



LIGHT PAPER

May 04, 2021



Foreword

NiiFi is an ecosystem of DeFi solutions targeting mass adoption. The first version of the platform consists of a swapping and lending tool, which are needed to meet the requirements for the first commercial use cases targeting Gaming and Finance.

These initial industries and use cases NiiFi will be targeting require optimal throughput, low latency, instant finality of transaction and low predictable fees.

While DeFi has experienced solid growth amongst the crypto community, the current state of the tools is not suitable for entrants who are less familiar with crypto. Therefore, NiiFi will target its offering directly to these industries' challenges, rather than building off of a traditional crypto user experience. Ease of integration, adoption and use are key to solving these industries' technological challenges.

The core team behind NiiFi has built solutions for companies such as Mozilla, Alcatel, Panasonic and Telenor used by millions of users across several industries and has also been working on blockchain scalability since 2013.

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NiiFi Light Paper

DeFi has been a widely reported success story in the last few years. The Total Value Locked (TVL) on deposit in various DeFi protocols across a number of blockchains has surpassed several tens of billions of USD. Perhaps tens of thousands of users around the world utilise these DeFi tools, for services such as trading and lending/borrowing. This success is related to the unique incentive structures behind these services, which allow users to earn yield, while providing utility to other users.

Nevertheless, we should not be looking to validate such success by looking in isolation at the blockchain ecosystem. In the same timeframe that DeFi emerged, global growth in fintech as a whole has spiked. Some individual companies have more than a hundred times the number of daily active users as the entire DeFi market, with new daily signups comparable to the total DeFi user base.

Although there are clear use cases for DeFi tools outside of the speculative cryptocurrency space, it is also true that the success of DeFi is limited. We consider it to be a collection of Proof of Concepts. The key question is therefore: why haven't these tools been adopted by a wider retail market?



We would suggest that the lack of adoption is principally due to the limitations of Ethereum (and all other blockchains). The limited throughput of Ethereum means that transaction costs have risen to levels which are not compatible with products designed for mass adoption. It is not practical to pass those costs onto users, nor is it prudent to burden a product with such high operational costs. A related issue is that transaction costs are unpredictable and so product owners cannot predict what the operational cost of a product will be in the future. On top of these issues, the latency and finality characteristics of Ethereum transactions severely impact a user's experience. No company can deploy a product at scale under these constraints.

It is clear that these problems must be addressed in order for material global adoption of these technologies to take place. It has become widely accepted that there are no methods by which a blockchain can scale without a so-called 'layer 2'. A layer 2 is a protocol which sits on top of a blockchain, leveraging the underlying blockchain's basic security but adding a scalability layer. There are many proposed solutions, but only one has proven itself for several years and has been used for commercial products already: nahmii.

nahmii is the only scaling solution for Ethereum, which holistically solves all the problems around throughput, transaction costs, latency, finality and usability. Since late-2018, nahmii has been live on Ethereum mainnet delivering a payment infrastructure which has been unparalleled in performance. We recently announced nahmii 2.0, which offers the same scalability but for more than just payments. nahmii 2.0 will allow generalised smart contract execution, enabling many more use cases to be built upon it.

For more information on nahmii 2.0 and why it offers the best scalability of any layer 2, please see the [nahmii website](#).

DeFi Yield and Market Efficiency

The usage of DeFi tools today is primarily generated from speculation and not mass adoption. Commercial uses will grow the market significantly, creating a more efficient market and, in turn, making DeFi tools more useful in a positive feedback loop. This is where the NiiFi Ecosystem will be crucial for the development of DeFi applications at scale.

The limits of blockchains today limit the utility of the tools in the market. Take Uniswap on Ethereum as an example of this:

Today we have a limited number of liquid markets on Uniswap; it is simply not possible for every market to be liquid due to the limited transactional throughput of Ethereum. On many tokens which have a high trading

volume on centralised exchanges, the trading volume on Uniswap is comparatively low. There is simply not enough capacity on Ethereum for every market to be equally liquid on Uniswap.

The yield generated by a DeFi tool should be primarily based on the relative levels of risk for that tool. A high yield is indicative of high risk or of growing trade, which the market hasn't yet responded to. In a steady state, where trade has plateaued for a token, then the yield on such a token in Uniswap should only reflect the risks for LPs. The risk is made up of the following:

- Systemic risk due to Ethereum and its smart contracts (e.g. in case of a vulnerability). This risk can be considered low due to the length of time that the Uniswap contracts have existed without exploitation
- Impermanent Loss (IL), risk, which is a "loss" due to the algorithm by which Uniswap operates and is high for a currency pair where the currencies are not correlated with each other

When trading volume is low on a currency, there is limited opportunity for rewards for Liquidity Providers (LPs). As the incentive is small, then for a given risk, the size of the liquidity pool is reduced. There will be countless token holders who do not wish to deposit their tokens into liquidity pools because the risk of impermanent loss is too high. This also means that there are many token holders who are missing out on yield because they are late to the party, or other LPs are willing to take higher risk.

When the liquidity pool is small, the pool cannot handle large trades without significant impact on the price (high slippage). This increases the risk for arbitrageurs and market-makers, who cannot effectively utilise Uniswap as another source of liquidity. Making the situation even worse, the high latency and unpredictability of fees of Ethereum further increases risk for arbitrageurs and market-makers

These problems compound and create a negative feedback loop, which effectively caps the liquidity and efficiency of Uniswap markets in general. Uniswap might be considered a great success, but it represents a tiny fraction of the global trade in Ethereum and Ethereum-based tokens. Moving to a Rollups-based system will not address this issue, as throughput will still be limited; latency is still high, finality delayed and fees will remain unpredictable.



The Benefits of nahmii for DeFi

DeFi tools can enable commercial use cases today, but they cannot do so on Ethereum. It also isn't possible using any Ethereum scaling solution other than nahmii. nahmii is the only layer 2 that solves Ethereum's issues holistically. This is not just about transaction throughput, it is also about latency, finality, predictability of fees and usability.

nahmii was the first commercially relevant payment layer 2 on Ethereum mainnet back in 2018. Collectively the team have been working on blockchain scaling since 2013 and highlighted the issues with Plasma in 2017, before anyone else. We see the same issues with all flavours of Rollups and other proposed solutions today. For nahmii, generalised smart contracts are coming soon as part of an upgrade to nahmii 2.0. This will enable the NiiFi ecosystem to be the only suite of tools that can meet the requirements of webscale products.

Nahmii will provide a paradigm shift in scalability for Ethereum smart contracts; this scalability will be inherited by all the tools built on top of it. In our Uniswap example, we can highlight the benefits here.

An automated market maker (AMM) solution on nahmii will not be limited in throughput or by high latency. This means that every currency pair can have effectively unlimited trading volume, which can reflect the wider market. Arbitrageurs and market makers will have much reduced risk, which means the markets can be considerably more efficient.

The yield for being an LP in the solution should be comparable, as it should be mostly determined by the risk of IL. It is also possible that yield may be increased in some cases, because trading volume is no longer artificially restricted. It is also possible that an AMM solution on NiiFi would allow more token holders to benefit from becoming a LP across a much wider range of tokens.

An often discussed 'problem' in the DeFi space is front-running. Another similar issue discussed is Miner Extractable Value (MEV). These are both related to the ability of entities to extract value from users by ordering transactions in a manner which favours themselves. It is our belief that the solution to these problems lies not in the complex suggestions other layer 2 protocols make, such as to set up MEV auctions, nor to add in the complexity of sequencers. The best way to control such practices is to reduce the incentive to do these things, by increasing the liquidity and efficiency of a marketplace. This minimises the potential benefits and increases the cost of capital of taking advantage of any opportunity. In the case of scaling solutions which have one or a limited number of operators, you want the balance to be tipped towards them having more benefit by running the market properly. This is the case for a solution built on nahmii, because any attempt to extract value in this manner will be easily identifiable. The Operator processes all transactions and publishes them off-chain, placing full responsibility on themselves. If the Operator behaves badly, they will be held to account for their actions publicly; their reputation will be damaged.

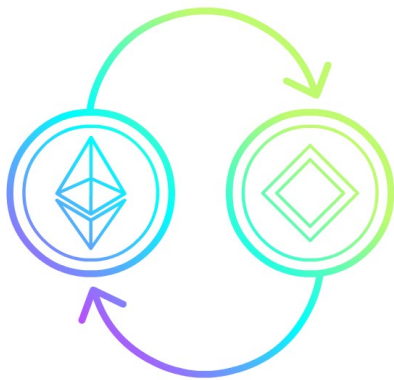
What is NiiFi?

NiiFi is the vanguard use case for nahmii 2.0.

There are just tens of thousands of people that are accessing DeFi on Ethereum and other blockchains today. NiiFi will provide utility and services to the rest of the world and any business that can take advantage of such tools. NiiFi is different because the target users include every person who doesn't use blockchain today.

NiiFi will be used to solve real business problems, create new business models and create more value for users. NiiFi does this by providing tools to perform low cost, fast and instant transactions using simple, elegant and user-friendly tools. NiiFi is DeFi for the masses and they don't even need to know they are using blockchain or DeFi tools. All users will know is that the products that they use will have new and valuable functionality and benefits.

The tools that comprise NiiFi will form the foundational tools for a product layer built on nahmii 2.0, although there will be many more tools to come. NiiFi is about bringing the following tools to nahmii 2.0, the only truly scalable layer 2 on Ethereum:



Swap

An Automated Market Maker, AMM,
based exchange



Lend

A DeFi lending platform

These tools will be based on the most popular tooling on Ethereum and other blockchains such as Binance Smart Chain. Some of these tools will require minor modification as the original products were partly designed to live within the less-scalable infrastructure of the base layer of Ethereum.

Existing Retail Ecosystems

We have been heavily focused on commercial use cases of our technology since 2018, a number of years ahead of any of our competition. Last year we became the first layer 2 to have any products deployed on it, with a live production IoT deployment in the seafood industry in Norway.

Working with a range of different partners who operate webscale products with millions of users, we have solidified the requirements for DeFi to be used in those projects. Now we will give retail users in multiple industries access to the DeFi tools described above.

The identification of a number of real-world use cases for these tools is not a trivial process and puts us firmly ahead of many of our competitors. We have a history of working with large companies and forging valuable partnerships, building products at scale. As a result, we have decided to create the tools listed above as we have use cases for them today. In each case, there will be minor modifications required to take advantage of nahmii's more scalable infrastructure.

Payment ecosystems are the ideal first application of these tools, as it is a high-growth industry. In many products we see that, despite historically not being financial applications, they are offering financial services as Over-the-Top services to users. Often these companies are using off-the-shelf infrastructure or working with partners to offer those services. Our tools will become very attractive alternatives. It allows those services to be run on a decentralised and public infrastructure, yet retain more control over their offering. A significant advantage of running on nahmii is that it allows compliance with regulations such as Know Your Customer (KYC) and Anti-Money Laundering (AML) rules.

What will we Offer to the Retail Financial Industry?

Many businesses and products are heavily integrated with, and reliant upon, a number of Payment Service Providers (PSPs). Whilst providing essential services to the platforms, they are full of friction and can be expensive. Furthermore, platforms suffer from vendor lock-in; there must be a large advantage to an alternative solution in order to switch.

For over 18 months we have engaged with many partners, and have already begun to build a platform that will allow the seamless use of fiat-backed tokens, such as USDC. The simple fact is that existing retail users are focused on using fiat currencies. Other tokens will natively be available in our platforms also, which will allow partners to offer even more exciting services to users.

Our platform will reduce fees for our partners, whilst also assisting on their treasury management and compliance. Using nahmii as a fiat payment rail is a simple yet exciting project, which will deliver tremendous value, but we aren't stopping there.

NiiFi will supercharge a paradigm shift for products and will consist of an Automated Market Making (AMM) tool and a lending/borrowing platform:

Swap (AMM)

A classic constant-product AMM exchange model is ideally suited to provide easy exchange between any tokens. This also enables FX within products using fiat-backed tokens. Importantly it adds a gateway for fiat users into cryptocurrency.

Lend (Lending/borrowing)

A lending protocol allows borrowers in a DeFi ecosystem to free up working capital, whilst not missing out on the potential upside of their collateral. Lenders can supply liquidity to the protocol and earn yield on their deposits. This is an important tool to increase liquidity and give maximum flexibility in an emerging DeFi ecosystem. Flash loans are an additional functionality which allows users to borrow funds and return them in a single transaction (the transaction will fail if funds are not returned). This functionality has at times been criticised, but we see this as a valuable tool to increase the efficiency of a market

Token Utility

The NiiFi token will ensure a fully decentralised model of governance. All stakeholders will have a stake in guiding the protocol's development process by voting mechanisms. Therefore the token is a governance token for the ecosystem.

It is crucial that token holders, that have been given the ability to vote on governance, are bonded to the success of the protocol in some way. This model is a well understood and successful way to ensure an alignment between token holders and the best interests of the protocol. As an example, we are recommending that trading fee discounts are applied for holders of the token. This would be done in the form of different fee discount tiers depending on holdings. Similarly for lending/borrowing, preferential rates could be applied. This will be an early governance decision for token holders.

We will also explore the token mechanics added by other successful protocols (eg. Uniswap), to see if their incentive mechanisms can supplement the NiiFi token utility. Those mechanics can be brought to the token holders as further recommendations for voting.

Tokenomics

Token Name	NiiFi
Ticker	NIFI
Token Type	ERC-20
Token Supply	888,888,888
Nominal Token Price	\$0.045
Diluted token valuation \$USD	\$40,000,000 USD

Token Allocation

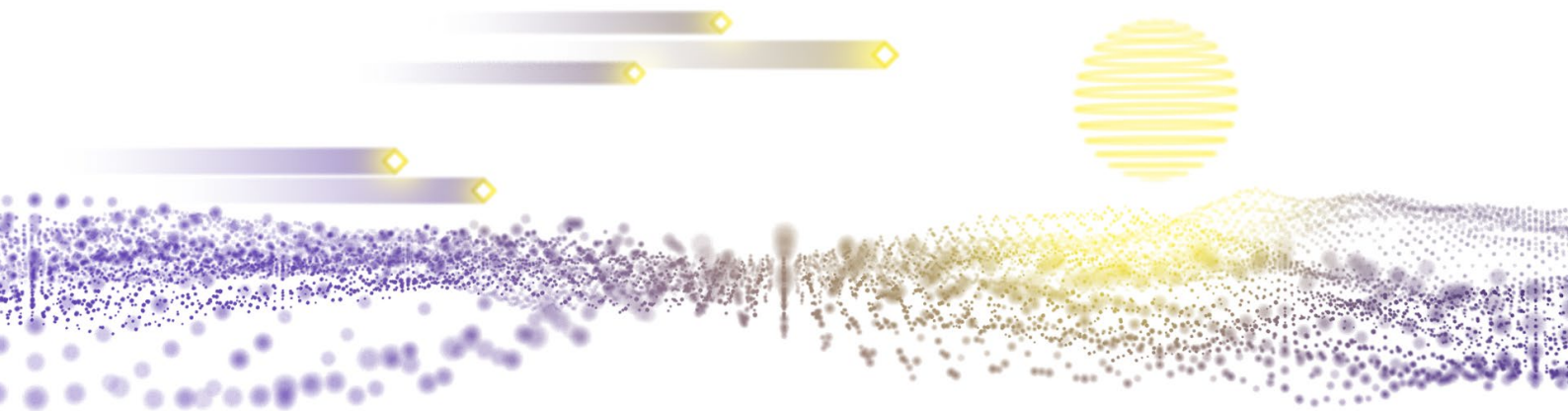
CATEGORY	Supply %	Tokens	Notes
Private Sale incl Strategic	12.2%	107.9M	Private Investors
Public	0.7%	6.1M	Public
Future Potential Sale	6.8%	61.1M	Follow-on round
Development Pool	8.5%	76.1M	Ongoing Development Pool
Business Development	10%	88.8M	Core revenue generation, growth
Marketing & Exchanges	11.8%	104.2M	Platform & product marketing, exchange incentives and fees
Future Liquidity	10%	88.8M	Token Liquidity
Team	20%	177.7M	Allocation for team and future team
Ecosystem Rewards Pool	20%	177.7M	Pool used to fuel & fund the ecosystem including staking.. Potential for revenue flow back into pool

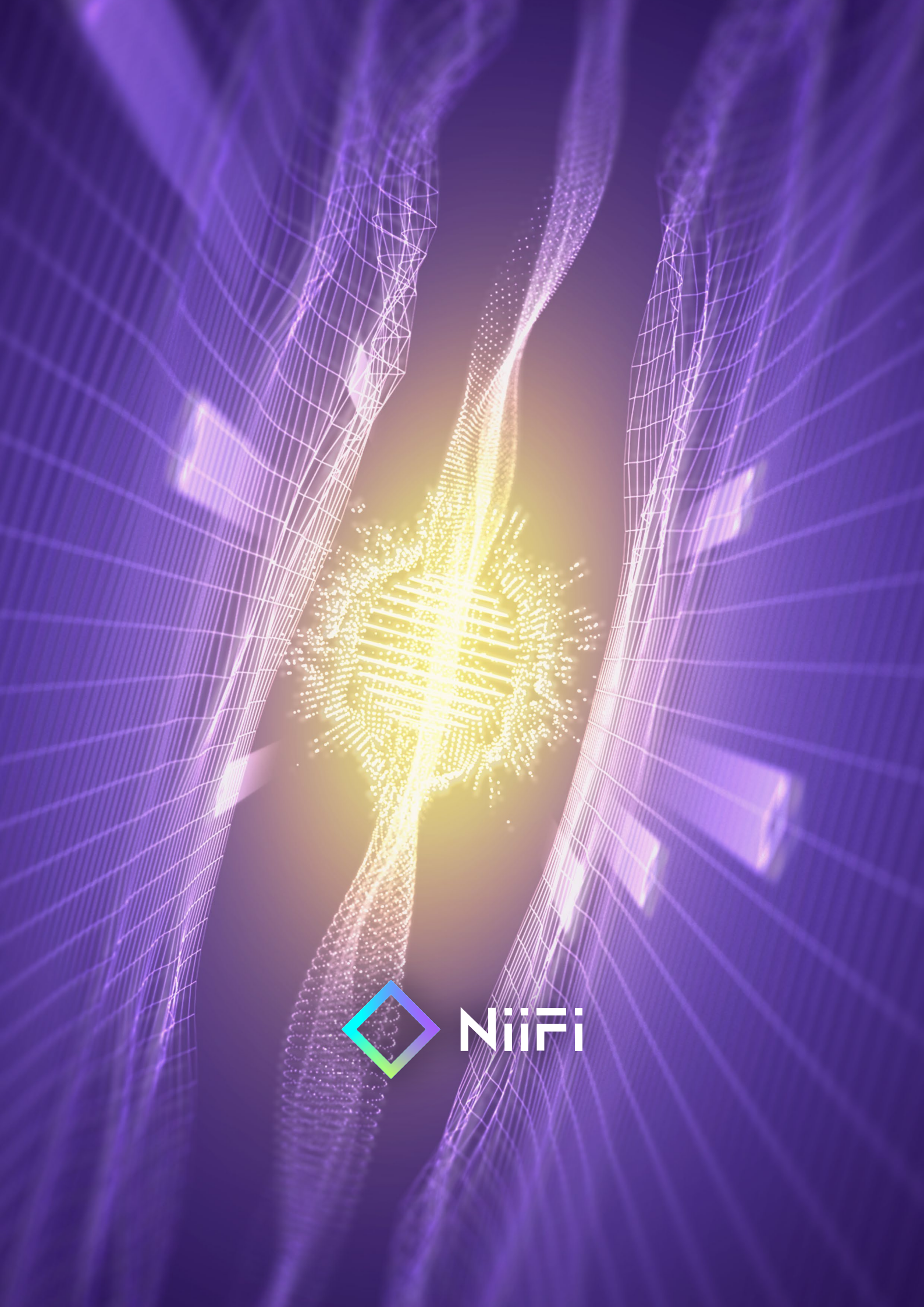
Token Vesting and Emission Details

CATEGORY	Vesting %	Tokens	Emission Start	Emissions	Token Emissions p/m
Strategic Sale	16.67%	30.3M	TDE	6	5.05M
Private Sale	20%	77.6M	TDE	5	14.86M
Public Sale	N/A	6.1M	TDE	N/A	4.44M
Potential Future Private Sale	TBD	61.1M	TBD	TBD	TBD
Ecosystem Rewards Pool	4.2%	177.7M	TDE+3 months	24	7.41M
Business Development	6.7%	88.8M	TDE+3 months	15	5.93M
Marketing & Exchanges	3.57%	104.2M	TDE	28	3.72M
Future Liquidity	4.2%	88.8M	TDE+6 months	24	3.70M
Team (12 month lock)*	8.3%	177.7M	TDE+12 months	12	14.81M
Development Pool**	3.47% on TGE	76.1M	TDE	18	2.64M (initial) 4.32M (ongoing)

* Team tokens vested after 12 months

** Initial vest 3.47% TGE+1 onward 5.67%





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