



Whitepaper
Version 1

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EXECUTIVE SUMMARY

NPAY will be a revolutionary payment platform that enables buyers to use the NPay coin to pay sellers (private or merchants). We offer sellers, merchants the security and convenience of receiving funds without problems or stress, and we provide the best possible protection for consumers, acting as a reliable agent. Combine the best payment protection features of the current fiduciary system with innovative blockchain features; we have been able to produce a close to a perfect payment system (these features will be outlined in subsequent sections).

The NPAY platform aims to provide the consumer protection that buyers take for granted in traditional online purchases, acting as a mediator, resolving conflicts and enabling the possibility of refunds to mitigate fraud, while shielding the merchant from crypto-market volatility. We want to use the best features of the crypto technology to enable fast transactions, lower rates and low cross-border transactions that merchants can sell to a growing global audience. In summary, we aim to build a payment API for marketplace integration that will become a significant crypto contender.

All aforementioned features we intend to integrate would make for an incredible product in its own right, the first of its kind in the world of crypto-payments and one that could be funded by venture capital investment alone. In essence, the NPAY coin will act as a transactional coin, that buyers can use in the NPAY Platform itself alongside other major coins, and as a financial payment mechanism.

This is an ambitious effort to create a complete software platform from scratch that offers global value to the customer and the retail community, which drives its future growth as a payment platform.

We believe cryptocurrencies are evolving to become much more than speculation and are here to stay in the minds and wallets of consumers. This is a game-changer that we know can change how merchants and buyers use cryptocurrencies and we believe that the only missing link is a platform of mediation and trust.

1 INTRODUCTION

The NPAY network was designed by the Kryptonite OÜ, a cryptocurrency development Co., Ltd. from Estonia.

Given the increasing popularity of digital assets and blockchain, traditional investors demand more significant exposure to digital assets and blockchain-based technologies. However, many things can be «lost in transition» concerning the integration of the world of digital currency and the world of traditional finance. Providing a seamless payments system between cryptocurrency and conventional assets is the underlying philosophy behind the NPay Network.

Merchants, buyers and sellers, who use digital currencies, currently have to interact with several counterparties to successfully carry out their transactions. These counterparties being traditional banks, payment networks and financial services companies. The majority of them do not understand the nature of digital currencies, which can cause frustration, account freezes, losses and not to mention the various inefficiencies associated with it.

With the blockchain, a growing number of users and businesses are beginning to struggle to leverage the existing infrastructure to manage the transfer of funds for making payments for goods purchased and also for receiving payments.

NPAY is designed as a completely decentralized Peer-to-Peer Cryptocurrency based on the quark algorithm which was developed for the sole purpose of revolutionizing the traditional online payment system to create a new payment system based on the blockchain technology which will make online or in-store payments faster, anonymous and more secure.

1.1 VALUE PROPOSITION

At NPAY, we aim to achieve a global adoption status within the financial ecosystem.

We will do this by tackling significant problems faced by the traditional online payments system using our technology to provide a better online payment system where transaction fees will be brought to its barest minimum. We are looking at beating down these high transaction fees to as low as 0.0001 per transaction and even free in some cases.

NPAY coin is not just another cryptocurrency off the blockchain technology, but a Coin purposely designed to be completely usable by merchants and customers and other individuals around the world. The usability of our coin including other associated features such as security, speed and scalability will further boost its acceptability worldwide as it will be a significant means of payment in business worldwide.

Merchants and Consumers in geographical locations where fiat currencies are weak will be able to engage in local and cross-border e-commerce business by using the NPAY Coin to earn and receive payments for the value of their goods and services transacted.



2 PROBLEM ANALYSIS

In this section, we aim to clearly outline and discuss certain problems which the NPAY coin aims to tackle and also discuss our proffered solutions.

Despite industrial disruptions and advances with the blockchain, digital payments between customers and retailers of physical services in an e-commerce ecosystem are underutilized. The digital payment systems have retained the main holders of the sector, with many APIs and legacy contracts with traditional financial institutions, banks and credit cards. Despite the benefits of cryptographic payments, such as minimum or no fees, increased speed and barriers to entry, precise and advanced progress in the security of transactions has not yet been implemented in the market. Customers want and expect a robust consumer protection system that protects their purchases and offers a refund when necessary. Providers, on the other hand, prefer to obtain more income but are cautious about the volatility problems associated with accepting cryptocurrencies. Having the best of both worlds would be amazing as this is what the NPay platform is creating.

2.1 PROBLEMS

Fraud and chargebacks

Online transactions are «card not present» transactions. As e-commerce grows, the potential for fraud and payment also increases. In addition to being expensive, chargebacks can damage the reputation of the business; an excessive number of cancellations can result in the closure of corporate accounts, effectively killing companies.

Cross-border transactions and payments

Today, Trillions of dollars are distributed throughout the world thanks to the traditional system of slow payment and additional fees.

If you work in San Francisco and want to send part of your family salary to London, you may have to pay a \$ 25 transfer fee, with an additional charge of up to 7%. Your bank is cut off, the receiving bank is cut off, and you pay hidden prices. The Family Bank will not even register a transaction a week later.

Typical transaction costs for senders are 7.68%, which are the transaction costs associated with the payments, such as transfer fees or hidden margin gains. Facilitating payments is very profitable for banks, which gives them little incentive to reduce their rates. Cross-border transactions, from payment to letter of credit, accounted for 40% of the total revenues of payment transactions in 2016.

Relating the above to the ecommerce sector which involves merchants and consumers, we can see how cumbersome it is for individuals to engage in cross-border trades and transactions due to their fiat currency restrictions and the high fees which they have to pay in cases where it is possible for them to engage in such transactions.

Problems in the Ecommerce payment system

Despite the apparent popularity and penetration in the market, the ecommerce payment system has its flaws. Most of them are related to the centralization of the market platforms and the size of the companies that make them up.

We will quickly highlight these problems below;

Fees

In general, sellers are forced to pay high fees, but they have few options if they want to access a large audience that benefits from the main e-commerce platforms. In some cases, rates can reach 20%. You must also pay for a credit card or payment processor. PayPal, for example, typically charges around 3%. All this should be included in the price and sent to the consumer.

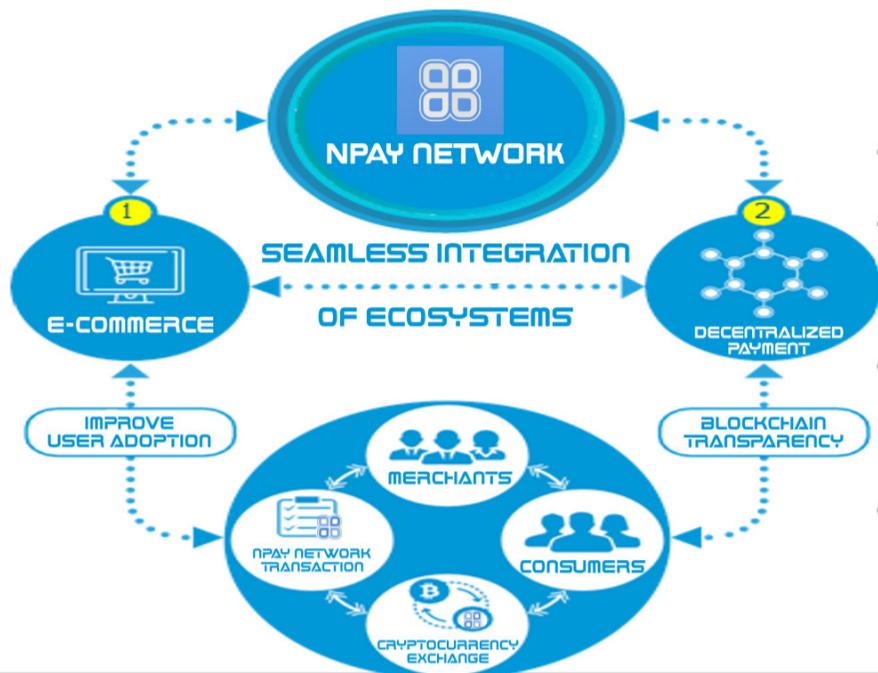
Intermediaries

With conventional e-commerce payment system, the e-commerce platform serves as intermediaries or agents that limit contact between the buyer and the seller. The merchants struggle to establish a long-term relationship with the buyers because as the communication is usually limited or takes place in strict parameters and the platform can see any message exchanged between the buyer and the seller.

Handling of Personal Data

Each main network service collects a large amount of personal information about its users and enters it in different ways, from personalized advertising to sales or distribution to third parties. Also, data breaches are an increasingly common phenomenon. Personal data is called Internet Oil, and its value makes it a popular target for hackers. Although the GDPR has improved slightly, in many jurisdictions the laws on the use of data are much less clear. There may not be a simple procedure to determine how companies should act in case of data breach and not inform their customers that their data are compromised for months, in any case. In summary, the loss of data has gone from shame or inconvenience to society to a little more than the cost of transactions.

2.2 NPAY - SOLUTIONS



For merchants who own online stores, the integration of the NPAY payment system as an alternative to payment methods such as PayPal or credit cards offers significant benefits.

With NPAY coin, payments are not border-restricted, so it does not matter if you buy things from someone a few miles away, in the nearby city or on the other side of the world.

NPAY will offer its coin users a way to receive almost instantaneous payments: there is no delay of three days, as is the case when credit card payments are expected. As the rates are very low (as low as 0.0001 or even less), the large fee cost is not transferred to the consumer.

NPAY is the ideal option for the integration of ecommerce since our platform has a robust and faster network, as well as powerful token control functions, which allow merchants to receive payments faster without restrictions.

NPAY is a fast, secure and stable payment method.

With NPAY, Users, Merchants and customers can easily store, send and receive NPAY anonymously and securely

through the use of both desktop and mobile wallets and this will significantly facilitate money transactions in any form.

When it comes to frauds and chargeback being experienced within the e-commerce ecosystem, NPAY is well positioned to deal with it.

Merchants also enjoy the benefits of NPAY's irreversible transactions, which put an end to fraudulent chargebacks. There is no payment process which unilaterally cancels a sale transaction, as usually happens when the client unfairly states that he never received the item. E-commerce support teams are often on the client's side, according to regulations, at the seller's expense, but with NPAY, all decisions are treated objectively, and fraud is eliminated.

2.3 THE NPAY GOAL FOR BUYERS AND MERCHANTS

BUYERS

For Buyers, our goal is to reduce the risk of fraud encountered while involved in online payments and transactions, guaranteeing complete protection of the purchase and acting as an intermediary for all transactions. We strive to be the best option for customers by reducing the amount of service fees for each transaction compared to traditional payment systems.

MERCHANTS

Our goal is to provide a way to expand our customer base and sales revenue to a broader audience of cryptocurrency enthusiasts and online spenders. This market of untapped users has accumulated a large number of assets that continue to grow in the estimation of limited results that inspire consumption. By giving merchants the opportunity to receive money in trust, we will respond to one of the main complaints about accepting the NPay Coin in a very volatile economy, protecting it from cryptography while securing users from experiencing this volatility. Also, we will mitigate the typical risks associated with traditional payment methods by eliminating the possibility of cancelling payments without a genuine reason, stealing credit card information and being fraudulent.



3 NPAY NETWORK

The NPAY network is built as an anonymous network which is hosted on masternodes globally.

Our network is hosted on a fully decentralized basis which curbs centralization or a central authority having complete control of the NPAY Coin.

NPAY is developed as a 100% Proof of Stake and Masternode currency.

WHY DO WE CHOOSE POS OVER POW?



Proof of Work

Requires complex mathematical calculations which is called Mining.



Proof of Stake

Requires coin holders chosen in a deterministic way that is called Staking.

We aim to outline the advantages clearly which PoS has over the PoW mining.

PoS is a mining concept available to some of the traded coins, which bases the coins you mine depending on the number of coins you own, this goes further to show that a person who owns 10,000 coins would mine more than a person with 200 coins regardless of their computing power. As a major crypto-coin like Ethereum (ETH) are starting to warm up to PoS, it leaves no doubt that the PoS mining algorithm offers a better consensus when compared to its PoW counterpart. Below are certain factors which go to prove why the PoS is a preferable mining algorithm for the NPAY Coin.

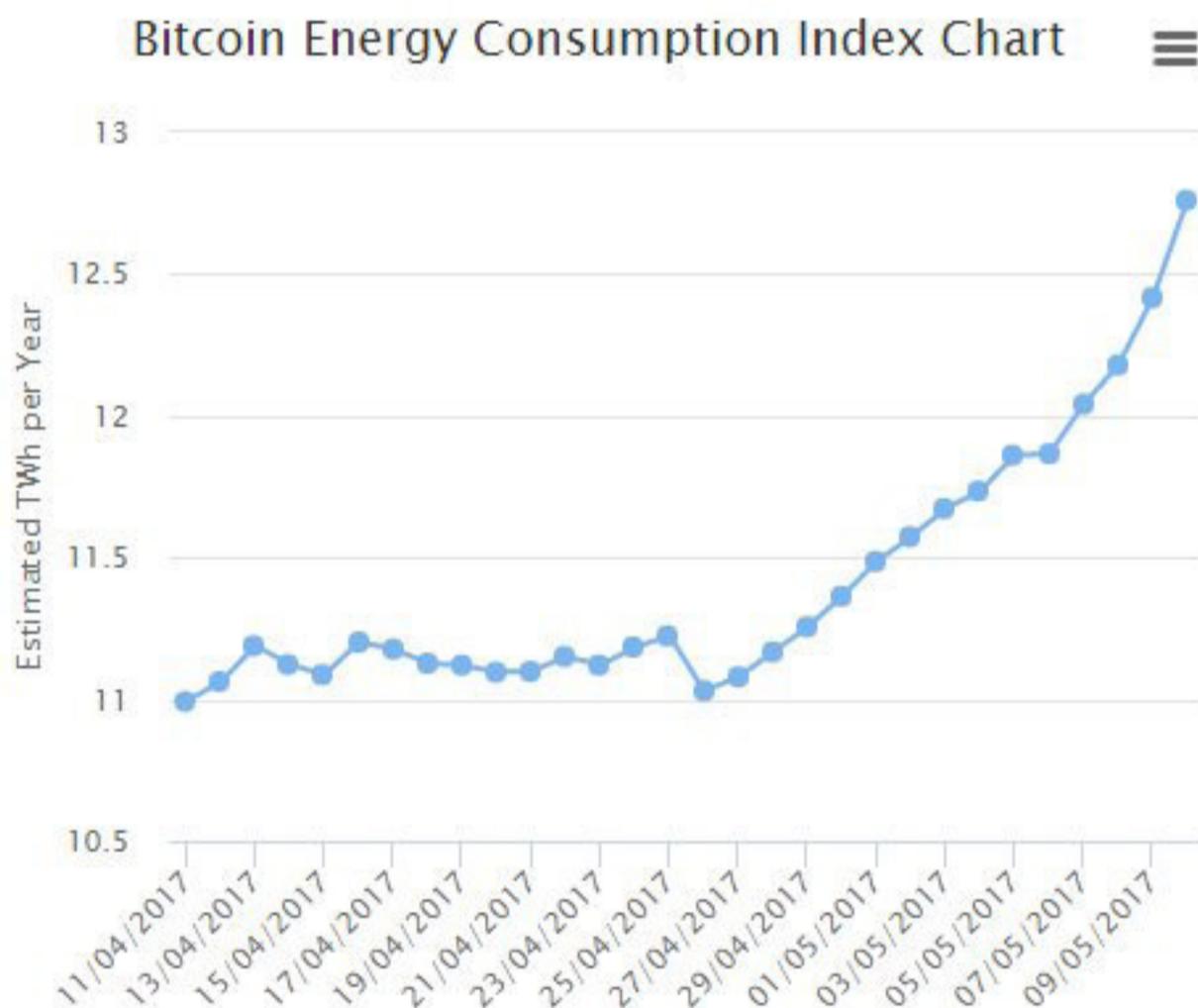
Resource (Electricity)

When it comes to the debate of the better mining algorithm, this factor stands out as the most apparent advantage the PoS has over PoW. This is because the PoW mining algorithm consumes massive amounts of computing power, which in turn incurs massive electricity bill, not to mention the deterioration of the mining computer involved.

This could lead to thousands of massively powered computers around the world would have a huge greenhouse effect.

With PoS, network stakes can be made using something as simple as a Raspberry Pi (USD 35), which only uses a minimal amount of electricity which can even stake more coins in comparison to a supercomputer.

Bitcoin Energy Consumption Index



From the above chart, we can quickly observe the massive increase in electricity consumed by mining bitcoin within one year.

For developing countries and other countries with high electricity cost, the PoW mining effect on electricity is apparent. This leaves the PoS mining algorithm as a better choice as it reduces the cost and consumptions of electricity and global warming issues.

With PoS mining adopted, the NPAY coin becomes more sustainable due to the reduction of energy needed in mining as compared to the PoW mining algorithm.

Other reasons for adopting the PoS mining over the PoW are;

1. Price Volatility – PoS offers stability for the NPAY coin when compared to the PoW mining algorithm.
2. Decentralization
3. Security
4. The NPAY network is further characterized by private and anonymous transactions to ensure user data remains confidential and secure.

3.1 FEATURES

The following features characterize the underlying technology of the NPAY Network;

DESKTOP WALLETS

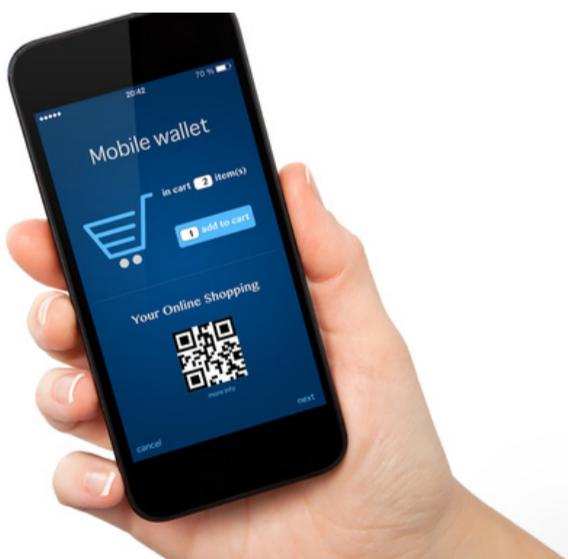
The NPAY desktop wallets applications are developed to function under three (3) operating systems since the creation of the genesis block in October 2018. These operating systems are;

- i. Windows
- ii. Mac
- iii. Linux

Our desktop wallets are designed to Masternode collateral enabled which are locked.

The Proof-of-Stake (PoS) mining algorithm of the NPAY coin allows coin holders to be able to stake coins on their desktop wallet application.

NPAY MOBILE WALLET



Our NPAY Mobile wallets are available in Android, and IOS versions as this will enable users to make payments with ease and comfort.

With the NPAY mobile wallet, Users can quickly send, receive NPAY, and you can also use QR CODE.

The NPAY mobile wallet is well developed to allow its users (merchants and customers) to check balance and store NPAY in the mobile wallet and also make payments seamlessly.

NPAY Debit Cards



To bypass the cumbersome nature of FIAT currencies, We will develop the NPAY card to enable users to make payments through cryptocurrency. We will provide cryptocurrency-based debit cards. (This is a developing feature)

BUYER PROTECTION:

The amount paid by the buyer will remain until the platform agent confirms the transaction.

Npay resolves conflict resolution and mitigates risks, protects consumers and guarantees the buyer the possibility of obtaining a refund if a problem arises from a purchase.

FLUCTUATION PROTECTION:

We will provide you with a clear summary of the conversion rates. The conversion from crypto to fiat is done at the best market price and is added to the pool. By securing this amount and guaranteeing retention after conversion, we ensure that the seller will receive the amount he requested, without limitation, due to the volatility of the crypto market.

NO CHARGEBACKS:

Sellers will be protected against incessant fraud and false credit card exchanges, which is common in traditional payment services that still use credit cards.

QUICK DISPUTE RESOLUTION:

Traditional solutions, such as PayPal, have a long waiting period to resolve transactions, while collecting evidence from both parties independently (up to several months), which makes it a slow and painful process. We will propose a self-published bi-directional resolution method and an advanced resolution solution with a three-line solution, with which both parties can talk in real time, and which is driven by one of our resolution supports. We will solve conflicts quickly and easily.



PERFORMANCE-BASED RATING OF SELLER:

We will run a performance-based tracking algorithm to evaluate the performance of the sellers and reduce the appropriate fund retention period when the performance of the provider is improved. This mechanism will create an environment of trust, encourage salespeople to work better over time and increase customer confidence. In the best case scenario, the best seller will virtually eliminate your waiting time and get funding almost immediately.

**PAYMENT APPROVAL SPEED:**

Unlike traditional payment systems that generally delay payment approval due to the high risk of fraud and require the submission of many documents, we will immediately approve payments and simplify the process for both parties.



3.2 TECHNOLOGY

Masternode

What is a Masternode?

Masternode is simply a cryptocurrency full node or computer wallet that keeps the full copy of the blockchain in real-time, just like you have Bitcoin full nodes and is always up & running.

But masternodes are considerably different in their functionality than normal nodes.

They are different because they perform several other functions apart from just keeping the full blockchain and relaying blocks/transactions as a full node does in Bitcoin/Litcoin.

Some of the special functions that these nodes perform are:

- Increasing privacy of transactions
- Doing instant transactions
- Participating in governance and voting
- Enable budgeting and treasury system in cryptos

These masternodes are not standalone but they are always communicating with other such nodes to make a decentralized network and are often referred in short form as MN.

(Source: <https://coinsutra.com>)

The NPAY coin was developed as a Masternode coin and this allows its holders to receive a high block reward as it serves as a compensation for securing the network through locking collateral.

The creation of more masternodes will ensure that more of the static coin supply are locked.

With masternodes, transactions are carried out and completed faster with greater speed and with the set variables the hyper-inflation becomes far-fetched.

NPAY Masternode Features:

Requirement for securing a network:	10,000 NPAY coins
Block reward received by Masternode holders:	80% of block rewards = 6.4 NPAY coins
Reward per Block:	8 NPAY coins

PROOF OF STAKE (PoS)



PROOF OF STAKE

PoS is a substitute approach for PoW which requires fewer CPU computations for mining. Though this is also an algorithm, and the purpose is the same as PoW, the process is entirely different here. As in case of PoW, a miner is rewarded by resolving mathematical problems and creating new blocks, in Proof-of- Stake, the creator of a new block is chosen in a deterministic way, depending on its wealth, also defined as stake. This means that in the PoS mechanism, there is no block reward. So, the miners take the transaction fees. PoS mechanism has its pros and cons, and the actual implementations are quite complex.

The time and electricity needed to solve complex mathematical equations to reach a consensus as seen in the case of PoW are not required in this case as that is replaced with placing bets on blocks. This means that when a block is accepted into the chain, whoever placed a bet on that block gets rewarded.

This consensus is considered to be stricter in its terms of operation when compared to PoW as every node whose block is found out to be fraudulent or dishonest gets penalized instantly with the amount of bet they had on being debited from their balance.

The idea behind this method is, “The more your stakes, the higher your chance.” With this method, the network will be fast, efficient and cheaper to run.

Features:

- Users can gain PoS block rewards in several ways;
 - By leaving their desktop wallets application to run continuously
 - By Storing Coins in the mobile wallet that supports NPAY
- The Proof of Stake wallet reward is 20% of the block reward which leaves the PoS wallet reward at 1.6 NPAY.
- The rewards are evenly distributed by network weight.
- To gain block rewards at higher frequencies, users are required to stake more NPAY coins as the higher NPAY coins a user holds the higher their chances of mining an NPAY block.



NPAY COIN

NPAY Coin is a crypto-coin based on the quark algorithm technology designed to be completely secure, effective, efficient and disruptive in making payments processing completely seamless and super-fast.

As a payment method, NPAY Coin has been created to be a robust payment method in the e-commerce ecosystem. We aim to connect retail and online stores with a guaranteed connection to an existing merchant network. NPAY will be distributed as a genuine and equal payment method which is first adopted within the e-commerce ecosystem (online retail market, stores, and other payment transactions) and later become connected to a larger payment network within the financial ecosystem.

Applications of the NPAY Coin

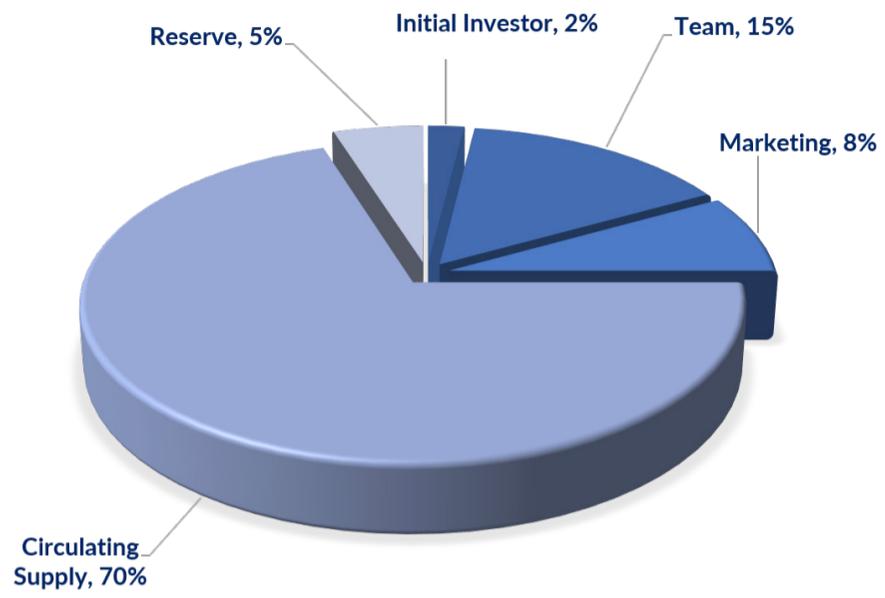
1. The NPAY Coin will be used as an active payment method in financial ecosystems such as e-commerce (online retail market and stores).
2. Spendable by merchants and buyers
3. Act as a catalyst for lower fees and faster transaction
4. Removes currency spending barrier for users

4.1 COIN SPECIFICATIONS

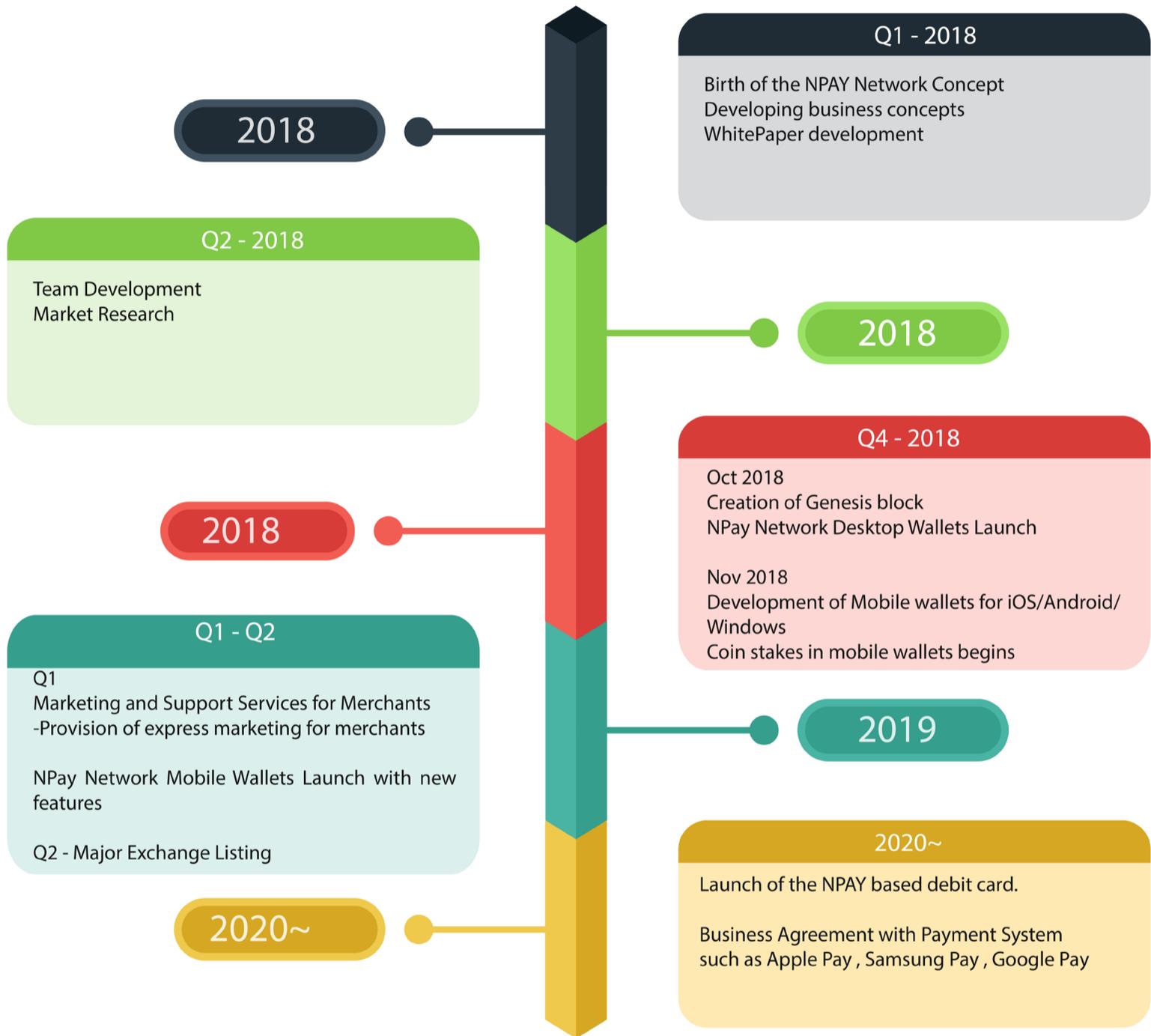
Algorithm	QUARK, POS / MN
Coin Name	NPay Network
Coin Symbol	NPAY
BlockTime	60 second
Block rewards	block per 8 (MN 80% , Stake 20%)
Masternode collateral	10000
Premine	none
Max supply	42,000,000 (+8 per block)

4.2 COIN DISTRIBUTION

INITIAL INVESTOR	2%
TEAM	15%
MARKETING	8%
RESERVE	5%
CIRCULATING SUPPLY	70%



5 ROADMAP



DISCLAIMER

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ANTI-MONEY LAUNDERING

Being an active international market player NPAY pays attention to be in compliance with international Anti-Money Laundering and Combating the financing of terrorism (AML & CFT) standards. There will be a certain Policy covering AML & CFT requirements in NPAY upgraded on a regular basis to ensure its best fit and compliance with the constantly changing environment of AML & CFT regulations and best market practices. Besides, NPAY will set up a set of regular AML & CFT trainings for its employees and officers. We welcome any legitimate person interested in our project and supporting it by purchasing the NPAY Coins. We do not discriminate on the basis of race, color, gender, religion, sexual orientation or to any other class protected by law. We are building a sustainable, transparent and safe ecosystem. That's why it is important for us to know our clients and provide them with legally solid solutions. We will implement efficient and high-quality Know Your Client (KYC) procedures, ensure compliance with AML & CFT requirements and best market practices.