

CREPE

AI-Supported Decentralized Asset Management System

White Paper

v. 1.02E Release for Phase-1

CREPE DAO

2023. 09. 01.

Disclaimer: No part of this whitepaper may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission from Crepe DAO.

Legal Disclaimer

The contents and declarations published in this paper on the products and services of Crepe Inc. are provided in good faith and for general information purposes only. Crepe Inc. assumes no responsibility for errors or omissions in the contents hereof.

This paper presents neither an offer/ solicitation nor an offer to buy or sell in any jurisdiction. More generally, no legal rights can be derived from this declaration. In no event shall The Ubuntu Investment Company or its affiliates be liable for any special, direct, indirect, consequential, or incidental damages or any damages whatsoever, whether in an action of contract, negligence, or other torts, arising out of or in connection with the use of the services.

Crepe Inc. reserves the right to make additions, deletions, and modifications to the document in whole or in part without prior notice, during and/or after the sale of the tokens. For a change of this paper, a publication of the currently valid version on the DAO's website is sufficient. The contents of this paper are not legally binding neither for Crepe nor for its governing bodies.

This document does not constitute in any way an investment, legal, tax, regulatory, financial, accounting, or other advice. Only on the basis of this paper should not be taken an evaluation or decision on the purchase of tokens. A potential buyer is recommended to check before the purchase of tokens with their own legal, investment, tax, accounting, or other consultants to identify potential opportunities and risks and to clarify the legal regulations applicable in or her country.

The potential acquirer of the tokens is responsible for clarifying possible legal requirements, regulations, and/or restrictions with regard to the acquisition, possession, or sale of tokens in their country of residence.

This paper contains forward-looking statements: They are based on the estimates and forecasts of the Crepe System that we at Crepe DAO plan to build for the next few years.

The statements are not intended as assurances or guarantees of the future developments and results stated therein. Instead, they are rather dependent on a multitude of factors, including many risks and uncertainties. Crepe DAO assumes no obligation and does not intend to update the forward-looking statements or in the event of development other than expected.

[1] www.crepe.fund

Glossary

CREPE	In this white paper, Crepe has three meanings. The first refers to the decentralized asset management system and its ecosystem. The second points to the token used for governance within the ecosystem. The third is the DAO group that governs the ecosystem.
PaaM™	<p>Planetary Augmented Asset Makerspace. PaaM™ is the engine of the CREPE System that specializes in digital asset management. PaaM™ composed of three component platforms: asset tokenizer, strategy creator, and activity taker. They are named Asset Tokenization Platform, Strategy Creation Platform, and “One-Click” Activity Platform, respectively.</p> <p>Users may create a basket of assets using a makerspace in the system. Each makerspace carries a framework to develop a portfolio of investments. Assets include any on/cross-chain assets or non-blockchain assets with credential oracle¹ market data.</p>
MNS	Market-Neutral Strategy. It is a type of investment strategy that seeks to stabilize the profit regardless of the directional risk of the underlying assets.
NNS	Non-market-Neutral Strategy. It is a type of investment strategy that seeks to maximize profit while taking some form of market risk.
VMS	Virtual Matrix Strategy. It is an investment strategy that includes any cross-chain or non-blockchain assets with credential oracle market data.
DTF	DEX (Decentralized Exchange) Traded Fund is the crypto version of ETF (Exchange Traded Fund). As ETFs will track a particular index, sector, commodity, or other assets, so does DTF: DTF pursues to hold the assets in its basket as the index it represents. A DTF basket is rebalanced or repositioned only as defined in its creation time. It is managed by authorized ² fund managers, EFM (Expert Fund Managers), or WFM (Whitelist Fund Managers).
DIF	Direct Indexing Funds. It is a fund almost the same as a DTF. The difference is that DTF can only be created and operated by authorized fund managers. In contrast, anyone can design, create, and operate DIF by paying a small deposit and token issuance fee.

¹ “A [blockchain](#) oracle is a third-party service that connects [smart contracts](#) with the outside world, primarily to feed information in from the world, but also the reverse.”

² Authorization is determined by DAO policy and voting.

EFM	Expert Fund Managers. The experts with the privilege to create DTF and their management strategy. The governing DAO authorizes them to be EFM.
WFM	Whitelist Fund Managers. The people with the privilege to create DTF and their management strategy. The governing DAO authorizes them to be WFM.
PFM	Private Fund Managers. Users may create their asset DIF without permission from any group or the DAO.
DAO Governor	The PaaM™ in general operates autonomously. Although most of the issues, except some open ones, will be predetermined, some must be resolved by voting. The DAO admin is a multisig designated by the governing body of the DAO, implementing its decisions.
Virtual Assets	Another name for cryptocurrencies. The US Financial Action Task Force (FATF) and other regulatory authorities around the world are officially using the name. ³ [1]
Maker	Those who use the makerspaces. They are expected to be financial experts to create financial products.
Makerspace	A makerspace is a placeholder that the PaaM™ offers. Each makerspace carries a framework for a specific financial product/service that users may use to create their products/services.
Protocol Economy	refers to an economic ecosystem that implements fair distribution through decentralization, executing a contract as a smart contract between individuals. By signing all transactions in the form of smart contracts between all participants in the PaaM™ , fair distribution, and protocol economy are realized.
Intrinsic Value	refers to the inherent or fundamental worth of an asset, independent of its market price or fluctuations. It is the actual value of an asset based on its underlying characteristics such as its usefulness, scarcity, quality, and potential for generating income. In finance, it is often used to determine the fair value of stocks, bonds, and other securities, and it is a key concept in fundamental analysis.
PoR	Proof of Reserves refers to a method that transparently assures and proves to the public that a specific asset or financial asset

³ US Financial Action Task Force(FATF) defines “Virtual Asset” as following:
“A virtual asset is a digital representation of value that can be digitally traded, or transferred, and can be used for payment or investment purposes. Virtual assets do not include digital representations of fiat currencies, securities, and other financial assets that are already covered elsewhere in the FATF Recommendations.”

genuinely exists, through methods such as audits. This method is primarily used to confirm the actual existence of a crypto asset and by recording evidence of this on the blockchain, it enhances the credibility of the blockchain ecosystem.

CCIP

The CCIP (Cross-chain Interoperability Protocol) is a protocol that provides a means for heterogeneous blockchains to interact and share information. This protocol allows data and transactions generated in different blockchain networks to be transmitted and used across disparate blockchains. Through this, assets, smart contracts, and data from different blockchains can be efficiently exchanged and their trustworthiness ensured, promoting interoperability between heterogeneous ecosystems. This ensures diversity in blockchain-based services and applications. In the Crepe System, this protocol is utilized to compose and manage a basket of assets dispersed across multiple blockchains.

Executive Summary

The Crepe System is a decentralized asset management system. This system offers an innovative asset management platform environment that allows anyone, regardless of whether they're financial experts or laypersons, and irrespective of their technical understanding of blockchain or Web3.0, to design and operate financial products.

The Crepe System accommodates all assets of the world as assets within the Cryptoverse, tokenizing them and enabling them to be structured into baskets for operation. On this platform, the authenticity of asset existence is proven with Proof of Reserve (PoR) and assets can be linked through mechanisms such as the Cross-chain Interoperability Protocol (CCIP). Assets that are tokenized and proven to exist can be intertwined with smart contracts, providing an ecosystem that anyone can operate. Thus, within this system, users can act as Prosumers in the decentralized Web3.0 ecosystem, combining all the assets of the world into a single basket for operation and management.

The asset management engine of this system, known as **PaaM™**, is comprised of the following three component platforms:

- **Asset Tokenization Platform:** This platform accommodates and tokenizes all assets of the world as assets within the Cryptoverse. Here, the existence of assets is proven using Proof of Reserve (PoR). It also enables the cross-chain usage of assets using the Cross-chain Interoperability Protocol (CCIP).
- **Strategy Creation Platform:** This platform provides a workshop equipped with multiple asset management strategies, enabling financial experts to easily use them. Notably, financial experts can create innovative financial products equipped with strategies and mint corresponding tokens for sale with just a few clicks, without a detailed technical understanding or rules of smart contracts. For example, financial experts whose qualifications have been verified through processes like DAOs are offered a workshop to create decentralized exchange-traded funds (ETFs) that follow specific indices.
- **"One-click" Activity Platform:** This platform allows financial experts to create asset management items by equipping innovative strategies and mint tokens. Then, for these tokens, they can be authenticated or exchanged through voting.

The **Crepe System** has the following features.

It is a decentralized integrated asset management system. The system eliminates the inconvenience of managing and operating assets on mutually incompatible blockchains and their fragmented ecosystems. It enables anyone to easily manage financial and even in-kind assets by tokenizing and integrating them. Since the system comes with pre-installed strategies and tools, users who do not understand blockchains and smart contract technology can easily introduce and execute management strategies with just a few clicks.

The asset management strategies may include traditional financial market strategies that have been historically practical and theoretically proven.

It provides a creation platform that allows any assets to be tokenized and issued. It expands the current virtual asset market to tokenize, combine, and issue not only native virtual assets on the blockchain but also spot and futures assets traded in legacy financial markets and real markets. Even data without real assets can be created by tokenizing on the blockchain.

It is a collaborative ecosystem that provides incentives to multiple users, including financial professionals and the general public. This system provides a makerspace so multiple users can participate, enabling them to perform various roles (design, operation, management, etc.) and collaborate in the entire process necessary for producing financial products.

It is an income-generating system that allows one to generate profits more safely and within manageable risks. The system provides various strategies developed and introduced to control risk on the one hand and generate profits through Makerspace on the other hand. Users can develop strategies on the system as independent creators or prosumers of asset management, select and implement their strategies among the provided ones, or purchase ones already specified by other creators. As a result, virtual asset investment, which has been perceived as a difficult and risky investment to control, can be an investment with a high probability of generating profits more safely within controllable risks through tokenized asset management on the blockchain on this system.

It is the protocol economy ecosystem. This system is the ecosystem of the protocol economy which will form the basis of Web 3.0. In other words, contracts and all transactions between individuals are made through smart contracts, and an ecosystem in which profits can be fairly distributed through decentralized collaboration is guaranteed. This system introduced the Soulbound Token, a Non-transferable Reputation Token (NTRT) that manages users' reputations so collective intelligence can be manifested through efficient cooperation between users.

Last but not least, the founders of our Crepe DAO hope that it serves as more than just another DeFi, but as a Web 3.0 asset management system that opens up a Web 3.0 form of prosumer finance. It acts as both the foundation of 'stakeholder capitalism' and a starting point to manifest a new economic democracy through an expansive protocol economy ecosystem that ensures equitable wealth distribution.

Prelude

This whitepaper describes Phase-1, the first part of the Crepe project. The subsequent part will be released when we implement the real-world assets that will be developed later.

1. Introduction

1) Decentralized Asset Management

Crepe is a Decentralized Asset Management System. In the traditional financial market, asset management systems primarily revolve around securities, managing assets such as stocks, bonds, futures, and options. In contrast, in the crypto financial market, decentralized asset management systems operate based on crypto assets.

Recently, BlackRock, one of the world's largest asset management companies in the traditional financial market, requested approval for a Bitcoin ETF (Exchange Traded Fund) from the US Securities and Exchange Commission (US SEC). This type of asset management is a prime example of an attempt to list an asset from the cryptocurrency market, Bitcoin, on a traditional financial securities exchange. We at Crepe DAO take an approach that is precisely the opposite of traditional finance ETFs. That is, we envision a system that aims to help users tokenize all assets in the traditional financial markets and bring them to a decentralized exchange for trading. These are structured into asset management items known as DTF (DEX Traded Fund), enabling them to be bought and sold.

Our vision goes even further, aiming not only to tokenize traditional assets found in legacy financial markets like securities, futures, and options but also to tokenize and manage every conceivable asset in the world. That is, assets like real estate, carbon credits, RA-100, and other non-traditional assets would be integrated into the blockchain, tokenized, and made tradable within the crypto market. Using these diverse assets, any financial expert with innovative ideas can create their unique fund with a few clicks, implement it as a Web3.0 product, tokenize it, and sell it. Lastly, the system allows regular users to simply click and purchase or trade tokens created by financial experts, combining both non-traditional and traditional assets.



Future of Money

Bitcoin hits more than 1-year high amid BlackRock ETF excitement

By Hannah Lang and Chibulke Oguh

June 24, 2023 6:03 AM GMT+9 - Updated 2 months ago



A representation of the cryptocurrency is seen in front of Bitcoin logo in this illustration taken, March 4, 2022. REUTERS/Dado Ruvic/illustration Against Licensing Studio

2) Makerspace for Asset Management

A "Makerspace" is often referred to as an "open workshop", a term used to describe a space where customers themselves can become crafters or makers and engage in activities. Particularly, it's gaining attention as a valuable mass innovation startup space to address the changes brought by the Fourth Industrial Revolution. Crepe aims to be the makerspace of the crypto industry, offering a creation and distribution platform that not only issues, combines, and synthesizes blockchain-native virtual assets but also all spot and futures assets traded in the legacy financial markets on the blockchain. It enables designing of management strategies for these assets.

The Crepe system supports the tokenization of all on-chain/cross-chain assets as well as all non-blockchain assets traded on Earth and offers various strategy implementation tools to create portfolios. Crepe provides financial creators with an infinite experience and creative space, supporting them not only in realizing and verifying their unique ideas but also in the production, distribution, sale, and consumption processes of an economic ecosystem. In this process, it offers an open ecosystem that anyone can challenge and distributes the produced value as an incentive to participants. Additionally, once a strategy is developed and verified, it can be circulated, sold, and consumed in the form of an NFT (Non-fungible Token).

Recently, the crypto market has been showing a trend where prices soar and plummet repeatedly, making risk management challenging. This is because the market has undergone unprecedented rapid growth over the past decade, leading to an immature ecosystem. Additionally, the concurrent development of multiple blockchains that are not interoperable has resulted in fragmented, miniaturized markets that can't absorb even minor shocks. Consequently, regular users are easily exposed to sharp price movements and find it challenging to track and adapt to all these fragmented markets. As a solution to these issues, Crepe has designed its technical engine, PaaM™.

3) Features of the Crepe System

The Crepe System, an AI-powered decentralized asset management system has the following features.

First, the advantages of legacy finance and cryptocurrency finance are fused.

Until now, crypto financial products have been limited to the blockchain. However, the System does not divide and reject the boundaries between legacy finance and crypto finance but actively utilizes each advantage. In particular, we adopted financial products only available in legacy finance markets, such as ETF (Exchange Traded Fund) and DI (Direct Indexing). We designed the System so users may create similar financial products, such as DTF (DEX Traded Fund), DIF (Direct Indexing Fund), and so on. By doing so, we broadened the scope of asset allocation to all assets on earth, including cryptocurrencies, and reduced the underlying risks by diversification.

Second, anyone can become a prosumer and design financial products.

The legacy financial market is one-way and closed, where licensed operators provide services to consumers with fees. Licensed operators by regulatory authorities are allowed to provide services in the market. In the decentralized crypto financial market, however, innovative operators created financial markets different from the legacy closed markets. Anyone may jump in and compose financial products. In theory, it offers opportunities. However, it is almost impossible for ordinary people who lack the expertise to use smart contracts to create financial products and become providers of various services. The System is equipped with easy-to-use tools so that anyone can become a prosumer who can produce, supply, and consume financial products.

Third, a one-stop financial product design is possible by integrating on/cross-chain assets and non-blockchain assets.

Creating financial products using cryptocurrency is very difficult due to the fragmented ecosystem. The reason for this is as follows.

- Cryptocurrencies that exist on heterogeneous chains are not compatible with each other if the blockchain networks are different. Therefore, it is necessary to have multiple different wallets for each chain and manage the corresponding number of passwords and seed phrases. As a result, users may be exposed to the risk of taking large asset losses.
- Even if there is, in many cases, it is necessary to go through a process that is relatively expensive, time-consuming, and risky, such as having to go through a third-party bridging service.

The **Crepe System** is a Web 3.0 Asset Management System that can configure, invest, and manage asset portfolios, including assets and rights traded in multiple chains and markets.

As shown in the Service Diagram below, anyone on the **PaaM™** can become an investor or user and consume financial products. Furthermore, the **PaaM™** provides access to even non-blockchain assets so that anyone as a prosumer can design financial products and become a fund manager/supplier/seller.

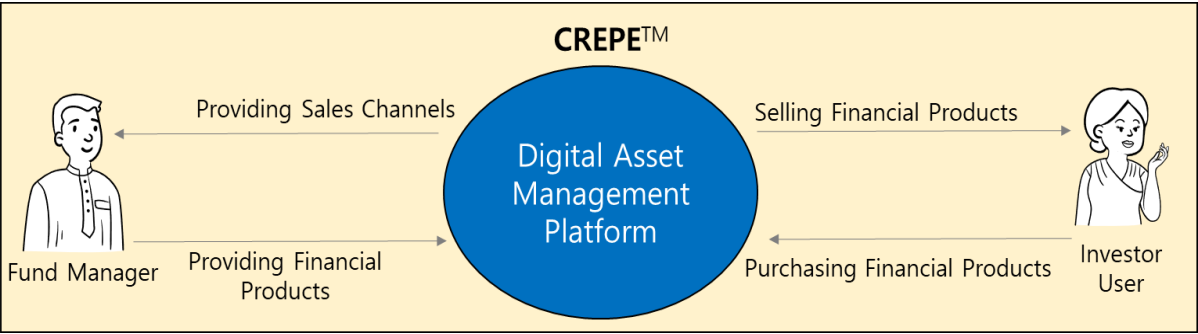


Figure 1. Service Diagram

2. Problems in DeFi and the Solutions

“Why Rapid Growth Kills Small Businesses”

- Eric George, Ph. D.

In an article titled above, Dr. Eric George, a council member of Forbes magazine, asserts that the problem in the startup business is rapid growth, not pitch decks or founder/investor inspiration.[3] Because fast growth destroys business. DeFi showed rapid growth in 2020 after AAVE and BANCOR were introduced in 2017, and TVL (Total Value Locked) started from U\$200,000 in December 2018 and recorded U\$20 billion in May 2021. It surprised everyone by growing 1.25 million times to U\$250 billion in December 2021 (see Figure 2 below). Unfortunately, however, it has grown without a sufficient foundation for it.

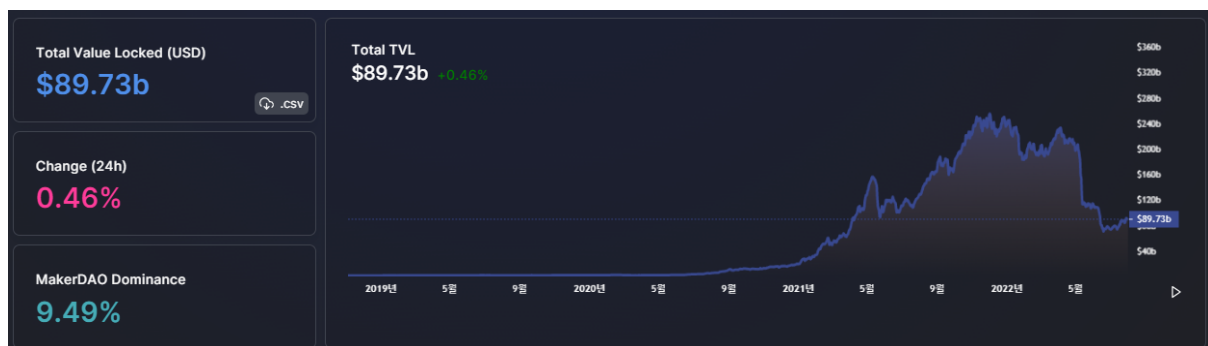


Figure 2. Defi Llama's TVL Chart⁴

As a result, hackers and spammers are rising, and the cryptocurrency industry is becoming a hotbed for large-scale hacking and other crimes. According to REKT data, in 2021 alone, about 600 projects were hacked and suffered financial losses of U\$2.2 billion. Compared to 2020, the number of projects suffering from hacking attacks increased about four times, and the financial loss increased about ten times. In the end, for these reasons, virtual assets were classified as risky, and problems occurred, such as not being able to form long-term diversified investment financial products for the general public and not being able to expand their sales. Although the crypto market has grown and expanded, the foundation has advanced little.

Based on the recognition of the issues in the blockchain industry, particularly what the DeFi market users are experiencing, we may categorize them into three;

- (1) Disconnection from legacy finance and fragmentation of the blockchain ecosystem
- (2) Immature decentralization
- (3) Investment risk that is difficult to manage

⁴ As can be seen from the chart of Defi Llama, the total deposit reached U\$250 billion in December 2021 and has now dropped to about U\$90 billion.

We at Crepe DAO believe that if one can solve the above, cryptocurrencies can become manageable assets (even though they are still risky) that can be constructed and sold as long-term diversified financial products for the general public.

1) Disconnection from legacy finance and fragmentation of the blockchain ecosystem

There are many serious problems with the crypto industry and DeFi. Among them, the most well-known and representative problems are scalability, security, and decentralization, known as 'the trilemma.' It is an area that many developers are challenging. However, Crepe Foundation sees it as a more serious problem than the trilemma. We believe the ecosystem fragmentation formed voluntarily and involuntarily due to the technical incompatibility between blockchains.

For example, suppose a user wants to invest in the Polygon market while providing liquidity to the Mango market of the Solana network. In that case, it is very complicated to hedge the investment using two chains and requires an expensive solution.

Although the DeFi market shows outward growth, the ecosystem has not grown as much as it should have because of ecosystem fragmentation. As a result, the risks are being amplified and expanded excessively. Among them, What we at Crepe attempt to solve may be summarized as the problem of three disconnections.

- Disconnection of assets not existing on the same chain: In many cases, because blockchains are incompatible, it is difficult for investors to mix assets on different chains in a portfolio and manage. Investors should carry different wallets for almost every chain and remember different ways to log in. Users often run into the problem of having to record and keep a different seed for each wallet.
- Disconnection of assets not existing on the blockchain: Currently, most real assets are not issued on the blockchain and cannot be configured and managed in a portfolio. Investors wishing to implement an asset hedging strategy want to easily invest and manage all tradable assets in the market beyond legacy financial assets on one platform.
- Disconnection from the legacy financial investment strategies: In the legacy financial markets, many hedging strategies and investment theories have evolved through numerous scholars' research and investors' experiences. DeFi, invented by the crypto industry, is a new product, and it is clear that it has developed a new financial system. However, one could not manage the risks as well as one should because the wisdom from experience could not be transcended and translated well.



Points for Solutions

It is necessary to find a way to connect and bundle as many types of assets as possible within a single gigantic ecosystem. In other words, users must invest, manage, and trade the assets in multiple chains on the platform supporting the ecosystem, even those in the non-blockchain markets on Earth. It should also offer users access to legacy financial investment products such as ETF (Exchange Traded Fund), Direct Indexing, etc. It enables users to adopt those various strategies.

Therefore, building a single gigantic ecosystem through tokenizing, integrating, and connecting all possible assets and strategies is necessary. To make the ecosystem comprehensive and inclusive, we must understand the types of assets to be tokenized. Assets may be classified in a few different ways as follows:

1. Assets may be classified as follows.

- **Classification by blockchain assets or not**

- Blockchain Assets
 - Same-chain assets (on-chain assets): Assets that can be traded on-chain without custody
 - Heterogeneous chain assets (cross-chain assets): Assets that can be traded on-chain only by using custody or bridge services
- Non-Blockchain Assets
 - Non-blockchain exchange-regulated assets: Assets that are listed following the rules of legacy financial exchanges and transaction information which are provided by oracle data services
 - Non-blockchain non-exchange regulated assets: Unlisted assets or deeds of right that are traded daily through markets or brokers in real life (e.g., unlisted real assets such as real estate, agricultural and fishery products, intermediate goods, or deeds of rights such as corporate bonds, leases, copyrights, and bills of lading)

2. Tokens issued based on non-blockchain assets can be classified according to the presence of custody, type of collateral, and collateral verification method.

- **Classification by entrusted or not**

- Data Token: Virtual Matrix Token issued based on (Oracle) data without custodial assets
- Custody Asset Token: Token issued based on assets entrusted to the custodial institution

- **Classification by type of collaterals**
 - In-kind Asset Custody Token: Token issued by custody of non-blockchain assets that match one on one
 - Heterogeneous Collateralized Custodial Token: Token issued by collateral with an on-chain asset that will preserve the value of the token underlying a non-blockchain asset

- **Classification according to the collateral verification method**
 - Oracle Auditor Verification: A method of verifying custodial assets through the auditor nodes of oracle services
 - Trusted DAO Auditor Verification: DAO auditor's periodic verification/reporting method for non-blockchain trusted assets

Building an ecosystem that comprehensively holds all the assets classified above is ideal. Therefore, the supporting system must allow users (a.k.a. prosumers) to issue all assets according to the classifications as on-chain tokens, implement various management strategies, and receive incentives according to operational performances.

2) Immature decentralization

With blockchain and its technology, the intervention of centralized third parties is disrupted, and changes occur in wealth distribution. In particular, DeFi tends to pay higher interest rates than legacy finance is an attraction. However, DeFi is not only vulnerable to attacks such as hacking but also exposes investors to risks. It is because no system exists, such as FDIC (in the USA), that insures deposits and supervises financial institutions for safety, soundness, and customer protection. Many DeFi's over the past few years have dazzled participants with excessive interest rates, so it is taken for granted that DeFi provides ultra-high interest rates. Unfortunately, as seen in the Terra/Luna crisis, services that provide ultra-high interest rates ultimately lead to Ponzi scams.

Big financial corporations planned and marketed financial products in legacy finance, and the end consumer was only a passive sales target. However, the transfer of ownership requires individuals to participate and change from passive consumption behaviors to active prosumers. DeFi participants are expected to play an active role in maximizing profits and minimizing risks as an owner or stakeholders of the financial products, rather than the passive role expected of consumers in legacy finance. In other words, DeFi participants must change their perception and make efforts to diversify their risk and maximize profits by constructing their portfolios. However, few DeFi's provide users with ways and opportunities to participate actively. Some DeFi's even limit participants' access, as in legacy finance.

Points for Solutions

The shift in the ownership of financial products requires a paradigm shift from legacy centralized services to decentralized services. In other words, DeFi designers must

- (1) recognize that each participant is an owner and a stakeholder,
- (2) increase the access to facilitate user participation;
- (3) allow participants to seek to maximize profits actively
- (4) allow participants to select the risk to take at their own discretion

Unfortunately, CeFi (Centralized Finance) and many DeFi services are immersed in the traditional service paradigm and remain unchanged. A paradigm shift is necessary to allow users to decide what to do with their own assets and employ various management strategies that may exist in both legacy and crypto finance.

3) Investment risk that is difficult to manage

The high risk in the cryptocurrency market is caused by many inherent reasons, such as rapid price volatility, technical complexity, hacking and spamming, and program errors (or malicious code) in smart contracts. In addition, external factors such as rug-pull, pump-and-dump, and Ponzi scams arise from the lack of a system that includes legal regulations that can block crimes and fraud.

- Risks in Decentralized Finance: According to CME, price discovery is defined as the act of setting a price for an asset.[4] The cryptocurrency market exhibits sharp price volatility compared to other asset markets. The market is immature, and the price discovery function works inefficiently. The problem is that not many techniques to hedge this have been introduced, and even if they are, it is not easy to use due to the disconnection between the blockchain networks.
- Technical risks: Due to the complexity of blockchain technology, it is difficult for average users to understand the contents of the technology described in the whitepapers. Moreover, programming errors or malicious code that may exist in smart contracts can only be detected at the level of professional experts. Similarly, knowing the potential of hacking attacks and spamming is almost impossible at the layman's level. The public needs to be protected by insulation from potential technical risks. In other words, we need a service that allows the public to be freed from technical risks and to hedge from financial risks as much as possible.
- Risks of the Reputation-less System: Although the decentralized market has the advantage that anyone may conduct trustless transactions, criminals and groups who want to gain illegal profits through anonymous transactions have emerged. A system is needed to prevent such crimes from occurring in advance.

Points for Solutions

- Solutions to the risks of decentralized finance: It is necessary to actively introduce the hedging tools and theories of the traditional financial market. Since many DeFi services are fragmented on a blockchain network that is disconnected from each other, it is difficult for even experts to hedge risks using them. Therefore, we will solve this problem by providing a system that can create integrated products by connecting assets that exist in heterogeneous blockchains and non-blockchain assets.
- Solutions to technical risks: Among the above risks, those that ordinary people cannot solve are probably technical problems. It is difficult for financial experts or ordinary people to understand technical problems that only professional programmers can understand, and it is even more difficult to understand smart contracts. Furthermore, it is virtually impossible to find and avoid the risk of malicious code that may be inherent there. Therefore, there is a need for a platform that provides a device that protects general users from technical risks.
- Solutions to the dangers of the reputation-less system: A system is needed to build and enforce a system that filters and blocks criminal attempts within a decentralized and third-party free range. Because the blockchain system is decentralized, it guarantees trustless transactions. Nevertheless, all the parties need evidence that the counterparty is not a criminal. This reputation management system provided by traditional systems is needed to be introduced in decentralized blockchain networks. On the one hand, by taking advantage of the decentralized system, personal information is blocked or protected. On the other hand, reputation and past performance are profiled and displayed transparently. It should show an individual's expertise or performance by connecting decentralized ID.

4) Integration with Artificial Intelligence in Asset Management

Crepe, a decentralized asset management system, envisions managing assets in a decentralized environment distinct from traditional asset management over the long term. Consequently, it faces the challenge of equipping the capacity to automatically optimize everything within this environment.

- Data Analysis and Forecast: Decentralized asset management must deal with countless data sources and blockchain transaction data.
- Automated Trading and Optimal Balancing of Assets: Decentralized asset management should make investment decisions swiftly and automatically, optimizing asset balancing. This necessitates the ability to automatically optimize efficient portfolio management, rebalancing, and repositioning.
- Risk Management: It's necessary to monitor and identify risks in the market. It's essential to protect assets and minimize risks in response to drastic price fluctuations or changes in market conditions.

- Personalized Investment Suggestions: There should be the capability to generate investment recommendations personalized to an investor's profile and objectives.
- Time and Cost Savings: By leveraging the advantages of a decentralized system, operational costs should be reduced, and efficiency should be increased. Real-time data analysis and decision-making processes should allow for swift responses.
- Enhancing Security and Reliability: Enhancing the security of smart contracts and detecting irregular transactions are essential.
- Scaling and Global Expansion: The decentralized asset management system should expand into global markets and handle large-scale operations. The capacity to expand asset management beyond human labor limitations is a must.



Points for Solutions

The combination of blockchain and AI technology is crucial as a solution to the aforementioned challenges in the decentralized asset management system. Additionally, AI technology can provide better value to investors through efficiency and performance improvements.

- Data Analysis and Forecast: AI technology aids in analyzing vast amounts of data, identifying patterns, and predicting future market trends. This helps optimize investment strategies and make more accurate decisions.
- Automated Trading and Asset Allocation: AI-powered algorithms can automatically make investment decisions and assist in optimizing asset allocations, thus realizing efficient portfolio management and rebalancing.
- Risk Management: AI can be used to monitor and identify risks in the market, helping protect assets and minimize risks in response to sharp price fluctuations or market condition changes.
- Personalized Investment Suggestions: AI crafts investment recommendations tailored to an investor's profile and objectives, adjusting investment strategies considering each investor's preferences and risk tolerance, enhancing investor satisfaction and trust in asset management.
- Time and Cost Savings: AI technology replaces or assists human labor, cutting operational costs and boosting efficiency. The benefits of real-time data analysis and decision-making enable timely responses.
- Enhancing Security and Reliability: AI can be used to strengthen smart contract security and detect malpractices. Combining blockchain and AI increases the reliability and security of the asset management platform.
- Scaling and Global Expansion: Through AI, the decentralized asset management platform can expand globally and handle large-scale operations, assisting in extending asset management beyond human labor limitations.
- However, the integration of artificial intelligence technology for value creation in asset management will be actively pursued in Phase-2.

5) Summary

In conclusion, virtual assets are currently classified as high-risk assets due to problems such as disconnection from legacy finance, the fragmentation of the blockchain ecosystem, immature decentralization, and investment risk that is difficult to manage. In order for virtual assets to be constructed and sold as long-term diversified investment financial products for the general public, a solution that can make risk management a little easier is needed. To this end, the Crepe Foundation proposes the following measures.

First, as a way to realize the transfer of ownership, a space⁵ where financial product makers can easily access smart contracts and users can easily design financial services, that is, multiple 'Makerspaces' must exist. In this makerspace, not only financial services for cryptocurrency but also various financial asset management strategies that exist in legacy finance should be selected and used. To this end, the makerspace needs to provide legacy financial service templates, including cryptocurrency, to makers. For example, makers must be able to compose and sell financial products such as ETF and direct indexing of legacy finance. In addition, it should be possible to select various on/cross-chain assets and non-blockchain assets. Through this makerspace, anyone should be able to easily design, sell, and supply financial products made of smart contracts without exposure to technical risks.

Second, continuous 'risk profiling' for low-risk long-term diversified investment financial products such as crypto funds, long-term deposit products, and insurance, etc., created by makers, i.e., suppliers in the makerspace, by a decentralized entity that can replace the compliance role of legacy finance is needed. Through this, consumers must select risks and expected rates of return and implement them so that stable and safe consumption can be achieved. Likewise, a system that can easily calculate profits must exist for the makers, that is, the supplier side.

Third, there must exist a system that provides a platform where these products can be sold and provided with liquidity. This system not only leads a paradigm shift with decentralization, but the change should enable individual participants to actively decide on maximization and stabilization of profits as equity participants.

Lastly, there needs to be a system that, as a decentralized asset management system, operates assets in a decentralized environment differently from traditional asset management and possesses the capability to optimize value creation. To achieve this, artificial intelligence technology must be incorporated.

⁵ We at Crepe Foundation define it "makerspace."

3. PaaM™: The Engine of Crepe System

PaaM™ (Planetary Augmented Asset Makerspace) is a one-click asset management system designed to solve the various problems pointed out in Chapter 2. This system provides the platforms of the following three layers.

- Decentralized Distribution Platform: It connects and tokenizes assets in both crypto-verse and non-crypto-verse. Once tokenized, the assets will be managed and traded in the size of a basket, such as DTF and DIF, etc.
- Strategy Creation Platform: Experts with unique ideas may use tokenized assets and construct a basket. Then they may add strategies (in the form of smart contracts using **ScoFact™**), create tokens, and run them to prove their ideas on the sandbox.
- “One-click” Activity Platform: Ordinary users may review the performances of different strategies. Some could be market-neutral; some could not. Some may be aggressive; some may not. Users will select tokens according to their activity objectives and attempt to generate income.

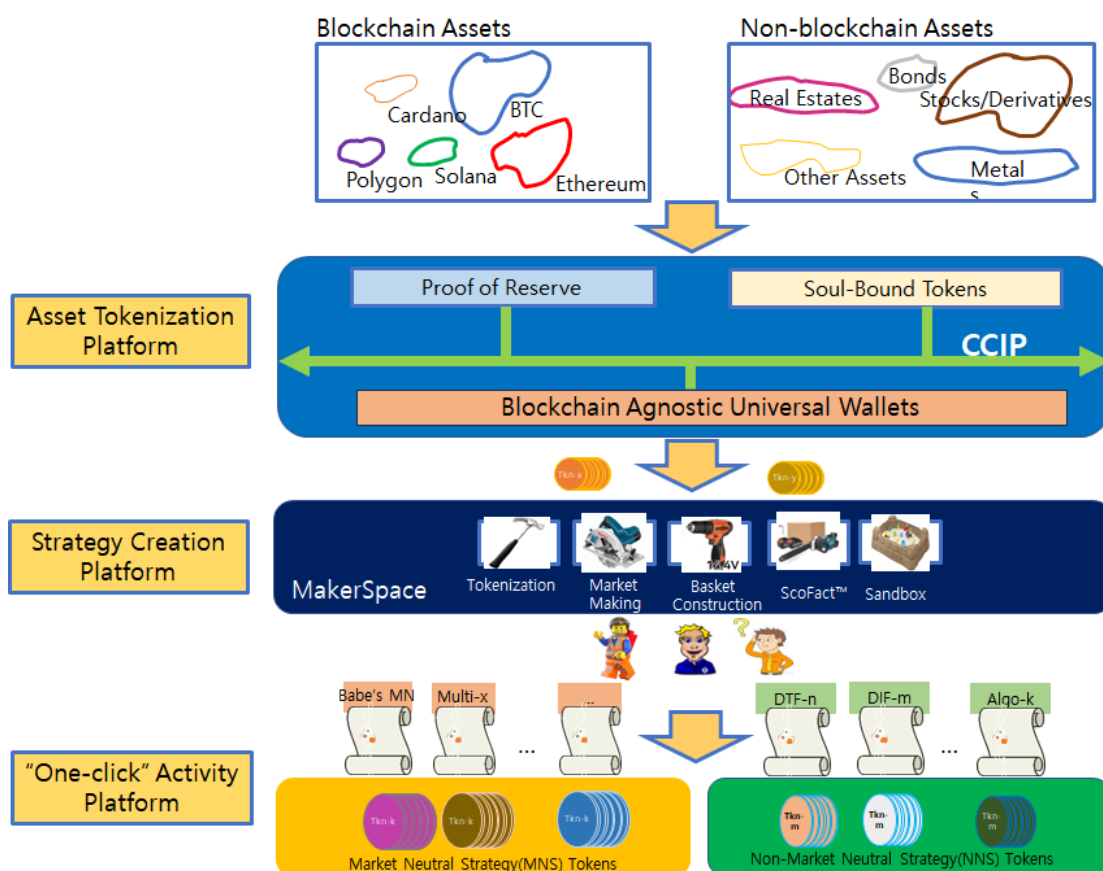


Figure 3. Crepe Asset Management System's Component and Concept Diagram

Crepe is a Web 3.0 decentralized system that allows anyone to become a maker in Makerspace. A maker can design financial products, and manage private funds for her/himself. The maker can even mint tokens for a basket with creative financial strategies and release them to the market.

Crepe is a digital financial system that takes advantage of legacy finance and crypto finance and converges them, providing a platform where anyone can design a fund, become a manager, and earn profits on their own on a blockchain. As a result, the system is designed to allow various types of assets to be easily sold as long-term, diversified investment financial products.

1) **ScoFact™ (Smart Contract Factory Technology)**

ScoFact™ (Smart Contract Factory Technology) is the technology for financial professionals or the public who do not understand smart contract programming. It provides users with a framework⁶ of smart contract templates. Users can design and develop smart contracts for ready-made financial products using the technology without understanding programming. The **PaaM™** platform is equipped with **ScoFact™** as a base technology, so anyone can design financial products and create smart contracts.

Since **ScoFact™** uses ready-made templates⁷ audited by professionals and verified in the field, the risks of technical errors and hacking attacks will be minimal. By providing **ScoFact™**, the **PaaM™** provides a comprehensive platform that reduces the risk of hacking and other similar attacks, solves the fragmentation problem mentioned above, and is ready to respond to the fast-changing global regulatory environment.

ScoFact™ enables many universal services. In other words, we created frameworks by implementing legacy financial services such as ETF, Direct Indexing, etc. Thus, financial professionals and the public can use the ready-made framework to design and develop financial products with several mouse clicks.

Furthermore, in the **PaaM™** platform, if users wish, non-blockchain assets and even imaginary assets that do not exist can be tokenized and released as so-called 'Virtual Matrix Assets (VMA).' Therefore, the **PaaM™** provides a broad spectrum of asset selection that encompasses both on-/cross-chain assets and non-blockchain assets, allowing to build an ecosystem that can organize portfolios of baskets for all planetary assets

In other words, the **PaaM™** uses **ScoFact™** to

- (1) allow users to design financial products at their discretion;
- (2) allow prosumers actively participate in creating their ideas;
- (3) fuse sales and consumption; and,
- (4) enable the composition of various financial services in legacy finance.

⁶ The framework provides a number of linked templates for designing financial products. A user of the makerspace, that is, a maker or creator, can design a financial product using the framework.

⁷ A template is created to complete the steps of financial design, and as an example, a web page for financial service design can be considered. On the web page, users can design one step of financial planning with a simple click.

2) Makerspace

Makerspace is a space where anyone can use financial strategy provided using **ScoFact™** and is a space where makers can use their imagination to build financial services. In particular, various strategy implementation tools are provided for financial experts and the general public, who have little understanding of smart contracts or blockchain cryptocurrency technology, so they can easily create their financial products. In addition, the **PaaM™ System** created a specialized makerspace to maximize the advantages of various tools as follows.

- **DTF** (Decentralized Exchange (DEX) Traded Fund) Makerspace: This is a makerspace to implement a financial product called ETF in traditional finance.
- **DIF** (Direct Indexing Fund) Makerspace: This is a makerspace to implement a financial product called Direct Indexing in traditional finance.
- **MNS** (Market-Neutral Strategy) Makerspace: This is a makerspace for realizing financial products that use a market-neutral strategy.
- **VMS** (Virtual Matrix Strategy) Makerspace: This is a makerspace for realizing financial products that use a virtual matrix strategy that integrates non-blockchain assets. This makerspace exists somewhere between imaginary and reality, allowing a user to build imaginary products without real non-blockchain collateral assets or non-blockchain non-existing assets. Some of the tokens created in this makerspace will have an 'i' in front of the token name to indicate that they have no collaterals and no real assets exist anywhere.

The above makerspace verifies and realizes the unique ideas of specialized financial creators through an open ecosystem so that they can produce, distribute, sell, and consume them. In addition, a strategy developed and verified may be fixed in the form of NFT to be distributed, sold, and consumed.

3) Income-generating Machines

We, the Crepe Foundation, believe that **PaaM™** is not only open but also innovative, with no precedents found, in that any ordinary user can participate in the system and manage assets through the **ScoFact™** and workshop. However, what ordinary users ultimately want is how and how much to generate income rather than openness or innovation of technology. Considering these points, financial creators design an asset management strategy, turn it into a product, issue tokens, and enable ordinary consumers to purchase them, which is defined as an income-generating machine.

In this income-generating machine, each strategy framework that exists in each makerspace has a different goal, and the degree of risk and return varies greatly depending on which asset and which strategy is selected. For example, the DTF makerspace is a strategy

framework designed to be similar to an ETF provided in the legacy financial market, and there is a big difference depending on the 'basket constituent coins' and 'management scheme'. For example, some DTFs set the baskets as the top 10 coins by market capitalization, and if the top 10 coins change, they manage in a way of rebalancing and repositioning, depending on the management scheme, the return can vary greatly and the risk can also vary. Therefore, ordinary users can earn as much income as they want with high probability by looking at the goals, techniques, and risks of the income-generating machines and investing in a combination of the risk level and the degree of income.

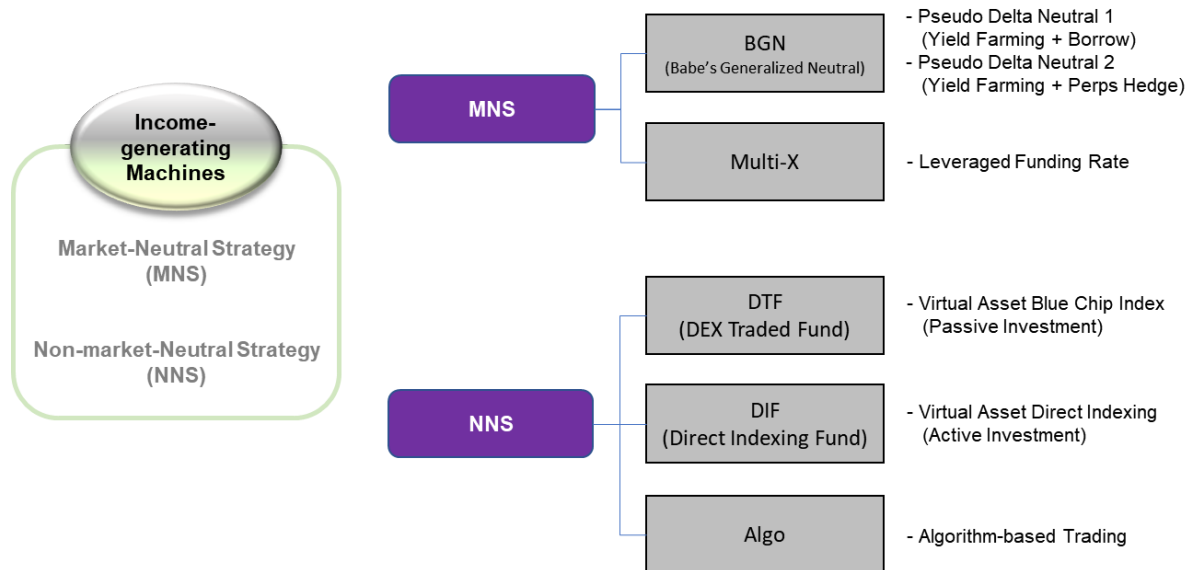


Figure 3. Income-generating Machines

For example, in the figure above, the Multi-X (Leveraged Funding Rate) machine, one of the MNS, can generate a profit of around 10% while preserving the principal's value regardless of market fluctuations. A detailed description of the income-generating machine is covered on a relevant web page, as it requires somewhat complicated descriptions such as items, management schemes, and strategies, and requires continuous revision.

4) Soulbound Token for Reputation Tracking

The **PaaM™** is an open ecosystem. We provide **ScoFact™**, which allows “anyone” to build a basket of virtual assets and create their tokens. The problem is that “anyone” can launch and sell it, which can easily be abused for criminal purposes. Therefore, appropriate institutional risk mitigation measures are needed. Continuous risk profiling that can replace the existing regulations in legacy finance should be disclosed and provided to users. In other words, anyone can design and launch a financial product. However, the decentralized identifier indicating who the designers and publishers are, their past product release history, and the performance of the released product should be disclosed so that anyone can review it. In addition, all the profiles must be in the form of NFTs to be transparent and undeletable.

In particular, NFTs representing prosumers in the **PaaM™** platform are issued as “Soulbound”⁸ NFTs that cannot be transferred or sold. Designed to be Non-transferable, non-sellable, and inseparable from the owner, Soulbound NFT records the owner's reputation within the **PaaM™** platform. Soulbound NFTs are minted and distributed through an independent DAO (Decentralized Autonomous Organization). It is intended to make the owner's reputation independent from a single platform to be extensively used in wide areas and many other projects.

5) Blockchain-Agnostic Design

PaaM™ has a long-term vision of accommodating and tokenizing all assets in the world. Therefore, to realize this, it has been designed to be blockchain-independent as follows:

1. Universal Wallet: A wallet that allows easy access to and management of multiple blockchain platforms and digital assets in one place. Users can effectively manage various cryptocurrency assets from a single interface without being conscious of which blockchain they are using. This wallet provides users with convenience and efficiency.
2. Integrated Token Use to Pay Gas Fees: This design ensures users don't have to pay gas fees separately for each blockchain. All gas fees are paid using the Crepe Token (its symbol name, CRE).
3. CCIP (Cross-chain Interoperability Protocol) Implementation: CCIP is a protocol that provides a method for heterogeneous blockchains to interact and share information. This protocol enables the transfer and use of data and transaction details originating from different blockchain networks to be shared among heterogeneous blockchains.

6) Link to AI Technology

In PaaM™, all strategies created using the Makerspace will be analyzed by artificial intelligence. This feature is set to be thoroughly designed and developed in Phase-2 of the project.

7) Summary

So far, the **PaaM™** architecture, the engine of the Crepe System, has been described. Technically, the **ScoFact™** (**Smart Contract Factory Technology**) offers the boilerplates of various abstract financial products so that anyone can easily adapt them. In the Makerspace,

⁸ Soulbound Token is a token that is practically non-cashable and inseparable from its owner. This term is the name of an item used in World of Warcraft, and this item cannot be sold or is inseparable from the player of the game.

various tools are provided so that anyone can easily add details to the boilerplates and create their financial products. Since anyone can launch and sell financial products, the Soulbound token is designed to track credits to promote experts for their track-records, prevent crimes, and mitigate hacking attacks. Finally, using the various devices designed this way, the income-generating machine was designed and installed as a standard product-making vehicle to make it easy to use.

As shown in the figure below, an additional requirement for the **PaaM™** system is a DAO (Decentralized Autonomous Organization) community to support it. The DAO, Crepe's investing and operating entity, will be explained in the next chapter.

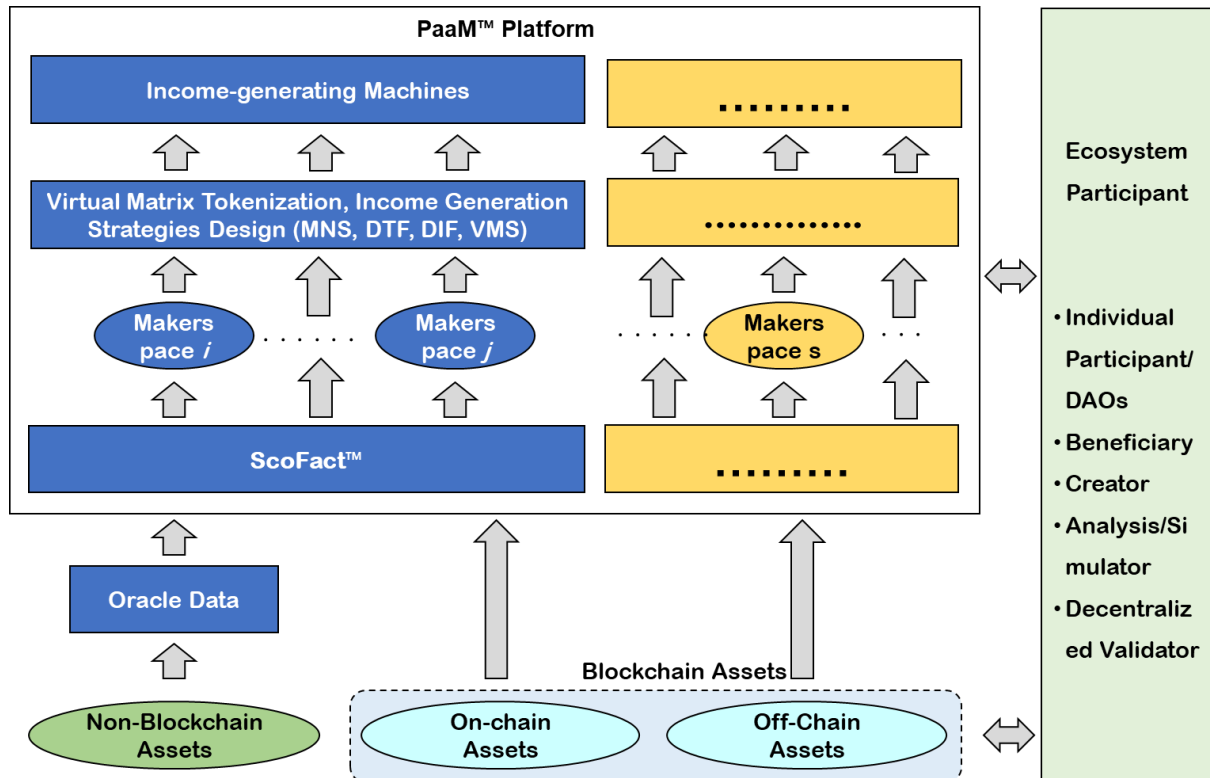


Figure 4. **PaaM™** Architecture

4. DAO: Collective Intelligence Complementing Smart Contracts

We at the Crepe Foundation believe that the current Web 3.0 crypto asset management market faces technical and institutional resistance from Web 2.0-based traditional finance. On the other hand, we also believe this is a transitional period in which technological imperfections are quickly overcome, and changes in the legacy financial market are brought about. For a decentralized organization to replace traditional financial institutions in asset production, certification, brokerage, and ownership, DAO is essential to improve the credibility of the ecosystem in decision-making, asset custody storage, and collaborative reward system as a social and economic tool.

High feedback from the community and quick decision-making are essential to overcome and adapt to the challenges in the growth process of the Crepe ecosystem. As an activity space for this group of participants, DAO is a social means of Web 3.0 that increases community participation in the ecosystem, contributes to communication expansion, and complements the rigidity of smart contracts.

1) Soulbound Token (SBT)

PaaM™ is a platform based on the activities of financial creators, and a collaborative space for creators, underwriters, custodians, and researchers is essential. Accordingly, Crepe intends to expand the ecosystem and the Crepe value chain through solidarity with external DAOs, such as mutual guarantees of NFTs within the DAO. Ecosystem participants expand the usability of NFT in a network of various collaborations through NFT and have greater exchange value. For example, in the DAO, which is partnering with Crepe, the holders of management strategy and portfolio creator NFT can collaborate with the holders of researcher NFT to provide real-time social trading strategies to the holders of subscriber NFT and share the revenue.

One of the important functions of NFT in the Crepe ecosystem is the ability to record participants' activities. In the legacy financial market, financial service entities have become an important criterion for consumer selection. With the emergence of decentralized financial markets without intermediaries, the importance of smart contracts making this possible has been emphasized. In contrast, the importance of financial service entities has been overlooked. Unlike the direct investment market, which emphasizes the completion of transactions, in the indirect investment market, such as asset management, the management record of the manager is an important factor in making the market. An NFT within the community that identifies entities and records their activities is essential.

Users can upgrade the NFT by doing altruistic actions for the community or contributing to earn Soulbound Tokens (a kind of NTRT, Non-transferable Reputation Token). As in the legacy financial market, the manager's reputation in the crypto asset management market

(the function of accumulating reputation based on the records and the value chain community) is an important factor. It enhances the loyalty of ecosystem participants and secures long-term liquidity.

In the Crepe ecosystem, DAO is open to the outside people and complements the technical limits of decentralization by using social organization tools for collaborative and collective intelligence expression. By issuing NFT, the member activities of the DAO will be measured by quantitatively recording and making rewards within the ecosystem. Compensating them with Soulbound tokens for reputation and the stability and scalability of the ecosystem will improve.

2) Incentive Computation and Distribution

One of the core values of a Decentralized Autonomous Organization (DAO) is the fair distribution of wealth. The method of calculating incentives is distributed based on the quantity and quality of the activities of DAO participants.

It is important to understand that the participation of the DAO communities is on a volunteer basis in the Crepe ecosystem. The distribution of total wealth generated in the ecosystem is not only made through the activities of the DAO network but also determined by the weight of the DAO.

Theoretically, activities in the DAO network can be calculated as follows, and the distribution is made according to the degree of contribution of the participants.

$$C_p = \sum_{d=1}^l (W_d \cdot M_d \cdot \sum_{a=1}^m W_{d,a} \cdot A_{p,d,a}) + \sum_{c=1}^n W_c \cdot B_{p,c}$$

The variables of the above formula are as follows.

C_p: Contribution of participant 'p'

W_d: dApp 'd's weight of contribution to the entire network

M_d: MAU (Monthly Active User) of dApp 'd'

W_{d,a}: participant's weight of activity 'a' on dApp 'd'

A_{p,d,a}: participant p's amount of activity 'a' on dApp 'd'

W_c: committee 'c's weight on all committees

B_{p,c}: participant 'p's amount of activity on committee 'c'

An AI agent will compute the incentives and distribute them to the DAO members.⁹ This will make the ecosystem self-sustainable.

⁹ The AI agent implementation will be done at the last phase of the development.

5. Tokenomics

1) Protocol Economies

Crepe provides a creation platform that supports creators' production activities by providing a makerspace where they can combine various assets and allows creators to tokenize and publish their results. At the same time, it is a collaborative ecosystem that provides incentives to experts, including many ordinary people, who perform various roles (design, operation, management, etc.) in the entire process necessary for producing financial products. In addition, it is a funding and investment system that raises investment funds necessary for creators' product management from investors and provides various incentives to liquidity providers. It is a protocol economy platform that operates so that all participants in the process of issuance, operation, and investment receive the value produced in the platform as an agreed-upon incentive.

A. Participants

1. Creators (index developers, investment strategy developers, fund managers) create financial products using the tools provided by makerspace within the **Paam™**. The designed product can be issued and sold as an intellectual property NFT.
2. Analysts report research, risk management, and monitoring and analysis of market situations to designated channels.
3. By holding NFT, users can also invest in the creator's product and upgrade the NFT according to the investment result. Investors can sell trading access rights for investment data as NFTs.
4. Liquidity providers provide liquidity for relevant products and receive compensation.

B. Incentives and Penalties


1. CREPE Token staking contributes to ecosystem stability by reducing the circulation quantity of CREPE Token, a Native Governance Token, depending on the period and quantity, and receives rewards.
2. Activities of ecosystem participants are stored as NFTs linked to DAO, and utility is created through community activation. Users will get rewards with CREPE Token incentives for all these activities.
3. CREPE Token governance staking increases community feedback and democratization of decision-making and receives rewards.
4. ITransactions not meeting the minimum staking period are subject to penalties upon withdrawal.

C. Tokens and Coins Issued

Tokens and coins issued by this platform are as follows.

1. CREPE Token (Governance Token): It is a means of storing all financial values that are produced and will be produced in the ecosystem. At the same time, it is a means of payment for the use of goods and services created by all actors in the ecosystem. The value of CREPE Token changes based on the demands and future revenue values according to the growth of CREPE ecosystem size, usability, and circulation speed. It can be minted as rewards for investment activities such as staking and liquidity providing, etc., and community revitalization activities such as marketing, sales, research, and CIP (Crepe Initiative Protocol) submission, etc., in addition to the acquisition by direct investment (participation in presale and IDO).
2. Soulbound Tokens (SBTs): Used as a decentralized identifier for a participant in the CREPE ecosystem. Since SBTs cannot be transferred or sellable, it is a means to track personal traits such as reputation, credentials, credit amount, and rankings as shown in the example below. A person may have multiple profiles for different purposes for different DAO groups. The SBT cannot be removed unless it is burned.

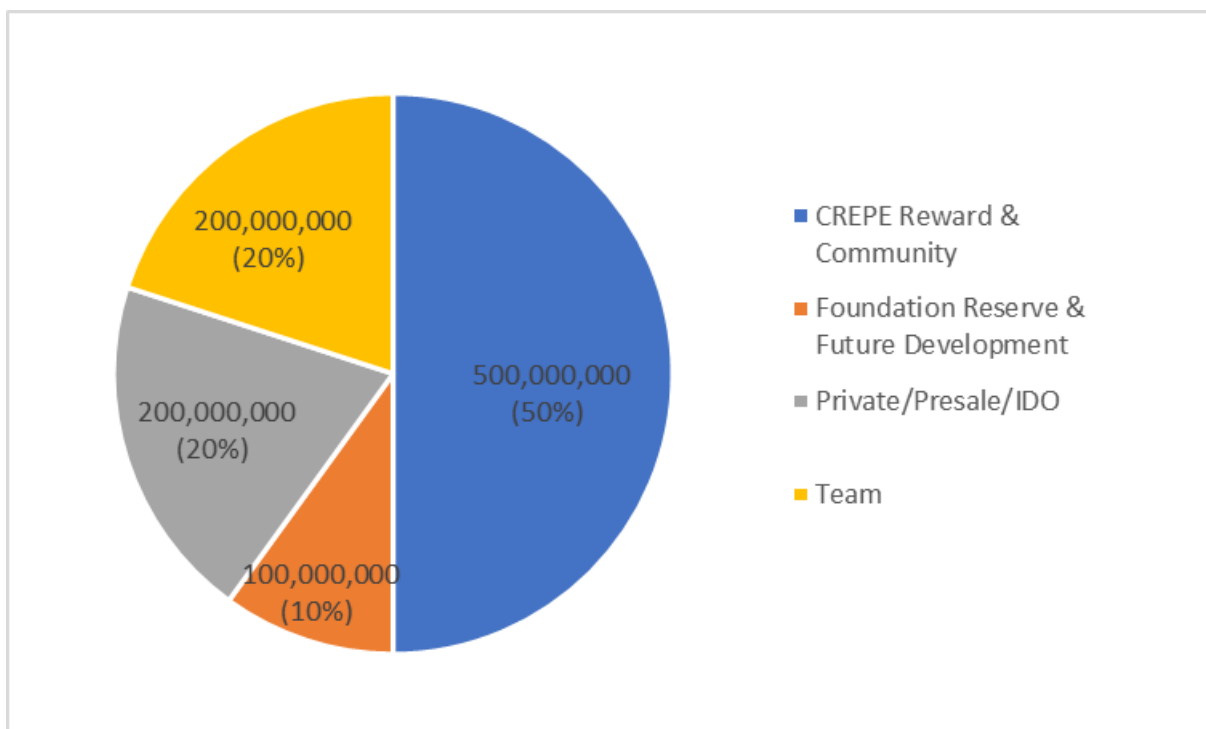
Crepe SBT Example

ID: Crawling Monster	
Trait-type	
DAO Ranks	1 //Admin
Credit	1000
Investment	5 //Guru
Trustability	2 //Realistic
Since	YYYY.MM.DD

3. Makerspace Token: These tokens are issued by makerspaces, minted, and offered in asset management products like DTF, DIF, and MNS. They are in principle security tokens that are backed by underlying assets, but are only traded internally and not on external exchanges. To redeem the tokens, they can be exchanged for CREPE tokens on CrepeSwap.

2) CREPE Token Distribution Plan

The CREPE Token issued by Crepe Foundation is designed to be issued in a limited amount of 1 billion tokens. Of this, 350 million tokens (35%) can be mined as a reward through various staking methods, and 150 million tokens (15%) are paid for community expansion. Among team quantities, 50 million tokens (5%) for founders will be paid in a lump sum in February 2025 after the 3-year vesting period from February 2022, and 30 million tokens (3%) for early contributors will be paid in a sliding way for 12 months after the lock-up period from February 2022 to September 30, 2023. The remaining 120 million tokens (12%) for teams are paid for the salary and compensation of the development team and management team, development expenses and marketing expenses, etc.



6. Timelines

2020 ~	Preparatory Stage
February 2022	CREPE Issuance
August 2022	Whitepaper v.1.0 / PoC Running on a Polygon Testnet
September 2022	System Development Completed and Audited
November 2022	CREPE Presale
March 2023	Crepe Beta Release
Oct. 2023	Crepe 1.0 Release, Services Start <ul style="list-style-type: none">- Income-generating Machines (MNS, NNS) Begin Operating- Same chain assets are connected CREPE Listed on Overseas Major Exchange
Jan. 2024	Crepe 1.5 Release <ul style="list-style-type: none">- Heterogeneous chain assets get connected CREPE Listed on Domestic Major Exchange
April 2024	Crepe 2.0 Release, Extended Services Start <ul style="list-style-type: none">- Non-Blockchain assets get connected

7. Conclusion

The **Crepe** is a system that provides a platform that tokenizes not only native virtual assets on the blockchain, but also all spot and futures assets on the planet traded in legacy financial and real markets as underlying assets on the blockchain network, and can design strategies such as portfolios or financial products by issuing, combining, and synthesizing these tokens.

In this system, a smart contract framework suitable for the type of existing asset or management strategy is provided through a creative place called Makerspace. Therefore, financial experts or ordinary people who have no knowledge of blockchain technology can participate in Makerspace and design financial products by exercising their creativity. Created financial products can be distributed and traded, and values can be created.

The advantages of this **Crepe** are as follows.

- 1) Innovativeness: Until now, crypto assets have been limited to on-chain. However, this system does not divide and reject traditional and crypto finance boundaries but actively utilizes each advantage. In particular, it is possible to create financial products similar to ETF (Exchange Traded Funds) and DI (Direct Indexing), which were only available in legacy finance markets. DTF (DEX Traded Funds) and DIF (Direct Indexing Fund) are those products.
- 2) Flexibility: In this system, creative users can flexibly mix on-/cross-chain assets with non-blockchain assets by participating in an open makerspace and hedging in various ways. For example, a user can manage assets by mixing on-chain and non-blockchain assets into a portfolio.
- 3) Comprehensive Diversity: In this system, all global assets such as real on-/cross-chain assets and non-blockchain assets can be mixed and even data without any assets are converted into virtual assets and issued as tokens. They can be composed in portfolios or financial products. Therefore, it is possible to create a wide variety of portfolios and financial products by composing total assets according to a creator's imagination.
- 4) Durability/Sustainability: This system provides many financial investment strategies developed in legacy finance as tools so creators can use them in the makerspace. Theoretically, if this investment strategy can be used flexibly, in that case, it is possible to maintain the asset value or generate continuous profits regardless of the sharp fluctuations in cryptocurrency or the global economic situation. However, to make this possible, the financial product creation, design ability, and operational know-how of experienced experts are very important rather than the durability of the tools provided by the platform. Therefore, Appendix A was added and explained many financial products designed by Crepe using its professional know-how.

- 5) Accessibility: Until now, designing financial products—using blockchain technology and smart contracts—was thought to be almost impossible for financial experts and ordinary people without knowing the technology. This system provides smart contract factory technology **ScoFact™** so that smart contracts can be automatically created so that even financial experts and the general public with little knowledge of blockchain technology can easily create them.
- 6) Safety: The reality is that even highly skilled programmers are easily exposed to hacking. This system reduces the risk of hacking by using a proven framework.
- 7) Transparency: Financial products created on this system can be viewed on the blockchain to enhance transparency. A financial product created once is not only difficult to change arbitrarily because the smart contract limits the operator's authority, but anyone can easily and transparently read it even if it changes. Moreover, due to the characteristics of cryptocurrencies, the performance of financial products is updated in real-time, so the final consumer of financial products can transparently view the performance and other information of their investment products.
- 8) Openness: Anyone can participate and use this system. Therefore, general users with little knowledge of blockchain or lack knowledge about financial products can freely use the makerspace.
- 9) Ease/Convenience: The framework provided in each makerspace is designed to make it easy to create financial products with a minimum of clicks. This ease allows anyone to manage their assets and design financial products.

Crepe DAO designed a solution, **Crepe System**, that solves three problems identified in Chapter 2: 1) Disconnection from legacy finance and fragmentation of the blockchain ecosystem, 2) Immature decentralization, and 3) Investment risk that is difficult to manage.

The **Crepe System** facilitates asset management and tokenizes all assets, allowing multiple creators or prosumers to participate and collaborate. As independent creators of asset management, users can develop strategies on the platform, select and refine their own strategies among the provided strategies, or purchase strategies already specified by other creators. As a result, virtual asset investment, which has been perceived as a difficult and risky investment to control, can be an investment more safely profitable within controllable risk through tokenized asset management on the blockchain on this system. Through this series of processes, the System will build a gigantic protocol economy ecosystem for the basis of Web 3.0.

We crepe founders hope that **the Crepe System** will become the foundation of stakeholder capitalism rather than just another one among hundreds of DeFi, and become the beginning of the economy in which wealth is equally distributed.

References

1. FATF. Glossary of the FATF Recommendations. <https://bit.ly/3cXnrcj>
2. Klaus Schwab, Peter Vanham. Stakeholder Capitalism: A Global Economy that Works for Progress, People and Planet 1st Edition. January 6, 2021. ISBN 9781119756132.
3. Eric George. "Why Rapid Growth Kills Small Businesses." Forbes Magazine. Apr 16, 2020. <https://bit.ly/3owefOG>
4. CME. "Price Discovery. (Lesson 11 of 19)." <https://bit.ly/3vkqBgR>.