

SHARD

WHITEPAPER
Version 2.0

The future is not something we enter. The future is something we create.

77

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VISION

Our vision for Shard is to create a secure and widely usable cryptocurrency which appeals to all users. To achieve this Shard must have low fees, scalability, decentralisation, community support, liquidity and diminished volatility. Through offering significant, easily calculable proof-of-stake rewards, we hope to attract many users to take part in maintaining the network. Providing greater scalability and decentralisation, while keeping transaction fees to a minimum. To both assist with the sustainability of these block rewards as well as liquidity and volatility is the Shard Community Reserve along with Shardax and it's multiple large scale projects. Importantly, at all times we respect and appreciate our communities opinions and support, and hope that it will only grow stronger over time.

We aim to make digital assets more accessible to the average user and allow for wide scale adoption. Shardax will create unique projects featuring Shard, such as a crypto exchange which will allow users to trade, stake, review new coin offerings, manage their portfolio and much more. Universal wallet allowing users to hold all their coins in one place on their desktop or mobile, trade straight from their wallet and easily pay for services, goods and more on the go with a very simple and secure interface. Along with the yet to be revealed Quantum Project. We are looking to revolutionise the cryptocurrency experience allowing users easy access and usability, bringing it to the mainstream for day to day life.

ABOUT

TEAM

While the scope of the Shard project is broad and to complete our vision may take several years, we have an experienced and enthusiastic team and community who are dedicated and ready to make this vision a reality. The Shard team brings together a unique collection of experts within cryptocurrency and technology with out of the box thinking to resolve situations and overcome obstacles.

INTRODUCTION

Shard is designed to be a secure decentralised cryptocurrency, with fast low-cost transactions, increased liquidity and reduced volatility; through support of the Shard Community Reserve (SCR). The reserve is a collection of cryptocurrencies and tokens selected by our community driven team. As the community reserves grow Shard will have both increased liquidity and reduced volatility.

Shard finds utility not only as a cryptocurrency but also as a utility coin in multiple Shardax projects such as a Digital Asset Exchange & Staking Pool, Universal Wallet and Quantum Project.

Every quarter Shardax will be using 20% of their profits for liquidity, buying and burning Shard. This will decrease the existing supply so that coin holders can continuously stake without the worry of inflation, while also giving Shard holders added benefits when using Shard on these platforms.

The Shard blockchain is based on the proof-of-stake consensus, giving holders the opportunity to stake their coins. This is a more energy efficient approach to validation of the transactions in the blockchain as opposed to proof-of-work. Staking does not require coins to be locked up in any way, and is fully automated while running the Shard wallet. Rewards are split 80-20 between the user and the Shard Community Reserve respectively. This will bolster the community reserves helping to tame market volatility. Users who do not wish to leave their wallet staking, but would still like to benefit from the staking rewards, will have the option to deposit their Shard on Shardax, or with other supported online staking platforms to be staked for you.

FEATURES OF SHARD

Shard is a cryptocurrency which uses the proof-of-stake consensus. It has some distinct differences from other coins in the market. Some of the features include:

Cryptocurrency and Utility Coin

Shard gives holders the benefit of being both a cryptocurrency and utility coin. Allowing holders to transact directly in Shard or enjoy its utility in multiple partnered projects such as Shardax.

• Easily calculable % based proof-of-stake rewards

Shard holders have the option to stake their coins to help secure the network and gain % based rewards; the more Shard you are staking the higher the block reward received. Holders will be able to stake their coins in their wallets, on Shardax or with our multiple partnered pools.

Soft cap allowing continued staking

Unlike most coins which limit staking with a hard cap, Shard implements a soft cap through continued coin burns by the Shard Community Reserve. This will allow staking rewards to remain significant throughout the future. Thereby promoting a strong decentralised blockchain with maximum participation, while keeping transaction fees to a minimum.

Secure and confidential

As a blockchain-based cryptocurrency, Shard uses cryptographic encryption to protect the information in the blockchain. Additionally, pseudonyms are used when adding transaction histories on the blockchain to protect the confidentiality of the holder. The combination of the cryptographic encryption, pseudonyms and advanced security protocols make Shard secure for day to day transactions.

Transparency

Shard uses a distributed ledger that is synchronised across all nodes. As a result, all the transactions are authenticated preventing any internal fraud.

Users can view all the transactions on the blockchain.

Stability

Most cryptocurrencies are volatile because the value is completely dependent on the supply and demand forces. However, Shard's aim is to have decreased volatility because it will gain liquidity from the cryptocurrencies held in the Shard Community Reserve and its use in multiple partnered projects.

Fast transaction speeds

Shard uses PoS consensus. The algorithms have low latency, this enables a high volume of transactions to be handled at the same time without any drop in the speed. The target rate of updating the transaction blocks is 120 seconds, which enables transactions to be confirmed 5x faster than Bitcoin.

Scalability and robustness

PoS coins can be scaled allowing more users to join the platform or hold the coin. Even though the coin supply is limited, the blockchain is scalable allowing thousands of users to transact using Shard at the same time without any inherent latency.

No restrictions

Shard is open to the public. You can join in by simply acquiring Shard and staking them. Leaving is equally easy, by simply selling your Shard to other willing buyers, either directly or through supported exchanges around the globe.

Open source decentralised blockchain

The Shard blockchain is open source, allowing the community to contribute to code changes. Any updates to the blockchain must be adopted by a majority of users to be passed.

SHARD COMMUNITY RESERVE

This is a multi-cryptocurrency reserve with the core purpose to provide market liquidity and reduce volatility. Other uses of the SCR may include funding exchange listings, development and marketing. The reserves will be diversified between numerous cryptocurrencies and tokens; and will be further bolstered through Shard network stakes as well as partnered projects with Shardax and market making of Shard.

The key functions of the reserve can be summarized into the following three roles:

- To grow the reserves through diversification in promising undervalued cryptocurrencies and from partnered projects with Shardax.
- To provide Shard with additional market liquidity. This makes it more resilient to volatility pressures than other altcoins.
- To counteract inflation by burning the excess Shard held in the community reserve. This reduces the total circulating supply of Shard enabling continued staking.

Shard holders can contribute to the reserves by staking their coins. The newly minted coins will be distributed 80-20 based on the Shard PoS reward split. 80% of the reward will go to the user who originally staked the coins while 20% will be pooled into the Shard Community Reserve. This is a win-win situation for Shard holders, by staking they can gain additional coins for themselves while supporting the network as a whole.

Shard will be decreasingly volatile as the cryptocurrency reserves increase. However as a cryptocurrency and utility coin, demand will also influence the value of Shard. If the demand significantly rises, the value of Shard may increase. As the SCR aims to reduce volatility, not determine the market value.

SCR Quarterly Report

This will be a quarterly report showing:

- Estimated value in \$ of extra-Shard holdings
- Estimated value in BTC of extra-Shard holdings
- Shard held in the SCR
- Shard burned by the SCR

SHARDAX

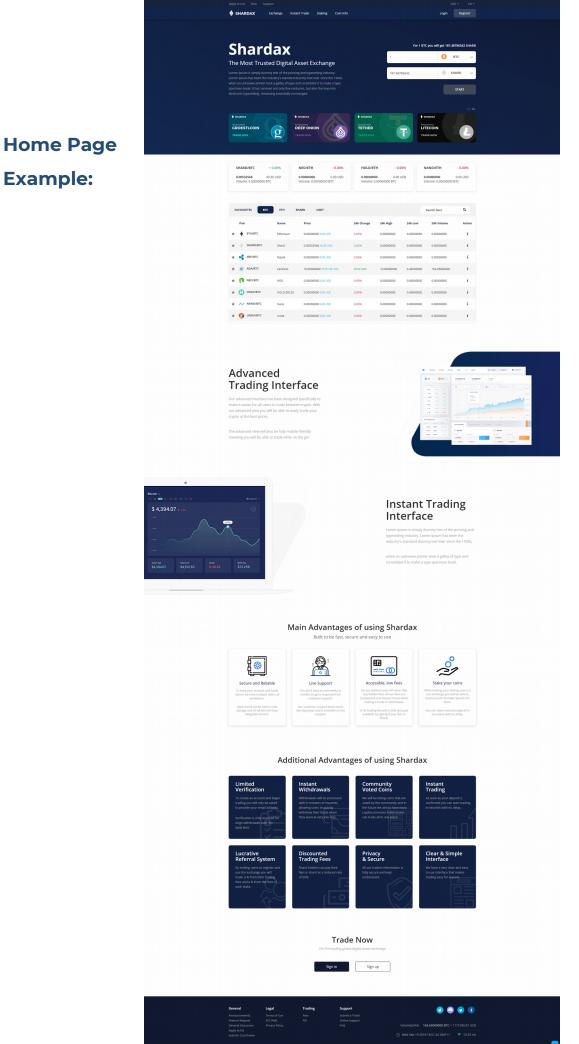
Crypto Exchange & Staking Platform

Shardax is a registered UK company which is developing multiple large scale projects featuring Shard.

Shardax exchange is a new and unique exchange that combines the advantages of top-tier crypto exchanges, with the ability to earn rewards from your deposited proof-of-stake coins, allowing users to trade and stake all in one place.

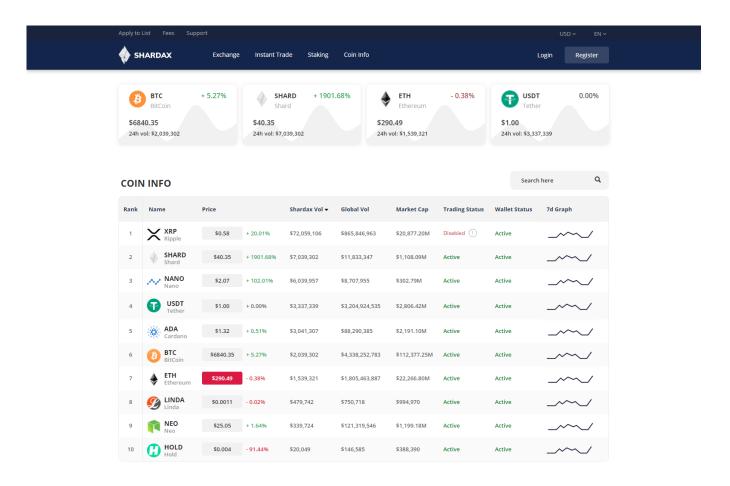
Shardax will make it easy to buy all types of leading cryptocurrencies, removing the need to go between multiple exchanges and cryptocurrencies. In the cryptocurrency space at this time, investors must buy coins and tokens from a variety of exchanges to get the coins they want. In contrast, Shardax will make it easy to invest in cryptocurrencies, as investors will be able to trade many cryptocurrencies in one place, including Shard, Bitcoin and other leading cryptocurrencies.

Shardax makes staking your coins a breeze as we understand that knowing how staking works can be difficult for some proof-of-stake holders, as having some technical knowledge is helpful. However, we have made the staking concept more approachable for novice proof-of-stake holders by offering an easy-to-use staking option. Some benefits of staking on Shardax are that once a holder adds their coins to the staking pool, the staking process is fully automated by the pool from that point forward. Your coins will stake without requiring your computer to be running 24/7 saving on electricity costs. Also by combining smaller groups of coins together into a single large pool, every contributor's coins can produce a larger quantity of stake rewards than they would in isolated groups on individual wallets.



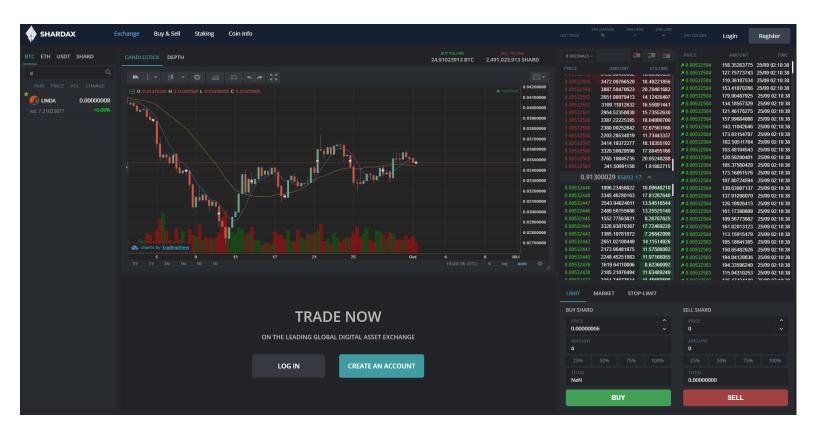
Example:

Coin Info Page Example:

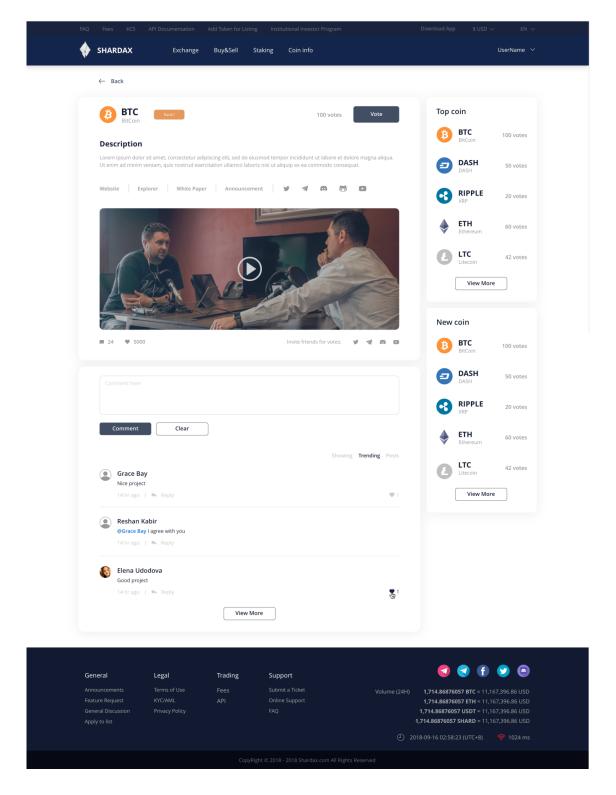




Advanced Trading Page Example:



Coin Voting Page Example:



SHARDAX ECOSYSTEM

The shardax ecosystem consists of 5 platforms in one, and is the only exchange at this time to combine all these features into 1 platform:

Advanced Trading Platform

The Shardax advanced trading interface has been designed specifically to make it easier for all users to trade between digital assets. With our advanced view you will be able to easily trade your digital assets at the best prices, via a Limit, Market or Stop-Limit Order.

Instant Trading Platform

The Shardax Instant Trading Platform will allow users to trade between any cryptocurrency on the exchange without needing to do multiple trades to get the coin they want.

Staking Platform

On the Shardax staking platform users will be able stake their favourite staking coins and receive rewards automatically, while being able to instantly exchange without any hassle or long waiting times.

Portfolio Platform

The Shardax Portfolio Platform will allow users to track their portfolio value and other useful information such as earnings and investments.

ICO Platform

The Shardax ICO platform will initially allow users to view information on specific ICO's and these ICO's will receive a rating. In the future we plan to allow ICO's to raise their funds via Shardax which we hope will cut down on scam ICO's. This will streamline the ICO process as the project team can more easily raise the needed funds through the Shardax ICO platform. To protect investors the funds will not be released until a set of conditions are met by the project team. Finally users will not need to move their tokens to exchange them after the ICO phase has ended as they will be listed on the Shardax exchange.

Features Of Shardax

Shardax has multiple features and some of these features are listed below

Secure and Reliable

To keep your account and funds secure we have multiple layers of protection.

Most funds will be held in cold storage and wallets will have delegated servers.

Limited Verification

To create an account and begin trading you will only be asked to provide your email address. Verification is only required for large withdrawals over the daily limit.

Fast withdrawals

Withdrawals will be processed within minutes of a request, allowing users to quickly withdraw their funds when they want at very low fees.

Privacy

All our traders information is fully secure and kept undisclosed at all times.

Live Support

You don't have to wait weeks or months to get a response from customer support. Our customer support team works all year and is available on live support 5 days a week and via ticketing 7 days a week.

Accessible, low Fees

On our platform you will never find any hidden fees, all our fees are transparent and displayed on our fees page.

Discounted trading fees

Shard holders can opt to pay their fees in shard at a 50% discounted rate, making Shardax one of the cheapest exchanges to trade on.

• Clear and Simple Interface

We have a very clear and easy to use interface that makes trading and using the platform easy for anyone on any device.

Community Voted Coins

We will be holding coin votings which will allow the community to vote for their favourite coin to be listed.

Lucrative Referral System

By inviting users to register and use the exchange you will make a % of their trading and staking fees.

Shardax Benefits

Shardax offers Shard holders multiple benefits which have been listed below, with more planned in the near future:

Discounted Trading Fees

Receive 50% discount when paying fees in Shard.

Main Trading Pair

Shard will have its own main trading pair, allowing Shard holders to trade directly between any coin on Shardax.

Pay for Listings & Services

You will be able to pay in Shard to list coins on Shardax and also pay for other services such as marketing and ICO listings in the future.

Coin Voting

Use Shard to vote in coin listing battles to get your favourite coins listed on the platform.

Dust to Shard

Users will be able to convert small amounts of coins (Dust) into Shard.

Shardax Profit Contribution

Every quarter Shardax will contribute 20% of its profits to be used for liquidity, buying and burning Shard. This will decrease the existing supply so that coin holders can continuously stake without the worry of inflation.

SHARDAX UNIVERSAL WALLET

Universal Wallet & Cold Storage

The Shardax universal wallet will be a mobile and desktop wallet where only the user has full control of their keys and assets. It will allow users to hold and trade their coins all within one safe and secure wallet. This means there will be no need to keep track of multiple wallets and private keys anymore.



Features Of Shardax Universal Wallet

The Shardax Universal Wallet will have multiple features, some of these features have been listed below:

One Wallet 100's of Assets

With the Shardax Universal Wallet you will no longer require multiple wallets for all your assets, you will be able to hold all your assets on one secure wallet.

Only you have access

Using the Shardax Universal Wallet, you are the only one with access to your assets and their private keys.

Next Generation Security

A 256-bit seed and 24-word mnemonic provides the highest encryption for all of the private keys on your wallet. All your assets are secure and accessible with your seed.

Easy to Use

The Shardax Universal Wallet will have a very simple and easy to use layout which will look great, allowing users to be able to manage their favourite assets at a click of a button.

Monitor your Portfolio

Users will be able to monitor their portfolio allowing them to keep track of the value of their portfolio and other useful information such as earnings and investments.

Easy Recovery

If you have lost access to your wallet, don't worry you can simply restore your wallet using your 24 word mnemonic.

Atomic Swap

The Shardax universal wallet will give users the option to trade using an atomic swap feature. This will allow users to trade between one another directly from their secure wallets, without having to trust a third party.

Exchange within your wallet

The Shardax universal wallet will allow you to directly trade with the Shardax Exchange and automatically receive your exchanged coins back in your wallet. Allowing you to hold your own funds before and after making a trade. We are also looking to partner with other exchanges to make sure you always get the best price possible.

Enable cold storage feature

Cold storage feature will allow you to transact without exposing your wallet to any elements.

Shardax Universal Wallet Benefits

Shardax Universal Wallet offers Shard holders multiple benefits which have been listed below, with more planned in the near future:

Discounted Fees

Receive discount when paying fees in Shard. This will depend on how much Shard you are holding.

Access to premium services

Depending on the amount of Shard you hold you will have access to premium services.

Pay for Coin Listings & Services

You will be able to pay in Shard to list coins on the Shardax Universal Wallet and also pay for other services.

Coin Voting

Use Shard to Vote in coin listing battles to get your favourite coins listed on the wallet.

Shardax Universal Wallet Profit Contribution

Every quarter Shardax Universal Wallet will use 20% of its profits to be used for liquidity, buying and burning Shard. This will decrease the existing supply so that coin holders can continuously stake without the worry of inflation.

SHARDAX QUANTUM PROJECT

The Quantum Project is one of many projects that have been planned. Details on this project will be released at a later date to protect the idea, with development planned to start in 2019/2020.

SPECIFICATIONS

Architecture & Consensus

Shard has its own main-net blockchain that is based primarily on proof-of-stake consensus. A main-net is a stand-alone blockchain that does not rely on any other cryptocurrencies, which sets it apart from many altcoins/tokens that are based on another cryptocurrency's blockchain, such as Ethereum's.

As a stand-alone blockchain, Shard transactions will be faster because products of the platform will only be subject to Shard's blockchain latency limits as opposed to parent-child chains that share a blockchain's latency limits thereby reducing the speed of transactions.

The validators (the equivalent of miners in PoW platforms) are chosen based on the number of coins they are staking, combined with the age of staked coins (their weight). This is not processor or GPU intensive, unlike blockchains that use only PoW consensus. The more coins staked and the longer a holder stakes their coins, the greater their value as a validator increases and the more transactions blocks that will be authenticated on their node. This results in better earnings.

A key reason why Shard opted for the PoS consensus is to reduce the likelihood of 51 Percent Attacks, and also to render the blockchain more scalable for future adoption as compared to PoW based blockchains which currently have problems.

Coin Tag	Algorithm	Туре	Min Maturity	Max Maturity	Block Time
SHARD	Scrypt	POS	9 Hours	72 Hours	120 secs

Security Protocols

The Shard blockchain uses multiple security protocols to protect the blockchain from Sybil attacks, to prevent double spending and coin theft. The first element is the use of an effective hash algorithm; Shard has been created using the Scrypt hashing function. Essentially, public keys are used to receive coins during transactions, but the authentication of transactions is done using private keys.

The use of the PoS consensus protects the Shard blockchain from Sybil attacks where malicious individuals give users on the platform false information (i.e. fraudulent public keys which can result in coin theft).

Double spending is prevented by continuous authentication of account balances. Given an initial and then a duplicate transaction, only the first transaction would be completed while the duplicate would be rejected based on the algorithm used and network.

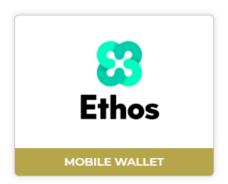
Wallets

The Shard wallet is unique from other wallets of many popular coins out there. At Shard, we strive to continually adapt and improve in many ways, usually influenced by the community's recommendations. The community's opinion is of the utmost importance to us and we continually use their voice as a tool to integrate and innovate new features into the coin. Shard strives to be a community leader, establishing standards set forth by every user of Shard coin, but exceeding them in every way possible.

During Q4 2018 and leading up to the beginning of Q1 2019, we will be focusing on making more improvements to our wallet. One of our biggest changes to our wallet will be a UI update which will re-define QT wallets with a new enhanced design. With the re-design we will also be integrating a graph which will allow users to monitor the value of their coins in USD and track how many coins they have gained over the course of a set time.

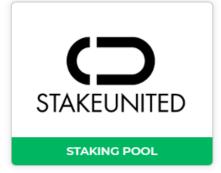
Alongside the UI update we will also be implementing our unique staking method which will combine or split staking stacks depending on the network weight. This will ensure optimal network stability while providing frequent staking rewards. We have also already reduced CPU and RAM requirements as well as minimised the amount of bandwidth required to run the wallet and will continue to minimise resource usage as much as possible. We will always take into consideration the communities opinions and ideas on what features are most needed and wanted.

Currently Shard has personal desktop wallets for Windows, Linux and MacOS available from the website and a Shardax Universal wallet within the near future. We have also partnered with multiple 3rd party services which offer mobile wallets, web wallets and staking options, some have been listed below:

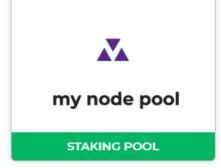












Proof of Stake

The target block spacing is 120 seconds, meaning that around every 2 minutes, a single user with mature coins will earn a stake reward for securing the blockchain. The minimum maturity period before your coins are eligible to stake is 9 hours, while the maximum maturity period is 72 hours.

The odds of a specific users wallet being selected to secure the blockchain is based on their coins' weight. Your coins' weight increases depending on how long you have been waiting to receive a reward, and how much Shard you are staking. To be eligible to receive the stake reward for securing the network, your computer must be on and connected to the network, otherwise the algorithm will select the next eligible wallet to create the block (and receive the reward). Of note, even with one's computer off a holders coins still gain weight and increase the potential rewards for when a blockchain signing & stake reward event does occur.

The distribution of the stake reward are split into two parts: 80% will go directly to the staker's wallet while 20% will be added to the Shard Community Reserve to assist with Shard market liquidity and further developments.

BLOCK REWARDS					
Block	ROI %				
1 - 4,000	50%				
4,001 - 20,000	600%				
20,001 - 40,000	550%				
40,001 - 50,000	500%				
50,001 - 60,000	450%				
60,001 - 70,000	400%				
70,001 - 80,000	350%				
80,001 - 90,000	300%				
90,001 - 100,000	250%				
100,001 - 110,000	200%				
110,001 - 120,000	150%				
120,001 - 130,000	100%				
130,001 - 140,000	75%				
140,001 - 170,000	50%				
170,001 - 400,001	25%				
400,001 +	12.5%				

Proof of Work

Apart from staking Shard in a wallet or a staking pool, at launch there was also the possibility of proof-of-work mining. The block reward in the 1-1000 range of blocks was 5 Shard, while those between 1001-5000 were 20 Shard each.

However as the current block is now above 5000, the mining reward element of Shard has ended. The final proof-of-work was generated on the 19th of March 2018.

PoS is now the exclusive blockchain validator and the only method of generating new Shard coins.

BLOCK	1 - 1000	1001 - 5000	5000 +
PoW Begins	5 Shard	20 Shard	PoS Only

ALLOCATION

Shard Allocation

Shard will be allocated as follows from the 25 million initial supply, however 15 million was burned leaving 10 million total supply.

- 80% to be sold to support Shard.
- 14% will be set aside as the development and marketing reserve
- 3% will be used for airdrops and bounties
- 3% will be reserved for the project team

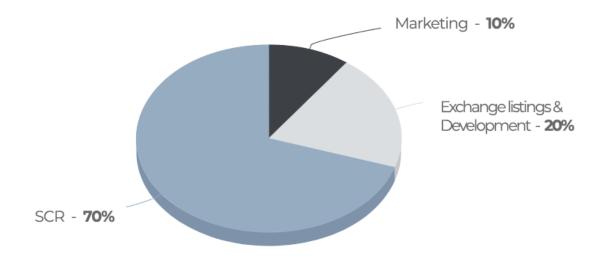
In total 15 million Shard was burned before Shard was listed on any exchange. The community voted to spare 4 million Shard to continue to raise funds in the same way.

The 1^{st} coin burn of 1 million Shard occurred on the 22/3/2018 and the 2^{nd} coin burn of 14 million Shard occurred on the 24/04/2018. As can be found on the block explorer.

Allocation of Proceeds

All funds raised from the sale-allocated coins will be utilised in the following way:

- A total of 70% will be used to set up the Shard Community Reserve. This involves the acquisition of the cryptocurrencies to be held within it, and will provide increased liquidity to the Shard markets and further developments.
- A total of 20% will be used for initial development and exchange listing costs
- The final 10% will be used for marketing. The marketing is important, and it will initially target the cryptocurrency community.



TEAM



KYANINVESTMENT STRATEGIST



ARON DEVELOPER



JAMESMARKETING STRATEGIST



EZTIAMANAGER



SAM DEVELOPER



ANRI DESIGNER



CHRIS ADVISOR



ABDUUCOMMUNITY MARKETER



YOU?

ROADMAP



CONCLUSION

Shard provides a completely different way to participate in the cryptocurrency market. How is it different? First, it relies on its main-net blockchain, versus non-blockchain based currencies or those that rely on other blockchains like Ethereum's. As a result, Shard will be substantially faster in transaction speed while supporting higher volumes. The architecture uses PoS staking which is more energy efficient as opposed to PoW mining used in coins such as Bitcoin.

70% of initial proceeds will initiate the Shard Community Reserve, where the community driven team will use their business insight and blockchain knowledge to diversify between numerous cryptocurrencies and tokens. The reserves will be further bolstered through Shard liquidity providing and the 20% PoS block reward split.

Shard will be usable not only as a cryptocurrency, but as a utility coin on multiple Shardax projects. Both Shardax and the Shard Community Reserve execute Shard coin burns. Fewer Shard in supply will allow continued staking of new coins, promoting higher staking participation; fundamental to maintaining the blockchain.

Rather than setting a maximum supply, Shard uses a soft cap that constrains the total number of coins below 700 million in order to control inflation. This gives Shard both longevity and scalability.

DISCLAIMERS

DISCLAIMER

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This white paper is for information purposes only and is subject to change. The Shard team cannot guarantee the accuracy of the statements made or conclusions reached in this whitepaper, and does not make and expressly disclaims all representations and warranties (whether express or implied by statute or otherwise) whatsoever, including but not limited to:

- Any representations or warranties relating to merchantability, fitness for a particular purpose, suitability, wage, title or non-infringement
- The contents of this whitepaper are accurate and free from error
- That such contents do not infringe any third-party rights.

The Shard team shall have no liability for damages of any kind arising out of the use, reference to or reliance on the contents of this white paper, even if advised of the possibility of such.

SHARD IS NOT A SECURITY

User acknowledges, understands and agrees that Shard coins are not securities and are not registered with any government entity as a security, and shall not be considered as such, Shard is a cryptocurrency and utility coin. User acknowledges, understands, and agrees that ownership of Shard does not grant the user the right to receive profits, income, or other payments or returns arising from the acquisition, holding, management or disposal of, the exercise of, the redemption of, or the expiry of, any right, interest, title or benefit in the Shard or Shard Platform or any other Shard property, whole or in part.



SHARD

www.shardcoin.io