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# Whitepaper

## Self-Custodial Platform for Recurring Payments Management in Stablecoins

# Contents

<b>01. Abstract.....</b>	<b>4</b>
<b>02. Introduction.....</b>	<b>4</b>
2.1 Market Opportunity.....	5
2.2 Problem Statement.....	6
<b>03. Current Payments Landscape.....</b>	<b>6</b>
3.1 Transaction Fees.....	7
3.2 Settlement Speed.....	7
3.3 Cross-Chain Asset Management.....	8
3.4 Interoperability.....	8
3.5 Scalability.....	8
<b>04. Value Proposition.....</b>	<b>9</b>
4.1 Strategic Vision.....	9
4.2 Proposed Solution.....	10
<b>05. Platform Features.....</b>	<b>11</b>
5.1 DEX Aggregator.....	12
5.2 Checkout Solution.....	12
5.3 Payment Links.....	13
5.4 Recurring Payments.....	13
5.5 Automated Investing.....	13
5.6 Wallet Management.....	14
5.7 Cross-Chain Swap.....	15
5.8 Extensions & APIs.....	15
<b>6. Technical Overview.....</b>	<b>15</b>
6.1 Stablecoins.....	16
6.2 Layer-2 and zkRollups.....	16
6.3 Minimum Viable TVL.....	17
6.4 EVM Architecture.....	17
6.5 Licencing & Compliance.....	18
6.6 Risk Management.....	19
6.7 KYC & AML Policy.....	19
<b>07. Market &amp; Competition:.....</b>	<b>20</b>
7.1 Emerging Trends:.....	20
7.2 Market Research.....	21
7.3 Competition Landscape.....	22
<b>08. Market Entry Strategy.....</b>	<b>22</b>
8.1 Growth Strategies.....	23

8.2 Enterprise Focus.....	23
8.3 Emerging Markets.....	24
8.4 Partnerships.....	24
<b>09. Rewards Program.....</b>	<b>24</b>
9.1 Maximum Supply.....	25
9.2 Utility and Incentives.....	25
9.3 Issuance and Distribution.....	26
9.4 Rewards Levels.....	26
9.5 Allocation.....	27
9.6 Launch Strategy.....	28
<b>10. Roadmap.....</b>	<b>28</b>
10.1 Implementation Plan and Milestones.....	29
10.2 Public Launch.....	29
10.3 App Ecosystem.....	29
<b>Conclusion.....</b>	<b>30</b>
<b>Disclaimer.....</b>	<b>31</b>
<b>Glossary.....</b>	<b>31</b>
<b>References.....</b>	<b>33</b>

# 01. Abstract

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This whitepaper presents a novel approach to building a self-sustaining payment layer on top of the Ethereum Virtual Machine (EVM) ecosystem of Layer-1 and Layer-2 networks. The focus of this research is to develop a system that operates entirely on-chain, without requiring constant oversight or intermediaries. The integration of decentralized finance (DeFi) protocols which include Chainlink, Uniswap, Aave, and Cask Protocol as foundational building blocks is a key aspect of this work. The objective is to create a secure, open-access system capable of managing various automated money flows and enhancing the accessibility of stablecoin payments for expansion into e-commerce and other sectors. This paper details how the proposed platform will utilize the described system to facilitate cross-chain transactions through a single interface, equipped with tools for automating business processes, such as payment requests, recurring payments, and auto-investing, all governed through smart contracts.

# 02. Introduction

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Blockchain-based payments are increasingly gaining traction in commercial settings, including e-commerce transactions, salary distributions, remittances, and cross-border settlements. This surge in popularity is particularly notable among small and medium-sized enterprises (SMEs), freelancers, and startups. A primary factor driving this trend is the growing preference to receive payments in stablecoins pegged to the U.S. dollar. This method is seen as a strategic approach to mitigate the risks of inflation in local currencies. For a DeFi platform to effectively cater to a broad spectrum of payment use-cases, it must meet the following criteria:

- Enable interaction between EVM's Layer-1 and Layer-2 networks via bridges or other cross-chain communication protocols like Chainlink's CCIP, to ensure interoperability and facilitate asset transfers between them.
- The platform must integrate well-established stablecoins like USDC, EURC, and DAI, and provide a seamless conversion mechanism between these currencies.
- Create a single access point for users to engage in lending, borrowing, staking, and other DeFi services, helping them earn passive income on their stablecoins or access additional liquidity.

For smaller enterprises and individuals, who often lack access to advanced banking services such as multi-currency or U.S. dollar accounts provided by financial institutions only to large corporate clients, stablecoins offer a cost-effective alternative. This emerging technology is leveling the playing field, allowing these smaller players to tap into global market opportunities that were previously accessible only to large international corporations. By utilizing stablecoins,

these entities can transact with greater ease and security, circumventing the complexities and limitations of traditional banking systems.

The transition towards blockchain and stablecoin-based payments marks a significant shift in the financial landscape, where the decentralization and stability of these digital assets offer a promising solution to the challenges faced by smaller businesses and individuals in a globally connected market. As we progress, this technology continues to open new doors, enabling a more inclusive and efficient economic ecosystem.

The subsequent sections will explore the platform's key features and potential use cases, articulate the rationale for asserting that the EVM ecosystem holds the best position to attract the most users, and delve into the broader trends and developments driving DeFi adoption and growth.

## 2.1 Market Opportunity

As various sectors undergo transformative shifts and the DeFi landscape challenges traditional finance (TradFi), it is becoming increasingly apparent that financial landscape in twenty years will be unrecognizable from the present one. Turing-complete blockchains, such as Ethereum, could function as a substrate for developing and implementing general artificial intelligence (AGI), allowing it to extend its reach into the physical world through economic channels. This opportunity underscores the importance of incorporating blockchain technology within enterprises, fostering a more open and decentralized financial ecosystem that caters to the demands of emerging artificial intelligence (AI) technologies.

The number of cumulative unique addresses on the Ethereum network currently stands at 255.24 million, representing a 16.14% increase from a year ago. This metric is expected to continue its upward trajectory as blockchain adoption accelerates and AI becomes more deeply intertwined with decentralized financial systems.

The convergence of AI and blockchain technology presents a unique opportunity to provide much more accurate credit ratings on users based on their on-chain data. As AI systems become more advanced and autonomous, integrating them with blockchain platforms like Ethereum enables the creation of hyper-efficient financial solutions that are both self-executing and scalable. This approach promotes transparency and trust within the ecosystem, facilitating the development of novel applications that leverage AI's capabilities for decision-making, prediction, and automation. Consequently, the synergy between these two powerful technologies has the potential to drive a new wave of economic growth and reshape the global economy, paving the way for a future where businesses can seamlessly harness the benefits of AI and blockchain to create unparalleled value and opportunity.

## 2.2 Problem Statement

The evolving financial landscape is witnessing a significant shift towards digital transformation, highlighting the need for reliable and secure financial solutions. TradFi is currently facing stiff competition from financial technology (FinTech) companies, pushing established financial institutions to innovate and focus more on customer-centric services. In this context, the adoption of digital assets, particularly stablecoins, by real-world businesses emerges as a critical area for development.

A strategic pivot is needed towards enhancing the integration of stablecoin payments into everyday business transactions. The core challenge in this domain is not just technological innovation but also the broader adoption of these digital assets by real-world businesses. To address this, the proposed strategy centers on creating a robust, user-friendly payment gateway that enables businesses to accept stablecoin payments with ease and confidence.

To mitigate the risk associated with the inherent volatility of cryptocurrencies, a focus on transactions involving stablecoins is proposed, offering a more stable and reliable form of digital currency for business transactions. Additionally, a significant barrier to the adoption of stablecoin payments is the lack of familiarity and expertise among business users in managing digital assets, particularly in self-custodial environments. To overcome this, the solution needs to include a comprehensive support and educational resources, simplifying the process for businesses to integrate and manage stablecoin transactions. Furthermore, the approach addresses the need for a trustless mechanism that facilitates recurring payments, a critical feature for businesses engaging in regular transactions. By developing a user-friendly and secure platform for stablecoin payments, the gap between traditional financial practices and the innovative potential of DeFi can be bridged, fostering wider acceptance and use of digital assets in the business world.

## 03. Current Payments Landscape

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The current payments landscape is evolving rapidly, with both traditional and decentralized payment systems undergoing significant transformations. In the early stages of cryptocurrency adoption, businesses primarily relied on centralized exchanges and centralized payment processors to facilitate digital transactions. However, the increasing demand for decentralized solutions and self-custodial payment systems has led to the development of new DeFi protocols like Uniswap, which allow for trustless and permissionless asset exchanges.

Businesses are increasingly turning to stablecoins as a reliable and secure payment alternative to fiat payment rails like SWIFT. Stablecoins are usually in the form of ERC-20 tokens pegged to the value of a fiat currency or commodity, providing a stable store of value and reducing the volatility often associated with traditional cryptocurrencies. According to the McKinsey Global Payments

Report, stablecoin transactions increased from \$50 billion in 2020 to a staggering \$600 billion in January 2021, indicating a growing demand for stable and secure payment solutions.

Today, stablecoins occupy a pivotal position in the global economy, and their significance has not waned despite the broader market downturn. The latest figures reveal that stablecoins have gained traction in Latin America, with more than one-third of consumers having used a stablecoin for an everyday purchase. In 2022, the volume of stablecoin transactions surpassed the combined volume of all transactions facilitated by Visa and Mastercard networks, further highlighting their growing dominance in the payments landscape.

### 3.1 Transaction Fees

The issue of high transaction fees is not unique to TradFi; it is also a significant challenge faced by DeFi platforms, particularly those operating on the Ethereum network during peak times. The growing demand for decentralized applications (dApps) has led to congested networks and higher gas fees, which can deter small and medium-sized businesses from transacting on these networks. This problem is further exacerbated during periods of high market volatility, resulting in even higher fees and slower transaction times.

To address these challenges, potential solutions have emerged in the form of Layer-2 scalability networks. These networks offer users stability and security while minimizing fees and transaction times. By utilizing Layer-2 networks, we can significantly reduce the burden of gas fees, making our self-custodial payment system accessible to businesses of all sizes. This approach not only provides users with a more efficient and cost-effective payment solution, but also enables them to benefit from the security and transparency offered by Layer-1 blockchain technology.

### 3.2 Settlement Speed

The settlement speed of transactions has been a long-standing issue for DeFi protocols, with Layer-1 networks like Ethereum taking several minutes to complete transactions. In contrast, TradFi platforms have made significant strides in improving their internal transfer speeds, making them nearly instant. However, with the emergence of Layer-2 instant settlement, the DeFi landscape is changing rapidly, and solutions like Arbitrum, Polygon, and Optimism can now facilitate transactions within seconds.

It is worth noting that TradFi networks have also improved their transaction speeds in recent years. FinTech companies like PayPal and Wise have made international money transfers nearly instantaneous, but this convenience comes at a cost—high associated fees. The fees can vary depending on the payment gateway, the currencies involved, and the destination country, ranging

from 0.35% to over 6%. Moreover, FinTechs are restricted by local laws and restrictions, limiting their reach and effectiveness as a global payment solution.

Stablecoin payments on Layer-2 networks are increasingly being recognized as a superior alternative due to their decentralized nature. This characteristic makes them more readily available to underserved communities, and although fees differ between networks, they remain a cost-effective option. Nevertheless, employing open DeFi protocols as the foundation for settlements poses a challenge concerning transaction verification time, which may exceed half an hour in certain instances. To establish digital assets as a genuine legacy payment substitute, it is essential that even cross-chain transactions be executed within seconds.

### 3.3 Cross-Chain Asset Management

The mass adoption of stablecoin-based payments faces a significant obstacle: the complexity of the cross-chain wallet ecosystem. In TradFi, users are aware that they must use the accepted currency of the destination bank for international transfers. However, in the world of digital assets, the number of variables is much higher, adding complexity to the system.

Although the proposed platform primarily focuses on the EVM ecosystem, it is important to note that individual EVM networks possess unique characteristics. Transferring assets from one network to another is not easy. Consequently, each network has its own set of parameters, increasing the complexity of achieving interoperability. While bridges and native versions of tokens in different blockchains partially address this issue, they also confuse users, who must utilize different wallets and tools while being aware of the blockchain where their assets are stored.

### 3.4 Interoperability

The promotion of widespread adoption of digital assets in the business sector heavily relies on the critical aspect of cross-chain interoperability, as explained earlier. The distinctive characteristics inherent in each EVM blockchain network pose notable obstacles. Although numerous projects have attempted to address this issue, only some have successfully provided an enterprise-grade experience that meets the demands of internal boards and regulatory bodies. Consequently, the lack of standardization and compatibility in cross-chain communication systems has impeded the integration of stablecoins in enterprise environments.

### 3.5 Scalability

In the United States alone, credit card payments processed on VisaNet, a private network maintained by Visa, accounted for more than 5,000 transactions per second in 2021, with the



infrastructure to handle over 24,000 transactions per second with reliability. Therefore, scalability is a crucial consideration when exploring stablecoin payment methods for the future of the online economy.

To address this growing demand, continuous research, and development efforts are dedicated to improving the scalability and efficiency of EVM networks, ensuring their ability to accommodate an expanding user base and increasing transaction volume. For instance, Ethereum 2.0 will experience a significant enhancement in scalability, increasing its capacity from around 12 to 13 transactions per second (TPS) to an impressive 100,000 TPS, making it substantially more practical for payment purposes. A secondary approach to scalability involves distributing the load across several Layer-1 and Layer-2 networks without compromising interoperability.

## 04. Value Proposition

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The proposed platform introduces a novel approach for managing recurring payment agreements between consumers and providers on the EVM ecosystem, highlighting the opportunities for growth and innovation in this space. This value proposition revolves around leveraging the inherent strengths of EVM-compatible Layer-1 and Layer-2 networks, which provide unparalleled security, scalability, and interoperability. The platform aims to streamline the integration of major DeFi protocols such as Chainlink, Uniswap, Aave, and Cask Protocol, thereby creating a cohesive environment for stablecoin transactions.

The platform is designed to empower businesses, especially SMEs, freelancers, and startups, by offering a comprehensive suite of on-chain financial tools. These tools are engineered to automate and simplify payment processes like recurring billing, salary distributions, and cross-border settlements. By enabling seamless access to stablecoins like USDC, EURC, and DAI, the platform provides a hedge against local currency inflation and facilitates efficient global commerce.

Emphasizing on a user-friendly interface, the platform aims to lower the entry barriers to blockchain-based finance. It integrates cross-chain functionalities to ensure fluidity in asset transfers, supporting an ecosystem where businesses can effortlessly engage in lending, borrowing, and staking activities. The convergence of these features positions the platform at the forefront of the shift towards decentralized finance, marking a pivotal step in redefining the landscape of digital payments and financial inclusion.

### 4.1 Strategic Vision

A future is envisioned where decentralized finance seamlessly connects to business ecosystems, empowering them to manage, grow, and maintain control over their digital assets. This scenario is

characterized by reduced friction and unprecedented transparency, which not only diminishes information asymmetry but also facilitates a more efficient allocation of resources in the economy. This transparency ensures that all parties have access to essential information for informed decision-making, supported by AI-driven credit scoring systems.

The platform is positioned as an EVM-agnostic wallet designed for stablecoin use, specifically targeting professional payment use-cases. This positioning is founded on a strong belief in the transformative potential of DLT to reshape the financial operations of businesses. The platform's primary goal is to facilitate widespread adoption of stablecoin-based payments by simplifying access to the EVM ecosystem and adopting an open-source approach for all its software.

## 4.2 Proposed Solution

DLTPAY v1.2 platform emerges as a decentralized stablecoin payment solution, integrating Layer-2 cross-chain technology for cost-effective, automated money flow in recurring payments and investing. It's designed to adapt to the digital era, recognizing the rise of the creator economy shaped by globalization, remote work, and AI technologies like ChatGPT influencing business operations.

Several core objectives have been outlined to guide the development and deployment of this platform, focusing on meeting the growing needs of modern business environments:

- Engage with essential DeFi & FinTech ecosystem players, including bridges, stablecoin providers, leading DeFi protocols, decentralized exchanges (DEX), and oracle services, ensuring extensive compatibility.
- Prioritize self-custody for user asset protection and uphold stringent privacy norms, maintaining compliance with GDPR & MiCA in Europe, and other relevant laws globally.
- Introduce functionalities beyond payments, such as automated investing, cross-chain swaps, staking, and liquidity provision, tapping into the dynamic prospects of the DeFi and RWA ecosystem.
- Incorporate intelligent auto-investing tools and dollar-cost averaging strategies, offering users an automated and methodical approach to investment, enhancing long-term financial planning within the platform's ecosystem.
- Jumpstart a community of users and developers who actively participate in the growth and development of the platform, united around a common goal.

The platform's modular design and adaptable workflows cater to the diverse transaction processing requirements. Additionally, the platform enables effortless integration with existing accounting systems and third-party applications, ensuring seamless payment processing for any use-case. AI-driven analytics for enhanced financial insights, and a dedicated support system to

assist users and developers, ensuring a robust and user-friendly experience in the evolving landscape of decentralized finance.

## 05. Platform Features

The DLTPAY platform has been designed to address the requirements of business users within the Web3 ecosystem, a demographic that has been historically underserved by the industry. The platform has been developed with a focus on three main features:

- Simplified integration of checkout processes through payment links and API.
- Management of subscription payments.
- A stablecoin-first wallet interface equipped with business functionalities such as batch transaction, swapping, interest-earning staking, and the generation of payment QR codes associated with an invoice.

The evolution of blockchain technology since the introduction of Ethereum in 2015 has resulted in the development of Web3 as a multi-chain environment. The ecosystem consists of numerous blockchains that communicate through interoperability protocols and bridges, reminiscent of the protocols (such as FTP and SMTP) that facilitated communication within Web 2.0.

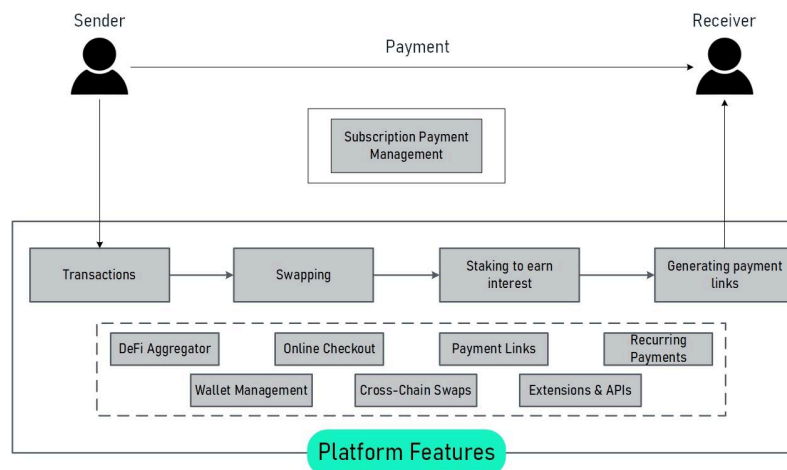


Figure 1: Overview of the platform's core functionality

The EVM architecture is anticipated to play a significant role in this multi-chain landscape, primarily because EVM-based blockchains share the same address format and are easier to connect than non-EVM-compatible blockchains such as Tezos and Solana. The potential of emerging technologies, such as ZK rollups, in delivering scalable and secure performance for next-generation financial applications is expected to be realized within this multi-chain EVM framework.

The payment platform discussed in this paper incorporates EVM cross-chain routing technology, which optimizes for low fees and facilitates transactions between businesses and crypto users on various blockchains. This technology streamlines the process of receiving digital assets, which could be automatically converted to stablecoins for easier record-keeping.

## 5.1 DEX Aggregator

The DLTPAY platform serves as a hub for aggregating DeFi & RWA protocols, such as Uniswap, Cask, LI.FI, OpenEden, and more, which have been whitelisted on the <https://app.dltpay.com/> front-end. This centralized access point empowers users to efficiently manage various financial processes and instruments. By implementing a self-custodial system, users maintain complete control over their assets while gaining access to a broad ecosystem encompassing DeFi applications, RWAs, and secure wallet interfaces, ensuring secure transactions and taking advantage of the stability and security provided by stablecoins.

The recent rise of DEX aggregators reflects the growing demand for platforms that streamline access to liquidity that is fragmented across different places. As the DeFi landscape continues to expand, individuals with limited technical expertise may find its complexity daunting. DEX aggregators effectively address this challenge by providing a user-friendly interface and a single point of access to a variety of exchanges and services, making it easier for users to navigate and participate in the decentralized finance space.

## 5.2 Checkout Solution

The DLTPAY payment processing flow hosted on a decentralized cloud using the InterPlanetary File System (IPFS) represents our vision for the future of digital payments. In contrast to centralized payment gateways like BitPay, Apple Pay, and Stripe, the proposed checkout system is entirely based on distributed ledger technology. Key benefits provided by the platform include:

- Significant reduction in fees for cross-border money transfers.
- Comprehensive transparency enabled by encrypted distributed ledger technology, allowing real-time verification of transactions by auditors.
- A streamlined process with fewer intermediaries involved in value exchanges
- Rapid and efficient transaction payouts are completed within seconds instead of days.
- The platform-agnostic design could be implemented within a mobile payment system or Web3-enabled portal.

These advantages position the platform as an ideal foundation for developing Business to Business (B2B) and Business to Customer (B2C) payment workflow. Furthermore, the tight

integration of the platform with the broader e-commerce ecosystem ensures an efficient solution that can be readily incorporated into existing infrastructures.

## 5.3 Payment Links

A feature that allows businesses to collect customer payments while automatically issuing an invoice. With payment links, companies can generate a unique URL with an attached invoice for their products or services. Customers can effortlessly click on the link to access the payment details via QR code and complete the transaction using their preferred digital asset.

The payment link features a streamlined checkout, eliminating the need for customers to manually enter their payment details or go through a cumbersome payment process. Moreover, sellers can opt to receive payment in a stablecoin of their choice, ensuring they receive a secure and stable payment in a digital asset pegged to a fiat currency. This feature provides a significant advantage, especially in volatile crypto markets, where prices fluctuate significantly.

## 5.4 Recurring Payments

The set-up and automation of recurring payments from customers' wallet addresses constitutes a key feature for businesses providing subscription-based services, such as SaaS applications, digital content creators, and domain registries. To enable recurring payments, customers sign a transaction that allows a smart contract to deduct a predetermined amount of funds from their wallet on a regular basis. Customers can make payments using a stablecoin such as USDC or have an equivalent value in USDC deducted from a native token, such as ETH, based on the current market price. This feature provides customers with a hassle-free and secure method to pay for recurring services, eliminating the need for manual payment processing.

The platform's smart-contract-enabled process ensures that payments are processed securely and transparently. The use of smart-contracts eliminates the necessity for intermediaries, such as banks and payment processors, reducing transaction costs and accelerating payment processing times. Furthermore, businesses can track their recurring payments in real-time, allowing them to manage their cash flow more effectively.

## 5.5 Automated Investing

Automated investing, or Dollar Cost Averaging (DCA), offers users a seamless and secure way to invest their USDC into Ether or other curated RWA assets, starting with TBILL, a tokenized exchange-traded fund (ETF) that provides exposure to U.S treasury bills which are currently paying out over 5% risk-free yield on USDC.

By setting up auto-buys, users can automatically purchase a predetermined value of an assets, denominated in USDC, at regular intervals to hedge their position. This process is fully decentralized, with acquisitions made through decentralized exchanges, ensuring that users retain complete control and ownership of their assets as they are directly sent to their personal wallets. Platform's community plays a pivotal role in this ecosystem, determining the selection of available assets on each chain, with choices guided by factors like token availability, on-chain liquidity, and the asset's reputation. By leveraging Chainlink Oracles, the platform guarantees that the quantity of assets swapped adheres to a user's specified slippage limits, ensuring value and stability in each transaction.

The platform empowers users with flexible and user-centric investment options. Investors can customize their investment strategy by selecting the amount of USDC and the frequency of their auto-buys. They have the option to define the maximum slippage they are willing to accept, based on the current Chainlink reported asset price. Additionally, users have the freedom to direct their purchased assets to alternate wallet addresses, an ideal feature for those who wish to transfer their assets to cold storage automatically.

The platform also caters to more strategic investors, offering the ability to set a maximum total investment value and price range for asset purchases. This ensures that auto-buys are only executed within the user's comfort zone, skipping purchases if the asset's price falls outside the predetermined range. These features, combined with the decentralized nature of the platform, provide a secure, transparent, and highly customizable investing experience, aligning with the evolving needs of institutional investors.

## 5.6 Wallet Management

The development of the client-side wallet interface focuses on meeting the requirements of professional users, including entrepreneurs and businesses. Apart from the previously stated functionalities, the wallet incorporates advanced features that enable the seamless execution of batch transactions to multiple addresses concurrently through a user-friendly interface, allowing businesses to streamline their payroll operations.

A major feature of the platform is the wallet that enables users to seamlessly manage digital assets across various Layer-1 and Layer-2 networks from a single interface. At the same time, the built-in swap mechanism allows for the easy exchange of different asset pairs. Additionally, the wallet grants users access to recent activity through its dedicated explorer, enabling real-time monitoring of on-chain transactions. This set of capabilities presents professional users with a compelling solution for managing their digital assets, empowering them to navigate the Web3 and conveniently leverage the DeFi space's benefits from a single platform.

## 5.7 Cross-Chain Swap

To ensure the highest level of protection for users bridging assets between blockchain networks, a strategic decision was made to integrate with LI.FI. LI.FI functions as a liquidity and data gateway, facilitating the seamless transfer of assets and exchange of data across multiple blockchains. LI.FI has successfully raised over \$17.4M in funding from notable investors such as Coinbase, Dragonfly, and Superscript. It stands out as the only solution currently offering native insurance against bridge failures through InsurAce.io. This decentralized global risk cover protocol provides mutual protection for digital assets against various risks, including hacking, smart contract bugs, and stablecoin de-pegging.

Through this partnership, cross-chain swaps are enabled across five EVM networks since the launch of DLTPAY 1.1, with plans to expand to additional networks in the near future. Additionally, the integration with LI.FI significantly streamlines the cross-chain swap process and removes the necessity of integrating with each bridge individually.

## 5.8 Extensions & APIs

The provision of API support by the platform holds significant importance as it enables developers to conveniently customize and extend its functionality to meet their specific business requirements. This flexibility ensures the seamless integration of digital asset transactions into existing workflows of businesses, thereby minimizing disruption and optimizing efficiency.

Additionally, the platform's planned compatibility with major e-commerce and SaaS solutions such as Shopify will help businesses to expand their customer base and meet the increasing demand for payments in stablecoins. The combination of these features establishes the platform as a crucial tool for the future of digital assets in commerce.

# 6. Technical Overview

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This whitepaper section will outline the platform's core features and technical components, providing a comprehensive understanding of its structure and functionality. As discussed, the platform aims to offer its users a single access point for interacting with whitelisted protocols and dApps, thus enabling smooth engagement with a wide variety of DeFi services. Some of the uses-cases included are:

- **DEX Aggregator:** The platform will integrate decentralized exchange services, allowing users to trade various ERC-20 tokens and stablecoins without relying on a centralized intermediary.

- **Payment Processing:** The platform will provide advanced tools for treasury management, enabling users to track their assets and optimize their strategies across various DeFi applications.
- **Asset Management:** Users can lend their assets or participate in staking opportunities to earn rewards, boosting their returns on investment and generating additional income.

In terms of high-level overview, the platform leverages standardized JavaScript libraries, including React.js and Next.js, and utilizes OpenZeppelin's library for secure smart-contract development within its tech stack. Additionally, building upon the open-source foundations of Cask Protocol, the platform implements a job scheduling and queuing system that can concurrently process several types of automated money flows.

## 6.1 Stablecoins

Stablecoins have emerged as an increasingly popular choice for payment processing, primarily due to their enhanced stability and security compared to traditional cryptocurrencies. These digital assets are pegged to stable reserves, such as the U.S. dollar, providing a more predictable value ideally suited for financial transactions. The team has recognized this trend and integrated stablecoin payment options natively into the payment link feature, delivering a reliable and robust payment processing solution for businesses.

By designating stablecoins as the primary payment option, the platform enables businesses to streamline their operations, facilitating smoother accounting and tax calculation processes. This approach eliminates the volatility concerns associated with conducting business using native assets such as Ether, fostering greater trust and confidence in blockchain-based payments.

## 6.2 Layer-2 and zkRollups

EVM-based Layer-2 scaling solutions, such as rollups, have emerged as popular options for enhancing blockchain scalability. Rollups bundle millions of transactions into a single transaction submitted on the base layer (e.g., Optimism), reducing costs and offering faster settlement times.

There are currently two main types of rollups: Optimistic and ZK rollups. While both approaches solve the scalability issue, they each have unique advantages and disadvantages. Optimistic rollups process transactions instantly while allowing users to contest fraudulent transactions before final settlement. However, the waiting period for contestation introduces a significant bottleneck, and the management of the core infrastructure fosters censorship. ZK rollups handle computation off-chain and offer near-instant settlement on both layers. They also rely on zero-knowledge proofs for privacy. Primary ZK solutions used in cryptography include zk-Stark, zk-Snark, and Validium, each offering unique privacy and scalability features valuable to smart contract blockchains.



The DeFi ecosystem's scalability is one of its greatest strengths, making its future promising. It took 40 years for leading CeFi messaging systems like SWIFT to achieve their current infrastructure and throughput. In contrast, DeFi began in 2015 with the launch of Ethereum, taking only seven years to reach its current performance level. Blockchain's decentralized and independent features make it more reliable and quicker to recover from major unexpected events than centralized payment methods, because of its on-chain setup.

## 6.3 Minimum Viable TVL

To operate efficiently, the platform needs a minimum TVL of \$100,000. This threshold is key to accessing RWAs via the project's third-party partners. Achieving this TVL ensures that the platform maintains sufficient liquidity and resources for ongoing development and service maintenance. Additionally, reaching this target lays the groundwork for future growth, allowing for the integration of more DeFi services and promoting a thriving community of users and developers.

- To achieve the minimum viable TVL, the project will raise funds through a sale of DLTP to the community, allowing early adopters and supporters to acquire DLTP and actively participate in the project's growth.
- Achieving this TVL target enables the delivery of a compelling product that serves as a public good DeFi infrastructure and pushes the boundaries of innovation in the space.

## 6.4 EVM Architecture

Since its inception in 2015, the EVM landscape has undergone significant progress. Merely developing a new Layer-2 solution is insufficient to drive widespread adoption of stablecoins; it requires the creation of an integrated suite of tools that significantly improve and streamline the services offered by conventional financial systems.

The EVM is a critical component of the platform being built, acting as the central execution engine for smart contracts. Designed to be Turing-complete and platform-independent, EVMs allow developers to effortlessly write and deploy smart contracts across various networks. This section explores the technical intricacies of the EVM architecture, illuminating its components and how they interact.

At the heart of the EVM lies a stack-based bytecode execution model. The EVM operates using a set of low-level instructions known as opcodes, which are executed sequentially within a sandboxed environment. This approach isolates smart-contracts from the underlying system, enhancing security and preventing unauthorized access to resources. Additionally, the EVM

employs a deterministic execution model, ensuring that all nodes in the network reach a consensus on the state of the blockchain.

The EVM's memory model is comprised of three primary components: stack, memory, and storage. The stack is a last-in, first-out (LIFO) data structure that holds temporary values during the execution of opcodes. The memory is a volatile, linear, and byte-addressable storage that persists only for the duration of a smart-contract's execution. In contrast, the storage is a long-term, key-value store that maintains the contract's state across multiple executions.

Gas is a crucial aspect of the EVM architecture, functioning as the primary mechanism for resource management and preventing infinite loops or excessive resource consumption. Gas is consumed during the execution of opcodes and is calculated based on the computational complexity of the instructions. Transactions must include a gas limit and a gas price, which determine the maximum amount of gas the sender is willing to consume and the price they are willing to pay for it, respectively.

The EVM's execution model relies on a set of base instructions that are built upon a high-level, contract-oriented programming language, such as Solidity or Vyper. These languages are compiled into EVM bytecode, which is subsequently deployed to the Ethereum network as a smart contract. Once deployed, the EVM executes the smart contract in response to transactions, ensuring that the contract's logic is carried out as intended.

## 6.5 Licencing & Compliance

The platform's self-custodial model empowers users with direct control and independence over their assets, eliminating the need for TradFi licenses required by centralized services. This architecture grants users total autonomy over their assets. Although this model does not currently require financial licenses, there is an ongoing effort to stay informed about MiFID II and MiCA regulations. If future services expand into areas that require such licensing, steps will be taken to acquire the necessary credentials to ensure compliance and continued service provision.

An optimistic perspective is held regarding blockchain regulation, with expectations of its integration into mainstream usage driven by financial inclusion and environmental concerns. The approach taken by DeFi markedly cuts down on administrative workloads and could improve the financial sector's efficiency compared to traditional financial bodies, aiding in the expansion of GDP and reduction of carbon emissions due to enhanced automation. The global Ethereum network's energy consumption, approximately 0.0026 TWh/yr, is in line with international climate goals, such as the EU's 2030 Climate Target Plan and the United States' emission reduction strategy for 2030.

Commitment to compliance includes vigilant monitoring of regulatory developments and adapting operations as needed. Engagements with legal experts and a partnership with BDO, an advisory firm that counsels US-listed public companies and holds ISO 9001:2000 certification, are in place. These collaborations ensure adherence to relevant laws and regulations, upholding the highest operational standards.

## 6.6 Risk Management

The DeFi ecosystem, while offering numerous benefits and opportunities for users, also exposes them to various risks, such as smart-contract exploits, market volatility, and platform security. To mitigate these concerns, we have implemented a set of risk management strategies, outlined below:



*Figure 2: Risk management features of the platform*

Furthermore, to counter the risk associated with price manipulation, the platform implements multiple price oracles, and cross-verifying data to ensure accuracy and integrity. This approach helps prevent issues arising from a single point of failure, as well as potential oracle attacks.

## 6.7 KYC & AML Policy

Although the platform is entirely self-custodial and does not require traditional KYC (Know Your Customer) or AML (Anti-Money Laundering) procedures, responsible and ethical use of the

software developed is strongly promoted. The evolving regulatory landscape is being monitored to ensure compliance and prevent potential misuse of the platform for illicit activities.

As the DeFi space matures and regulatory expectations shift, the platform's policies will adapt to stay in line with industry best practices and regulatory requirements, ensuring a secure and compliant environment for all users. In response to growing demand and potential regulatory changes, there is a plan to develop a version that will include a voluntary KYC process for users who need access to fiat off-ramp services and certain RWA products.

## 07. Market & Competition:

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Both TradFi and DeFi industry leaders have experienced significant growth in recent years, with the adoption of digital payment solutions accelerating at an astounding pace. However, legacy payment systems, often dominated by near-monopolies, are susceptible to fraud, rent-seeking behavior, and excessive transaction fees imposed on the user community. The proposed approach presents a more transparent, secure, and cost-effective alternative to address these challenges.

### 7.1 Emerging Trends:

EVM technology has continued to evolve over the years, and new trends have emerged in the space. Some of the emerging trends in the blockchain space include:

- **Cross-Chain Payments:** Interoperability between different blockchain networks is becoming increasingly important. Cross-chain payment solutions enable seamless transactions across multiple blockchains, allowing users to transfer assets without the need for intermediaries and enhancing the overall efficiency of the blockchain ecosystem.
- **Decentralized Autonomous Organizations (DAOs):** DAOs are emerging as a significant trend in blockchain governance and finance. They are being increasingly utilized for collective investment, fund management, and community-driven projects.
- **Layer-2 Scaling Networks:** As the demand for blockchain applications grows, so does the need for scalable solutions. Layer-2 networks provide increased throughput and reduced transaction fees by handling transactions off the main blockchain, offering promising solutions for addressing scalability challenges.
- **Real World Assets (RWAs):** A class of blockchain-based tokens that represent physical assets and TradFi assets such as U.S. treasury bills, stocks and bonds that exist outside the digital spectrum.

- **Stablecoins:** As digital assets, cryptocurrencies are often subject to extreme volatility, which can deter investors and users seeking a stable medium of exchange or store of value built on top of EVM ecosystem.
- **Non-Fungible Tokens (NFTs):** NFTs have gained immense popularity in the digital art and collectibles space. More recently, they have also been used to enable discounts for holders of special NFTs at the point of checkout in online stores.
- **Staking:** It allows users to earn passive income by providing liquidity to various protocols and platforms. In return, these users are rewarded with interest, fees, or tokens, which can be traded, staked, or reinvested to maximize returns.

Adopting a protocol-neutral strategy, the project engages in detailed examination by stakeholders before the integration of new technologies and DeFi protocols, aiming to preserve a payment layer that remains responsive to the user community's broadening and shifting needs.

## 7.2 Market Research

The global payment market is currently valued at over \$2 trillion, with digital payments constituting the majority of this expansive market. The industry is set to experience a compound annual growth rate (CAGR) of more than 10% from 2021 to 2028. Meanwhile, the broader financial services industry accounts for at least 20% of the global economy.

According to Coinbase's estimates, currently, less than 0.25% of global assets are represented on the blockchain, indicating a significant untapped potential for efficiency gains. The RWA market, which includes stablecoins, has experienced substantial growth in recent years, driven by the increasing adoption of blockchain-based payments and decentralized financial services in Latin America. Simultaneously, the Non-Fungible Token (NFT) market has witnessed rapid growth as artists, creators, and collectors embrace these unique digital assets for various applications, such as digital art, virtual real estate, and collectibles.

This expansion of the DeFi market has been further propelled by a growing number of businesses and governments willing to embrace and integrate blockchain-based payments. For instance, El Salvador made history by recognizing Bitcoin as a legal tender, and several other countries are exploring similar initiatives to foster financial inclusion, boost economic growth, and reduce reliance on traditional banking systems.

Furthermore, the increasing prominence of central bank digital currencies (CBDCs) reflects a growing interest from governments in leveraging the benefits of blockchain technology to enhance their national payment infrastructures. These developments collectively signal a paradigm shift in the global payment ecosystem, paving the way for more widespread adoption of stablecoin-based solutions in the near future.

## 7.3 Competition Landscape

The traditional payments industry is marked by vigorous competition, featuring an array of solution providers. Well-established industry giants such as Visa, Mastercard, and Stripe have secured their positions as the current market leaders in this highly competitive space.

In contrast to traditional payment methods, stablecoin payments are still in their nascent stages, with ongoing development and innovation leading to the emergence of numerous projects offering compelling products. Notable projects and protocols that help create infrastructure for stablecoin payment rails, such as Circle, Chainlink, and Uniswap, have gained significant traction recently. Instead of competing directly with these projects, the platform leverages their existing infrastructure and technologies as building blocks to enhance its capabilities. This collaborative approach is more effective in the DeFi ecosystem compared to the traditional Web 2.0 environment with a "the winner takes it all" model.

Within the competitive landscape of payment solutions, we find various contenders that offer stablecoin wallet services, checkout functionalities, and related features. Among these, noteworthy players include projects like Request.Finance. In addition to these established names, emerging projects such as Stables, Helio, Triple.xyz, and DePay are gaining prominence in the market. The prevailing industry direction suggests a shift towards solutions based on the Layer-2 technology, coupled with a growing inclination towards mobile wallets and cross-chain interfaces.

## 08. Market Entry Strategy

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The strategy includes a partnership with the Cointelegraph Accelerator, renowned for boosting Web3 initiatives. This partnership offers access to unique media tools, marketing insights, and mentorship from industry veterans, playing a key role in attracting the platform's first 1,000 users.

Currently, the project is in a public beta stage, focusing on refining the platform through user feedback and real-world application. This stage features pre-launch A/B testing with targeted towards tech enthusiasts, small businesses, and freelancers. These groups are likely to be the early adopters, and their feedback is crucial for tailoring the platform to better fit market demands.

For the purpose of adding maximum value at this stage, the following segments have been singled out for marketing efforts:

- **B2B / SaaS:** Companies using Stripe or similar payment gateways to manage recurring customer payments in fiat currencies and exploring other options.

- **Crypto, DeFi, and Web3:** Users within this community show a strong interest in being early adopters of new tools, analytics solutions, and wallets.
- **E-Commerce in Emerging Markets:** Consumers in these regions are driven by the motivation to save on transaction fees and leverage stablecoins as a path to financial stability.
- **Entrepreneurs:** Targeting freelancers, digital content creators, and other professional users who value self-custody, automation, and the array of other advantages associated with stablecoin payments.

To determine which key players would benefit from using the DLTPAY’s non-custodial platform, it's essential to take a step back and consider the user's perspective. This approach is crucial for developing an engaged community prior to the public launch.

## 8.1 Growth Strategies

To ensure long-term success and continuity of services, the project will focus on acquiring users through various channels and strategies:

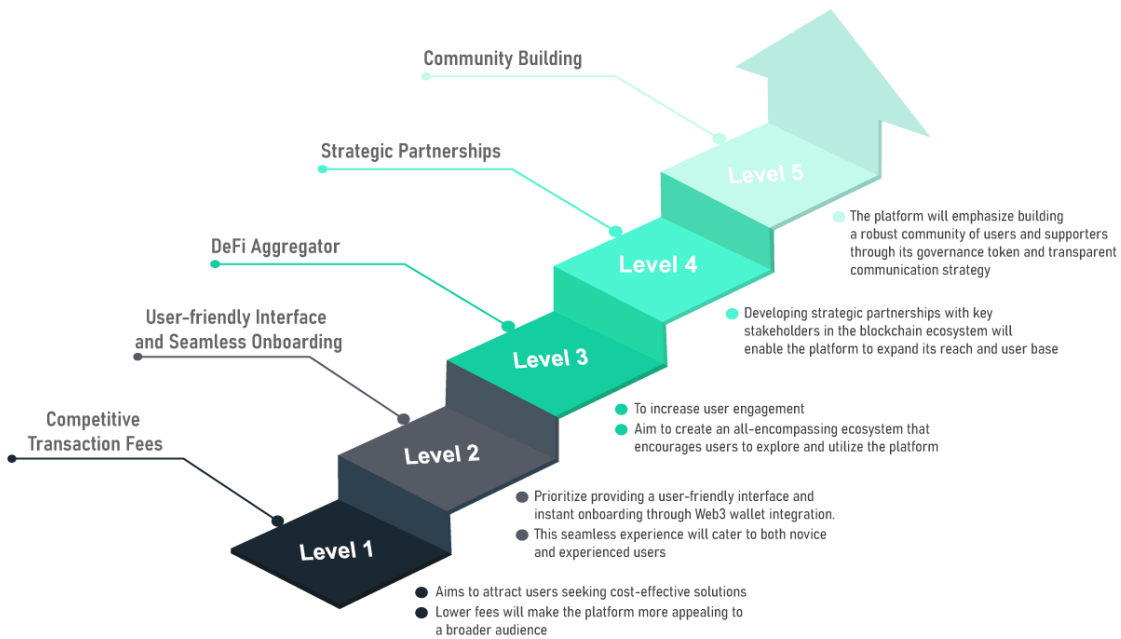


Figure 3: Strategy for achieving sustainable growth

## 8.2 Enterprise Focus

DeFi and RWAs hold immense potential in the enterprise market, primarily driven by the digital transformation of economies and the growing acceptance of stablecoins. Businesses are increasingly receptive to exploring decentralized, permissionless financial services. In response to

this opportunity, an API suite has been developed that integrates with existing workflows, offering functionalities like payroll automation, invoice management, and recurring payments.

The platform's potential also extends to the public sector, aiding government agencies in managing complex transactions while maintaining transparency and record integrity. A decentralized payment system is provided, ensuring transparency and simplifying audits across various departments and agencies. It is anticipated that countries at the forefront of digitalization, such as Estonia, would be among the first to adopt such solutions.

### 8.3 Emerging Markets

Emerging economies often suffer from inadequate TradFi payments infrastructures, creating a significant barrier to economic development. Leveraging Web3 technology can enable these economies to bypass traditional payment rails and leapfrog directly to DeFi, thereby fostering financial inclusivity and economic growth.

Emerging economies represent a significant opportunity for DeFi platforms due to their inherent demand for cost-effective solutions and a lack of access to TradFi infrastructures. Platforms such as the one being built can fill these gaps, providing affordable and efficient financial services to individuals and SMEs who currently find themselves underserved or excluded from conventional systems. To serve these economies effectively, partnerships with local communities and organizations are being established to create a presence in these regions.

### 8.4 Partnerships

Continuous efforts are made to seek partnerships with other protocols, Layer-1 and Layer-2 networks, stablecoin issuers, and other projects whose values resonate with the overarching vision of the DLTPAY initiative. The aim is to establish collaborations that not only drive the platform's adoption but also contribute to the growth and success of partner entities. A win-win approach is central to these partnerships, ensuring mutual benefits for all involved parties.

The connection to the Techstars alumni network that includes projects such as Chainalysis and Arweave serves as a solid foundation, providing resources needed for growth and expansion. Looking forward, leveraging the early partnership with Chainlink remains a priority, alongside exploring new opportunities for collaboration with leading service providers.

## 09. Rewards Program

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The DLTPAY Rewards Program, utilizing DLTP as its native token, has been developed to incentivize users who are engaging with the platform, creating a positive-sum ecosystem.



This rewards token is a key feature of our DLTPAY v1.3 platform, designed not just as an incentive, but as a mechanism to unlock premium features for our users.

Through active engagement and transactional participation within the app, users can acquire DLTP tokens. This system is structured to reinforce a community-driven environment, where the accumulation of tokens is aligned with the enhancement of the overall platform's value and functionality.

As a multi-chain ERC-20 token, DLTP is not bound to a single blockchain, it can function seamlessly across an array of networks, wallets, and dApps, irrespective of their underlying EVM compatibility. Holders can use Chainlink CCIP to transfer DLTP across different networks.

Below, you can find the official DLTP smart-contract addresses for all chains where it is deployed:

- **Ethereum:** 0x29F933645F8086719236825A28d04D8A055D98dB
- **Arbitrum:** 0x29F933645F8086719236825A28d04D8A055D98dB
- **Optimism:** 0x29F933645F8086719236825A28d04D8A055D98dB
- **Polygon:** 0x29F933645F8086719236825A28d04D8A055D98dB
- **BNB Chain:** 0x29F933645F8086719236825A28d04D8A055D98dB

In the next section of the whitepaper, we delve into the utility of DLTP, exploring its inherent design features, its role within the ecosystem, and its potential for broader adoption.

## 9.1 Maximum Supply

The total supply of DLTP is capped at 200 million, with no plans for additional minting in the future and a deflationary mechanism in place to reduce the circulating supply over time—with a small % of tokens being removed from circulation, which in turn increases the scarcity of the remaining DLTP. This fixed supply model incentivizes long-term retention of the token by users and creates a perception of scarcity, which, in turn, drives the token's utility.

To ensure seamless integration and accessibility, DLTP is deployed across multiple Layer-1 and Layer-2 networks, including Ethereum, Arbitrum, Optimism, Polygon, and BNB Chain. The cross-chain approach accommodates different user preferences and reduces network congestion.

## 9.2 Utility and Incentives

To promote user engagement and foster long-term commitment to the platform, DLTP offers the opportunity to earn rewards for actively using the platform. Token holders who accumulate a certain amount of tokens will become eligible to gain early access to new product features, and

exercise voting rights on product-related decisions that help shape the platform's development and future trajectory.

The DLTP token serves multiple purposes within the platform ecosystem, including:

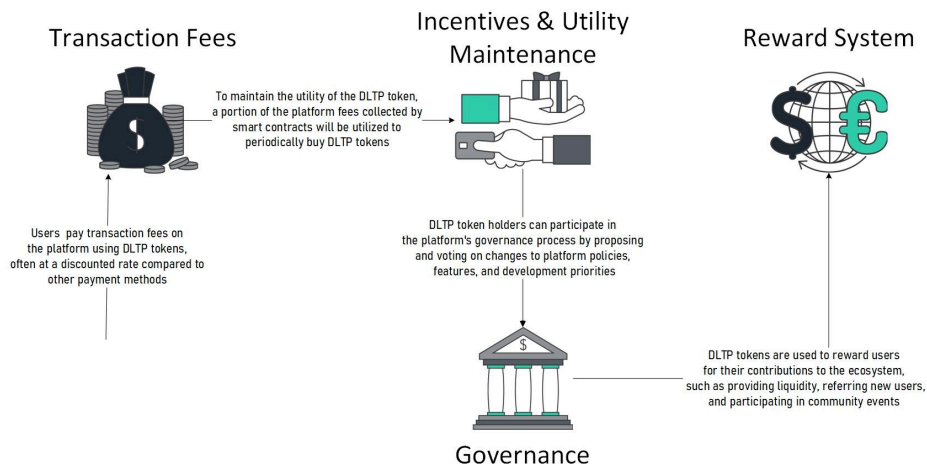


Figure 4: Overview of the token's utility and built-in incentives

## 9.3 Issuance and Distribution

In partnership with specialists in system economic modeling, the DLTP distribution strategy is designed to be fair and transparent. The issuance of tokens is planned through a phased approach, including stages like a public sale, rewards, ecosystem incentives, and strategic partnerships. This methodology is designed to enable a prolonged distribution over several years, encouraging a broad and active community of users who play a role in the platform's ongoing success.

The initial issuance will occur through a public token sale, enabling investors and early adopters to acquire DLTP and support the development and growth of the platform.

## 9.4 Rewards Levels

The DLTPAY platform's reward structure is designed to incentivize users with various benefits. At higher reward tiers, users can enjoy lower platform fees, and access to advanced features of the platform. Additionally, one of the most attractive benefits at the top reward level is the opportunity to earn up to 8% reward on all transactions. This feature significantly enhances the value proposition for frequent users. Moreover, enterprise support is provided, offering specialized assistance and services tailored for larger or more complex user needs. This tiered rewards system ensures that users who are more invested in the platform receive correspondingly greater benefits.

The platform offers five reward levels, based on the total amount of DLTP stacked:

	Basic	Standard	Plus	Professional	Enterprise
DLTP Balance	0	1,000	5,000	32,000	80,000
Platform Fee	1%	0.85%	0.75%	0.65%	0.49%
Earn Rewards	x	2.50%	5%	6.50%	8%
Access to RWAs	x	✓	✓	✓	✓
Private Discord	x	x	✓	✓	✓
Enterprise Support	x	x	x	✓	✓
Unlimited Access	x	x	x	x	✓

Figure 5: Comparison of different benefits based on the amount of staked DLTP

## 9.5 Allocation

The token supply will be allocated among various stakeholders and initiatives to support. The allocation will be as follows:

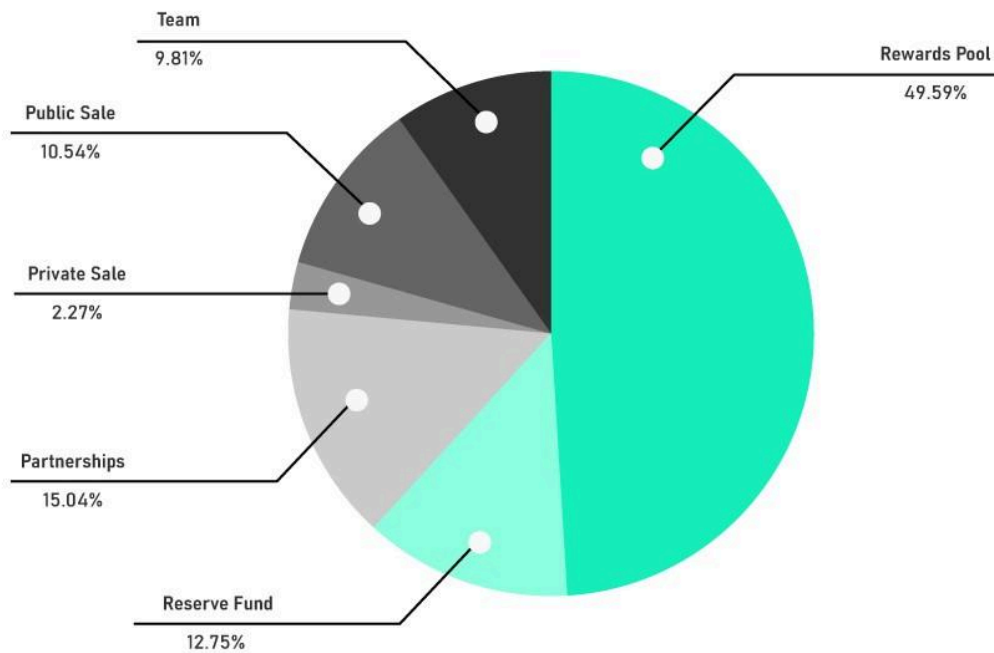


Figure 6: Initial allocation of the tokens among stakeholders

The tokens allocated for the development team and advisors will be locked up for a period of 12 months, with a gradual release over time. The tokens allocated for marketing and partnerships will be used to promote the platform and establish partnerships with other blockchain projects. The tokens allocated for the reserve fund will be used to ensure the long-term sustainability of the platform.

## 9.6 Launch Strategy

10.54% of DLTP tokens are allocated towards a community sale that will take place through a launchpad platform. The public sale will be open to all users, with a minimum investment of 0.01 ETH. The token will be offered at a fixed price during the community sale.

The proceeds from the token sale will be utilized to finance the development, expansion, continuous operations, and eventual transition of the platform into a DAO. The allocation of funds will prioritize the following areas:

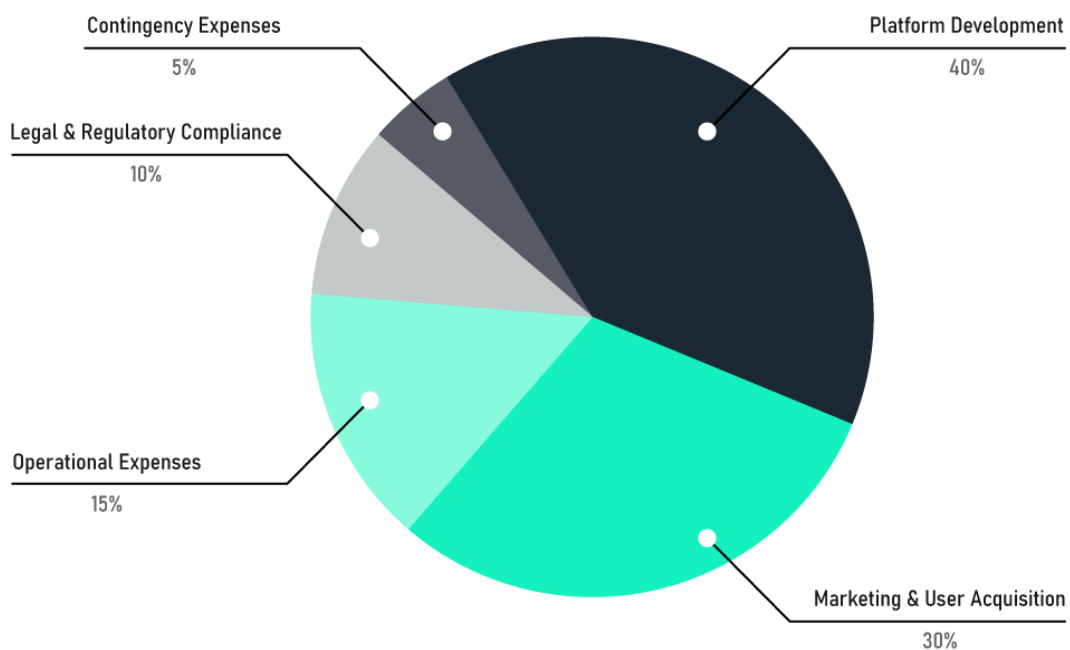


Figure 7: Allocation of proceeds from the community sale

## 10. Roadmap

The roadmap outlines strategic steps planned to achieve the project's vision. It consists of three main stages, each with unique objectives, challenges, and opportunities. The commitment is to

uphold the values of transparency and building in public while navigating the future together with the community.

## 10.1 Implementation Plan and Milestones

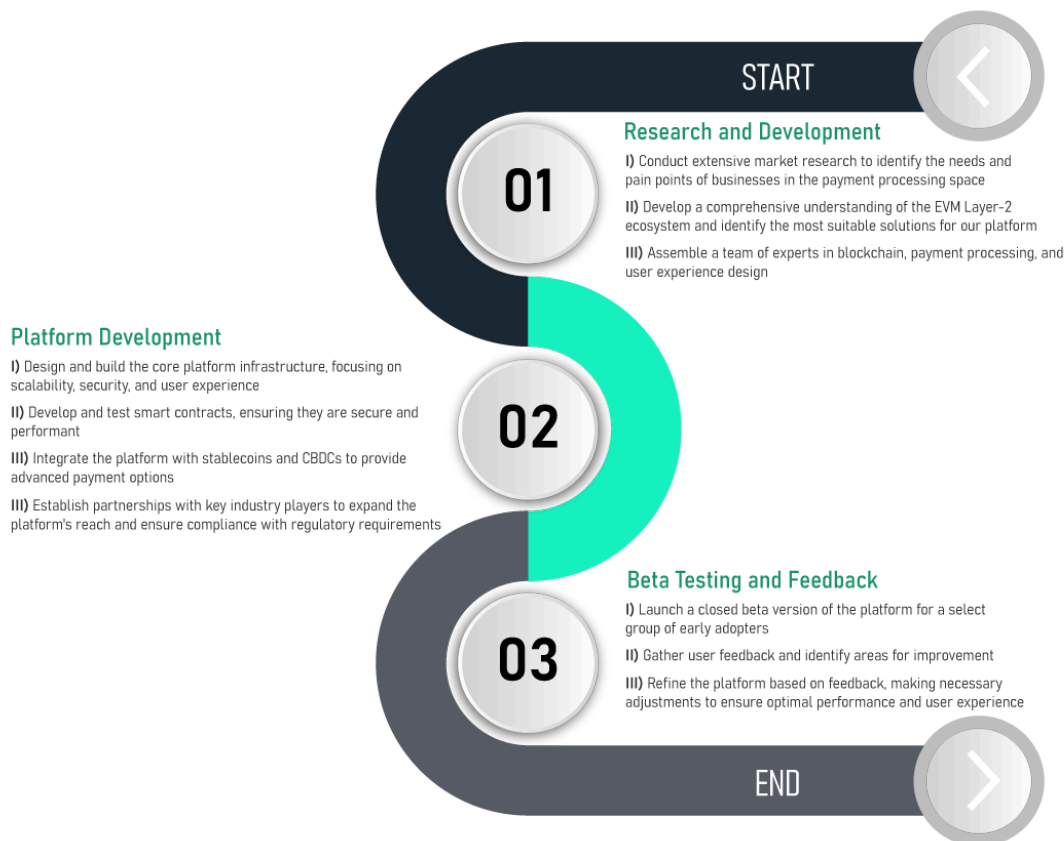


Figure 8: Implementation plan and milestones for the platform

## 10.2 Public Launch

After successfully completing the closed beta testing phase and incorporating user feedback, the team is set to initiate the official launch of the DLTPAY v1.3 platform on the mainnet. This launch will mark the beginning of the platform's availability to the wider market.

Following the platform's launch, users will be provided with flexible account creation options. They will have the choice to either create an account using their email address or utilize the convenience of Google Sign-in. Additionally, the platform's backend will be hosted on the InterPlanetary File System (IPFS), offering a decentralized and robust infrastructure.

Once their account is set up, users will be encouraged to connect their digital wallets, such as MetaMask, to the platform. This integration is a crucial step, as it enables users to interact seamlessly with the various features available.

## 10.3 App Ecosystem

The aim is to encourage the development of a Web3 dApps ecosystem by providing incentives for developers to create third-party applications that seamlessly integrate with the platform. The platform's objective is to empower business users of Web3 by adding functionalities customized to their distinct requirements.

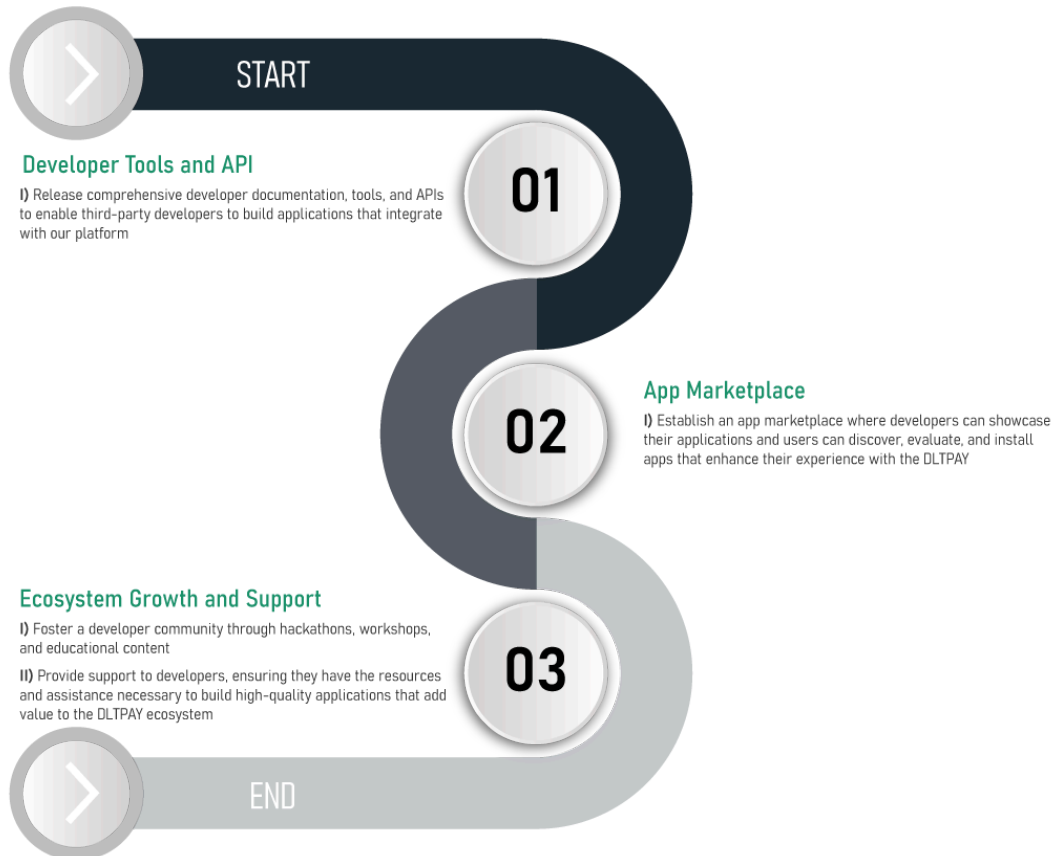


Figure 9: Goals for the Web3 application ecosystem development

Following this roadmap, the intention is to progress towards integration of decentralized finance into business ecosystems, empowering them to manage, grow, and maintain control over their digital assets.

## Conclusion

The proposed decentralized platform is structured as a stablecoin-focused wallet, equipped with integrated features for managing on-chain recurring payment agreements between a consumer and a provider. The strategy detailed in this whitepaper aims to provide users with increased yield on their assets and diverse options for automating financial activities. Its emphasis on stablecoins marks the platform as a reliable choice in an unstable market environment. The favorable

response to the public beta from the community has been a key driver for this project. Such early achievements underscore the market's inclination towards DeFi solutions that address practical business necessities, with a special focus on transactions in USD stablecoins, targeting new segments of the market.

## Disclaimer

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This whitepaper is provided for informational purposes only and does not constitute an offer or solicitation to sell, buy, or trade in any securities or financial instruments. The information presented in this document, including the description of the token and related technologies, is intended to outline our vision and goals for the project, as well as facilitate a better understanding of the proposed ecosystem.

The content of this whitepaper should not be construed as investment, legal, tax, or other professional advice. Potential token holders should consult with their own advisors and carefully evaluate the risks and uncertainties associated with the project before making any investment decision.

## Glossary

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**Aave:** Aave is a decentralized finance platform that allows users to borrow and lend crypto; it uses smart-contracts to automate the process.

**Blockchain:** A specific type of database that differs from a typical database in the way it stores information; blockchains store data in blocks that are then chained together.

**Cask Protocol:** An acronym for Consensus Aware Sharding and Knowledge, is an open-source protocol for powering financial automation that offers a highly efficient way to manage recurring transactions with stablecoins while maintaining low fees.

**DAO:** Decentralized Autonomous Organization (DAO) is a type of bottom-up organizational structure with no central authority, where members of the DAO own tokens and make decisions collectively through voting.

**dApp:** Decentralized applications (dApps) are digital applications or programs that exist and run on a blockchain or P2P network of computers instead of a single computer and are outside the purview and control of a single authority.

**DeFi:** Decentralized Finance (DeFi) is a system by which financial products become available on public decentralized blockchain networks, democratizing access.

**Digital Asset:** A form of value that is available only in digital or electronic form and not in physical form. It could be in the form of a stablecoin, NFT, or a cryptocurrency token.

**DLT:** Distributed Ledger Technology (DLT) is a peer-to-peer system for recording transactions between parties that is geographically spread across many nodes and computers.

**EVM:** Ethereum Virtual Machine (EVM) is a run-time environment for deploying smart-contracts, providing a foundation to build dApps and self-executing software.

**FinTech:** Refers to the integration of new technology into products by financial service providers to improve their utility and delivery to consumers.

**Layer-1:** A blockchain network, exemplified by Ethereum, that serves as the main settlement layer which validates blocks produced by miners to maintain distributed ledger of all transactions.

**Layer-2:** An umbrella term to describe 3rd party solutions that build on top of Layer-1 to improve the scalability of the Ethereum mainnet network.

**Multi-chain:** An approach for developing dApps that deploys them across multiple blockchains that share similar smart-contract technology.

**RWAs:** Real-world assets (RWAs) are blockchain-based digital tokens that represent physical and traditional financial assets, such as cash, bonds, ETFs, treasury bills or other securities.

**Self-custody:** Self-custody is a means of holding your digital assets by which only you have access to them, without relying on a custodian to do it for you.

**Stablecoin:** A stablecoin is a new class of cryptocurrencies that attempts to offer price stability and is backed by a reserve asset, incl. EUR, USD, or gold.

**SaaS:** Software-as-a-Service (SaaS) is a model in which software is licensed on a subscription basis that is either paid monthly or annually.

**Turing-complete:** Reference to a machine that, given enough time and memory along with the necessary instructions, can solve any computational problem.



**Uniswap:** A leading decentralized cryptocurrency exchange (DEX) with over \$3.7B in TVL that uses a set of smart-contracts to execute trades on its platform.

**Web 3.0:** Most commonly referred to as just “Web3,” it is an umbrella term for the decentralized web technologies that includes DeFi, NFTs, and the metaverse.

**zkRollups:** A Layer-2 scalability solution that operates independently but derives security from the Ethereum network through utilizing zero-knowledge proofs.

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