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ЯОЕЛА

White Paper



Acknowledgments

The Roela (ROE) would not exist if a dedicated team of professionals did not believe in a better World, where it is not necessary to contaminate, pollute water, damage our soil, hurt animals and human beings to use the economic properties to their full potential. Because this team was committed to changing this paradigm, ROE was born. We would like to thank each team member, working day and night to make this possible, because now we have the opportunity to offer the world a chance to choose.

The ball is in the global crypto community court now, they should make a choice, and hopefully it will be used to bring prosperity to humanity.

Abstract

Roela (ROE) is a new crypto protocol which transforms reserves of internationally-certified unmined gold stock into collateral to back ROE Token.

ROE is a solution for Stablecoins reserves, Crypto protocols in need of value reserve and newcomers who want to join the crypto world but not with volatility issues or a protocol backed by FIAT, which makes no sense.

The use of gold as collateral, in a new way, allows ROE to claim itself as the most ecological, green and stable value reserve in existence since DeFi has appeared.

ROE is a paradigm shift. Before this protocol, gold earnings were only for big mining companies. Now, earnings are going to be distributed equally and will be used to bring prosperity to humanity.





Introduction

Today the world is facing several serious economic problems, and it seems there are not appropriate answers to the questions everyone has. Some of these questions are:

● **How is the government going to deal with FIAT inflation?**


Since pandemic hits, governments issue more FIAT than ever in human history, and this action comes up with the inflation problem, among the others. This means your money value decreases every day more and more.

● **What options do you have to be safe of inflation?**

It is not new that precious metals and crypto seem to be the top choices among people, companies and institutions that are seeking to preserve their monetary health. However, this option brings several problems.

On one hand, metals like gold introduce several problems as they are not easy to buy, but most likely are not easy to store, not to mention the fact that not everyone can buy without knowledge about grades, karats and so on. Storing metals is expensive, it needs logistics, and it is difficult to trade with. Finally, metals are not easy to divide if you need to sell just a small amount for any reason.

On the other hand, Crypto currencies face other problems, like volatility with market changes, affected by external factors such as market trends, conflicts, or political decisions, such as



Chinese bans or wars like the Russia/Ukraine war. Stablecoins are even worse, because those are backed by FIAT, so inflation affects them directly; others like DAI are backed by other crypto which is a loop in the same volatility problems as mentioned before for non-backed crypto.

Finally, Algorithmic Stablecoins are not easy to understand for regular people, thus this kind of coin does not get general support due to the lack of understandable backed physical assets (warp of meaning).

● So, if stablecoins backed by algorithms do not have good support, how are FIAT massively supported?

Several case studies show that more than 70% of the general public still believes that FIAT currencies are backed by gold in central banks, this helps to support the FIAT systems, because the collective unconscious is unaware that the FIAT are not backed for anything at all. The FIAT system backed by gold was known as the Gold Standard.

● Why are FIAT not backed any more by Gold?

This is very simple, governments need to issue more money, for several reasons, but just to explain a simple one let's say that, if the populations increase and the monetary bases do not grow, this will end up in a reduction in an economic situation for the group of people involved in this process. (more people with the same amount of money, less money per person equals more poverty). This is only one example. However, wars, government expenses, inflation, etc, are all factors to issue more money.

On this basis, under the Gold Standard, the government was not able to issue more money if they did not have the backed gold in their central banks.

● Why not just buy more gold and issue more money?

The first point is that you need money to buy gold, so if a government issues money in order to buy gold, this money will only be gotten by Mining Companies. So, The Gold Standard introduced by itself restrictions on governments for issuing more money.

Another big issue was the scalability problem. Mining gold is a large process which requires a lot of time to be done. It is impossible for the mining process to accomplish gold extraction at the same rate governments need to issue money.

These two problems were the main factors for the Gold Standard exit.

In 1971, because of a series of decisions taken by the US president, known as the Nixon shock, the world left the Gold Standard and opened the new monetary system into the fiduciary economy, known as FIAT.

● **Is there a way to keep a reserve value, in an easy way, scalable and without all the problems mentioned before?**

Yes, and this is the main goal of our project: Roela.





Executive Summary

The Source

ROE is an ecological project which collateralizes allocated deposits of non-extracted gold lying dormant in mines. Essentially, ROE transforms reserves of internationally-certified unmined gold stock into collateral to back cryptocurrencies and stablecoins, using the gold full economic potential. The ROE token protocol promises solid growth potential. Its strength is contributed to a stabilization algorithm, which maintains a consistent price with respect to the spot gold market price, guaranteeing that 1 token is unconditionally backed by at least 1 gram of gold.

The Situation

Predominantly, the entire span of crypto projects, stablecoins, and non-stablecoins are periled by the painstaking efforts of procuring assets to utilize as reserves to facilitate their programs. Ventures collateralized by government-issued currency, which are not backed by a commodity such as gold (FIAT money), will typically encounter problems with the governments and administrations mandating regulations. Unequivocally, those using tokens as collateral will often face volatile tax and revenue issues.

The Solution

A logical query has arisen, “Why mine gold and contaminate the Earth merely to store it in vaults?”.



Prior to ROE, only a select few mining companies were privy to global extracted gold profits. Here, the ROE protocol introduces a pioneering concept in tokens, while gold does not have to be physically mined in order to qualify as collateral. Instead, through blockchain technology, ROE creates a transparent vehicle for providing liquidity to non-extracted gold stock certificates, congruent and mirroring to standards such as NI 43-101, the national instrument for the Standards of Disclosure for Mineral Projects within Canada. This instrument is widely used between banks and the mining companies; they use it as an accountable gold reserve stock.

So, the NI 43-101 certificate is the most reliable instrument to value a mine, it is sourced from comprehensive geophysics studies that are used to precisely quantify the gold stock and it is accepted as a worldwide standard. Thus, this kind of certificate represents the real, unmined but examined stock of gold in a portion of land, and therefore can be traded, or in our case, used as collateral.


To achieve this, the amount of certified gold is tokenized in the form of ROE, represented on 1 gram of gold: 1 ROE token. So, this token is the blockchain representation of 1 gold gram, and enables its usage into the decentralized finances world.

This procedure mentioned before will allow ROE, once implemented, to redistribute profits more equitably, bringing an unparalleled dynamic into the investment spectrum, coincidentally void of intrusion to our planet's ecosystem.

The Value

Regardless of the financial environment, history demonstrates that people have an inherent trust in gold as a secured store of value. ROE combines the gold standard with blockchain technology, introducing a streamlined hybrid which offers promising potential to evolve as the new reserve standard.

Additionally, an earnings portion will be placed into different decentralized finance (DeFi) protocols. Those earnings



will be distributed to those that are staking ROE and utilized to support sustainable projects in local economies.

The Magnitude

Our business model forecasts an overwhelming potential to generate reserves of up to US 5B, just with our first mining project . ROE has already inaugurated this momentum by signing a contract with the principles of a large mining organization and we anticipate that future projects will be added shortly upon verified proof of reserves, passing our stringent KYC compliance process, and receiving submissions for all associated legal certifications and requirements.

Goals and principles

Under the principles of prosperity for the human race and ecological solutions, this project is encouraged by 3 main goals:

1) Take care of the Earth in the Gold mining industry, bringing a green solution, but taking full economic potential from gold reserves.

2) Offer a new tool for DeFi and Crypto Projects as the first real decentralized solution as value reserves.

3) Offer to the community the choice to distribute Gold industry profits among every stakeholder, instead of a handful of mining companies.

About us

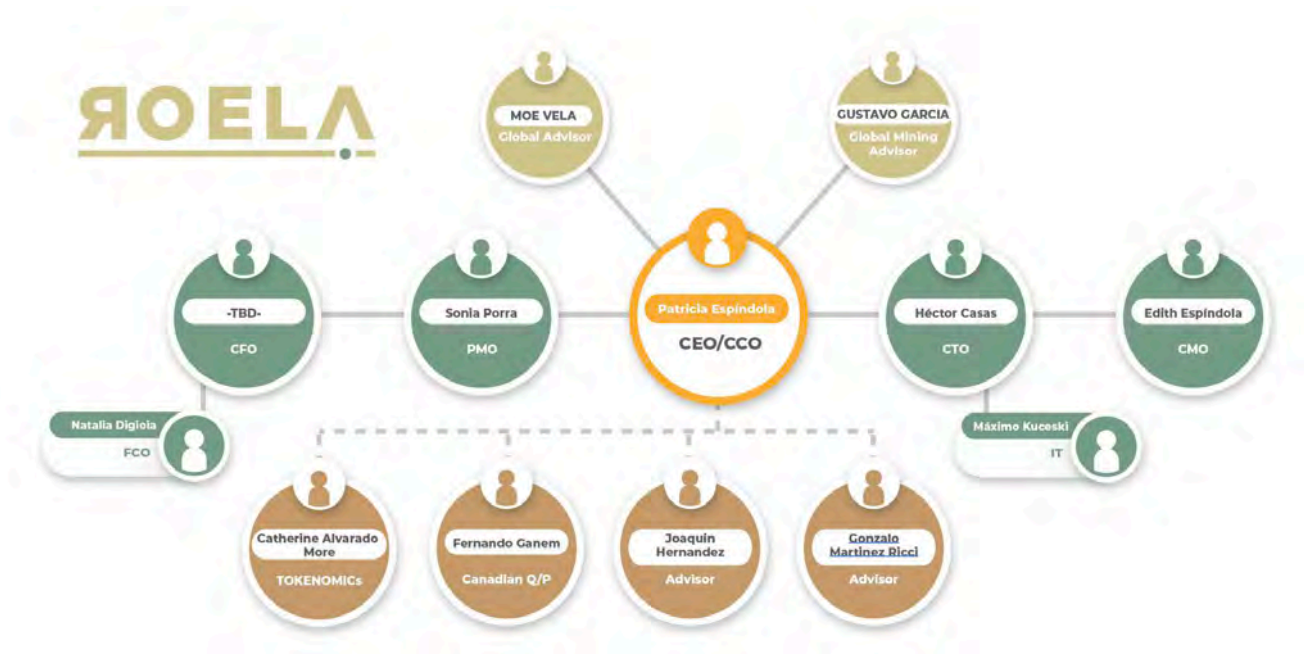
We are a company headquartered in Gibraltar, formed by a multidisciplinary group of professionals with the goal of contributing to the Roela project from our previous experiences and knowledge, committed to the expansion of the decentralized financing sector (DeFi).

As above all we value life care, we carry out our job with high ethical and moral standards, committed to environmental protection and sustainable development, and with the strong



conviction that we can contribute to generating well-being to the whole humanity.

We intend to improve the economic conditions of all the inhabitants of our planet through good use and management of resources, as well as taking care and preserving the Earth for future generations.





Vision


Highly motivated by ecological approaches in the economic technical issues presented by the crypto industry, our vision is to serve this industry with the idea to offer tools to develop a more sustainable global economy, with more and better opportunities for everyone.

The purpose of ROE is to offer a financial tool which brings more economic prosperity to our planet, positioning itself as the first 100% ecological value reserve token.

The market

Crypto Asset prices are famous for their volatility. Though many crypto assets aspire to become world currencies, most are frequently dismissed as no more than speculative assets due to their wild price swing.

● **Money is supposed to have three functions:** a store of value, a unit of account, and a medium of exchange. Stability is key to all these functions. Store of value is the most salient; if people store their wealth in an asset that constantly fluctuates in value, their wealth will fluctuate accordingly. A volatile asset is also a poor unit of account, because it is inconvenient to denominate prices in something which constantly changes in value. Every time the value of the unit of account changes, all prices must be adjusted accordingly. Finally, and most crucially, a currency needs to be stable to function as a medium of exchange



Emergent currencies often make use of collateral to ensure that the circulating currency has redemption value. This provides a lower bound on the price, thereby mitigating some of the risk of holding, using, and denominating debts in the currency. Since the goal of collateralizing is to bound the redemption value, it is easiest and most effective, but not necessary, to use whatever the stablecoin is pegged to. If users can always redeem one unit of the stablecoin for one dollar, arbitrageurs should ensure that it never trades at any other price.

Unfortunately, collateralizing a coin creates the problem of securely storing large quantities of the collateral. Traditionally, the best place to store large quantities of cash is in a bank, because it is secure, relatively easy to audit, and often comes with deposit insurance. However, this is also centralized, thus making it prone to deceptive practices. For example, some protocols admitted problems with the collateralized assets, despite initially claiming full collateralization. Moreover, there are often limits to how much deposit insurance covers, potentially leaving the majority of the reserve uninsured. Some stablecoins avoid this problem by storing their collateral as physical cash in a vault instead of a bank. For example, Rockz stores 90% of its collateral in the form of physical fiat currency in an underground vault in the Swiss Alps.[1]

Today these stablecoins have to deal with another major problem, since the pandemic hit, they realize that inflation is a huge factor.

- Commodity backed stablecoins also suffer from the problem of where to store their collateral, since there are fewer institutions which accept and insure deposits in the form of commodities than ones that accept cash. This, in turn, leads to a high degree of centralization.

- One way to avoid having to store large amounts of fiat is to collateralize with another cryptocurrency. This has the advantage of potentially decentralized operation, and allows for

easier diversification across backing assets. The problem with this approach is that digital collateral can itself be very volatile, making it hard to use as a guarantee of value. Any stablecoin backed by cryptocurrencies must have some mechanism built in to safely handle large swings in the value of the underlying collateral.

- Other stablecoins do away with the problem of volatile collateral by simply not collateralizing the currency at all. This has many advantages. First, not having any collateral to store or unlock simplifies many logistical challenges. Second, it is also cheap to operate, since it does not require the issuer to keep real or crypto assets on hand.

Unfortunately, this ease of operation comes with drawbacks. Algorithms are usually gameable. The value of the currency in this case stems purely from the reliability of the issuing mechanism and/or people's beliefs. Once users' expectations of the coin's stability change, whether due to a flaw in design or idiosyncratic changes in sentiment, there may be little to keep the price afloat because there is no inherent redemption value. Consequently, when these stablecoins fail, they tend to do so swiftly and catastrophically. One example is NuBits, which dropped from its pegged price of \$1 to less than \$0.30 over the course of 2 weeks in early 2018. It never recovered its peg, and has been trading below \$0.10 for the past six months.[2]



The gold industry


Gold mining is an economic activity which consists in extracting gold from the soil. But how does the gold business start?

It all begins with a gold deposit discovery somewhere in the world. After that, the owners of the land must notify the discovery, communicate it to the authorities and request the corresponding “possible mining project” cataloging.

Once this stage is over, geological investigations of the soil are performed so as to be able to affirm that in this site, gold has been found in observable and sufficient quantities to consider a viable first investigation stage to determine the amounts of the mineral with more scientific accuracy.

Therefore, state authorities are requested to change the status from **“possible mining project”** to **“mining project”**, and authorizations to the corresponding regulatory entities are requested in order to carry out mining exploration. Once they are approved, international companies with necessary equipment are hired to carry out a three-stage process. Each of them supplies a different type of certification in accordance with the discoveries made. This leads to estimating the mining reserves which the project possesses.

Reserves, on the other hand, represent the fraction of the mineral resource measured and indicated which is economically extractable, according to a productive, technological and sustainable scenario inserted in the plan.



Once the works are authorized and the company is hired to perform the exploration, the following certifications will be submitted:

- Inferred resources
- Proven resources
- Measured resources

Measuring processes of each certificate take several years and in many cases, they are granted in parts as the project moves forward.

Big mining companies normally acquire the projects with the **inferred resources final certificate**, or with early **proven resources in progress** certifications, because the project value at that moment is still economically viable to be negotiated with landowners. By doing so, both parties are benefited: the mining company gets an economically viable project and the land or mining project owner gets an excellent profit as a result of the years invested until that moment.

The ancient gold standard

The **gold standard** was an international monetary system, where the national currency quantity that countries all over the world could issue should be equal to the gold they had in their power, which at the same time worked as backup of those currencies. Gold coins as well as gold-backed paper notes, which could be exchanged by this metal, were used as currency. This system was widely extended all over the globe but, since the 1970s, most of the worldwide economies started to abandon it and replaced it by floating fiduciary currency regimes.


The gold standard posed several problems, but mainly, the government inability to maintain parity between gold and the quantity of money issued made the system unsustainable.

The **new gold system**, has brought solutions to all the problems of the old system. How? Thanks to the use of new applied technologies and their combination with old collateral or backup monetary methods, which offer perfect solutions to be used as a **value reserve**.

Moreover, our method is rapidly scalable, in an accurate and efficient manner. It allows us to have available resources without waiting for conventional extractions for so long, which might **take up to 30 years**.

Furthermore, it is ecological, since it preserves and takes care of the local environment, communities and economies.





Thanks to the ROE system, the use of the blockchain is transparent, reliable, non-alterable and it does not lead to corruption in its management and use.

Mining process of big companies

They eliminate whatever is between the soil and gold, destroying the environment in the process, and then they use cyanidation as the principal method to separate gold from other unwanted elements.

In order to separate gold from rocks, zinc is added to the sodium cyanide solution, which precipitates zinc residues and also desirable metals such as gold and silver. Zinc is eliminated with nitric acid or sulfuric acid, leaving silver and/or gold bars, which are generally melted into ingots that are later sent to a metal refinery for their final transformation with water (thus, converted into pure metals in 99.9999%).

In the 1970s there were advances promoting the use of coal for gold extraction, which is absorbed by the porous matrix of carbon. Activated carbon has such a big internal surface that fifteen grams (half troy ounce) could cover 18,000m². Once this step is completed, cyanide is applied to separate gold from organic matter. As in most industrial chemical processes, there are environmental risks arising from this extraction method, apart from the high toxicity of cyanide itself.


Small mining operations: harmful consequences for communities and the environment

While big corporations extract most quantities of gold, dozens of thousands of people work independently in smaller artisanal operations, which in some cases are illegal. Among them, we can find galamseys (name given to independent workers in Ghana) ranging from 20,000 to 50,000, known in French speaking countries as orpailleurs.

The high risk of these companies was observed at illegal mine collapse in Dompouse, Ashanti region, Ghana, on November 12, 2009, when 18 workers died, 13 of which were women. Many of these women worked in mines as loaders. It was the worst mining disaster in the history of Ghana.

Unhealthy working conditions and their negative consequences both for people and for the ecosystem are evident in this type of practice.

The same happens with small-scale mining, where minerals extracted from high gold concentration veins, especially of free and grainy particles, are mixed



with water and grinded in stones called quimbaletes, which have a concavity to be used like a mortar. Mercury is added to form an amalgam with gold, which is separated from the rest by means of a thin fabric. The amalgam is heated or burned to evaporate the mercury, and gold remains in the form of balls.

This procedure is not only harmful to the miner who extracts the material and breathes part of the mercury vapors produced by heating, but also to the areas nearby, as evaporated mercury condenses polluting soil and water, thus affecting both human health and wildlife.

Environmental consequences of the gold industry

Gold mining uses highly toxic chemical products which can filter in the environment. Extracted gold is processed in contaminating factories, and mines, even when abandoned for long, might keep causing pollution, as water washes chemical products and toxic minerals.

Cyanide

Cyanide is one of the most efficient chemical products to dissolve a rock and obtain pure gold. It is highly toxic for human beings and wildlife, and using it in large amounts (necessary to extract gold) usually ends up in the environment. Cyanide spill in Baia Mare in 2000 is an example: about 100,000 m³ of waste water contaminated with heavy metals of up to 120 tons of cyanide were released from a dam in Romania into the Tisza. The project processed waste from old mining activities which caused serious environmental problems. Gold was extracted from this waste to reduce costs and, instead of neutralizing cyanide, cyanide contaminated water was recycled, which caused the high concentration of cyanide that broke the dam.

Mercury

Mercury is used in the same manner as cyanide. It is easily absorbed by the soil surrounding the gold mine and, therefore, most of it gets into the environment. The National Institute of Environmental Health Sciences estimates that gold mining in the Sierra Nevada mountain range in California introduced up to 8 million pounds of mercury after just three decades of operation, which ended in 1888. Mercury levels are still high in the region.



Environmental pollution

Many gold mines are open-air pits, which are harmful to people living in the surrounding areas. Vapors from chemical products are mixed with car fumes and heavy machinery smoke, which causes a heavily polluted place. Out of the facilities, most of the gold is sent to a processing plant for melting and thus impurities are eliminated. These facilities are highly polluting.

Acid Drain


It is produced when water is washed through a mine. Then, it is drained within the ecosystem and it brings the chemical products latent in the mine. The National Institute of Environmental Health Sciences points out that this happens even if the mine has remained closed for more than 100 years. A study carried out by the Environmental Protection Agency shows that up to 40% of all the drainage basins in the Western United States have been affected by the acid drain of mines. It may have a series of long-term effects on the environment, from killing fish and other animals to poisoning drinking water for human beiROE. In addition to all this damage, we should consider bad use of drinking water, river diversion and the millions of liters of water waste, damage to local flora and fauna, and native communities.

How is gold quantified and certified before it is extracted?

In mining, talking about resources is not the same as talking about reserves. The term resource is what you are able to locate, and when an economic analysis is applied and the amount to be extracted is defined, we use the term reserves. In order to know if there are gold reserves in one place, a previous work and study must be done, and a certified professional must sign as the responsible person in case it might not be true.

Mining assets classification is created on the basis of global definitions common to the various mining companies all over the world. Quality and classification process controls are carried out, as well as a follow-up of estimation processes which determine the amount of mineral found in a specific space.

There are companies internationally recognized by gold and other precious minerals regulating governmental institutions authorized to carry out these studies and certifications. They are audited and controlled by organizations and governmental entities, since the result of their reports, known as NI 43-101 or 43-



101 IR, is used as part of the documentary evidence of the existence of gold for the approval of a money loan by a bank or financial institution. In this way, a single and globally uniform classification system is made for mining projects.

This classification is controlled by statutes, regulations and best practices of the industry. There are several classification schemes worldwide: the CIM Canadian classification (see NI 43-101), the Australasian Joint Ore Reserves Committee Code, JORC, and the South African Code for the Reporting of Mineral Resources and Mineral Reserves, SAMREC are the general standards.

Mineral resource classification - Wikipedia

In this manner, a mining project with an NI 43-101 report or equivalent, can prove its gold reserve through geological studies carried out in previous years. ROE has adopted these standards and has the certificates proving the amount of gold issued by organizations and institutions internationally authorized for such purpose. The token relies on a mining project with NI 43-101 certification of inferred reserves. In 2023, and until 2025, we intend to certify the complete mining project with a NI 43-101 certification of proven resources. These certificates will be found and verified in the corresponding section of our website.

Challenges

The first challenge the ROE protocol will face will be the right comprehension of the community about how the mining industry works and how it is possible to utilize the non-extracted gold as value reserve.

Secondly, the adoption by other protocols and the general public will be the key element in the ROE project.

Our vision about a more ecological approach will be tested and challenged by the general audience and at the end of the day, this will be the most important factor.

On the other hand, the gold mining industry and economic sectors will also play important roles, support from this sector could improve the adoption or generate resistance in the markets.

Overcoming the current

Roela's main goal is to transform the way mining companies work; old working flows have to be changed at the lightness of new technologies. These

technologies will allow everyone to use the full potential of a resource without damaging and polluting the environment.

Why should we mine and contaminate the Earth to extract gold?

Once mined, the gold is stored in high security vaults, which is expensive and makes no sense at all. We can leave the gold in the best vault in the world (the soil itself), certify the quality and quantity and then, with the blockchain help, make use of its full economic potential.

Today if you want to own a gold bar and you have to go to the bank to buy this piece of gold, first of all, your bank is going to conduct a full due-diligence on you and your financial capabilities. Then if you pass this due-diligence process, they will sell you the amount of gold you want to buy, but the banks are not going to deliver the it to you, they are just going to provide a piece of paper, called gold certificate, which says that you own some gold, and that gold is stored in this bank vault. You bought the gold bar, but you don't have physical access to your property.

Since this is the regular procedure, why is humanity still mining gold as if it were in the 1800 when today's technologies help us to do it without the negative consequences the mining process brings with it?

Today ROE is changing the way the mining process will be conducted, and the way that the economic capabilities in some precious metals are used.

The speed in the certification process against the old mining process extractions changes the usability of the precious metals economic resources. With this new path, ROE offers a unique scalability way that helps and allows any economy, country, token or crypto currency to use it as a back value reserve, with a real value reserve asset in place but without the problem of the old gold standard.



Project overview

Our planet is daily affected by different types of pollution; however, there are three main concerning types: air, water and land pollution.

The problem caused by cyanide and mercury on people exposed to these substances is also widely known, which is overwhelmingly harmful to all living beings, not just to people.


The goal of ROE is, to a greater or lesser extent, to find a solution to all these problems, which are the indiscriminate water and land pollution, environmental destruction and health damage to living organisms arising from mining.

The use of the next generation resources, such as blockchain, allows us to keep the value of our assets, and to use the economic properties of such resources equally, for all the inhabitants of our planet, and more specifically, for the network users. In this way, profits arising from these resources, which belong to the whole of Humanity, will not just belong to a handful of multinational companies that are not interested at all in our world care and resource preservation.

There is a universe of goods and ways that people may choose to keep their FIAT values or those of a different nature, a business, a means of transaction or physical goods.

We believe that a stable value token, gold-backed up and based on blockchain technology is the best way to keep this value.

Digital currencies were created as a payment system of cryptographic testing, contrary to FIAT currencies, which are



based on mere trust, allowing both parties involved in a transaction to negotiate directly without the need to trust in a third party. When bitcoin appeared, it was possible to get into a new world where decentralized digital currencies were born. Some of the main advantages of digital currencies include: low transaction costs, they are internationally transferable and easily converted, pseudo anonymous, transparent and operating in real time, immune to bureaucratic or legal bank problems.

We see cryptographic digital assets as an instrument to improve the quality of life of people and the world. Having this purpose, we focus on offering a solution to many problems in a single manner. For this reason, we have created Roela, a token capable of bringing gold mining pollution to an end, generating a safe way to keep FIAT asset value or secured goods, and adding a smart way to create profits through contributing to a Decentralized Finance ecosystem.

Profits/rewards are obtained thanks to the contribution of the network economy. There are advantages of economies of scale to generate better and higher profits which will be later divided among users of ROE who may wish to stake; and most importantly, they allow us to grant more resources and opportunities to the industries and technologies dedicated to taking care of our planet.

The implementation of our Token is not totally decentralized, because as we said before, each token is backed by an asset in gold supporting its value, which turns us into a Security Token that implies complying with regulations and norms in force. However, in Roela, we will act as custodians of this value reserve because we believe this token implementation will plant the path to a future solution to climate problems and environmental damage that traditional mining has caused to the world..

We also believe we are supporting a new way to generate dividends to many people instead of big mining corporations accumulating unlimited wealth.

Advantages

- 1) It is ecological-driven and contributes to taking care of the planet.
- 2) It offers a new approach in the way to provide value reserves for several purposes.
- 3) It helps Crypto economies to find a stable asset to back projects without depending on FIAT.
- 4) Benefits and profits will be split among a lot of people instead of



a handful of Mining Companies.

5) ROE Communities will help to develop new Social projects. (loans and Grants for new jobs)

6) ROE will support and finance green projects which look to improve any contamination problem.

7) A profit portion will be used as grants for new DeFI projects

8) A profit portion will be used as grants for projects that benefit humanity.

9) Community support and adoption could cause Mining Companies to change their Business model.

Why a security token

Crypto tokens that share profits, pay interest, pay dividends or invest in assets or other tokens to generate profits for the token holders are considered security tokens. Since they grant rights similar to those of financial instruments, they are subject to financial and capital markets regulations.

Simply put, a token is deemed a security when there is an expectation of profit from the efforts of others. It is an investment contract which represents legal ownership of a digital or physical asset or right, which would resemble any financial instrument right. If certain regulations are not followed by the Company Handling a Security token, this could result in penalties being incurred and even the development of the project being stopped.


What are the benefits of Security Tokens?

However, when all rules and regulations are followed, startups can benefit greatly. One such benefit is that the company is able to offer tokens as a digital representation of shares in its stock. Benefits for security token holders include:

- Being able to store them in different wallets
- Using them as collateral for a loan
- Trading their tokens for other assets

Redefining Ownership

Security tokens bring a new meaning to the term “ownership.” Because of these tokens, assets, such as vineyards or real estate, can be divided into fractions and subsequently sold off to investors. In detail, instead of investing in and owning



a complex real estate project, which may be too expensive for a lot of people, 100 people could own a fraction of it and receive pro-rata returns.

What are the Similarities Between Security and Utility Tokens?

- Both are subject to increase or decrease in value depending on market demand;
- They are not cryptocurrencies in the sense that neither one is created for direct commercial use such as buying or selling of external services and products. Simply put, they are not comparable to fiat money since they are not standalone means of payments;
- Utility tokens are often incorrectly promoted as an investment, whereas security tokens could mistakenly be taken for utility tokens.

We are ecological

The new system proposed by ROE is **beneficial to the ecosystem**. Why? Because it avoids gold extraction from the soil, thus, also avoiding the negative consequences of the mining industry, which is dangerously contaminating and destructive to the environment.


Both cyanide and other substances used for gold extraction pollute water and the environment, and they affect settlements and wildlife near the mine. For this reason, **gold mining is not ecologically viable**.

ROE, instead, proposes a sustainable development as it allows the gold found in the safest place, the earth, works as value backup without polluting and destroying the environment. Therefore, the token becomes **disruptive and original**, combining **ecological awareness and a good yield**.

Environmental care and **sustainable development** are values that represent ROE, and that is why the token will be hosted in a **blockchain with a neutral carbon footprint** to make it even more sustainable, reducing annual carbon dioxide emissions and supporting users and projects that promote environmentally viable solutions.

ROE economy

Tokens will be issued when getting the first proven reserve certification (stage 3) obtained from mining project, in MEXICO , CHILE and Argentina



or from any other one acquired by ROE. From that moment on, issuance policy will be ruled by obtaining certifications showing proven resources and, based on these resources, a token will be issued for every gram of gold.

ROE has other mining projects in Mexico, Argentina and Chile, also there are another projects in different countries who are interested to be incorporated to our protocol and ROELA are in advanced negotiations.

As to the issuance policy, using our NI43-101 as a reference, and based on Timon Project estimation of future Technical Report NI 43-101 certification (which indicates Au inferred reserves per cubic ton of soil), or any other ROE mining project, we can assure that this project has the same value as the above mentioned ones. In that sense, our token issuance policy will just use 70% of the NI43-101 of actual mining projects with certifications on hand, converted into gold grams at the moment of this valuation, which is US\$20 dollars per gram for non-extractive gold, to reach an initial issuance of 5,500,000 tokens of free availability. The remaining value of 30% of our NI43-101 is taken as security margin due to the formula used to give value to the project in order to be protectionists and extremely careful with the token issuance policy of the project, thus leaving a considerable amount of inferred real value as collateral of the issuance. Once the PROVEN resource certification stage has begun, which will be between 2023 and 2025, while these certifications are issued by official entities, and reserves increase, each certification will give rise to a new token issuance corresponding to the amount of gold certified.

These certifications will be at the disposal of an Escrow Agent in Gibraltar as collateral for the gold underground and, there fore as support for each token issued. Estimations indicate that the project may reach a potential of 20,000,000 usable tokens, and it is the mission and function of PROVEN resource certification to be able to define the final total value.

ROE cannot be burned because each one represents a gram of gold existing underground; however, the total available circulating will be regulated and controlled by the company.



Overview

ROE token is an ERC3643 native of Ethereum blockchain and its main function is to offer a value reserve for protocols within the decentralized finance world. Each token is backed up by 1 gram of gold that is in a mining project, which our protocol could be the owner of or have control to dispose of the non-extracted gold for that purpose.

With the aim of verifying the quantity of gold each mining project possesses, we will be based on the proven reserve certifications of each project incorporated to our protocol, thus, each token will be issued against an NI 43-100 report certification. These reports are the gold mining industry standard to prove their deposits.

Price

The price of the token will be equal to 1 gram of extracted 24k gold (1X), minus 50% of quotation board value. In order to get the right price, our protocol will consider the information from LBMA quotation price and from another three main sources, and an average will be taken. With this average, the value of 1 gram of gold will be settled and from that, the price will be fixed at $1 \times -50\%$ (X being the value of a gold gram for a specific moment averaging the 6 primary sources of market prices).

Mathematical model

The mathematical model equation for the constant product-market-maker model fixes the product of the wallet quantities:

$$G_e \times G_m = T$$

Where G_e and G_m denote the amount of Non extracted Gold quantities and ROE wallets amounts respectively, and T is some constant.


Showing the above rule, it can be said that ROE price is:

$$P = G_e / G_m$$

Expansion and Contraction market stabilization algorithms will be deployed sooner in the next months to show the backtesting simulations process.

Backtesting

Part of the Roela team is dedicated to run Backtesting model such as Monte



Carlo Simulations, since this process needs to be adjusted and run again with every single change in math and equations, before the ROE official launch our team will be publishing a Yellow Paper with more specific analysis data, projections and simulation with basis in the Monte Carlo Simulation.

Stabilization

Working and analyzing different protocols, the approach adopted by the ROE team is following some key Stabilization Algorithm taken from CELO (mento) Stability Algorithm. [3]

<https://docs.celo.org/celo-codebase/protocol/stability/doto>


Mento was inspired by the Uniswap system, and mitigates the risk of depletion as follows: The ROE protocol maintains 2 virtual buckets of ROE and the liquidity pair token (USDT, USDC etc). The amount in every bucket is recalibrated every time the reported oracle value is updated, provided the difference between the current time and the oracle timestamp is less than `oracle_staleness_threshold`.

Through a stabilization mechanism, ROE aims at achieving a stable price, in accordance with offer and supply, which is obtained thanks to the implementation of technical and economic instruments that will keep the price value between the ranges of 1X -15% y 1X +5%.

For incentive and mitigation of risk

In order to maintain the base price, a pool (PL) will be used with the necessary liquidity for repurchase of all ROE circulating tokens on the basis of 1X -50%. While to maintain price rise with a maximum of 1 X +5% a bond offer system will be implemented which will maintain an anchor over the maximum price, every time the market resorts to that instrument when the price rises, the bond value will be within the range of ROE original price. Likewise, the purpose of this instrument will be to encourage purchase if the price goes down too much, through interest rate adjustment or APY, ROE purchase as a bond is encouraged. This PB-ROE bond instrument will be one of our tools in price stability. Our bond for ROE (PB-ROE) price rise compensation will be issued when the price is higher than 1 X or when the price is lower than 1 X -60%, and will just be available during window periods when ROE price is over or below the 28 limits.





of these values. This bond will work as a price anchoring mechanism in order to discourage ROE purchase at a price higher than 1 X, understanding that the market will choose to buy this bond at a value of 1 X -xx% instead of paying ROE at a price higher than the reference value of 1 X+ in the market. PB-ROE bonds will have a discount between -15% and -25% APY as necessary in order to regulate the token rising price. When the price is below 1 X -60% we will also use this bond as a tool to encourage purchase and to make ROE price go up. In this way, this bond has a price stabilization double function.

In case the ROE token price is above 1 X, the purchase of these bonds will be carried out by means of bond exchange by non-ROE tokens. We should keep ROE offers circulating so as not to increase the price even more, generating a higher ROE demand to buy a bond. In that sense, this bond sale will be made in other tokens, such as BNB, ETH, etc.

In case the ROE token gets lower than 1 X -60%, this bond will start to be offered but with the opposite policy, it can only be acquired with a ROE token. In this case, the intention of decreasing the price is to take ROE Tokens out of circulation, and in this case, it is expected that price should rise or get stable, at equal demand with less supply, price goes up or remains stable.

Our bonds will be available in 15-day, 1-month, 6-month and 1-year periods. If at the expiration date of each bond, ROE price is not within a stable range for any special market reason, users may choose among the following solutions: Redeem their bonds and join any Staking or Smart Share Pool (SSP) program with their ROE token.

Extend the bond duration in any of the term formats offered.

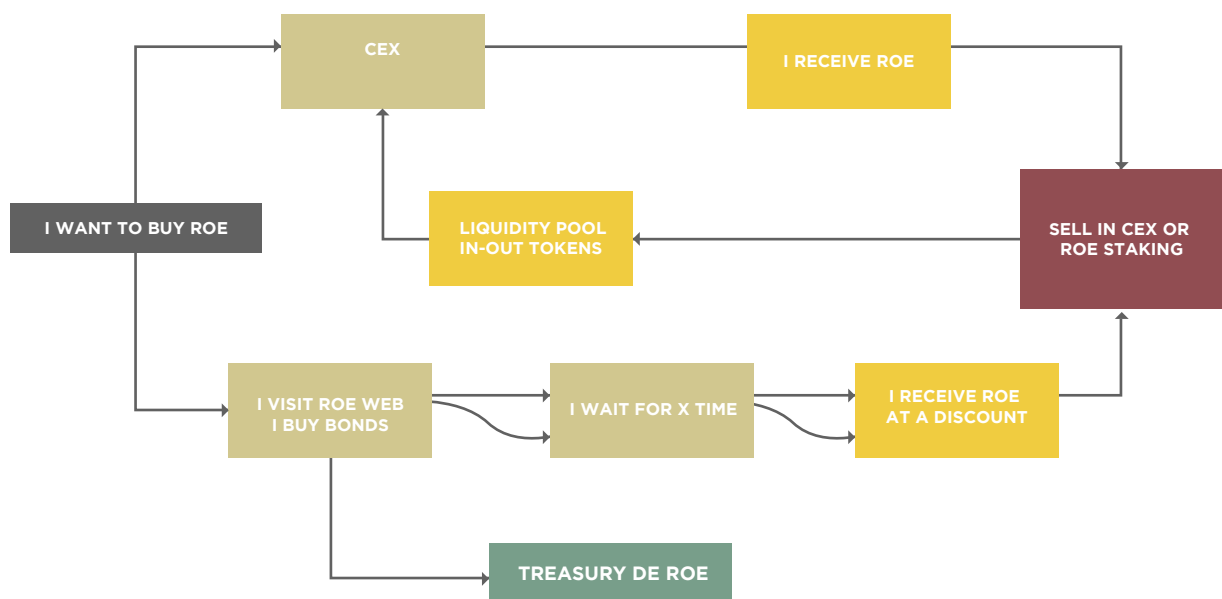
Redeem their bonds by ROE through vesting, which will last the time it will take for the protocol to stabilize the price within range (1 X -60% to 1 X +5%).

Stable variation range: (1 X -50% to 1 X) Modifiable variation range (1 X -60% a 1 X +5%) Furthermore, and as the last contingency measure, if the price is higher than 1 X +5%, the ROE team may opt to use reserve tokens, or treasury in order to generate a higher offer and start a price rise. Due to its nature and function, our protocol will offer extra options for corporate users' security as well as for individual ones. Among these options, we will offer multi-signature with shared keys, to avoid thefts and hacks, and own vaults, with insurance in

case of any event, which guarantee ROE token replacement to the user.

With these tools, we consider it will be possible to implement token price stabilization mechanisms to allow enough flexibility for market benefit, without losing the advantages of a stable price.

Token flow / Minting function



Economic control tools

Bonds: token sale at a discount directly from the protocol to users.

Circulating supply increases (price reduction and volatility) and Treasury volume rises in order to keep a constant Floor price.

Bond yield adjustable to protocol needs in X moment.

Staking: Total “Locked value” increase (trust pattern in DEFI) and circulating token increase.

Liquidity Manual Insertion: ROE/USDT, ROE/DAI, ROE/UST and other pairs, as manually added liquidity

Price oracles

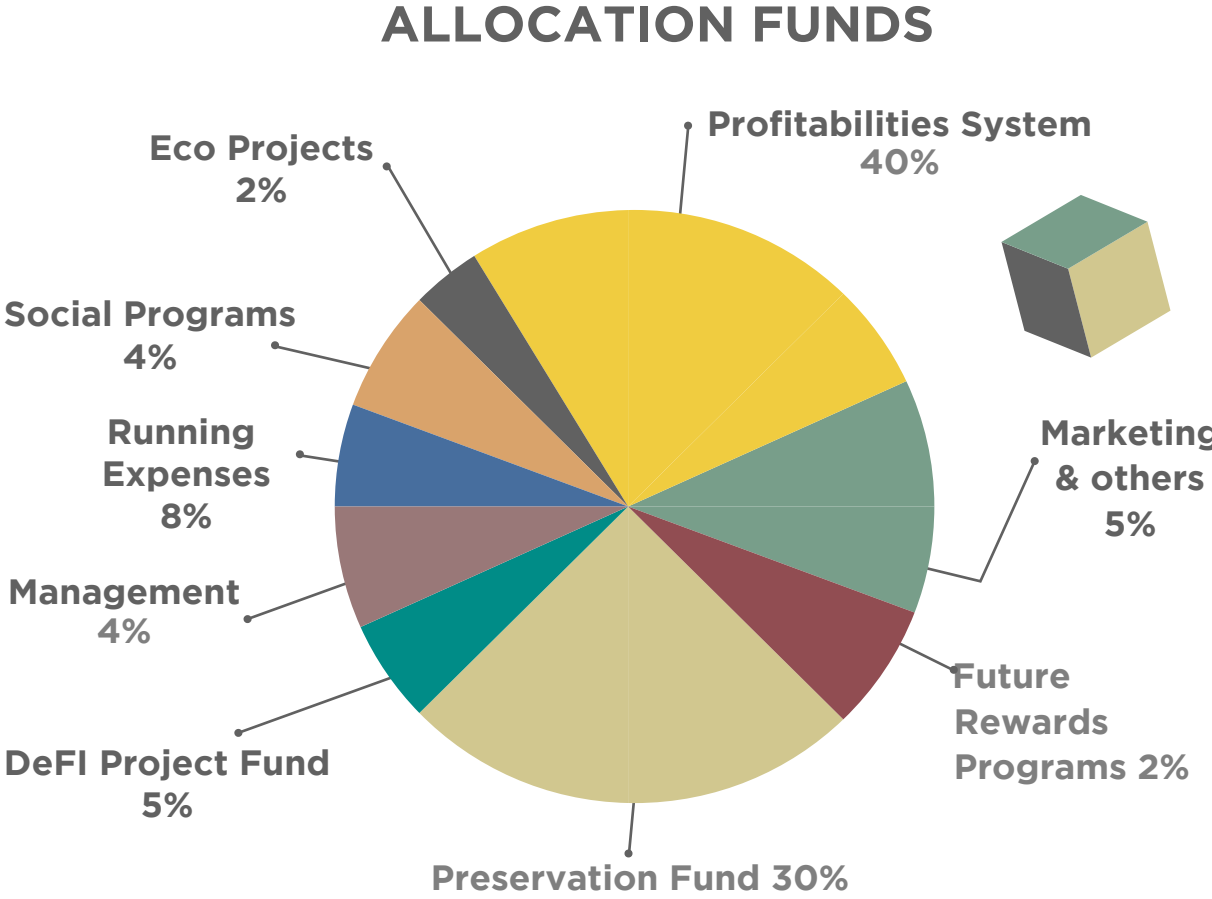
The oracle used by ROE will get the market Gold Price from 6 sources in the Real Asset World, this information will be taken simultaneously from the 6 Main



Stock Market in the world, comparing the prices and getting consensus, at the same time and because the Stock markets around the world are open and close in certain times, the oracle will provide 3 sources in online prestigious websites in non-profits organization which shows 24/7 the gold price. Times between reports will be refreshed in a matter of seconds, providing an accurate price at any given time.

On the weekends, in the frame time between the last stock market closes until the first stock market opens in Asia on Monday, the price will remain fixed.

Distribution of revenue from token



Profitabilities System 40%: capital for crypto investment fund, until we build our own in-house investment team. Thus, we assure and create a sustainable system to generate profits offered through staking, bonds and lottery systems of our protocol.

Preservation Fund 30%: for the purpose of issuing more ROE tokens, it is necessary to constantly keep certifying the mining projects of our protocol, which allows us to obtain more NI 43-101 certifications, and with them we will be able to issue more ROE. This capital allows us to proceed with these certifications, and in case it is extremely necessary, it will give a solution to the project.

DeFi project Fund 5%: a fund to support and finance new projects within the DeFi ecosystem, which help escalate, adopt and expand it. With this fund, we intend to help good projects which require financing and mean a change or contribution to decentralized finance development.

Eco Projects 2%: like DeFi fund, the purpose of this fund is to finance and support projects related to ecology, to environmental care or to new technology development in order to improve people's lives through sustainable solutions with negative impact on carbon footprint.

Social programs 4%: necessary funds for new job posts generated under our protocol spectrum. Loans and training will be granted to buy new technology and necessary elements for sustainable activities development, such as organic vegetable and fish cultivation (aquaponics), smart farming, organic production in general, among others. Besides, training on these activities and education in the use of DeFi as a commercialization tool will be financed, granting incentives to producers, and to the supply chain for the use of decentralized finances.

Marketing & others 5%: budget offunds for marketing, advertising, events and related expenses.

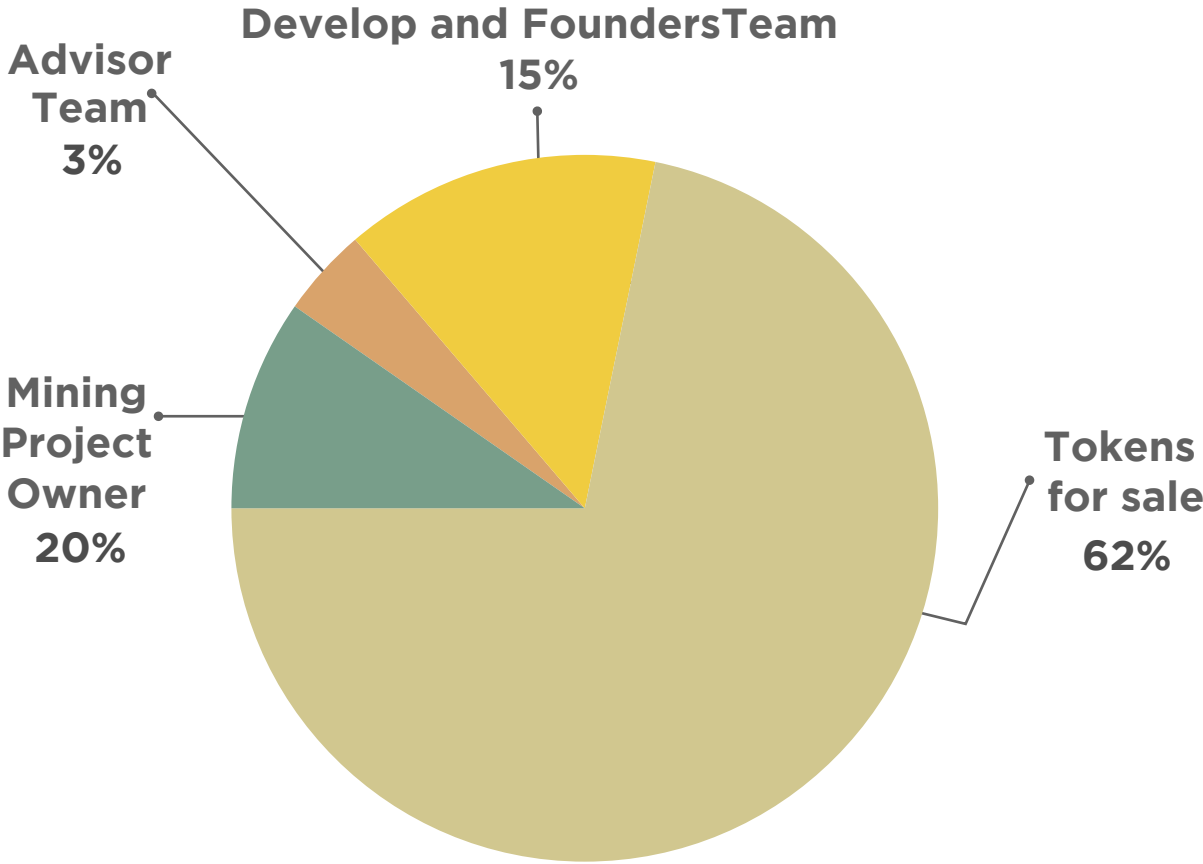
Rewards Programs 2%: the quantity of tokens of the total available package which will be part of the lot to be given as a reward in presale for anticipated ROE purchase.

Running Expenses 8%: current expenses resulting from running the company, employees, professional services, servers, rent and any other expense of the activity.

Management Team 4%: the quantity of tokens to be distributed as a compensation and objective package among managers of all the protocol areas. Token issuance allocation



TOKEN ISSUANCE ALLOCATION




Who is ROE for and why using it?

Blockchain industry does not yet provide a decentralized manner to offer assets that serve as value reserves which are not related to FIAT currency.

Upon this vacancy, ROE comes up as an excellent option. It is not like other stable altcoins which depend on TraFi reserves, and they are not affected by the typical volatility of other tokens and crypto currencies. It therefore appears as the ideal alternative to any person or organization that wishes to obtain a value reserve utility token.

Token custody

Users will be able to use digital wallets compatible to keep their tokens, as well as approved Exchange and solid wallets.



As a responsible administrator, ROE sets a decentralized back-up policy where a third party, provider of backup services, will have the custody of 90% of the tokens at ROE disposal. This measure grants asset security and provides theft insurance which acts as the ecosystem financial insurance.

The remaining 10% of the available issued will be divided into two wallets, the first one being the immediately available reserve wallet, and the second one will be a continuous operative use wallet. The latter will provide immediate daily liquidity required by acquisition or redemption of each token, while the immediate available wallet is an element with a higher protection degree which will be an immediate reserve, with the aim to compensate the quantity of tokens in the operative use wallet and to transfer more resources when it goes down to values predetermined by governance.

Reserves and available fund movements will be managed under multi-sign modality.

Transfers between the two wallets directly administered by ROE will be programmed to automatically perform the functions above mentioned every time continuous operative availability wallet reserves reach the established minimum, and they will be audited by the ones responsible once every 24 hours.

On the other hand, a custody wallet will be used when the minimum amount of the immediate available reserve wallet goes down to the minimum established and it will be manually carried out at the request of the responsible signers.

The minimum amount of each of these wallets shall be established by the governance mechanism, in the meantime, the mechanism will set as a rule that when reaching 50% of its initial capacity, the wallet must be completed again.

Tokens in custody shall be distributed in different wallets. For staking, bonds and lottery protocols, a cold wallet service with collateral will be used.

Our website will periodically inform about the exchanges where the ROE token can be acquired, and will update those exchanges listing the token or the ones that might cease to offer it. Therefore, users will be updated about exchanges where the ROE token is officially traded.

With this system, annual benefits of around 5% are expected to be distributed among token owners, which is a very good yield for the worldwide average.

Staking and bonds

Staking system: ROE users may proceed to staking in the protocol, thus receiving an ROE compensation for their test to stay. The staking APY is estimated at 5%.

Staking will be available in 1-week, 1-month, 3-month, 6-month and 1-year periods.

Bond offer system: additionally to Staking, we will offer a variety of bonds with different purposes.

ROE token acquisition

Different Exchanges will list ROE and will offer their own commercialization forms.

Our website will periodically inform about the exchanges where the ROE token can be acquired, and will update those exchanges listing the token or the ones that might cease to offer it. Therefore, users will be updated about exchanges where the ROE token is officially traded.

The ROE token will be available in different exchanges listing it for private users or those who make acquisitions lower than 1000 tokens per purchase, while for corporate clients or big clients, higher than 1000 tokens, orders will be channeled on our website or our sales department. Big clients and corporations using ROE as a reserve will also be able to acquire the token in a principal exchange to be announced later, which shall offer an immediate purchase option to those clients who might need it.

Vesting: there are 4 types of vesting in our project.

- Presale: 6 months prior to the Protocol launch, then 10% monthly
- Big Reserves and Mining Owner: 25% every 6 months
- Launch: 25% every 6 months.
- Dev, Founder & Advisor: 1 year (25% and then 3%)

Note: the tokens of developers, founders and advisors team may be released to be used in other protocols as an exchange or swap before the vesting ending period of 1 year, and in a single transaction if vesting time applied to said purchaser is higher than the original remaining vesting time. This procedure contributes to having those tokens for a longer period of time still in vesting and at the same time it is an extra incentive to the protocol for its price balance.



Technical architecture

Supported networks

ROE token will be a Multi Blockchain Token, deployed in the first stages under Ethereum, due to the special characteristics of ROE, it makes sense in next stages to deploy the token in other Blockchain supporting EVM.

On the other hand, in the future and once the ROE token is adopted by consensus in the Crypto world, it is our goal to deploy ROE in the BTC blockchain.

Governance voting

The Roela protocol aims at becoming a DAO system. The first step to accomplish it is to build a community. In that sense, ROE will start as a centralized protocol, but it will migrate towards a DAO, gradually incorporating and as the community is being built, decision making to the DAO protocol.

As an example we will say that, among other decisions, DAO shall vote the following:

- Incorporation of new mining projects.
- Distribution and use of economic resources resulting from the protocol.
- Election of authorities representing token holders in mining certification commissions, in the investment fund and in the team in charge of analyzing new projects.
- Incorporation of new material or resources (such as diamonds,

platinum, etc.) to be added to the protocol, among other decisions to be communicated in the future.

Regarding the manner of governance participation, our team is working on designing a dynamics which will allow all the parties to have a fair representativeness. In that sense, we are analyzing variables for all and each party to have a voice and vote.

We are considering distributing 45% of voting rights among holders of big reserves (more than 1000 tokens).

45% among smallholders (between 1 and 999 tokens)

10% among founders and developers.

By doing so, we make sure representativeness among all sectors is balanced and whales do not have a dominant or deciding influence in the direction of our protocol.

Finally, we would like to communicate that prior to our DAO startup, the name of our governance token, the acquisition manner and further details will become known.

At the moment we can just tell you that we are thinking that those users committed to the purpose of the project, being it a value reserve token, through staking, bonds and lottery, should have the chance to obtain governance tokens as a result of their continuity in the protocol.

We are also analyzing different options for ROE holders who have not participated in staking, bonds and lottery systems, which might allow them to access a governance token through ROE tokens swap.

And one last option for those incorporating after DAO implementation. We are willing to start with the first DAO steps in Q3, 2027 (TBC).

We will keep you informed about the news related to this.



Authorizations and certificates

Information of the following documentation will be shown in the ROE website as proof of rights and to be followed by any person or institution who wants to know more about any given Mining Project of ROE.

Mining Projects ownership certificates
Exploration Certificates
NI43-101 Reports
Satellite Images (Magnetometric reports)
Government authorizations and inscriptions

This will provide accurate information to all the general audience about ROE project status, certificates and the governmental process under the ROE Mining project authority.


Regulatory compliance

Roela is a company with Headquarters in Gibraltar, and this jurisdiction rules apply. Any and all statutory rules about digital asset commercialization and issuing apply.

ROE will set up all necessary mechanisms to rule the token as Security Token, unless other criteria will be taken by the regulator. ROE follows and complies with all the compliance mandatory rules by the Gibraltar Government.

Legal

The information described in this paper is preliminary and subject to change at any time. Furthermore, this paper may contain forward-looking statements. Forward-looking statements generally relate to future events or our future performance. This includes, but is not limited to, Roela projected performance; the expected development of its business and projects; execution of its vision and growth strategy; and completion of projects that are currently underway, in development or otherwise under



consideration. Forward-looking statements represent our management's beliefs and assumptions only as of the date of this presentation. These statements are not guarantees of future performance and undue reliance should not be placed on them. Such forward-looking statements necessarily involve known and unknown risks, which may cause actual performance and results in future periods to differ materially from any projections expressed or implied herein. Roela undertakes no obligation to update forward-looking statements. Although forward-looking statements are our best prediction at the time they are made, there can be no assurance that they will prove to be accurate, as actual results and future events could differ materially. The reader is cautioned not to place undue reliance on forward-looking statements.

Appendix

[1] A Classification Framework for Stablecoin Designs Cornell University and AVA Labs

[2] A Classification Framework for Stablecoin Designs Cornell University and AVA Labs

[3] <https://docs.celo.org/celo-codebase/protocol/stability>