➢ Welcome

We are glad that you are here!

Elysium is an L1 blockchain designed from the ground up to solve the current problems faced by existing blockchains. We have reimagined every aspect of the technology, from tokenomics to consensus, to create a fundamentally new distributed system.

This documentation is the only reliable source of the Elysium architecture. We are still polishing the system's nuances, so the documentation is constantly updated and supplemented.

In addition to the documentation, you can get more information about the project on the official [website](#) and [Twitter](#).

Ask questions and get the latest news you can in our [Discord community](#).

We also have many challenging quests in the [Crew3 community](#).

➢ Positioning

Elysium is not yet another blockchain

Elysium is a next-generation innovative blockchain. And this is not just a marketing slogan! It is hard to tell what aspect of blockchain technology was left unchanged during the Elysium development.

You can learn more about the unique technological approaches in the related sections. But more important than any technical solution is the problem the computer system solves.

The success of Bitcoin has been so resounding, and the capital earned by the first enthusiasts is so mind-boggling that the crypto industry has spawned a new gold rush. Today if you add the word "blockchain" to the project description, its capitalization will immediately skyrocket by several orders of magnitude. But blockchain itself is not a silver bullet - more than 500 Bitcoin clones appeared, but how often do you hear about them?

Satoshi Nakamoto used blockchain technology to create a decentralized bank - the most reliable version of a bank. That is why Bitcoin clones do not have a chance: why put your money in a small, unknown bank when you can keep it in the biggest and most reliable one?

Vitalik Buterin, by combining blockchain and smart contracts, created a distributed computer that is not afraid of a nuclear war (well, it will definitely survive a couple of strikes).

The main criterion for the success of Bitcoin and Ethereum was that they were the first to solve a particular problem, and not because they used blockchain technology. The problem simply would not be solved without it.

Although they are using the same technology, there is quite a lot of confusion about their positioning. Bitcoin is incomparable as an old reliable bank, while Ethereum is a full-fledged computer. The nuance is not to confuse their functions.

Ethereum is a computer, not a bank!

And since everyone can write programs for that computer - no wonder it is overflowing with malware. It happens because developers can leave backdoors, which will be difficult to find even for a professional. Therefore, at the level of smart contracts, there is no trust that many blockchain evangelists declare. Nowadays, the fraud level in the

blockchain space is almost the same as in the medieval market. Many pickpockets are trying to steal your money, while scammers want to swindle for their own good.

We see the task of Elysium not to be another decentralized bank or computer but to create a convenient and safe economic environment. Where the system will warn you if you try to send money to a smart contract that can be emptied by its owner. Where if you want to look into the logic of a smart contract, you do not have to be a developer to understand it. Where anyone, not even a programmer, may implement quite complex counterparty interactions. And where even the stolen seed phrase does not grant access to the user's funds.

And if Bitcoin is a solid bank and Ethereum is a reliable computer, then **Elysium is a safe market**.

➢ Features

Elysium is made of innovations

The logic of Elysium grew from a single Big Idea, which is still early to unveil. It is amazing how the architecture of the blockchain self-assembled around it, as if the puzzle pieces fell into place. The result is a next-generation blockchain project that solves almost all existing problems and stands out among other networks with a set of unique features, any one of which would be sufficient for success on its own.

Real Decentralization

The cryptocurrency industry is increasingly shifting towards centralization. But centralized projects, in our understanding, lose the very idea that made cryptocurrencies so attractive in the first place. Proof of Stake is particularly destructive to decentralization, as it declares decentralization through the capital.

In one of his talks, Nassim Taleb gave an example that people can vary from each other in weight by 5, well by 10 times at max. But in the size of their fortunes, they can differ a billion times. How can a decentralized system be created where one vote weighs billions of times more than the overwhelming majority of others?

The unique consensus of Elysium – Proof of Victory – provides real, rather than declarative decentralization, as anyone can participate in it, and the weight of the vote does not depend on the size of the owned capital.

True Scalability

Current approaches to blockchain scalability often rely on the concept of sharding, where the single data of the blockchain is split into several parts. In our opinion, this is a dead-end direction, as the very idea of storing data on multiple different tokens in one blockchain is quite absurd.

The concept of a blockchain is to store a canonical history of transactions that is important only within the context of one asset! If you have dollars and euros in your wallet, operations with dollars do not affect euros. The only time these two currencies intersect within one transaction – is when they are exchanged for each other.

Each token in Elysium will be accounted for its own independent blockchain, and each validator will be able to create blocks in many of them simultaneously. This approach allows for transactions on different tokens to be processed independently of each other. This means that high activity and load on one asset will not affect the transaction speed on others. Moreover, each new validator will increase the overall throughput of the network.

Lightning Speed

When people talk about blockchain speed, they often mean how quickly transactions go through, which depends primarily on finalization time. That is, how long to wait before you can be sure that the transaction will not be canceled. And there is only one condition for fast finalization – all validators need to know which of them should become the next leader and produce a new block.

In Proof of Work, there is no finalization in principle – you can never be sure that a longer chain of Bitcoin blocks will not suddenly appear out of nowhere with a completely different transaction history. Of course, the probability that aliens will arrive with overwhelming superiority in computing power or that a genius somewhere in the basement is about to finish building a quantum supercomputer is not so great. But it is not zero!

Proof of Stake consensus, on the other hand, is much better in this regard – it implies the leader's random selection in advance, depending on the size of the stakes provided by the validators. All validators immediately know who will make the next block, and the transaction speed in such networks seems almost instantaneous. But getting true randomness in fully deterministic computer systems is impossible. So a whole class of attacks on this consensus emerged, and some are impossible to defend.

In Elysium, we use the concept of occupying a future block for finalization. When creating a new block, the validator writes the future block number when he will become the leader again. It is similar to a circular queue when the leader gets back to the line after block creation. This addition to the Proof of Victory consensus allows almost instant finalization.

Thus, instant finalization, true scalability, and fast communication through a separate network layer allow Elysium to achieve unprecedented transaction processing speeds.

Innovative Duonomics

Elysium Duonomics is built on the use of two different coins. The purpose of the RAY coin is to be a transaction fee payment, and the SKY coin will be needed to issue RAY. This model separates blockchain investments and transaction fees, which solves many problems at once:

- The burn mechanics of an investment SKY coin directly secures its value by the network activity - even if the number of daily transactions stays at the same level, the SKY price will continue to rise since its supply shrinks and the demand from the system remains constant.
- The growth of the SKY price will not raise the cost of transaction fees paid in RAY.
- RAY's inflation will ensure the long-term stability of commission prices relative to fiat currencies.
- Increased Elysium activity, unlike other blockchains, will reduce transaction fees.
- Burning SKY will allow its supply to be lowered gradually rather than in a leap, as in the case of Bitcoin halving.

- The separation of the commission paid in RAY and the rewards for validators accrued in SKY prevents frontrunning and makes it possible to assess the work of network nodes based on more factors besides the block production itself.

Separating tokenomics into inflationary and deflationary coins accomplishes a crucial goal. The interests of investors, users, and validators align since they all benefit from network activity growth.

Natural language smart contracts

Smart contracts were developed as full-fledged programs. But they are not. If you have ever touched the subject of writing smart contracts, you know that a smart contract does not run like an ordinary computer program – it does not execute entirely from start to finish. The smart contract code in current implementations is more like a library of functions that are called to handle different events.

The logic of working with smart contracts in Elysium will be built around events handling, allowing writing such handlers in a language close to natural:

When contract state becomes "Fulfilled"
Then for each User
Which invested 100 Tokens
And which state is Active
Do send 120 Tokens

In the future, this approach will make it possible to build a visual editor for creating smart contracts without writing any code.

Uncompromising Safety

The security of the Elysium wallet will be ensured not only by trivial encryption of the seed phrase when it is stored, as it is currently done by most wallets like MetaMask. In addition to the seed phrase, the user in the Elysium network will also have a seed password that will be optionally needed to confirm the use of a new wallet installation. Seed password will be required on a mandatory basis in two cases: when installing the wallet for the very first time and if you lose access to all your authorized devices.

When installing the wallet program on a new operating system or device, the blockchain at the system level will require confirmation that this installed program is allowed to dispose of funds. It can be confirmed either by the seed password or by using a wallet on an already authorized device. That way, if an attacker steals your seed phrase, he still cannot transfer your funds without knowing your seed password or having access to your device.

Elysium smart contracts will be significantly simplified compared to full-fledged Turing-complete programming languages, so the most likely ways of fraud can be automatically detected at the system level. This way, you will always be able to see the security level icon of the smart contract and, in addition, read and understand its logic on your own, even if you are not a programmer.

The ultimate effect in terms of security will be achieved by the combined work of the wallet program and the system's assessment of smart contracts. For example, if a smart contract allows the withdrawal of assets to the owner's wallet, the user will be warned when signing the transaction.

➤ Funding

Decentralization through crowdfunding

In today's world, many new blockchains are emerging. The community perceives them as an easy way to make money on investments. The significant factors for investment decisions are: what VCs take part in the project, what services will switch to this blockchain, how much marketing money is in the budget, and so on.

All of these factors apply only to centralized projects, where the major investors fully control not only the development of the project but also the distribution of profits. And in the blockchain area, it was not always like that.

The advantages of distributed systems have been evident to the public since the success of Napster in 1999. However, people were not eager to run node programs to support them because it required keeping a home computer turned on 24/7. That is why Bitcoin originated primarily as a system with incentives for participants.

Initially, it was an experiment to create a decentralized system in which working nodes get rewards. By the way, this is why Bitcoin's consensus is called Proof of Work (PoW). Accordingly, there were no monetary barriers for new participants – on the contrary, anyone with a computer was welcomed and could become a miner without any costs.

In turn, the slogan of the increasingly popular today Proof of Stake (PoS) consensus is like this: "We do business on blockchain technology, and you can also invest." The meaning turned upside down! If it used to be "participate and get paid," now it is "pay if you want to participate."

The Elysium Team wants to bring back the spirit of cryptocurrencies' dawn! We have adopted Bitcoin's approach as our basic creed: Elysium is a unique decentralized system that solves real-world problems and needs as many support nodes as possible. The difference is that Elysium is a scalable blockchain, so each additional validator, besides providing more security to the system, will also add throughput.

That is why any person with a computer will be able to become a validator in the Elysium network, and no financial investments will be required for that. But this will be possible only a while after the launch of Elysium.

A successful project nowadays needs funding for developers' salaries, advertisements, bug bounties, hardware, and so on. Many modern blockchains use VC funding, but this approach has significant drawbacks.

VCs often seek to maximize their financial returns, which can lead to conflicts of interest with other stakeholders in the project. The chief investor may insist on making decisions in his personal interests, which may interfere with the project's development. But the main problem with VC funding is that it makes projects centralized, which is opposed to the initial idea behind cryptocurrencies.

The most decentralized method to receive investments is crowdfunding. And we take it to another level. We introduce a concept of initial validators which will secure the Elysium network for at least the first year. These initial validators will be like the first Bitcoin miners getting a minimum of 10% of the future Elysium capitalization.

The main idea is that the closer the launch – the fewer risks investors have, so there will be more and more people willing to jump on the leaving train. These laggards will need to pay to catch up with those who have supported the project since the beginning.

This approach makes it possible to:

- avoid centralized investments from VCs;
- turn founders' vision into reality;
- reward people who supported the project the most;
- launch Elysium decentralized as much as possible.

Therefore, we are building a strong community of enthusiasts simultaneously with blockchain development. And if you want to be one of the initial validators – you are welcome!

FAQ

Don't you have tokens of the future blockchain for sale?

No. Elysium is not a PoS blockchain that could be decentralized only through token distribution. All Elysium tokens will be distributed among validators when the blockchain is up and running.

How exactly will you raise funds?

We need the Elysium blockchain decentralized as much as possible from the very beginning. To achieve that, we have launched the Pioneers Program.
To join it, you will need an access key NFT. Selling these NFTs will help us fund the blockchain development.

How much money do you need to build Elysium?
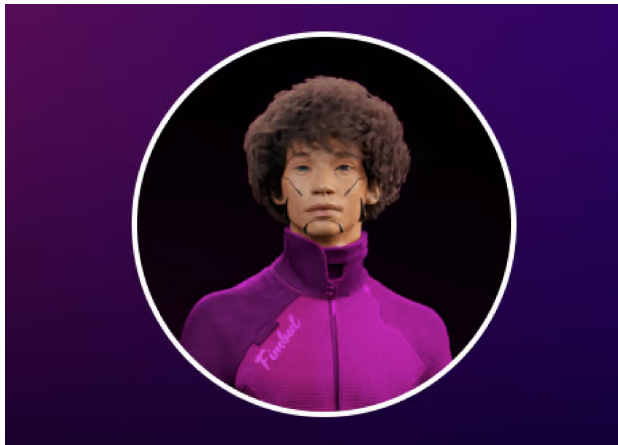
We are aiming for $1 000 000 to develop a blockchain.

➢ Team

The Titanic was built by experts, and the Ark was built by amateurs


HeapVoid

Chief Developer

More than 30 years of coding experience. Loves to make mental models on any occasion. Needs constructive criticism to move forward. Likes science fiction books.

0p0int
Frontend Developer

Designer with front-end coding skills. More than 20 years of experience. Introvert and does not like to chat. Pays full attention to details. Listens to music while working.
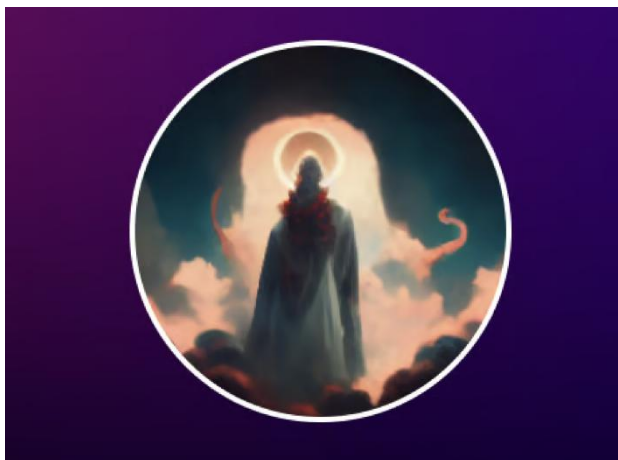
Futurum
Community Manager

Manages communities since Discord was invented. Can provide technical support in any language. Likes memes, and good jokes. Spends a lot of time in the gym.

We have been developing complex applications together for a long time. At the same time, we have been interested in cryptocurrencies. From time to time we shared opinions about new projects and usually, it resulted in a statement like: "Why have they implemented this functionality so stupidly?". And usually, after that, we started to discuss how to do it the right way.

At some moment, such insights accumulated enough for one of us to exclaim: "If you want to do something well – do it yourself." We fell silent and began to look at each other in surprise. Then we worked almost around the clock for six months to polish the logic. And when no internal contradictions were left, we decided to make the Elysium project public.

FAQ

Are you qualified to develop a blockchain?

We certainly do not create a new blockchain every Tuesday. This is the first blockchain we are developing.

But we have rich experience creating vastly different software, and we do not see anything super complicated in the blockchain node code. It is just an ordinary program. The complexity lies in the interaction logic of various nodes but not in the code itself. And we have already thought it through.

But if we lack some competencies, we hope to attract developers from our community. In general, if you like our ideas and want to live in a world where Elysium exists, feel free to contact us, and we will figure out how you can help the project, even if you are not a developer.

But wait: doesn't blockchain development require a big team and significant funding?

The corporate world often obeys weird laws. Here is a real-life story for you. One bank needed to refine the logic of its accounting software. It was a task for a few days at most, so we billed them $1,000. After a couple of days, they refused. Later we discovered they had hired a big company for $300,000 to solve the same problem.

It happened not because we underestimated the size of the necessary work – we have done a lot of similar tasks before! It is corporate psychology when a manager relieves

himself of responsibility by hiring a big company. If something goes wrong, he will claim that he did everything right — he hired a market leader for a lot of money.

And in a big company, there is a hierarchical chain of 8 bosses above one real programmer, each with a good salary.

It is not difficult to code the core of a complex system in several months if you know what you are doing. And because we are building an open-source project, many contributors will join us later.

Why are you anonymous?

Satoshi Nakamoto also decided not to reveal himself for some reason. Publicity causes misleading confidence and allows one to collect much more money. But, unfortunately, it

does not guarantee anything, remember the story of the Terra collapse?

We do not need a lot of money to complete the project. And the risks of being public are enormous. For example, the attention of the SEC. Or a restriction to developing blockchains in the country where we live. Or simple bandits in case of resounding success. Does Vitalik Buterin have bodyguards? And if not, is he afraid to walk down the street?

What is your interest?

First of all, we will be among the initial validators. We believe that SKY tokens mined during the first year after the Elysium launch will become a life-changing wealth in several years.

Besides that, we will operate the network layer. It will also bring us SKY tokens as Routers' rewards. But we will use these tokens as liquidity for the bridges, DEX, and CEXs, as grants for developers, and for other tasks that will help Elysium grow.

But more important than money is that we want to do something meaningful. Society and technologies are developing at an increasing pace, so it is impossible to state that Elysium will be shining after decades (don't forget that Bitcoin is still only 13 years old). But at least it will be a milestone to reference. A milestone in the right direction away from centralization.

➢ Roadmap

The journey to the Moon and beyond

October 2022
- ✓ Birth of the [Elysium Discord Community](#)
- ✓ Launch of the [Elysium website](#)

November 2022
- ✓ Elaboration of the Tokenomics design details
- ✓ Elaboration of the Consensus design details
- ✓ Development of the [Tokenomics simulation](#)

December **2022**
- ✓ Publication of the [Introduction](#) section of the documentation
- ✓ Elaboration of the Message Routing design details
- ✓ Elaboration of the Pioneers Program mechanics
- ✓ Publication of the [Pioneers Program](#) section of the documentation

January 2023
- ✓ Publication of the [Tokenomics](#) section of the documentation
- ✓ Blockchain selection for the Pioneers Program (Polygon)
- ✓ Detailing of the Elysium blockchain architecture
- ✓ Development of the Pioneers Portal architecture
- ✓ Development of the Discord <-> Polygon interactions

February 2023
- Launch of the Pioneers Program promo website
- Development of the Pioneers Portal interface
- Writing Elysium documentation

Q1 – Q2 2023
- Development of the Pioneers Program: smart contracts, portal, mini-game
- Publication of the blockchain documentation
- Distribution of 9000 Access Key NFTs starts
- 7500 via private sale
- 1500 free as a reward from the Team

Q3-Q4 2023
- Distribution of 9000 Access Key NFTs continues

- Start of Pioneers Program
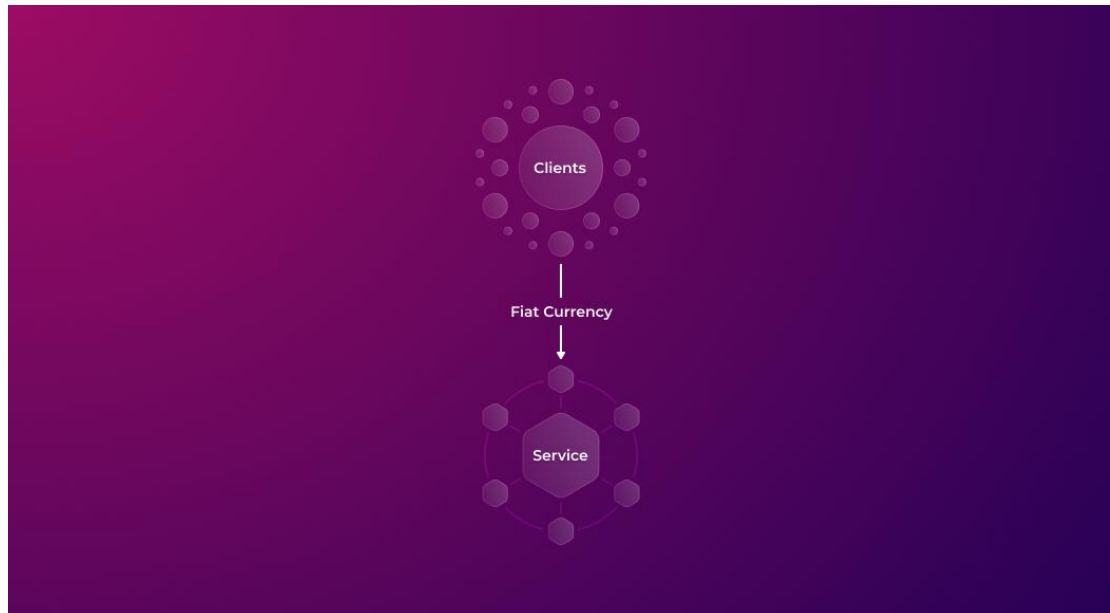- Development of the Elysium blockchain

Q2 – Q3 2024
- Distribution of 9000 Access Key NFTs continues
- Development of the Elysium blockchain
- Launch of TestNet

Q4 2024
- Distribution of 9000 Access Key NFTs ends
- Launch of MainNet
- End of Pioneers Program

Money problems?

## Creating consistent tokenomics is harder than it seems

Real-World Economics

Blockchain can be seen as a system that provides a service for its customers to store data in a decentralized manner. Thus, the commission for user transactions acts as payment for the work of nodes. Unlike the real world, where prices are set in fiat currencies, fees for the blockchain service are paid in coins stored within the system. But what kind of changes does this entail?

If a cryptocurrency has its own blockchain, it is called a coin, unlike tokens, whose operations are processed by third-party blockchains. Thus, the description of the mechanics of how the blockchain economic model works should be called "coinomics."

The most common tokenomics model today is the one applied 13 years ago for Bitcoin. It implies that the number of coins is limited, and their issuance, which decreases over time to zero, comes as a reward to network nodes for making the system work. Therefore, users must buy them from node owners, often with fiat currency, to interact with the system.
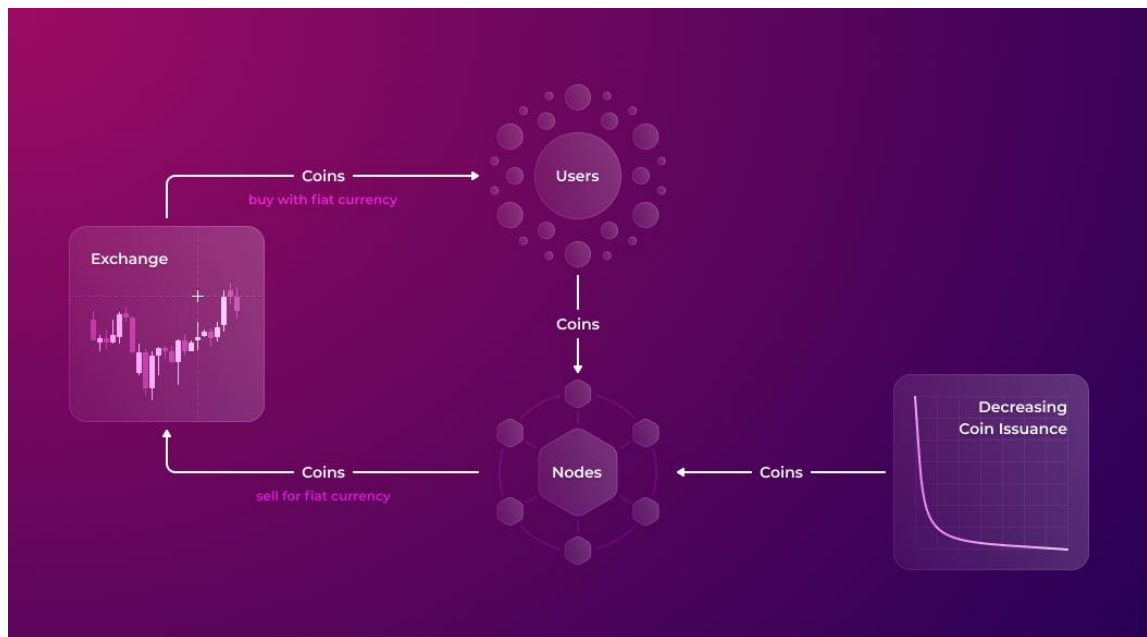
The most popular blockchain tokenomics

It appears that users still pay nodes of the system in fiat currency but through an intermediate medium in the form of a blockchain coin. This payment arrangement has one indisputable advantage – because the number of coins is limited – when the system's popularity grows, its price skyrockets. But this same property also entails internal contradictions.

Investments vs Coin Backing

As we already wrote in the [Positioning](#) section, Bitcoin is primarily a bank, and therefore, its main task is to safeguard the Bitcoins in users' accounts. So transactions can be thought of as depositing or withdrawing funds. With this approach, there is nothing wrong with a transaction taking an hour to process because the Bitcoin blockchain is not primarily a payment system.

In this model, the main concern is that funds are withdrawn at the expense of new users who want to invest in the system. Meaning that Bitcoin is rising in value because people buy it expecting it to become even more expensive.

This is why short-sighted financial experts sometimes call Bitcoin a Ponzi scheme. But they are wrong – in addition to its function as a store of value, Bitcoin now also acts as a measure of value (e.g., WBTC on Ethereum) and a means of payment (Lightning Network).

The emergence of smart contracts in Ethereum was a milestone in the development of blockchain technology. Ethereum blockchain provided not merely the ability to store coins like the countless Bitcoin clones before but gave access to a full-fledged distributed computer. ETH became necessary not just to pay commissions when transferring itself between users but also to pay fees when using thousands of other

16

tokens with various functionality. So ETH became the first cryptocurrency secured not just by supply and demand but also by actual network functionality.

But because of Bitcoin-like tokenomics, a conflict between network users and long-term holders has become apparent. Investors withdraw tokens from circulation, causing the price to rise, which raises costs for using the blockchain functionality that backs the coin. Thus, at the peak of the bull run, the commission on the use of smart contract functionality is prohibitive, reaching hundreds of dollars per transaction.

Imagine Netflix released its token with a limited supply, which is needed to pay for movies. Many people will want to buy it as an investment asset, causing its price to rise. Users wishing to watch movies will have to pay a lot more. This will lead to a decrease in the number of actual clients, while they are the key to the service's success and, consequently, the value of the issued token.

That is why in the real world, paying for a service and investing in it are separated into two different types of assets: fiat currencies and stocks.

Users vs Node Owners

Exchanging money for services or goods is such a simple and old concept that we don't even realize it hides a problem. It is faced mainly by people in developing countries suffering rapid currency depreciation. The local currency decline makes the population poorer since most goods in any country are imported in today's globalized world. But exporters in such countries, on the contrary, make excess profits because their income remains stable, and local costs relative to these revenues are reduced.

In the blockchain world, this problem is more pronounced as cryptocurrency users continue to live in the real world and use fiat money for living. As cryptocurrency rises, network node owners play the role of exporters in countries with weakening currencies. Their income increases while their living costs remain the same. But those who use the network for something other than investing or trading act as people getting poorer.

For example, the transaction cost has a dramatic profitability impact on online business that involves cross-border cryptocurrency payments, especially if numerous transactions are assumed.

Thus, the users' and the node owners' interests directly contradict each other. For users, commissions are costs, and it is beneficial to reduce them. For node owners, fees are income, and it is profitable to increase them. But in an ideal world, the interests of users and node owners should coincide — both groups should be interested in the growth of network popularity and its further development.

Modern blockchains solve this problem through issuance, which provides the nodes with their profitability in the first place by the very high number of newly created coins at the start of the network and the numerous initial blockchain investors. So users pay a small fee, and nodes get the bulk of the reward with minted coins. But because issuance decreases over time, at some point, one of two things will happen anyway – either the income from the emission will not be enough to motivate node owners, or the fees will drastically increase.

Even Bitcoin, having most of its coins already created and its issuance significantly reduced relative to the initial stage of blockchain development, has this problem. There is still debate in the community about what will happen when its emission drops even further or stops entirely – whether the pure fees will be sufficient to motivate node owners.

At some point, the following chain of events may occur. Bitcoin issuance during the halving will drop so much that it will become unprofitable to mine in the face of such competition. The number of miners will begin to decrease, and Bitcoin's hashrate will start dropping. This will make users nervous about blockchain security, and they will begin withdrawing money from Bitcoin. The price of Bitcoin will drop, making mining even more unprofitable.

Within standard single-coin tokenomics, it is impossible to balance the user costs with the node owners' revenues because of the real-world coin price volatility. But this balance is crucial for customer availability if blockchain provides unique functionality.

Resume

It seems to us that it is almost impossible to make a consistent model of tokenomics on a single-coin basis – while using two coins makes it possible to resolve virtually all internal contradictions.

Elysium Duonomics

Uniting the interests of system participants

An ideal tokenomics should facilitate the coincidence of the interests of three groups of participants:

- Long-term holders who, having invested once, may not return to the blockchain for years.
- Regular users of the system who constantly use it for a variety of tasks.
- Validators who spend computing resources and time to keep the system running.

The coincidence of interests is not just a theoretical concept. When applied to tokenomics, it means that the growth of some functional parameter of the system must benefit all participants. Since Elysium is a truly scalable blockchain, we chose network activity, in other words, the number of transactions per unit of time, as such a parameter.

Also, we are pretty sure that it is impossible to create a single-coin tokenomics model in which transaction growth results in gains for all participants, so Elysium tokenomics uses two coins: RAY and SKY. Their supply is managed by Elysium Grinder, which is essentially an automated central bank.
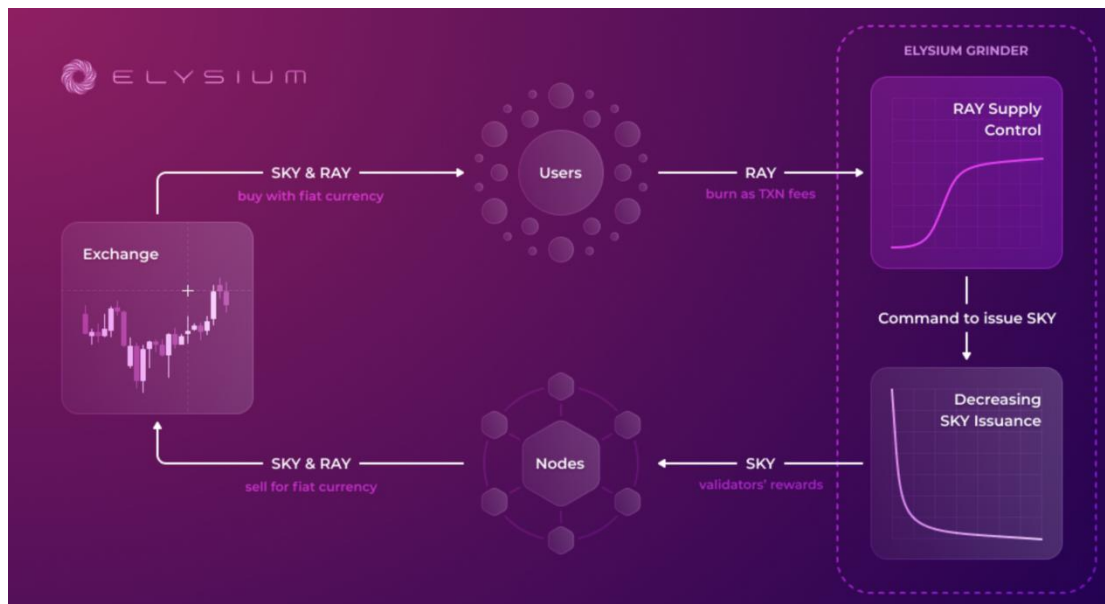
RAY Coin

Parameter	Value
Maximum Supply	Unlimited
Circulating Supply	Limited by formula
Initial Supply	1 000 000 000 RAYs during the first 1000 days
Inflation	5% yearly after 1000 days
Utility	Transaction fees in Elysium are paid in RAY
Issuance	Anyone can issue RAY by burning SKY in the Grinder
Burning	All RAYs used to pay commissions are burned

What matters most to blockchain users is that transaction fees do not become very expensive. In modern blockchains, the commission amount is determined on an auction basis – the more commission users pay, the faster their transaction will be processed. This leads to two problems: frontrunning and higher fees during activity spikes.

Frontrunning is the ability to outrun someone else's massive transaction by increasing the commission paid and earning from the resulting price increase.

In Elysium, the RAY coin will be used to pay commissions. The maximum commission cost will be a fixed amount of 1 RAY, but with the growth of the network activity, the transaction cost will decrease – down to thousandths of a RAY. Moreover, because RAY is an inflationary coin with a 5% supply growth per year, its price will correlate with the real-world inflation rate in the long run.

An activity expansion is usually accompanied by coin price growth. Thus, with the increase in network activity, the relative price of RAY will grow, but the absolute value of the transaction cost expressed in RAY will decrease. This will allow the fees to remain at an acceptable level relative to the real world even at the peak of the bull run.

RAY Utility

All transaction fees paid in RAY are immediately burned. The base fee rate per transaction is 1 RAY. But since the volume of transactions can be large, too many RAYs can be burned in a short period. Therefore, as the number of transactions increases, the fee is reduced so that no more than 1% of the total RAY supply is burned daily.
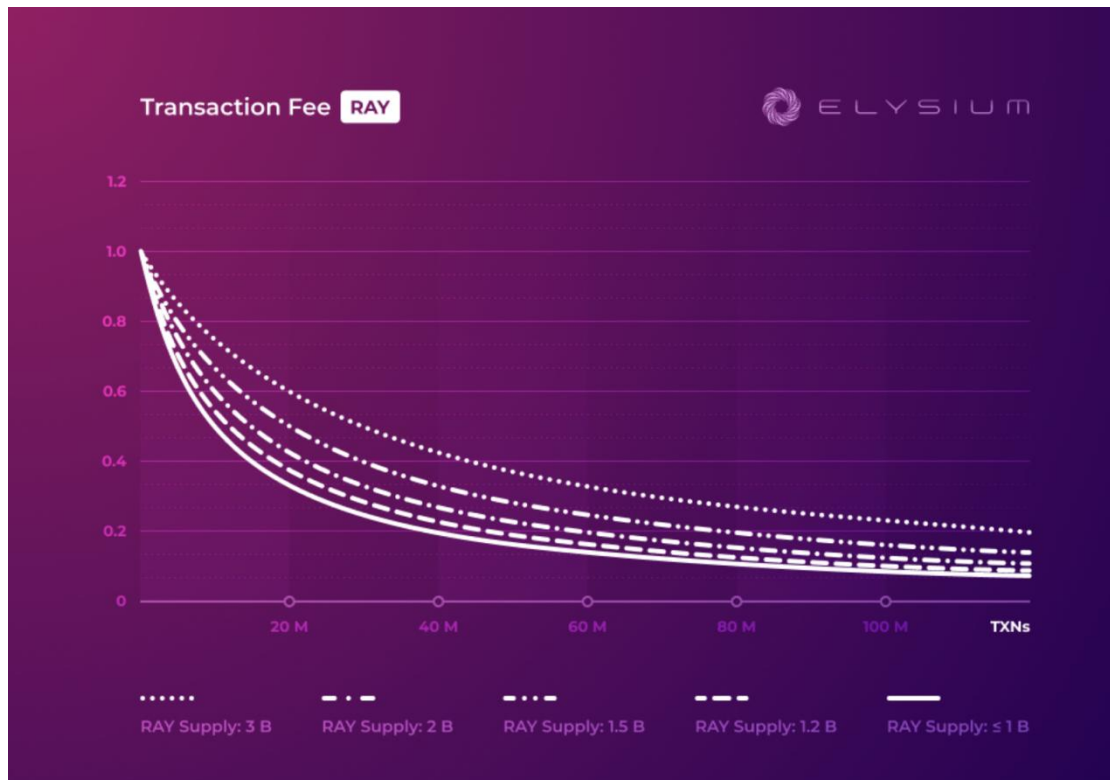
RAY Issuance

RAY can only be released into circulation by burning SKY in the Elysium Grinder. There is a queue of orders arranged by the SKY / RAY rate for this purpose. The more SKYs are offered in exchange for a single RAY, the sooner the Grinder will process that order. The closest analogy to such a queue is exchange limit sell orders, executed by persistent demand from the Grinder.
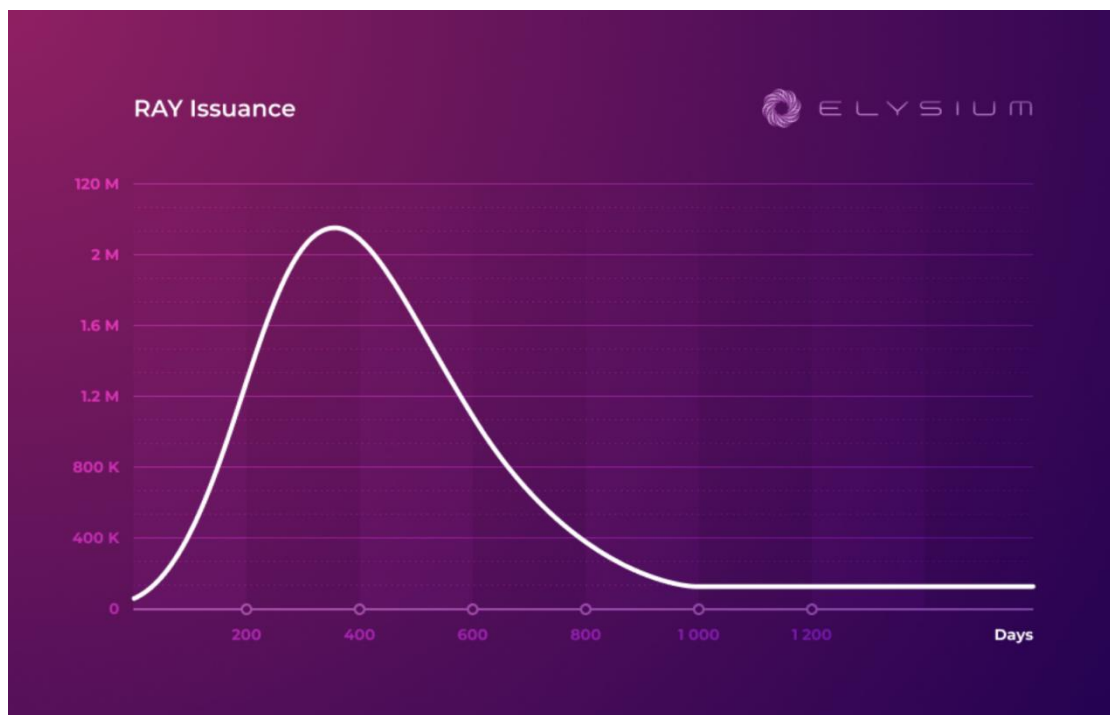
RAY Circulating Supply

The Elysium Grinder controls the issuance of the RAY coin to reach the target circulating supply determined by a mathematical formula. Since the RAY coin is inflationary and the commissions paid in RAY are burned, there is a constant need to create new RAYs. Elysium Grinder will print RAYs providing the necessary issuance and replacing burned RAY coins to reach the target RAY circulating supply.

SKY Coin

Parameter	Value
Maximum Supply	100 000 000 SKYs
Utility	SKY is used to issue RAY
Issuance	Can be minted only as validator's reward
Burning	A part of SKY while minting RAY is burned

It is vital for investors and validators that there are explicit mechanics for the growth of the asset in the long run. But in most modern networks, it is not entirely obvious what a coin is secured with, so the main criteria for long-term investments remain the limited supply of the token and the possible popularity of the decentralized system in the future.

In Elysium, SKY is designed for investment purposes and is directly secured by user activity. SKY is a RAY coin printing certificate. Its main properties are a constant

demand from the system and persistent burning. Thus, the more RAY coins are burned as transaction fees, the more must be printed, and the more SKYs will be used for this purpose, part of which will be burned.

Thus, even a constant amount of daily transactions will reduce the overall supply of SKY. Therefore, both investors and validators benefit from the network activity since it directly reduces the SKY coin supply.

SKY Utility

SKY is used by Grinder for RAY issuance. Anyone can put SKY coins in the Grinder specifying SKY / RAY rate. The Grinder continuously uses the SKYs offers with the highest bids to issue RAYs. During the order processing, one part of the SKY burns irretrievably, and the other part becomes available for reissue into circulation. It will stop being burned when only 1 000 000 SKYs remain.

SKY Issuance

Validators' rewards will be calculated in RAY as the sum of burned commissions and inflationary RAY issuance. SKY will be issued corresponding to that amount using a constant product formula as validators' rewards. This means that the reduction of SKY token issuance will not occur in leaps and bounds, as in the case of Bitcoin halvings, but gradually.

Since validator rewards are not directly dependent on the specific transactions they process, the distribution of SKY among validators can be adjusted based on many factors. In addition, this approach prevents front-running.
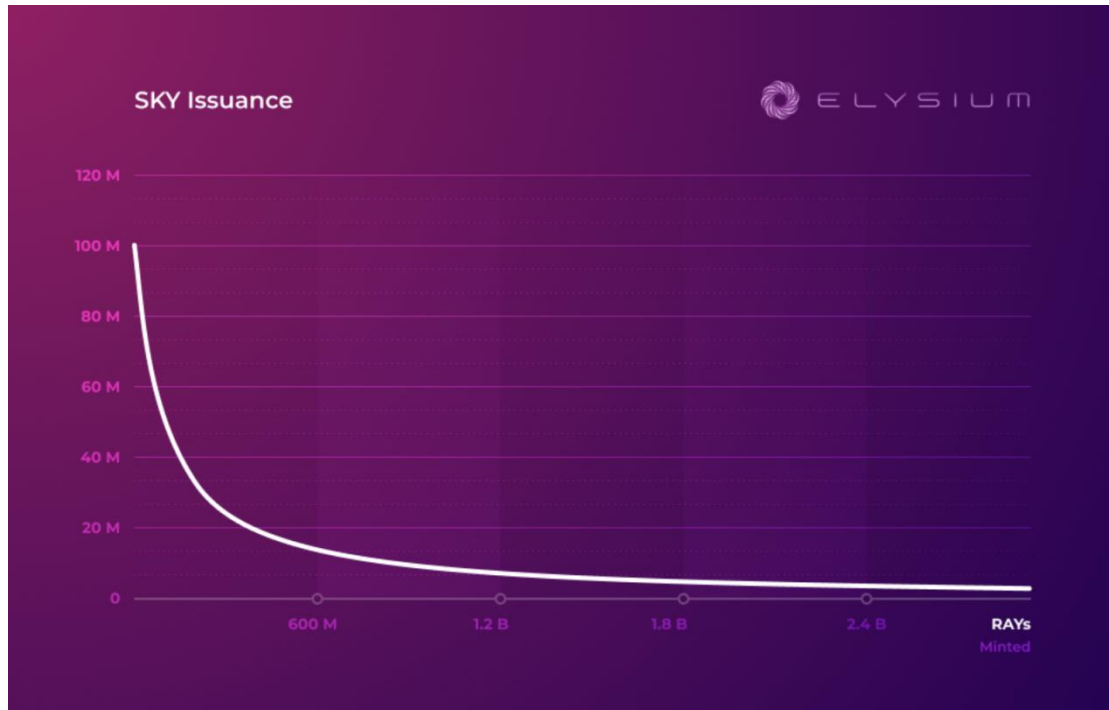
SKY Circulating Supply

The amount of SKY circulating supply depends on the ratio of the SKY burning speed to the issuance volume. The SKY burning pace is determined primarily by the SKY market price. The SKY issuance depends on the number of RAYs burned as commissions. Thus, the exact amount of SKY in circulation can only be approximated.

Our simulation shows that though the total supply of SKY is 100 000 000, it is unlikely that there will be more than 20 000 000 SKYs in circulation at any given moment.

SKY Circulating Supply
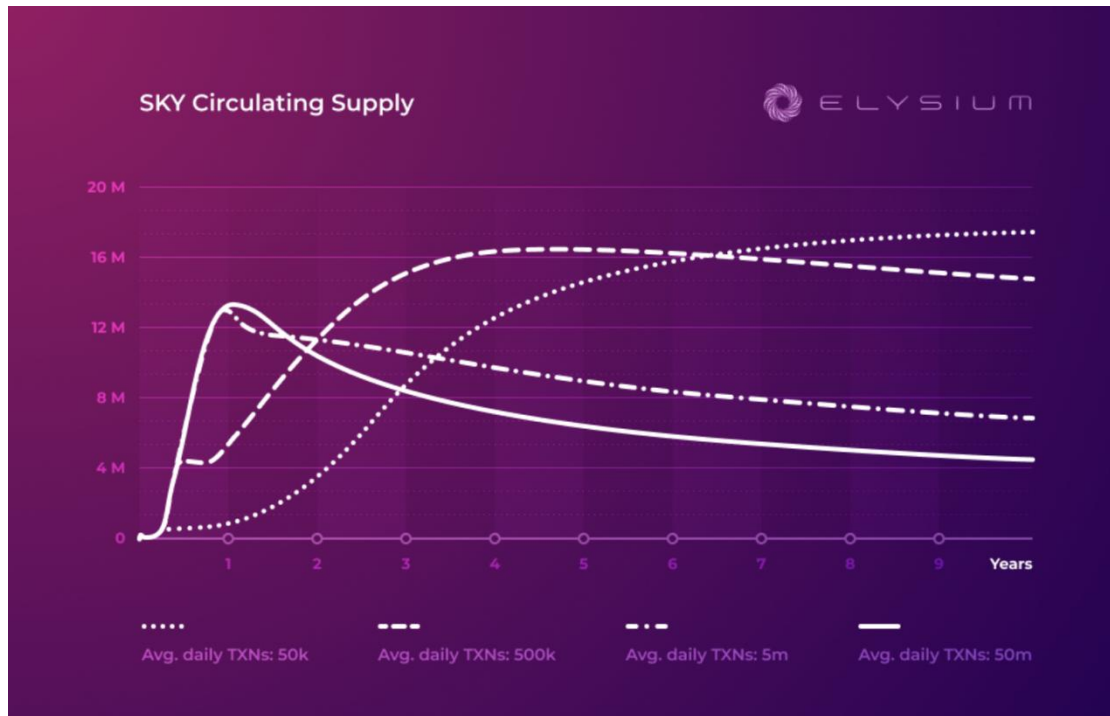
RAY / SKY Rate

The RAY / SKY rate depends very much on the initial distribution of coins – therefore, it can even fall during the first few years if the number of transactions is not very high. But in the long term, the amount of RAY in circulation will grow, and the amount of SKY will fall after the peak is passed. So, in the long run, depending on the number of transactions in the blockchain, the amount of RAY given per SKY will steadily grow.

RAY / SKY Rate
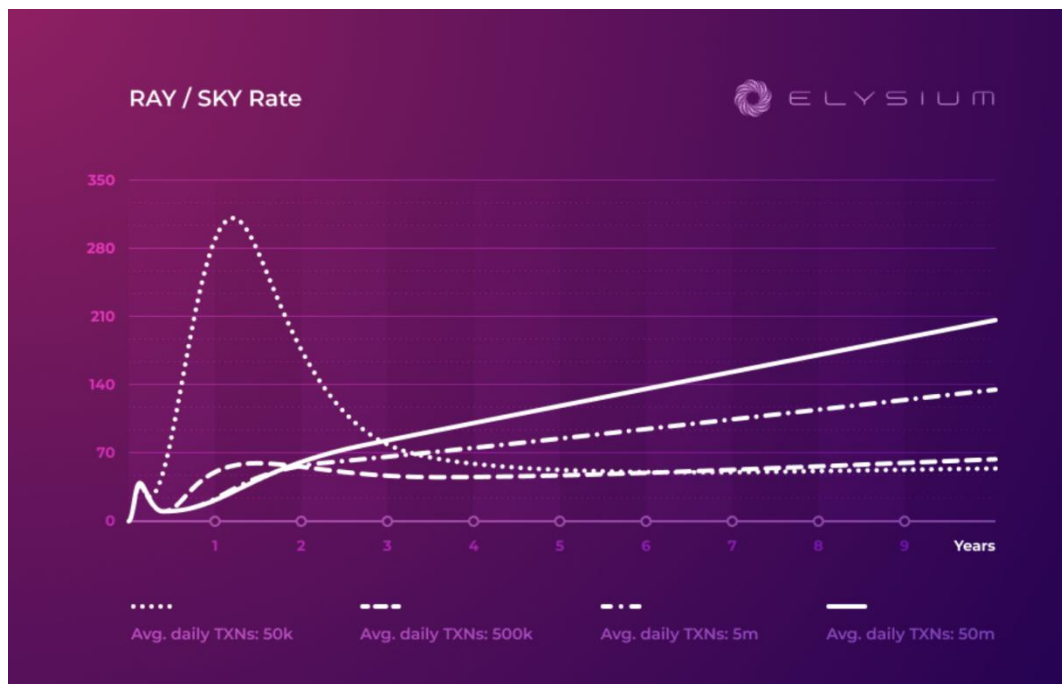
FAQ

Do you have two tokens? But LUNA also did, and it collapsed!

If some single-token system goes bankrupt, it doesn't mean all single-token mechanics are doomed. We have fundamentally different mechanics from LUNA, self-sufficient and not directly tied to the real world. Thus, it cannot be broken by external manipulation, as it happened with LUNA.

How will I be able to deposit or withdraw money from Elysium?

In the beginning, a bridge with Ethereum will be set up to interact with the outside world, allowing users to use wrapped ETH in Elysium. It will also be possible to withdraw capital from the Elysium network using this bridge.

Bridges to other popular blockchains will be created in the future. If necessary, it will be possible to make a bridge with reverse logic, where RAY or SKY is withdrawn from Elysium, and in another blockchain, the user receives wrapped RAY or SKY tokens.

What happens if no one puts SKY in the Grinder?

That won't happen. At least, the Elysium Team will put a single SKY in the Grinder queue at a price sufficient to issue a billion RAYs. And we have no doubt that there will be many such overpriced orders.

SKY will not be burned when trading on the exchanges. Will it break the system?

There will be DEX in Elysium, so it will be possible to trade SKY for RAY outside the Grinder.

If the price of SKY on DEX drops much relative to prices in the Grinder queue, it will open up an arbitrage opportunity. Anyone can buy a cheap SKY on the exchange and put it into the Grinder at a much higher price.

If the price on the exchange exceeds the price in the Grinder, it would be more profitable to cancel the Grinder's order in the queue and sell the SKY on the market.

Thus, the price on the exchange and in the Grinder queue will strongly correlate. But the burn price in the Grinder will likely be slightly higher than the exchange rate since it will take some time to process the order via the Grinder. In other words, if there is a possibility to swap SKY on the DEX immediately or through Grinder, say, within a week, then, obviously, the long wait must be somehow compensated.

What happens if SKY collapses?

As has already been said, the prices in the Grinder queue and on the exchange correlate. If the price of SKY falls (relative to RAY), then the Grinder will start to consume (and burn) significantly more SKY. Therefore, at moments of deep SKY drawdowns, it will be burned at an accelerated pace.

Where will the first RAY tokens come from?

The initial RAY tokens must appear somehow to launch the system. Otherwise, it will be impossible to make any transactions. For that, Elysium will have a rule (both initially and in the future) that each new validator will receive 100 RAY as a gift.

Will SKY be distributed evenly?

SKY will be distributed among validators as a reward. Since we plan to launch a network with about a thousand initial validators, and about 10% of the total SKY supply will be distributed among them in the first year, there should be no large SKY holders.

Well, except for the Elysium Team, which needs a lot of tokens to create bridges, provide liquidity for centralized exchanges, offer grants for developers, etc. The additional reward the Team will receive as Routers' rewards by operating the network layer.

➢ Pioneer Program

Elysium protection against multi-accounts

What could be more pleasant and profitable than the price growth of the owned tokens? There can be only one answer – getting even more of those tokens for free! When the Bitcoin network first launched, this was the case. Back then, there was not much competition because most people did not know about cryptocurrencies, and those who were aware did not think Bitcoin would be so successful.

However, now it is impossible to earn a lot on Bitcoin mining without significant investments in computational power. Too many people want to repeat the success of the first miners. As mining becomes more profitable, more people start doing it, which, in turn, reduces its profitability.

Thus, for mining to remain profitable, it is necessary to limit the possibility to join for new participants. But who exactly can participate in the issuance, and who cannot? That is the goal of the Pioneers Program – to allocate a pool of future validators who can peacefully mine in the Elysium network for at least a year. This approach is not dictated by marketing or funding goals but by the technical architecture of Elysium itself.

Initial Validators

In Elysium, the issuance is more like PoW – you do not need anything besides a network node to earn. But there is a restriction on who is eligible. We call this barrier for new Elysium validators "Sybil wall."

This wall is not built directly into the consensus – it bases upon data stored inside the blockchain, but it is not the number of staked tokens as in PoS. It is not about tokens at all, so we cannot just send that data into our wallet as PoS blockchain developers do.

There is a problem with the chicken and the egg because of the wall and consensus separation. The architecture assumes the working wall, which needs validators to function. However, for validators to exist, there must be an active wall and a mechanism to infiltrate through it.

The only way to solve this contradiction is to make sure that at the moment of the network launch, there are already validators inside the wall. That means it is necessary to specify the initial list of validators before the genesis block is produced.

Pioneers Program

The Pioneers Program is the original Sibyl wall replacement. Its concept is to create a single queue through which participants can progress with limited resources. This approach creates economic motivation to concentrate resources on advancing a single account to the top of the leaderboard rather than dividing resources among multiple accounts, which would end up at the bottom of the list.

The output of the Program will be a single queue of initial Elysium validators. They will join the network gradually, one by one. Since the primary store of value – the SKY token – has a decreasing issue over time, the place in the Pioneer Program will significantly affect how many SKY tokens a participant can mine. The higher the position in the Pioneer Program – the earlier you become a validator – the more tokens you will obtain.

At Elysium, at least 10% of all SKY tokens will be distributed among the initial validators during the first year alone. In other words, you can get a noticeable share of the unique blockchain's capitalization. It is worth noting that passing the wall in an already-running Elysium blockchain will be more complicated than becoming an initial validator with the Pioneer Program.

Bring tangible value to the project and pass the entire Program absolutely free!

FAQ

What exactly is the Pioneer Program?

The Pioneer Program is made as a space race game. Participants can increase the speed of their spaceship by:
- choosing the right engine mode;
- obtaining resources in daily game events;
- receiving rewards from the team for helping with the project;
- improving the ship by additional access key burning;
- purchasing temporary in-game boosts.

The time of joining the race is also a crucial factor. Those who start the race earlier will have a significant advantage over those who join later, as it will be more challenging for the latter to catch up.

We decided to implement the Program playfully for two reasons. First, it will promote the constant involvement of the pioneers, and second, it will make it impossible for one person to take several high places in the Pioneers Program leaderboard.

In other words, this approach is much better at preventing Sybil attacks than KYC.
What blockchain will the Pioneer Program run on?
Since Elysium is still under construction, we will have to use a different blockchain for the race. Most likely, it will be Polygon.

What do I need to enter the race?

You will need one of the 9,000 [Access Key NFTs](#) to participate. Each key can be exchanged for a spaceship that automatically enrolls you in the race.

Each ship has two characteristics that are important for the flight. The access keys also have these characteristics and transfer them to the spaceship. You can burn additional keys to enhance the ship's parameters at any time.

When will the race start?

We plan to start the space competition in Q3-Q4 2023 – read more in our [Roadmap](#) and stay tuned for announcements.

Until the race starts, there are many things you can do to improve your future spaceship. Read more about ship enhancement in the [Spaceship](#) section.

How many participants will take part in the race?

We do not know exactly. There will be 9000 access keys, each allowing participation in the race. But because anyone can burn additional keys to improve the spaceship, there will be considerably fewer than 9000 pioneers to actually take part in the race.

Will all Pioneer Program participants become validators?

No. The main goal of the Pioneer Program is to fight multi-accounts, so to become a validator, you must get to the finish line.

After the first pioneer finishes, a certain amount of time will be given to finish the race. Exactly how much time that will be is unknown at the moment – it could be a week or a couple of months.

So you should better not fall too far behind!

What mechanics will interfere with multi-accounts?

The crucial part of the Pioneers Program will be daily tournaments (lasting for approximately 5 minutes) on the "Astonite Mining" minigame, which pioneers will be playing simultaneously.

Astonite needed to get the fuel for Spaceships will be distributed through these tournaments.

The tournament's start time will be shifted by one hour each day to keep everyone equal.

Is it possible to finish the race and become a validator for free?

Yes. To do this, you need to start participating in the life of the project as early as possible. You can get everything you need from the Elysium Team to successfully complete the race for free if you constantly and actively help with the project.

We could use help in many areas to speed things up: writing texts, 3D modeling, creating videos, programming, and advertising. If you have experience in these areas and are willing to help us — feel free to contact any member of the Elysium Team in Discord.

Why will it be harder to become a validator at Elysium?

It is all about competition. Currently, not many people know about the project, and Elysium has not yet been launched.

However, as the blockchain becomes operational and the initial validators demonstrate success, more people will be interested in becoming validators.

While we cannot yet disclose the details of how to infiltrate the original barrier in Elysium and become a validator, it is worth noting that monetary investments, unlike the Pioneer Program, will not help it much.

If I do not want to be a validator, can I earn with the Pioneer Program?

Yes. We are developing the profitability mechanics also with short planning participants in mind.

During the prelaunch phase, you can do quests in Crew3 and reach certain levels to buy 4 different keys at a private sale. And then sell them to future participants – the Elysium Team will not hold a public sale. This means one can buy an access key without hassle only on the secondary market.

After the race begins, the primary asset that can be profitably resold will be Astonite (ERC–20 token). Therefore, obtaining Astonite and selling it to those who want to catch up with other participants or reach the top of the race leaderboard can be a lucrative strategy.

Will I become rich if I make it to Elysium?

There is only one way things can go according to plan. And there is an infinite number of ways to mess things up.

As with any innovation at the stage of its creation, there are a lot of risks. But we have a good plan and a cohesive community to help us overcome difficulties. But more important is that we have no backup plan – Elysium is the project of our lives for the next several years, and we will do everything for its success.

If development goes according to plan, the capitalization of Elysium can reach 40b in a few years. That was the capitalization of the second–echelon networks at the peak of the previous bull run. If it is the case, then 10% of this capitalization, distributed among the initial validators, will be 4b.

What type of computer do I need to be a validator?

We will find it during the Testnet phase. But our PoV consensus is light and does not require heavy calculations. Also, it will use only a CPU, so at rough estimation, an ordinary workstation will do.

Do I need to run my computer 24 hours a day?

It is on you. But while your node is offline, it will not be mining SKY.

Can I run the node program on the server?

Yes. We will make a special server edition of the validator node that could be installed on a common Linux VPS.

Do I need to invest something as an initial validator?

No. The only cost for you to be a validator could be renting a Linux VPS (~$10 per month) if you do not want to use your home desktop computer. When you become a validator – it is time to gain capital, not invest.

➢ Access Keys

Pioneers Program is a closed event that needs a key to join

NFTs Specification

Utility	Obtaining a ship for the space race of future Elysium validators. Additional improvements to the spaceship.
Supply	9000 NFTs of 4 different types: A (600), B (1200), C (2400), D (4800).
Minting	With WL till the first pioneer finishes the race.
Buying	On the secondary market from those who have minted with WL.
Selling	At any time on the secondary market.
Burning	When getting or upgrading a spaceship. Via the Team buyback and burn initiative.

Access Key Type A
only **600** pcs

Parameters
Engine Efficiency: **27**
Inertia Retention: **0**

Distribution
500 keys will be minted via private sale
100 keys the Team will keep for marketing

Private sale
~**$400** with **WL Type A**

Access Key Type B
only **1200** pcs

Parameters
Engine Efficiency: **9**
Inertia Retention: **0**

Distribution
1000 keys will be minted via private sale
200 keys the Team will keep for marketing

Private sale
~**$200** with **WL Type B**

Access Key Type C
only **2400** pcs

Parameters
Engine Efficiency: **3**
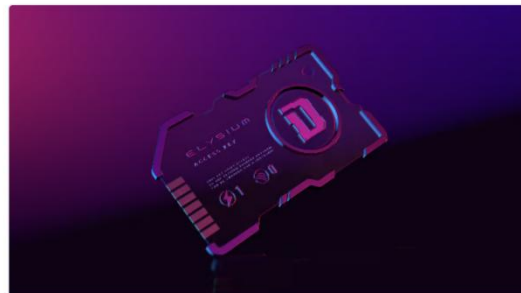Inertia Retention: **0**

Distribution
2000 keys will be minted via private sale
400 keys the Team will keep for marketing

Private sale
~**$100** with **WL Type C**

Access Key Type D
only **4800** pcs

Parameters
Engine Efficiency: **1**
Inertia Retention: **0**

Distribution
4000 keys will be minted via private sale
800 keys the Team will keep for marketing

Private sale
~**$50** with **WL Type D**

Extended Private Sale

The extended private sale allows those who have WL of a particular type to mint an Access Key of the same type at a fixed price. The WL-based minting will continue till the first pioneer finishes the race (just before the launch of the Elysium MainNet). Participants must reach a certain level in Crew3 by completing quests to obtain a WL and to be able to mint the keys.

Required levels in Crew3 for different WL types (level requirements may change over time):
WL Type D - level 10 (11 700 XP)
WL Type C - level 12 (17 600 XP)
WL Type B - level 14 (24 700 XP)
WL Type A - level 16 (33 000 XP)
Thus, advancing in levels, users can mint a D key first, then a C key, and so on.

Every user can mint only **one key of each type** by raising Crew3 level, which is 4 keys in total: Access Key D + Access Key C + Access Key B + Access Key A.

Access Key Parameters

When a key is burned to obtain or upgrade a spaceship, its parameters are transferred to the spaceship.

The *Engine Efficiency* parameter of the Access Key cannot be changed - it is a built-in property of the key.

The *Inertia Retention* parameter can be improved through key staking. Every 30 days of staking the "Inertia Retention" raise its value by 1.

For more details on how these parameters affect the ship flight please refer to the [Spaceship](#) page.

Buyback and Burn

The Team will buy those offers from the secondary market that are below the private sale prices. Then we will burn those bought-back keys. This will keep the price floor at a level higher than the private sale prices and also will shorten the supply.

FAQ

What is the point of the extended private sale?

The whole idea of the extended private sale is not to let the price of NFTs drop.

It allows us to indirectly control the size of the supply on the market. When the secondary market prices for Access Keys start to decline, we will make it harder to get WL for the minting. This will reduce the supply on the secondary market and increase the price of NFTs.

Also, it allows the Team to keep the price above the private sale prices by buying back NFTs below the floor and burning them.

What about the public sale?

We will not hold a public sale.

The concept of the short-time public sales when NFTs are sold out in minutes is the concept of the bull run. On the weak bear market, we do not want to compete with those who have bought NFTs on private sale and are willing to earn some money by reselling them on the secondary market.

All the keys that would not be minted just will stay unissued.

Are NFT keys a good investment?

Our keys are not just pictures — they are actual certificates granting access to a unique event. They are limited in number and will be burned all the time.

The more Elysium gets real — the more people will be eager to become validators. And anyone who joins the Pioneer Program after the start of the space race will have to catch up with the others. To do that, they will need improved ships, which can only be obtained by burning a few keys.

Thus, the number of keys will only decrease over time, and the demand for them will increase.

Moreover, the Team will buy back those NFTs that are sold on the secondary market below the private sale price and burn them.

Why are there 9000 access keys? Is not that too much?

Some of the keys will be lost or forgotten. Some will burn to improve spaceships. Some holders will use their keys to get access to the race but will never participate. Some will participate only at the start. Some keys will never be minted. Some will be bought back by the Team and burned.

Thus, we expect only a minority of initial key owners to be persistent enough to finish the space race before the Elysium launch.

When will the keys have value?

Keys will have utility until the first pioneer finishes the race. After this point, the minting and staking will be closed and the Team will stop keeping the price floor.

This will happen not long before the launch of Elysium's MainNet, which is estimated to be in Q4 2024 – see Roadmap for more details.

Why does the Team need so many keys?

In addition to supply, the market price is also affected by demand. We keep 16.6% of keys as a reward for marketing events aimed to attract new users. We will distribute them carefully to avoid a sharp increase in supply on the secondary market. It is in our best interests since we will need to buy back these keys if their price falls below the floor.

According to our estimation, we will not use all our marketing keys – those that will leave undistributed when the first pioneer finishes the race will be burned by the Team.

➢ Spaceship

A vehicle needed to participate in the race
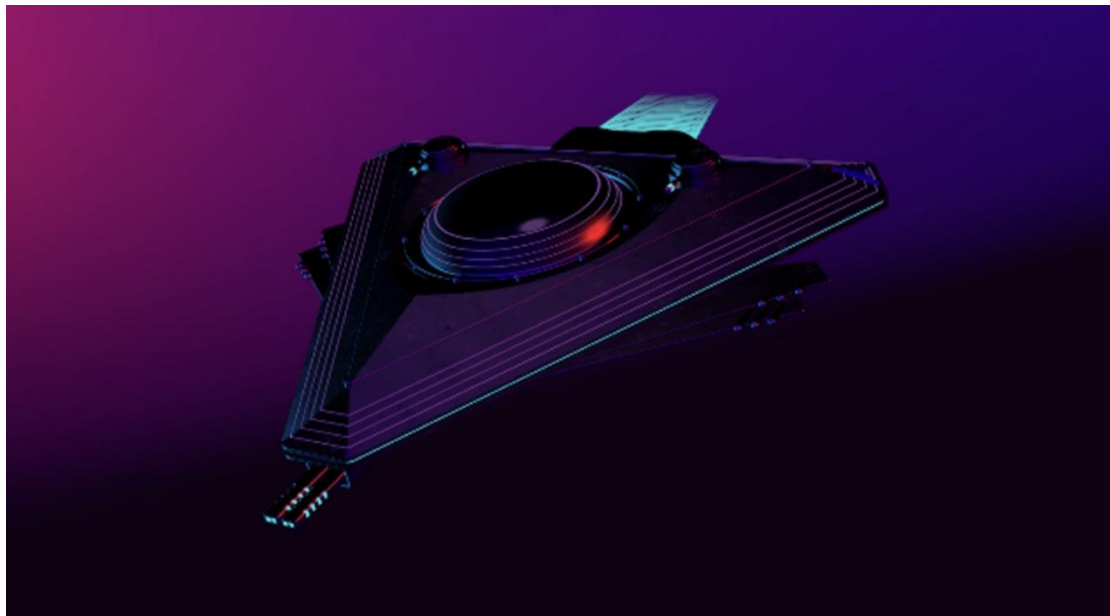
NFTs Specification

Utility   Participating in the race to become one of the first validators in the Elysium.

Supply   Not greater than 9000

Minting   Free mint with any Access Key NFT after the start of the race.

Buying   On the secondary market only, after the start of the race.

Selling   At any time after the start of the race on the secondary market (with the loss of the achieved race result).

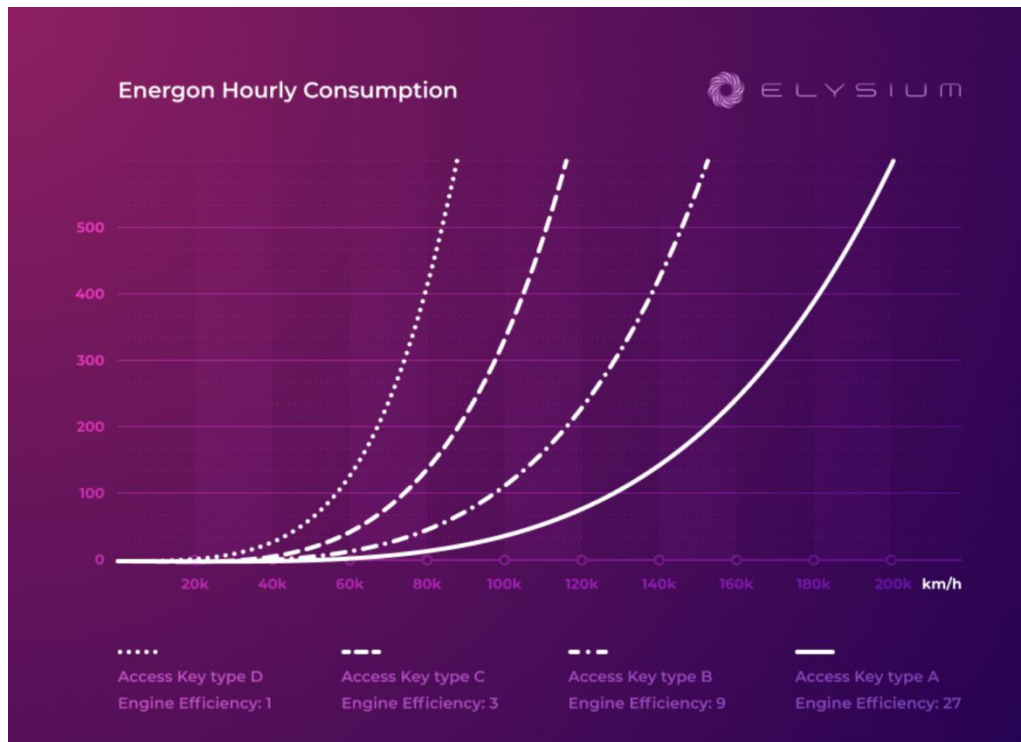Burning   When finishing at Elysium.

Flight Physics

Each spaceship produced in our shipyard is equipped with an engine that creates artificial inertia in a given direction. Units of energy called Energons are constantly spent to keep it. Without it, the artificial inertia will decrease until the ship loses it entirely. The greater the speed of the spaceship, the more Energons will be spent per unit of time to keep it.

The main task of the pilot is to determine the hourly consumption of Energons. You can manually change this parameter at any time. When a new Energon consumption rate is set, the spaceship changes its speed. If the new value is higher, the ship linearly accelerates and achieves a new speed in one hour. If the new value is lower, the vessel stops the engine and continues moving by inertia (losing it) until the speed reaches the value required for the specified consumption level.

If the consumption rate is not changed, the spaceship will maintain its speed until it entirely runs out of Energons.

Engine Efficiency

The Engine Efficiency parameter determines how productively the Energons are used. The higher the parameter, the fewer Energons are needed to maintain the same speed, or the faster the ship can fly with the same consumption of Energons.

Energon Hourly Consumption — ELYSIUM

• • • • •	– – –	– • –	———
Access Key type D	Access Key type C	Access Key type B	Access Key type A
Engine Efficiency: 1	Engine Efficiency: 3	Engine Efficiency: 9	Engine Efficiency: 27

The Engine Efficiency depends on the key type and can be improved temporarily with the in-game boosters or permanently with additional keys burning.

Inertia Retention

The Inertia Retention parameter affects how fast your spaceship will lose its artificial inertia. Though all the ships will lose it in 25 hours, the speed of losing it differs depending on the Inertia Retention value. The higher the parameter is, the slower your ship will drop its speed.

Inertia Leakage — ELYSIUM

• • • • •	– – –	– • –	———
Inertia Retention: 0	Inertia Retention: 8	Inertia Retention: 16	Inertia Retention: 24
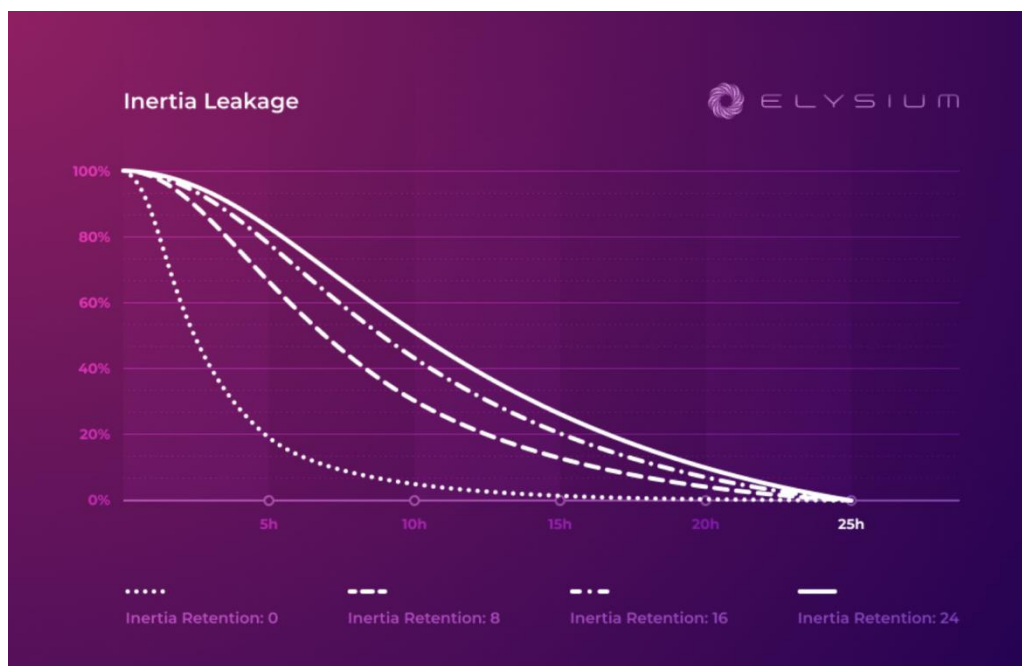
The Inertia Retention points can be obtained temporarily via the in-game boosters and permanently by burning additional keys (that were staked before) or acquiring a ship before a race starts.

During the prelaunch phase, the Inertia Retention parameter of the ship will grow faster compared to the key staking. And the more keys are burned for the spaceship – the more the difference is. Each burned key reduces the period of getting a new Inertia Retention point by 15% relative to the staking.

Spaceship Launch

Every ship is launched by the electromagnetic catapult obtaining the base speed, or in other words real inertia. The spaceship cannot lose this real, not artificial, inertia. So the ship does not fully stop when it loses its artificial inertia but continues to move with speed acquired by the primary acceleration. That means that even if you run out of Energons during the race, you will still continue to move towards the finish, though at a relatively low speed.

After each launch, the electromagnetic catapult loses its power, and each subsequent launch will accelerate the ships less. So it gives an advantage to those who will be the first.

Electromagnetic Catapult Power
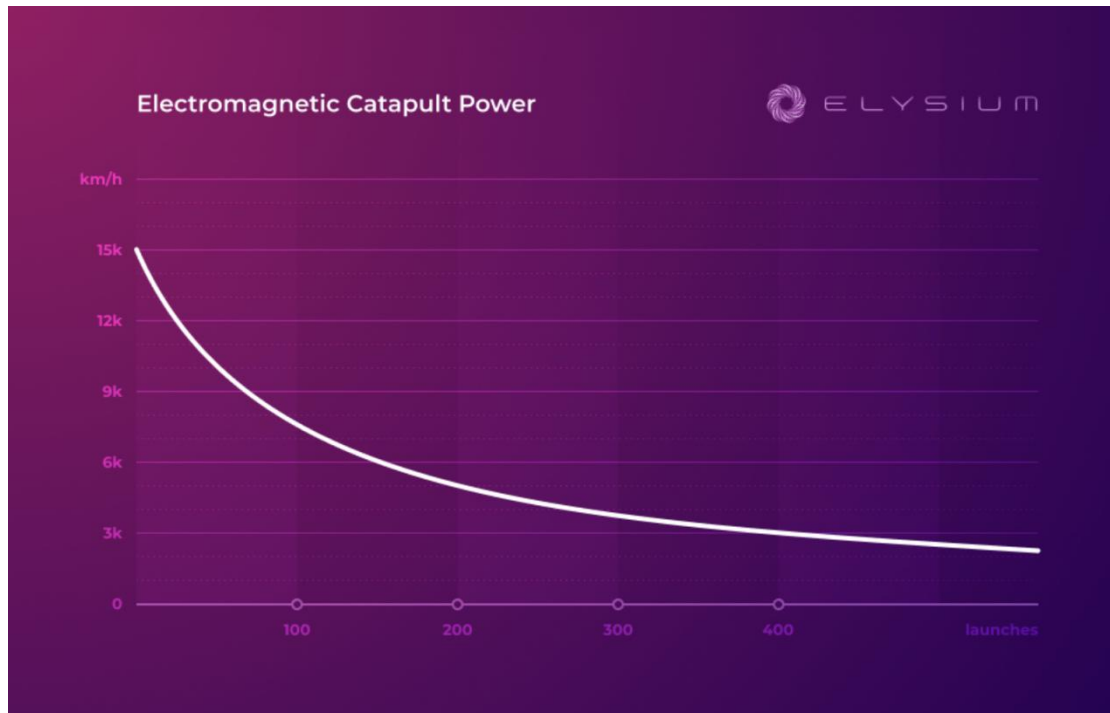
During the prelaunch phase, already joined pioneers will be waiting for the official race to start. Since they will launch at once, there will be a queue for the catapult. Every pioneer will have a particular score during prelaunch that will determine the place in the catapult queue. There are three ways to raise the score.

1, Burn better keys:
  - key D gives +10 points
  - key C gives +30 points
  - key B gives +90 points
  - key A gives +270 points

2, Burn keys as soon as possible. Those who burn keys (independent of the type) during the first day after opening the minting will receive +90 points. The next day key burn will give +89 points. Every day this reward will be reduced by one point.

3, Elysium Team will use points as rewards for different community events.

Spaceship Upgrade

By burning additional keys, you can improve the ship's parameters at any moment – during the prelaunch stage and after the race has already started. The parameters of the keys are added to the ship's parameters.
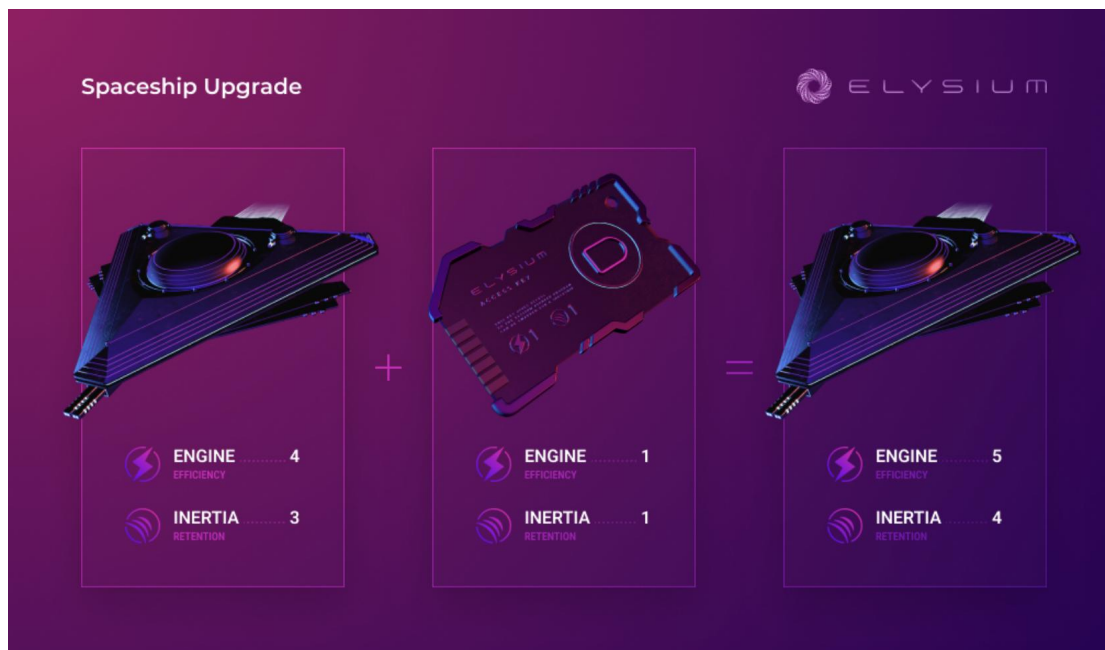
There is a special bonus for burning 4 different types of keys (A, B, C, D) to improve one ship. When a spaceship is upgraded with all four types of keys, 20 points will be added to both parameters.

Full Set Bonus can be applied for the ship only once.
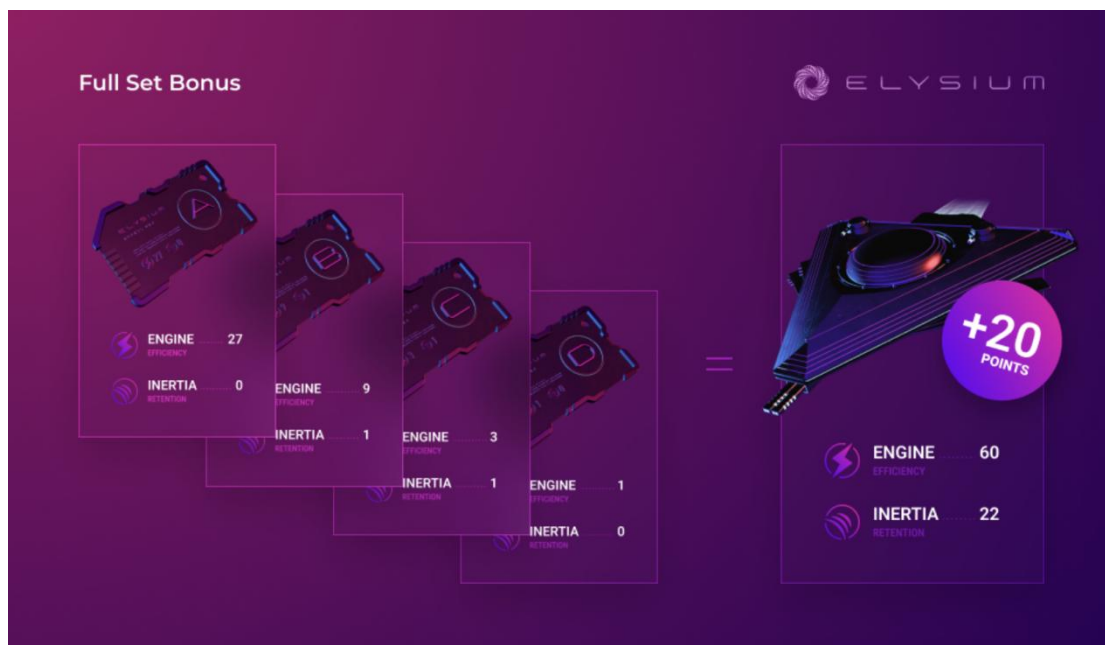
Flight Economics

In the Pioneer Program, we decided to recreate the Elysium tokenomics without simplifications to test it in real-life conditions before launching the blockchain. The

only things we changed for the space race were to reduce the number of tokens to 100 000 and slightly accelerate the timing of the issuance.

Therefore, the relationship of Astonite -> Cosmogrinder -> Energon fully corresponds to the SKY -> Grinder -> RAY in Elysium tokenomics.

Astonite Mining

A unique mineral called Astonite is needed to obtain Energons. You can receive it during daily minigame tournaments. Unfortunately, the amount of Astonite is not only limited in the Universe but also constantly decreasing.

Astonite can be obtained in daily tournaments on the game "Astonite Mining." The event is held simultaneously for all participants. Astonite is distributed according to the tournament score. The tournament launch time will be shifted each day by one hour so that all pioneers will be in identical conditions.

These tournaments are the crucial mechanism to protect against multi-accounts. Since the competition will not last long (about 5-10 minutes) and will require all the player's attention, there will be no practical possibility of playing simultaneously from multiple accounts. And, of course, we will make it impossible to create a bot that can play instead of a human.

Obtaining Energons

Energons are obtained by recycling Astonite in a unique device called a "cosmogrinder." The higher the conversion rate - the harder it is for the cosmogrinder to proceed. That is why cosmogrinder will work faster if you offer less Energon for one Astonite.

Elysium 的创新

特性

Elysium 是从一个单一的宏伟想法发展而来的，但现在公布还为时过早。Elysium 的架构就像拼图碎片落在了合适的位置一样令人惊喜。同时，它作为下一代区块链项目解决了目前区块链面临的棘手的问题，并凭借一系列独特的功能在整个区块链领域中脱颖而出，其中任何一个功能都足以获得成功。

真正的去中心化

加密货币行业正日益接近中心化。在我们看来，中心化项目失去了加密货币去中心化的最初目标。权益证明（POS）对去中心化更加其具有破坏性，它导致区块链越来越趋近大资本，趋近于中心化。

在 Nassim Taleb 的一次演讲中，它举了一个例子，人们的体重可以相差 5-10 倍。但对于拥有的财富而言，它们可能相差 10 亿倍。在这样的环境中，建立一个去中心化的系统是不可能的。因为在这个系统中，一张选票的权重是绝大多数选票的数十亿倍。

Elysium 的独特共识系统 - Proof of Victory - 提供了真正的，非声明式的去中心化，使得任何人都可以参与其中，如此投票的权重不取决于拥有的资本的规模。

无与伦比的拓展性

目前区块链可拓展性解决方案通常是建立分片网络，这种网络把区块链的单个数据分割成几个部分来认证并提交到主链上。我们认为这是不可取的，因为把各式各样的 Token 数据存储在一条单一的区块链上的想法是非常荒谬的。

区块链的概念是储存一个资产中重要合约的历史数据! 如果您的钱包中同时拥有美元和欧元，操作美元的网络不应当影响到欧元的网络。这两种货币在一次交易中唯一会产生的交集将会是在它们互相交换的时候。

因此 Elysium 中的每个 Token 都有自己独立的链上执行区域，每个验证器都可以同时在其中创建多个区块。这种方法允许不同 Token 上的事务彼此独立地处理。这意味着一个资产上的高活动和负载不会影响其他资产。此外，每个新增加的验证器都将增加网络的总体吞吐量。

闪电般的速度

当谈论区块链速度时，通常指的是合约或交易地上链速度，这主要取决于一个事务从提交到上链的时间。也就是说，要等多久才能确定交易这笔不会被取消。快速解决这个问题的方法

只有一个——所有验证器都需要知道它们中的哪一个应该成为下一个领导者来产生一个新的区块。

在工作量证明（POW）中，你永远无法确定就不会有一个更长的比特币区块链突然出现，而且交易历史完全不同，因此很多 CEX 的 BTC 验证周期都在 6 个区块左右，这个验证周期非常之久。当然，可能外星人在计算能力上拥有压倒性的优势，或者某个天才即将在地下室的某个地方完成量子超级计算机的建造，来掌控破解 BTC 的出块规律，这种可能性并不大。但它不是零!

另一方面，权益证明共识（POS）在这方面要好得多——它意味着整个系统将提前知晓下一个验证人，当然，是否成为验证人取决于提供的质押的数量。所有验证人都立即知道谁将生成下一个区块，因此这样的网络的交易速度几乎是瞬时的。但是在完全确定的计算机系统中获得真正的随机性是不可能的。因此，针对这一共识的攻击实际上变简单了，你只需要掌握一定数量的 Token 就能操纵区块的验证。

在 Elysium 中，我们使用了抢占未来区块的概念。当创建一个新的区块时，验证者会在他再次成为领导者时写下未来的区块号。它类似于一个循环队列，当 leader 在块创建后回到行。这一胜利证明共识的增加几乎可以立即完成。

因此，高 TPS、强可扩展性以及通过单独网络层的快速通信能力可以使 Elysium 实现前所未有的合约处理速度。

创新性的双币种经济学

Elysium Duonomics 使用了两种不同的硬币。其中 RAY 币的目的是作为交易费用的支付，SKY 代币用来发行 RAY。该模型将区块链投资和交易费用分离，如此解决了很多问题:

- SKY 代币将通过一系列的活动来燃烧进而保持其价值——即使每日交易数量保持在同一水平，SKY 价格也会继续上涨，因为它的供应减少，而系统的需求保持不变。

-
- SKY 价格的增长不会影响到 RAY 支付 GAS 的成本。

-
- RAY 的通货膨胀将确保其价格相对于法定货币的长期稳定。

-

45

-

与其他区块链不同的是，Elysium 活动的增加将降低交易费用。

-
-

燃烧 SKY 将允许其供应量逐渐降低，而不是像比特币减半那样急剧下降。

-
-

使用 RAY 支付 GAS 和使用 SKY 分发验证人奖励的分离设计机制防止了资本的复利来集中大量的代币，并且可以根据区块生产本身之外的更多因素评估网络节点的工作。

-

将货币经济学分为通货膨胀代币和通货紧缩代币实现了一个关键目标。让投资者、用户和验证者的利益保持一致，因为他们都将受益于网络活动的增长。

更加易读的智能合约

我们通常认为智能合约是一个成熟的语言。但事实并非如此。如果你曾经接触过编写智能合约，你就会知道智能合约不像普通的计算机程序那样运行——它不会从头到尾完全执行。目前的智能合约代码更像是一个函数库，被调用来处理不同的事件。

在 Elysium 中，我们使用智能合约的逻辑将围绕处理事件来构建，并使用类自然语言编程，如下所示：

```
When contract state becomes "Fulfilled"

Then for each User

Which invested 100 Tokens

And which state is Active

Do send 120 Tokens
```

在未来，这种方法将使得构建一个可视化编辑器来创建智能合约成为可能，从而无需编写任何代码。

极致的安全性

Elysium 钱包的安全性将不仅仅是通过存储秘钥来确保安全，就像目前大多数钱包(如 MetaMask)所做的那样。除了秘钥外，Elysium 网络中的用户还将拥有一个秘钥密码，用来确认秘钥被安全的使用，可以选择使用该密码来确认新钱包的安装。在两种情况下，种子密码将被强制要求:第一次安装钱包时，以及如果你无法访问所授权设备时。

当在新的操作系统或设备上安装钱包程序时，区块链将在系统级别确认是否允许该安装程序并处理资金。它可以通过秘钥密码或在已经授权的设备上使用钱包来确认。这样，如果攻击者窃取了你的秘钥短语，他仍然无法在不知道你的秘钥密码的情况下转移你的资金。

与成熟的图灵完备编程语言相比，Elysium 智能合约将大大简化，一些低级的欺诈方式可以在系统级自动检测到并被标记。通过这种方式，您将始终能够看到智能合约的安全级别图标，此外，即使您不是程序员，也可以自己阅读和理解其逻辑。

在安全方面的最终效果将通过钱包程序和系统对智能合约的评估相结合来实现。例如，如果智能合约允许将资产提取到合约所有者的钱包中，用户在签署交易时会收到警告。

通过众筹实现的去中心化

我们对于融资的看法

在当今世界，许多新区块链正如雨后春笋一般出现。社区把他们看作是一种简单的投资赚钱工具。投资决策的重要因素是:哪些风投会参与这个项目，这个区块链上会有多大的生态存在，预算中有多少营销资金，等等。

但所有这些因素只适用于中心化项目，主要投资者不仅完全控制项目的发展，而且还控制项目利润的分配。

自 1999 年 Napster 项目成功以来，分布式系统的优势已经显而易见。然而，人们并倾向于运行节点程序来支持它们，因为这需要保持家用计算机全天候开机。这就是为什么比特币最初主要是作为一个用来激励参与者的系统。

最初，这是一个创建去中心化系统的实验，在这个系统中工作的节点可以获得奖励。顺便说一下，这就是为什么比特币的共识被称为工作量证明(PoW)。因此，新参与者没有金钱障碍——相反，任何拥有电脑的人都受到欢迎，可以成为一名矿工，无需任何成本。

反过来，如今越来越流行的权益证明(PoS)共识的口号是这样的:"我们在区块链技术上提供服务，你也可以投资我们。"意思完全颠倒了! 如果过去是"参与并获得报酬"，那么现在是"想参与就付费"。

Elysium 团队想要找回加密货币的曙光!我们采用比特币的方法作为我们的基本信条:Elysium 将会是一个独特的去中心化系统,解决现实世界的问题,需要尽可能多的支持节点。不同的是,Elysium 是一个可扩展的区块链,所以每个额外的验证器,除了为系统提供更多的安全性之外,也会增加整个网络的吞吐量。

这就是为什么任何拥有电脑的人都可以成为极乐网络的验证者,而且不需要任何的财务投资。但这只有在 Elysium 启动后一段时间才能实现。

如今,一个成功的项目需要为开发者的工资、广告推广、漏洞奖励、硬件等提供资金。许多现代区块链使用风投资金,但这种方法有明显的缺点。

风投机构经常寻求最大化他们的财务回报,这可能会导致与项目中其他利益相关者的利益冲突。首席投资者可能坚持根据个人利益做出决定,这可能会干扰项目的发展。但风险投资的主要问题是它使项目中心化,这与加密货币背后的初衷是相反的。

最分散的接受投资的方法是众筹。我们把它提升到另一个层次。我们引入了初始验证人的概念,它将确保 Elysium 网络至少在第一年的安全。这些最初的验证者将像第一批比特币矿工一样,获得未来 Elysium 代币总量的至少 10%。

其主要观点是,越接近主网的发行,投资者的风险就越小,因此会有越来越多的人不断地离开。这些落后者需要付出代价才能赶上那些从一开始就支持该项目的人。

因此,我们决定众筹实现该项目可以有以下优点:

- 避免风投机构控制项目;
- 将创始人的愿景变成现实;
- 奖励那些从一开始就支持我们项目的人;
- 确保 Elysium 尽可能的去中心化。

除此之外,在区块链发展的同时,我们正在建立一个强大的爱好者社区。如果你想成为最初的验证者之一,Welcome!

FAQ

你有没有出售代币的计划?

不,我们没有这个计划。Elysium 不是一个只能通过代币质押的去中心化 PoS 区块链。当区块链启动并运行时,所有 Elysium 代币将在验证者之间分发。

你们将如何筹集资金?

我们需要极乐空间从一开始就尽可能地去中心化。为了实现这一目标，我们启动了先驱者计划(pioneer Program)。

您将需要燃烧我们的 NFT 来加入它。同时，出售这些 NFT 将帮助我们为区块链的开发提供资金。

你需要多少钱来构建 Elysium?

我们的目标是筹集 100 万美元

Elysium 不仅仅是另一个区块链

定位

Elysium 是下一代创新区块链。这不仅仅是一个营销口号!但是同时我们也无法保证在 Elysium 开发过程中区块链的行业的技术会发生什么重大升级。

您可以在很多地方了解到加密行业里这些技术的更详细信息。但比任何技术解决方案更重要的是如何编写这样一个计算机系统。

比特币的成功让第一批参与者收获了巨大的利润，以至于带动了整个加密行业的增长。现如今如果您在项目描述中添加"区块链"这个词，它的关注量会立即飙升几个数量级。但区块链本身并不是什么很稀有的技术——到目前为止出现了 500 多个比特币克隆，但你经常听说它们吗?

中本聪使用区块链技术创建了一个去中心化的银行——最可靠的银行版本。这就是比特币克隆没有机会的原因:当你可以把钱存在最大、最可靠的银行时，为什么要把钱存在一个不知名的小银行?

Vitalik Buterin 将区块链和智能合约结合起来,创造了一种不怕核战争的分布式计算机(好吧，它肯定能挺过几次打击)。

比特币和以太坊成功的主要标准是他们第一个解决了一个特定的问题,而不是因为他们使用了区块链技术。没有它，问题根本无法解决。

虽然他们使用相同的技术，但关于他们的定位有很多困惑。比特币作为一个可靠的老银行是无可比拟的，而以太坊是一个成熟的计算机。差别在于不要混淆它们的功能。

以太坊是一台计算机，不是银行!

既然每个人都可以为这台计算机编写程序，那么它不可避免的充满了恶意软件。这是因为开发人员可以留下后门，即使是专业人员也很难找到。因此，在智能合约的层面上，不存在许多区块链建设者宣称的足够的信任。如今，区块链领域的黑客正在横行肆虐。

我们认为 Elysium 的任务不是成为另一个去中心化的银行或计算机，而是创造一个方便和安全的经济环境。如果你试图将钱发送到智能合约，系统会警告你--智能合约的所有者可以将其清空。如果你想研究智能合约的逻辑，你不必是一个开发人员来理解它。任何人，甚至程序员，都可以实现相当复杂的合约交互。甚至即使是助记词被盗也不允许访问用户的资金。

如果比特币是一个可靠的银行，以太坊是一个可靠的计算机，那么 **Elysium 将会是一个安全的公共市场**。

我们对项目的展望

路线图

2022 10 月

- Elysium Discord 社群 诞生
- 完成 Elysium 网站

2022 11 月

- 详细阐述了经济模型
- 共识设计细化
- 开发了经济模型模拟器

2022 12 月

- 发布了我们文档的引言部分
- 细化了信息传递的设计细节
- 先驱者计划机制的细化
- 发布了文档 先驱者计划

2023 1 月

- 推出先锋计划推广网站

- 选择先锋计划的开发区块链
- 开发 NFT 智能合约

2023 Q1-Q2

- 开发先锋计划: 智能合约, 网站, mini 小游戏
- 发布区块链的详细文档:
- 经济模型
- 信息传递
- 可拓展性
- 共识协议
- 智能合约
- 钱包
- 开始分发 9000 个 NFT
- 7500 公开销售
- 1500 作为团队对用户的奖励

2023 Q3-Q4

- 继续分发 9000 个 NFT
- 先锋计划启动
- 开发 Elysium 区块链

2024 Q2-Q3

- 继续分发 9000 个 NFT
- 继续开发 Elysium 区块链
- 推出测试网

2024 Q4

- 9000 个 NFT 分发结束
- 主网启动
- 先锋计划结束

泰坦尼克号是由专家建造的，而方舟是却是由业余爱好者建造的

我们的团队

HeapVoid	首席技术专家	超过 30 年的编码经验。喜欢在任何场合做逻辑模型。喜欢建设性的批评。喜欢科幻小说.	HeapVoid.jpg
0p0int	前端开发者	设计师，前端开发者。有着超过 20 年的经验。性格内向，不爱交流。充分注意细节。工作时听音乐.	0p0int.png
Futurum	社区管理员	自 Discord 发明以来就开始管理社区。自称是来自北极的机器人。喜欢表情包和开玩笑。唯一的未婚队员.	Futurum.png

长期以来，我们一直在一起开发复杂的应用程序。与此同时，我们一直对加密货币感兴趣。我们时常会分享对新项目的看法，通常会得出这样的结论:"为什么他们要这么愚蠢地实现这个功能?"通常，在那之后，我们开始讨论如何正确地做这件事。

在某个时刻，这样的无数个想法聚集起来，最后我们中的一个人说到:"如果你想到了怎样才能做得更好，那就亲自去做。"我们陷入沉默，开始惊讶地面面相觑。然后我们几乎夜以继日地工作了 6 个月来完善逻辑。当内部矛盾不再存在时，我们决定将 Elysium 项目公之于众。

FAQ

你觉得你们有资格资格开发区块链吗?

我们当然不会在每周二创建一个新的区块链。这将会是我们开发的第一款区块链。

但是我们有着其他领域丰富的经验，在区块链的代码中我们没有看到任何超级复杂的东西。这只是一个普通的程序。复杂性在于各个节点的交互逻辑，而不在于代码本身。我们已经验证过了。

但如果我们缺乏一些能力，我们希望从我们的社区吸引开发人员。总的来说，如果你喜欢我们的想法，想要生活在一个有 Elysium 存在的世界里，请随时联系我们，我们会想出你可以如何帮助这个项目，即使你不是开发人员。

但是等等:区块链的开发难道不需要一个大型团队和大量资金吗?

企业界经常会存在一些奇怪的现象。这是一个真实的故事。一家银行需要完善其会计软件的逻辑。这是一项最多几天的任务，所以我们向他们报价 1000 美元。几天后，他们拒绝了。后来我们发现他们花了 30 万美元雇了一家大公司来解决同样的问题。

这并不是因为我们低估了必要工作的规模——我们以前做过很多类似的工作!一个管理者通过雇佣一个大公司，这样可以减轻自己的责任，这是企业心理学。如果出了问题，他也会声称他做得很好——因为他花了很多钱雇了一个市场领导者。

在大公司里，一个真正的程序员上面可能有 8 个老板，而每个老板都有着相当高的薪水。

如果你知道在这个系统中你需要做的是什么，那么在几个月内编写一个复杂系统的核心代码并不难。而且因为我们正在构建一个开源项目，许多贡献者稍后将加入我们。

你为什么要匿名?

出于某种原因，中本聪也决定不公开自己的身份。过度宣传会引起误导性的信任。但是不幸的是，它并不能保证任何东西，还记得 Terra 崩塌的故事吗?

我们不会需要很多钱来完成这个项目。但是如果公开，我们会面临很大的风险。例如，美国证券交易委员会的关注。或者被限制在我们居住的国家发展区块链。或者一些其他的别有用心的人。维塔利克·布特林有保镖吗?如果不是，他会不敢在街上走吗?

你们如何从这个项目中获得收益

首先，我们将是最初的验证者之一。我们相信，在 Elysium 发布后的第一年，我们所积累的 SKY 代币将在几年内成为改变生活的财富。

除此之外，我们还将运营网络通信层。它还将为我们带来 SKY 代币作为通信层的奖励。但我们将使用这些代币作为 Bridge、DEX 和 CEX 的流动性，作为开发者的补助金，以及其他有助于 Elysium 增长的情况。

但比钱更重要的是我们想做一些有意义的事情。社会和技术正在以越来越快的速度发展，所以不能说 Elysium 在几十年后一定会发光(别忘了比特币还只有 13 年的历史)。但至少这将是一个值得参考的里程碑。这是远离中心化的正确方向上的里程碑。