## Validators Program

**PandExchange** introduces an innovative collaborative feature, designed to enhance the **decentralized** nature of the platform and ensure reliable execution of functions. **Validators** play a **crucial role** in the ecosystem by executing transactions on behalf of DCA plan owners.

These Validators, who can be any user of the platform, contribute to the seamless functioning of PandExchange by **handling the execution** of functions that cannot be directly carried out on smart contracts. In exchange for covering the associated gas fees, Validators are **rewarded** by the DCA plan owner who has pre-paid the fees at its creation.

This incentivized participation from Validators fosters a **collaborative environment**, users actively contribute to the execution of transactions while benefiting from the rewards.

# FEATURES

## Validators Program

The Validators feature of **PandExchange** promotes community engagement and reinforces the platform's decentralized and self-sustaining nature.

The **Validators Program** is already up and running on PandExchange Beta. Any user can participate and earn cryptocurrency through it. A great focus will be put on this program to develop guides and tools on how to best use it and how to automate it, in order to increase the amount of Validators and having all transactions executed on time.

Note that the PandExchange team will handle the transactions if needed in the beginning, but our objective is that it is handled **entirely by Validators**.

# FEATURES

## Validators Program Generalization

Once the PandExchange Validators Program has been **fully decentralized**, i.e. does not need our team intervention, it will be expanded to other purposes requiring scheduled transactions.

The first step will be the creation a **standard convention** for PandExchange Validators, to easily allow the addition of other DApps inside the places where Validators will look for functions to execute. The design of this convention has **already been developed** by our team. The second step will be the development of new features on PandExchange using the Validators Program, such as recurring paiements, salaries and much more. Finally, third parties DApps will be manually added by our team inside the PandExchange Validators Program to solve use cases we did not think of and that will use our previously mentioned standard.

The PANDEX utility token main purposes being to be used by Validators as you will see below in the tokenomics section.

# FEATURES

## Price aggregator

In addition to providing users with the flexibility to choose the DEX for their DCA trades, PandExchange will introduce a sophisticated **price aggregation feature** to optimize the trading experience further. This enhancement ensures that users automatically receive the most favorable prices when executing their DCA Plans. The price aggregation mechanism will be seamlessly integrated into the creation of DCA Plans, allowing users to harness the benefits of optimal pricing.

What sets PandExchange apart is its commitment to ongoing optimization. Not only will users have the advantage of price aggregation at the initiation of a DCA Plan, but this feature will also **dynamically update** throughout the lifetime of the plan. This continuous monitoring and adjustment mechanism guarantee that users consistently enjoy the best possible prices for every swap within their DCA Plans.

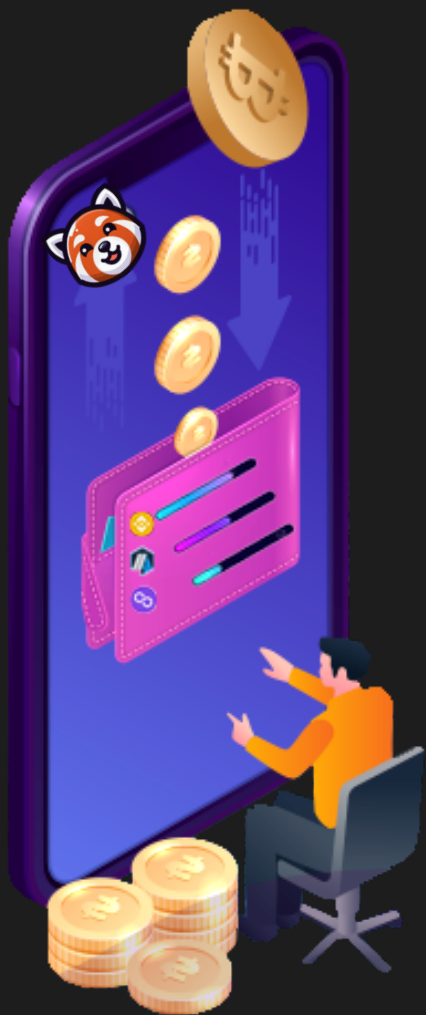
It's important to note that while price aggregation is a powerful tool for optimizing trades, PandExchange remains dedicated to user autonomy. Thus, **manual selection** of the trade path and the preferred DEX will always be an available option. This flexibility ensures that users can tailor their experience based on their preferences and strategic considerations.

# FEATURES

## Crypto Portfolio Handler

The **automatic crypto portfolio** feature of PandExchange will offers users a convenient and efficient way to **manage their cryptocurrency investments**. With this feature, users will have the ability to define their desired crypto portfolio for each supported network, specifying the allocation and composition of different cryptocurrencies.

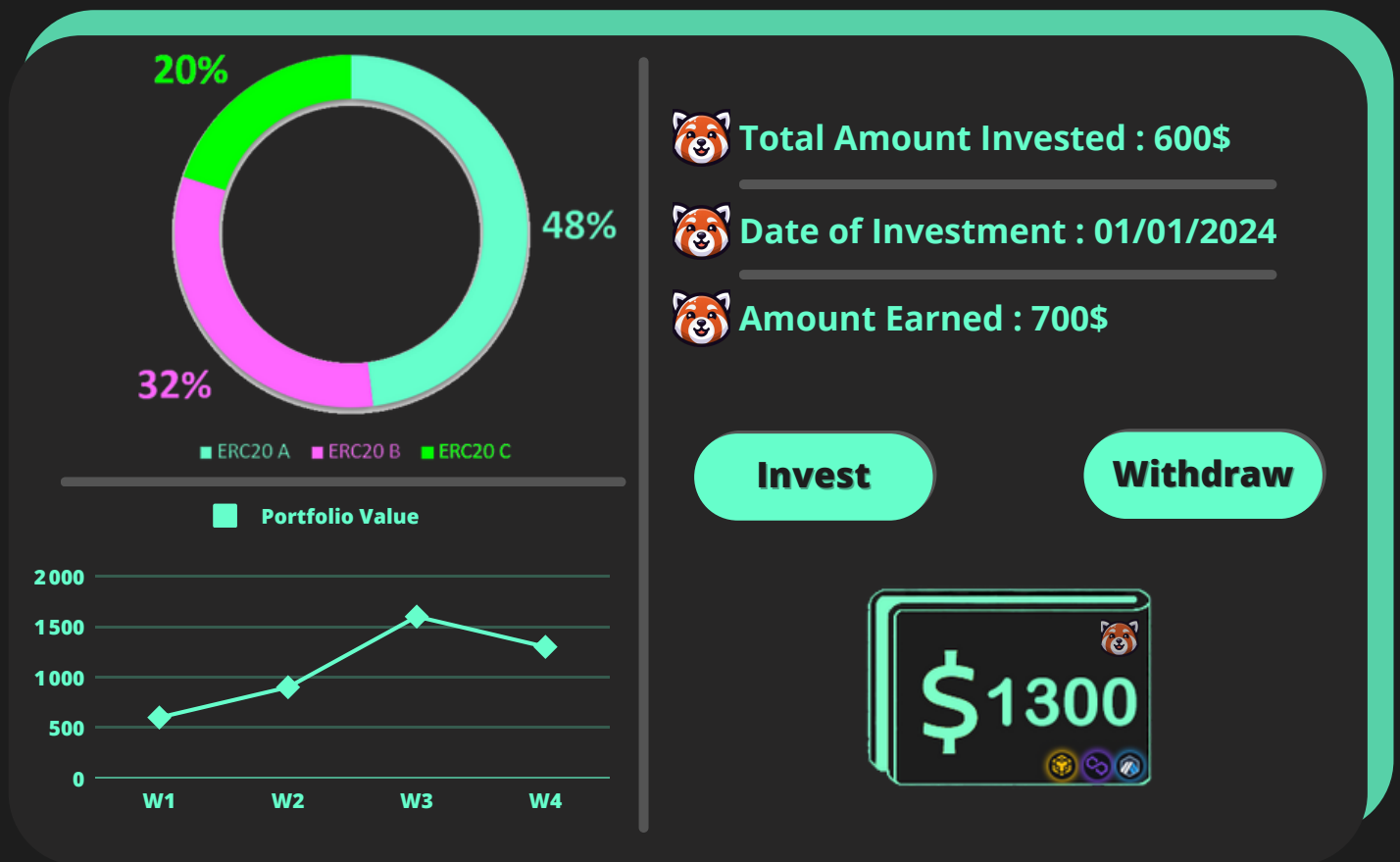
Once the portfolio is set, **PandExchange** leverages its Validators feature to execute the necessary trades on behalf of the user. Validators, as **active participants** in the ecosystem, perform the functions required for building the portfolio using **Dollar-Cost Averaging** and ensuring that the desired allocation is maintained at all time. This automated approach saves users time and effort by eliminating the need for manual trading and monitoring.



# FEATURES

## Crypto Portfolio Handler

By leveraging the **decentralized execution power of Validators**, this feature will provide users with a **reliable and secure** solution for managing their crypto portfolios, enabling them to easily maintain their desired asset allocations and **optimize their investment** strategies while benefitting from **DCA** and decentralization.



Complete portfolio handler design mockup



# FEATURES

## PandExchange DEX

PandExchange aims to become an **independent DEX** with a strong focus on **Dollar-Cost Averaging** (DCA) features and investment methods. By prioritizing DCA, PandExchange **revolutionizes** cryptocurrency investments, offering a comprehensive suite of tools for recurring investments at regular intervals.

With a commitment to decentralization, PandExchange empowers users with **control, flexibility, and efficiency** in their investment strategies. The goal is to create a trusted and accessible DEX that caters to both novice and experienced investors, democratizing access to the world of cryptocurrencies.

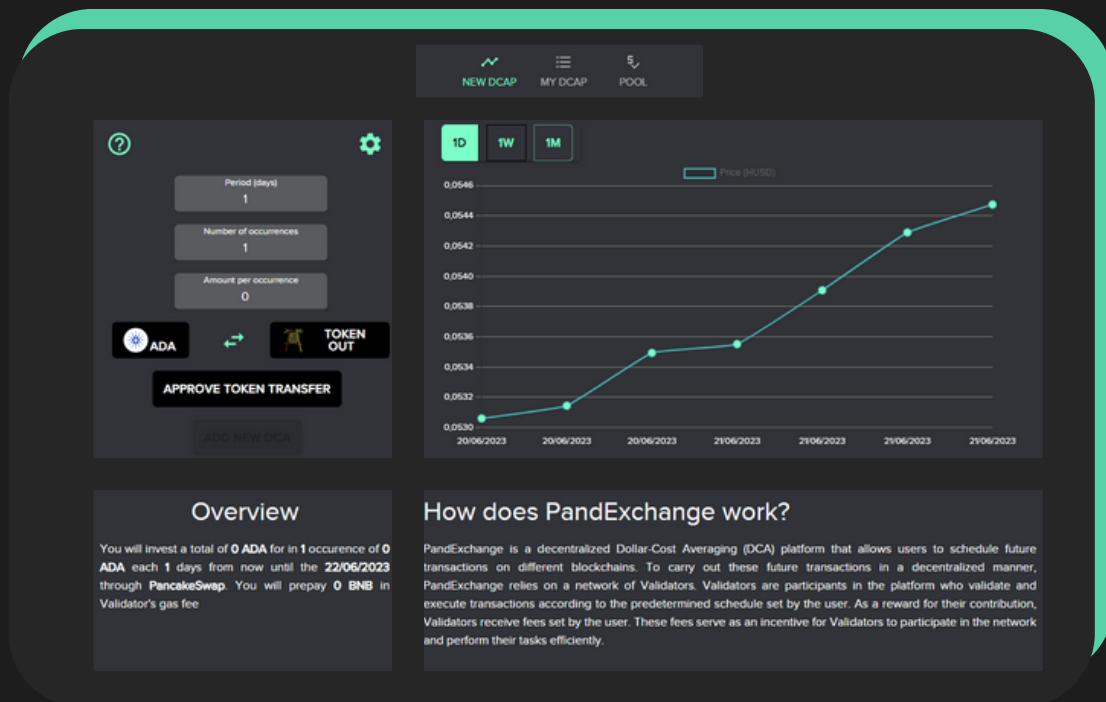


DEX

# PANDEXCHANGE BETA

## Available now

The **PandExchange Beta** is now accessible to all users on multiple chains, including **BNB Chain**, **Polygon**, and **Arbitrum**, as well as on BNB Chain Testnet and Polygon Mumbai. This Beta version of PandExchange showcases its full **base functionalities**, offering essential features like the ability to create DCA investment plans and monitor them easily with PandExchange website. Consider the Beta release as a testament to our ongoing development efforts. We have **ambitious plans** to expand the platform significantly, incorporating all the mentioned features and even more exciting capabilities. The PandExchange team is committed to delivering an enhanced and comprehensive user experience as we continue to evolve and refine our offering. [Try it out now and become part of PandExchange Ecosystem.](#)



# TOKENOMICS

## PANDEX Token

The **PandExchange ERC20 token, named PandEx (PANDEX)**, will be at the core of PandExchange and gives PandExchange users a better experience while using it. The tokenomics of **PANDEX** have been designed around the principle of a deflationist token to better match the long term vision our team has for PandExchange and to grow together with our users. **1,000,000,000 PANDEX** will be initially minted and by design this supply will only diminish over time.

PandExchange will implement a tax mechanism of 3% on buy/sale transactions made on the platform using the native token. This tax can be modified, but a predefined maximum value will be set to 3% to ensure controlled adjustments. The distribution of these taxes will be explicitly defined with 50% percent of it to the development and marketing funds, 33% will be burned and 17% to a stacking reward pool.

Additionally, to prevent large holders from exerting undue influence, an anti-whale mechanism will be in place, capping individual ownership at 3% of the total supply. The anti-whale mechanism will utilize a whitelist feature for essential addresses such as the router, contract, early investors and other purposes clearly defined in the ICO.

# TOKENOMICS

## PANDEX Token

The PANDEX Token will include the following mechanisms in its tokenomics:

- Can be used as the PandExchange Validators reward, in which case PandExchange fees are voided
- Can be used to purchase Achievements NFT, effectively burning the used PANDEX
- Can be stacked using PandExchange non-inflationist stacking mechanism



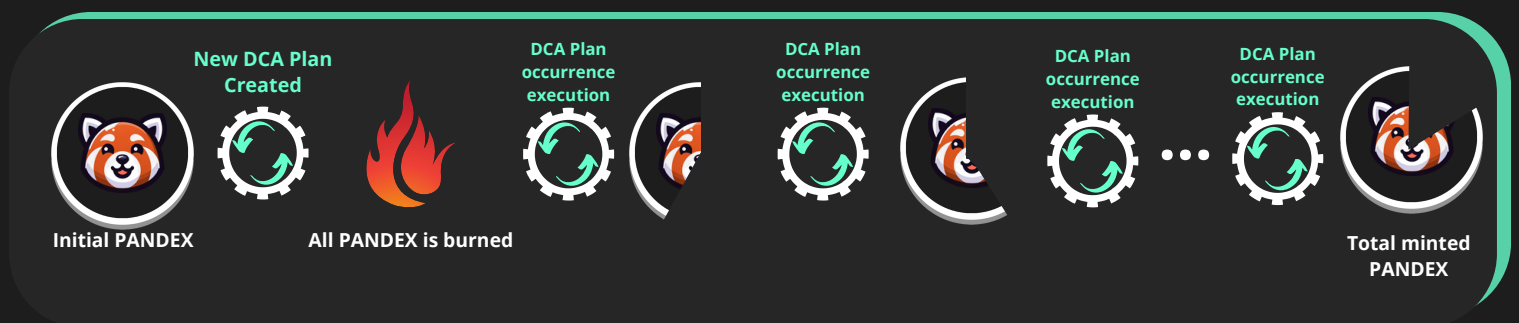
All these features will each be a part in the constant burning of PANDEX Tokens, ensuring its growing scarcity and value.

Also, cliff and linear vesting periods will be incorporated according to the ICO details below to minimize any risks of dumping that could affect standard users and investors

# TOKENOMICS

## PANDEX Token - DCA Plans

PANDEX main feature is the ability to be used to pay the PandExchange Validators reward instead of the chain native token. When creating a DCA Plan, users will be able to choose to prepay the reward with PANDEX, which will burn all provided tokens. When a Validator execute a transaction, a fraction of the burned PANDEX will be minted to the Validator.



The total minted amount will be inferior the burned amount, ensuring that the total PANDEX supply decrease over time. For a single DCA Plan the total minted amount will be equal, with N the total number of occurrences in the DCA Plan, to: **TOTAL\_MINTED = TOTAL\_BURNED \* N/(N+1)**

Using the PANDEX Token as the PandExchange Validators reward while creating a DCA Plan will **void the creation fee** that is normally taken at the start of the DCA Plan.

# TOKENOMICS

## NFT Achievements

**PandExchange** introduces an exciting **NFT Achievement System**, designed to reward users for their engagement and accomplishments within the platform. Through this system, users can **unlock a variety of achievements** by completing specific milestones and actions. PandExchange NFT Achievements will be heavily linked to PandExchange PANDEX utility token as you can see below. They can also be obtained by burning 10,000 PANDEX tokens directly.

Each achievement comes with its **own unique rewards**, but they all include access to stacking, early access to upcoming platform features, airdrops, and more to come. The **NFT Achievement System** adds an extra layer of gamification and incentivization to the **PandExchange ecosystem**, fostering user engagement, and creating a vibrant community driven by shared accomplishments.



# TOKENOMICS

## NFT Achievements

### Creator NFT Collection

- Creating a DCA Plan while holding this NFT allows the Validators to receive a higher proportion of the initial prepaid fees, up to 100%, effectively lowering the required fee amount at creation

### Validator NFT Collection

- Increased PANDEX earnings for participating as a Validator, up to 100% percent of the prepaid fees
- Allow holders to Validate transactions 5 minutes earlier

As more features rolls out, more way to earn **Achievement NFT** and more diverse rewards will be available.



# TOKENOMICS

## PANDEX Token - Stacking

The PANDEX token stacking mechanism not only rewards our users but also bolsters the deflationary nature of our token. Our approach is designed to encourage long-term holding without any token minting, ensuring a sustainable ecosystem. Moreover, the stacking feature actively participate in the burning of PANDEX Tokens and the increase of its scarcity.

To participate in our stacking mechanism, users must possess one of the PandExchange NFTs. This strategic approach encourages users to either invest in utility NFTs, consequently reducing token supply, or actively engage with the PandExchange Ecosystem as standard users or PandExchange Validators.

The rewards earned through stacking are distributed weekly to all participants. The reward pool, constituting 17% of the total weekly tax collection, is allocated based on the user's stacked token proportion and chosen lock period. For example, a user with a 1% stack of PANDEX Tokens in the contract can receive up to 1% of the reward pool, depending on their lock period.



# TOKENOMICS

## PANDEX Token - Stacking

While the reward period remains consistent at **one week**, users have the flexibility to choose stacking periods ranging from 1 to 12 weeks. Opting for a **longer** lock period results in a higher proportion of the total possible reward:

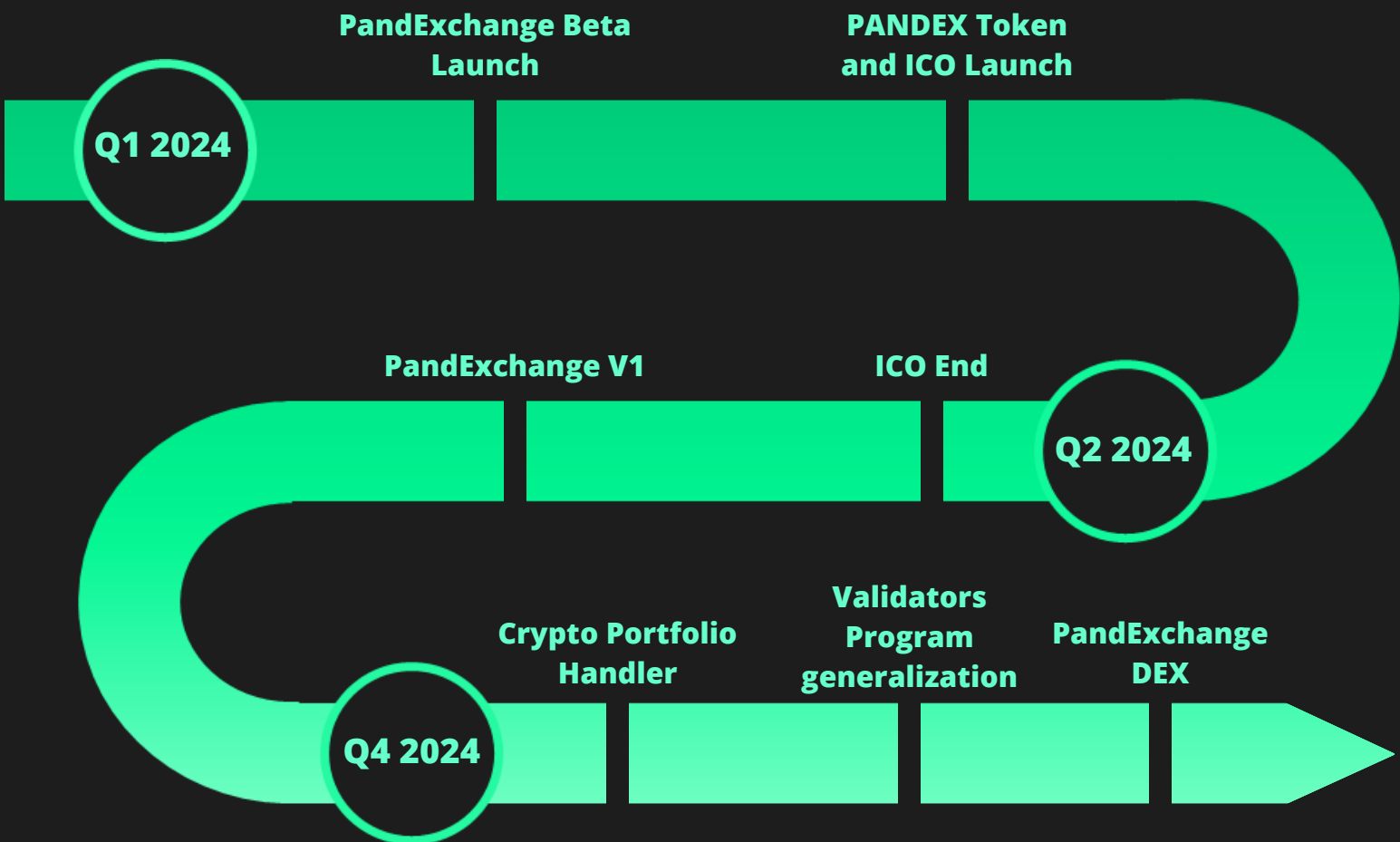
- Stacking 1 week → 80% of the possible reward
- Stacking 2 weeks → 85% of the possible reward
- Stacking 4 weeks → 90% of the possible reward
- Stacking 8 weeks → 95% of the possible reward
- Stacking 12 weeks → 100% of the possible reward

For example, a user stacking 1% of the PANDEX Tokens in the pool for 4 weeks would receive 0.9% of the total reward pool, as compared to 1% for a 12-week lock. Any unrewarded amount automatically contributes to increasing the token's **deflation rate** by being burned.

Our stacking mechanism offers PANDEX holders compelling incentives to retain their tokens for extended periods. It not only aligns with the interests of PandExchange Validators, who receive rewards partly in PANDEX but also contributes significantly to token burning. This dual effect increases the value of PandExchange NFTs and enhance PANDEX's **scarcity** and **long-term value**.

# ROADMAP

## The future of PandExchange



# PANDEXCHANGE TEAM

## Meet PandExchange founders

At **PandExchange**, we strongly believe that transparency is an obligation for any **serious and ambitious project**. You can find below the **who the founders are**. You can also find the contact info for any questions you may have, we are always here to share and discuss with our community.



**François LIARD**  
Co-founder  
Software engineer



**Rémi GIARD**  
Co-founder  
Cybersecurity engineer

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# SUMMARY

## PandExchange

PandExchange is a decentralized application that revolutionizes the way users engage with cryptocurrencies. With a strong emphasis on Dollar-Cost Averaging (DCA), PandExchange enables users to execute recurring investments at regular intervals, mitigating the impact of short-term market fluctuations and potentially maximizing long-term asset accumulation.

By leveraging smart contracts and a network of PandExchange Validators, PandExchange ensures secure and efficient execution of transactions while maintaining a decentralized ecosystem. The platform also introduces solid tokenomics with a guaranteed deflation and important utility including an innovative NFT Achievements system to reward users and non-inflationist stacking. PandExchange will continue to improve and add key features as per our roadmap.

With its commitment to independence and user-centric design, PandExchange aims to democratize access to cryptocurrency investments and aim to provide a seamless, trusted, secure, and accessible investment experience for users of all levels of expertise.