# GME TOKEN WHITE PAPER





### Important Notice

Please read this section very carefully. If you are in doubt as to any action you should take, please consult with your legal, financial, tax or other suitable professional advisers.

This document is a technical whitepaper setting out the current and future development of the GOLDEN RICE MINING platform and the GOLDEN RICE TOKEN (GME). This whitepaper is for information purposes only and is not a statement of future intent.

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The GME tokens will give token holders access rights to use the GOLDEN RICE MINING platform, and can only be used to pay for GOLDEN RICE MINING platform fees. GME tokens will not have any other rights or functions attached to it (such as, any ownership or voting interest in GOLDEN RICE MINING) and is not (nor is it intended to be) a medium of exchange accepted by the public, or a section of the public, as payment for goods or services or for the discharge of a debt.

The GOLDEN RICE MINING platform and GME tokens are not and are not intended to represent or constitute any security, collective investment scheme (or units therein), business trust (or units therein), commodity, derivatives contract or spot foreign exchange contract in any jurisdiction and in any manner. This whitepaper is not intended and does not constitute a prospectus, profile statement or offering document, and is not an offer to sell, nor the solicitation of an offer to buy an investment, a security, collective investment scheme (or units therein), business trust (or units therein), commodity, derivatives contract or spot foreign exchange contract.



## Executive Summary

The world associates blockchain technology and cryptocurrencies with decentralization. Cryptocurrencies are decentralized because the technology on which it is based—the blockchain—is powered by blockchain validators which validate transactions on the distributed ledgers around the world and keep it secure. Over the years, these blockchain validators have come to be known as "blockchain miners" and "crypto miners".

While it is true that miners are making the blockchain network decentralized, there are still big barriers to entry that prevents everyone from joining: limited knowledge, limited technical skills, limited financial resources, and limited infrastructure.

All these limitations create opacity in mining. A technology that should be transparent is used by a few parties with the necessary resources to either maximize profit by monopolizing the market or to create a scam business using the hard-to-understand "crypto mining" buzzword.

We are GOLDEN RICE MINING –a company with a simple mission: building trustworthy and easy crypto mining that is accessible to everyone. GOLDEN RICE MINING will achieve this by looking at both the short- and long-term impact of mining.

Soon after the GOLDEN RICE TOKEN is distributed, we will be launching the next generation GOLDEN RICE MINING platform for cloud mining Proof-of-Stake-based cryptocurrency (PoS). The platform is a highly automated and secured staking pool with very low minimum commitment. Miners can get their rewards based on the masternode reward distribution without losing any of their collateral. GOLDEN RICE TOKEN (GME) will be used for the platform economics.

While we are making sure that the platform is stable, GOLDEN RICE MINING will seek to grow the mining community even further with Project ALEXANDRIA – a mining knowledge bank powered by the community. As a long–term project, GOLDEN RICE MINING understands that this is not a simple mission. There are hundreds of active blockchain projects, each utilizing its own unique approach; that being said, we are confident that our current proposal is a step closer to reaching our goal.



### **BUSINESS BRIEF**

#### **Cryptocurrency Mining Industry**

Back in 2008, the Bitcoin whitepaper was published. Bitcoin promises mankind a future where everyone can rely upon a trust-worthy system based on the blockchain. Months later, the Bitcoin network went live and the world learned about its ingenuity. Innovations then sprouted, and now there are hundreds of crypto coins as well as tokens inspired by Bitcoin that are built for different purposes.

All these coins are based upon blockchain technology with 'their own unique flavors'. Transaction Validation is fundamental to any blockchain technology. On a trust-less blockchain, validators are essential, thus they mostly get rewarded with the internal currency. The world calls these people "miners", and the industry is called "cryptocurrency mining".

According to a research published by Coherent Market Insight, the cryptocurrency mining industry is still at a very young stage, valued at only US\$ 650 million in 2016; however, it is expected to grow 63 folds and reach at least US \$38.38 billion by 2025. This is on point with the growth of the market capitalization of cryptocurrencies, which has been experiencing a 50x growth, from US\$ 7 Billion in January 2016 to US\$ 350 Billion in May 2018. The main contributing factors are the increasing public awareness of cryptocurrency and the increasing adoption of cryptocurrency.

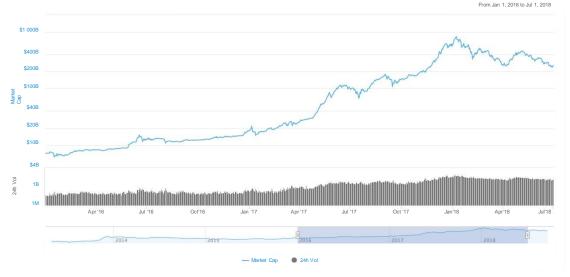


Figure 1 - Cryptocurrency Market Capitalization Growth 2016-2018 (CoinMarketCap.com)

In the cryptocurrency world, Bitcoin is likely the most well-known and holds the biggest market capitalization. The arrival of HECO, arguably opened the door to an infinite number of blockchain applications, causing Bitcoin market dominance to drop over the year. While competition at first seemed like bad news for Bitcoin, the growth of total `market capitalization made this concern less relevant. Non-Bitcoin cryptocurrencies are referred to as altcoin (alternate-coin).

<sup>1. &</sup>quot;Bitcoin: A Peer-to-Peer Electronic Cash System - Bitcoin.org." https://bitcoin.org/bitcoin.pdf

<sup>2. &</sup>quot;Cryptocurrency Mining Market, by Mining Enterprises, Revenue..." 12 Dec. 2017, <a href="https://www.coherentmarketinsights.com/market-">https://www.coherentmarketinsights.com/market-</a> in sight/cryptocurrency-mining-market-1099.

<sup>3. &</sup>quot;Global Charts | CoinMarketCap." https://coinmarketcap.com/charts/.

**Brief** 





Figure 2 - Bitcoin dominance shrink over the year (CoinMarketCap.com)

Blockchain technology is still relatively young and is continuing to evolve. As part of the fundamental blockchain technology, the mining activities were subject to numerous changes over the years. When Bitcoin was first launched, mining using CPU Processors or GPU/VGA Cards was still possible. Later, the development of specific mining—hardware for Bitcoin with the use of technology such as Field—Programmable Gate Array (FPGA) or Application Specific Integrated Circuits (ASICs), made CPU & GPU Btcoin mining obsolete. In 2018, one can only viably mine Bitcoin using ASICs.

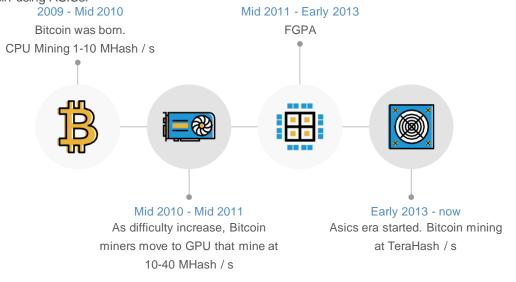


Figure 3 - History of Bitcoin mining hardwares

The ethereum platform was released in 2015, which gives it the benefit of learning from the Bitcoin experience. Instead of SHA–256, ethereum utilized a new consensus algorithm named Ethash with an Anti-ASICs feature. It is this feature that ensures mining is still reachable for people with common hardware such as GPU/VGA cards.



Despite these efforts, the ability to mine viably is still only accessible to people who hold the newer GPU/VGA cards with greater hashing power. Thus, a new alternative was proposed -Proof of Work (PoW) can be replaced with Proof of Stake (PoS) to achieve network consensus required for validation.

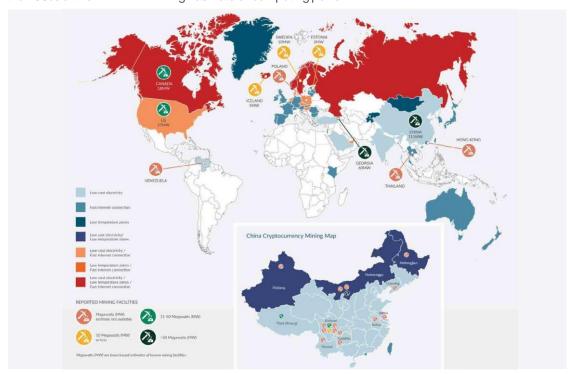
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#### Comparison between Proof of Work (PoW) and Proof of Stake (PoS)

#### **Proof of Work**

In 2009, the Bitcoin network went online. With that, Bitcoin became the first PoW (Proof of Work) cryptocurrency on the Nakamoto Consensus. PoW requires each validator to perform some work that validates trustworthiness. This work consists in solving complex cryptographic problems using their own computational resources and those who find the solution can confirm the transactions and write the block onto the chain. Miners are competing with each other to create the next block of transactions on the blockchain. In turn, the winning miner receives cryptocurrency coins as a reward for the amount of time and energy spent for generating the solution.

This reward system incentivizes miners to generate the right solution and ensures that the network remains secure while newly minted cryptocurrency is added to the overall circulating supply of coins on the network. In the event that a fugitive party wants to attack the network, they have to take control of more than 50% of the network's mining hashrate or computing power.



GOLDEN RICE Paper



#### Mining Economics

In order to mine on a PoW network, miners will need to acquire capable hardware & infrastructure. They also need to run the latest software version in order to support the network.

As the network grows, difficulty grows along with it and the number of coins rewarded is reduced to curb supply. With decreasing supply, the cryptocurrency itself will worth more due to increasing demand.

#### Market Capitalization

In the second quarter (Q2) of 2018, most mineable cryptocurrencies are still running under PoW. The undisputed leaders, Bitcoin & Ethereum are still 100% PoW. In 2017, the two coins collectively

make up between 60% to 70% of all cryptocurrencies' market capitalization.

#### **Drawbacks**

PoW is energy-hungry by design, with cost, maintenance, and efficiency being the major drawbacks. Another problem is due to the fact that increasingly, highly specialized hardware required to viably mine PoW cryptocurrencies lead to centralization. With the advent of ASICs, it becomes apparent that only those with tremendous capital can take part in this mining industry. Despite this, in Q2 of 2018, the top cryptocurrencies are still leaning heavily on PoW. For example, Bitcoin is using PoW algorithm SHA256, Ethereum is using Ethash, and Litecoin is using Scrypt.

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#### Proof of Stake

On Proof of Stake, a validator may validate block transactions if they hold a stake on the blockchain network. PoS decentralizes the consensus power by ensuring rewards are distributed based on the number of coins staked by the miner.

As such, the selection is strongly influenced by those that have the most coins – the more stake they have in the network, the more they have to lose in the event of a mishap. The other determining factor is the length of time for which the coins have been owned, as it indicates whether the coins are in a long-term position – which is considered a more trustworthy position in comparison to coins that have been acquired recently.

In other words, those who own more coins and have been holding the coins longer are deemed to be more trustworthy and are considered less likely to attack the network.

#### Mining Economics

As PoS miners need to stake their cryptocurrency in order to mine, they need to believe in the cryptocurrency itself in order to get the reward. Similar to PoW, the miner needs to understand how to run and configure the latest version of the relevant software in order to support the network.

#### Market Capitalization

PoS is still in its infancy. Amongst the PoS cryptocurrencies, DASH is leadingbasedon market capitalization. As of Q2 of 2018, PoS cryptocurrencies constitute less than 5% of the total market capitalization. This will surely change as ethereum is finalizing its plan to launch CASPER, enabling ethereum to be a PoS-based cryptocurrency. When this happens, the market capitalization of PoS coins should increase dramatically and more coins should be following Ethereum and making the jump towards PoS.

#### **Drawbacks**

Although PoS has many advantages over PoW, the "nothing at stake" condition allows miners to vote on multiple chains. This is especially dangerous during chain—split/fork condition.



#### Blockchain Mining Industry Players

	Proof of Work (PoW)	Proof of Stake (PoS)		
Blockchain Core Team	Each blockchain has its own core team. Depending on the size of the project, a core team can be well-structured, but there are many cases whereby the team is formed ad hoc with only a small number of individuals involved. This is true for both PoW and PoS.			
Chipmakers	As PoW needs great hashing power, chipmakers are joining the arms race of making the fastest and most efficient hardware in the market. NVIDIA and AMD are the leading players for GPU/VGA while Bitmain and Bitfury are leading the way on ASICs mining hardware production.	PoS does not rely on hashing power, therefore, specialized high-end hardware is no longer needed. What is needed for PoS to work are secure servers with sufficient processing power, memory, bandwidth, and a sta- ble and fast internet connection to run the		
Mining Pool	Antpool holds the biggest Bitcoin mining pool (17%), while Supmova is the leading mining pool for altcoins.	Masternode reliably. Commonly referred to as "Shared Masternodes" by the community, they are done manually by a trusted member of the community who runs the masternode for the group.		
Cloud Mining Company	Genesis Mining, NiceHash	There is not yet a global player company that provides "Shared Masternodes" at the level of PoW cloud-mining.		

As the market moves toward PoS, there is no market leader for either PoS Mining Pool (commonly referred as "Shared Masternode" by the community) and Cloud Mining platform.

#### **Problem Statement**

While it is true that miners are making the blockchain network decentralized, there are still big barriers to entry that prevents everyone from joining: limited knowledge, limited technical skills, limited financial resources, and limited infrastructure being the main reasons. As of July 2018, there are more than 360 blockchains running various masternodes with different variation of staking and rewarding rules.



Masternodes typically have the following characteristics



#### 1. Collateral

A fixed number of coins that need to be staked. The number is usually set to areasonably high value to limit the number of masternodes on the network.



#### 2. Maturity Time

The time needed from when the masternode is setup to the time when the masternode is eligible to validate transactions on the network and received rewards.



#### 3. Queue

The position of the masternodes on the rewarding mechanism. Upon receiving the reward, the masternode goes to the end of the line and wait until it's eligible for the next reward.



#### 4. Rewards

The "mining" reward is given only to eligible participating nodes.

Only mature masternodes that has reached its turn in the queue can receive the reward. To run a masternode, users need not only own enough coins to cover the collateral, but also require intermediate to expert understanding of blockchain, computer & network security to run & configure the wallet.

#### Knowledge

Each blockchain project has its own way of sharing information. It usually starts with a Github repository and a Slack / Discord group as the official community. Once the project is set, the community starts to discuss it at various forum such as BitcoinTalk and Reddit. Gitter and Telegram are also becoming popular as the community grows. A more matured project will have an official website to keep the most recent information.

While these movements in the community are useful for the purpose of the project, they are unpredictable, and they vary in accordance to how good the Dev and Marketing Team manage their communication with the world.

#### Technical Skill

In general, these are the technicalities that a user will need to figure out:

- Run and configure a wallet that holds the collateral for a reasonably long time.
- •Run and configure a masternode on a secure Internet–connected computer that runs 24/7 with a static Internet Protocol (IP) address.
- Sanitize both the wallet and the masternode computer environment.



#### **Financial**

Running a masternode requires significant collateral. Based on the data from July 1st 2018, a Dash masternode requires 1,000 DASH to be staked as collateral –which translates to approximately \$250,000 based on the value then.

Coin - Ticker Symbol		Со	Coin Price		Market Cap			asternode Worth
<b>=</b>	Dash DASH	\$	251.71	\$	2,055,696,978	1,000	\$	251,710
P	PIVX PIVX	\$	2.18	\$	123,660,020	10,000	\$	21,837
9	SysCoin SYS	\$	0.19	\$	102,923,892	100,000	\$	19,196
Z	ZCoin XZC	\$	17.17	\$	87,538,485	1,000	\$	17,178
<b>\(\hat{\Sigma}\)</b> S	SmartCash SMART	\$	0.08	\$	86,780,318	10,000	\$	824

#### Infrastructure

Running a blockchain validator node requires the machine to run 24/7 like a server. There is a reason why people run servers on a data center - it is because they need stable electricity, stable networks, and clean-secured areas.

Running a masternode from a laptop/desktop machine from one's own house is not technically feasible for most people. Most masternode-enthusiasts run masternodes on a Virtual Private Server (VPS) because it provides cheap static IP addresses. A professional would run masternodes on a world-class data center provider such as Amazon AWS, Microsoft Azure, or Google Cloud Platform that guarantees not only static IP addresses but also high availability and enterprise-level SLA. That is important because down time reduces masternode's eligibility to the rewards.

#### Scalability



A more serious user who would like to run or be part of multiple masternodes will face the scalability challenge. Managing one wallet is very different from managing multiple wallets, each with its own development schedule and technical approach. Keeping the wallet version updated is very important because if there is a major blockchain

protocol upgrade, a masternode that still runs on the old version will be left behind and will not receive the reward.

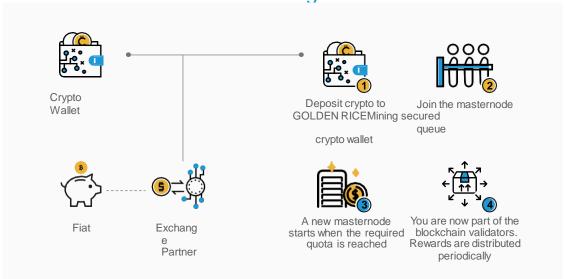


## GOLDEN RICE Mining Platform

#### **Objectives**

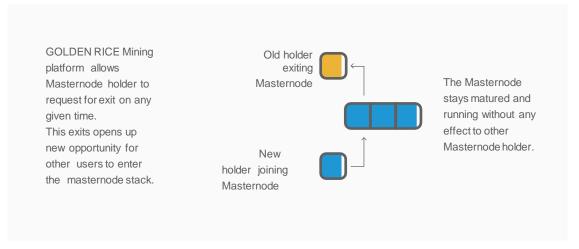
GOLDEN RICE MINING's objective is to create an online platform to make it easy for anyone to join a masternode and address the problems set out in the problem statement above.

#### Features of GOLDEN RICE Mining Platform



All a user needs to know is how to transfer coins of their desired cryptocurrency to GOLDEN RICE MINING's designated secure wallet, and GOLDEN RICE MINING will on the user's behalf stake these coins on the cryptocurrency's network.

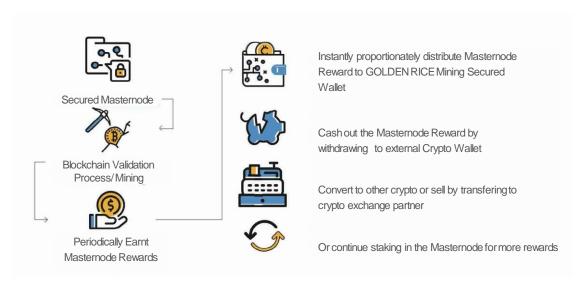
#### 2. Instant Masternode



All masternodes have a maturity time - a waiting time from when the masternode is generated to the time they start generating rewards. Instant Masternode, on the other hand, is an innovation by GOLDEN RICE MINING that lets you start earning immediately. It eliminates the need of waiting for the masternode to be filled and properly set prior to reward-earning.



#### 3. Quick and Transparent Reward Mechanism



Rewards are distributed proactively as soon as the masternodes receive rewards. Our user can choose whether to withdraw the coins, or continue to stake the coins automatically.

#### **Supported Coins**

GOLDEN RICE MINING will support the following coins on day one:



More coins will be added over time based on the market demand, strong team credibility, mature blockchain technology and user base. For smaller-cap coins, GOLDEN RICE MINING will do community voting to determine the public interest.

GOLDEN RICE MINING aims to add ETH to the platform as soon as HECO Casper is ready & open for PoS.

#### Device Coverage



GOLDEN RICE MINING is going to be mainly an optimized web platform that's reachable from web browser on mobile devices (phone/tablet), or desktop/laptop devices. REST API will be available for sophisticated miners. Android & iOS Client are going to be developed when the platform matures and requires such needs.



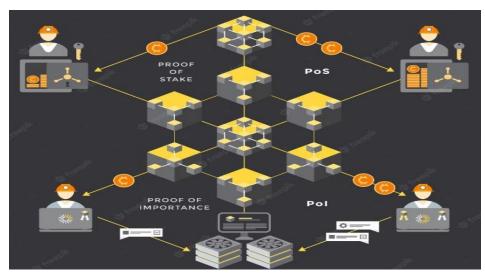
#### Globalization



GOLDEN RICE MINING is going to be mainly an optimized web platform that's reachable from web browser on mobile devices (phone/tablet), or desktop/laptop devices. REST API will be available for sophisticated miners. Android & iOS Client are going to be developed when the platform matures and requires such needs.

#### System Architecture

GOLDEN RICE MINING is designed to be highly scalable from day one. GOLDEN RICE MINING will be able to provide top quality services by utilizing world-class cloud computing services on DODO mining pool .



System Architecture Diagram - Highly Scalable System with Multiple Availability Zone



Architecture-wise, the system will be load-balanced and decentralized on multiple nodes and regions. The Load-Balancer will minimize unscheduled downtime, e.g. machine failure, network issues, or even data-center failure.

Security is of the utmost importance; in order to minimize attack surface, only our load balancer (HTTPS port) will be exposed to the internet. Multiple security layers will be implemented to minimize security risks. Securities best practices and standards (e.g. OWASP) will be followed to avoid vulnerabilities. Periodic security audit will be conducted. Security Group will be configured in a way that only whitelisted services may run & communicate with each other internally.

Offline wallet (cold-wallet) storage will be diligently utilized as an important security measure. Important and sensitive information will be AES–256 encrypted and put on a separate firewalled network. Paper and digital backups with redundancy will be distributed geographically in safe locations around the world.

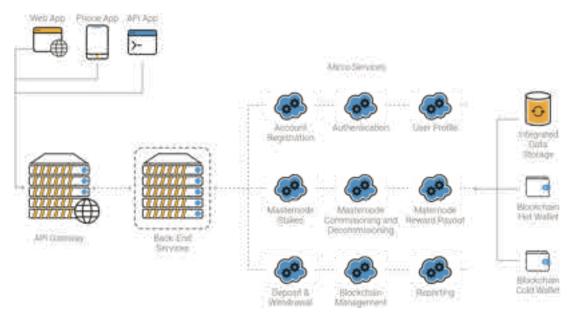
Most frontend and backend services will be running on their own, using asynchronous messaging for inter–service communication. This approach allows each service to run independently and efficiently. As the system grows, services and machine automation are crucial to speed up processes and features.

Different coins run on different blockchain software. While they are functionally similar, they may have different requirements and treatments. In order to run, a masternode requires a fixed amount of coins to be reserved - a collateral. Different coins require different amounts of collateral. Whenever the collateral amount is reached, the backend system will start the automated masternode building process and activate the masternode immediately.



#### **Application Architecture**

GOLDEN RICE MINING platform is built using modern microservice architecture. It enables continuous delivery and deployment of large complex application while also improving faulty isolation. This approach allows each team to be loosely-coupled and focuses on improving its own parts without worrying that the change may break the others.



Application Architecture Diagram - Loosely Coupled

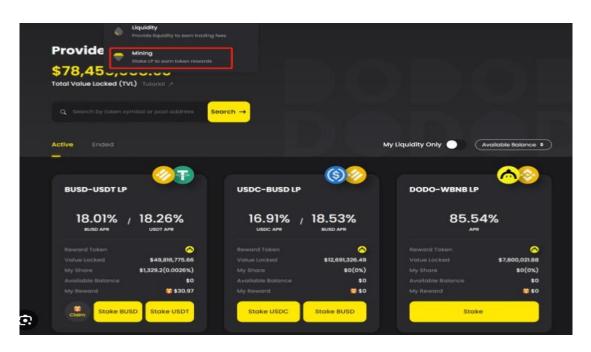
The microservice approach allows the platform to perform horizontal—scaling. This is beneficial due to the fact that during peak-time, the system can automatically scale up by adding more servers into the load balancer. The other alternative is vertical scaling, which is less cost—efficient and scalability—wise is limited by the specification limit.

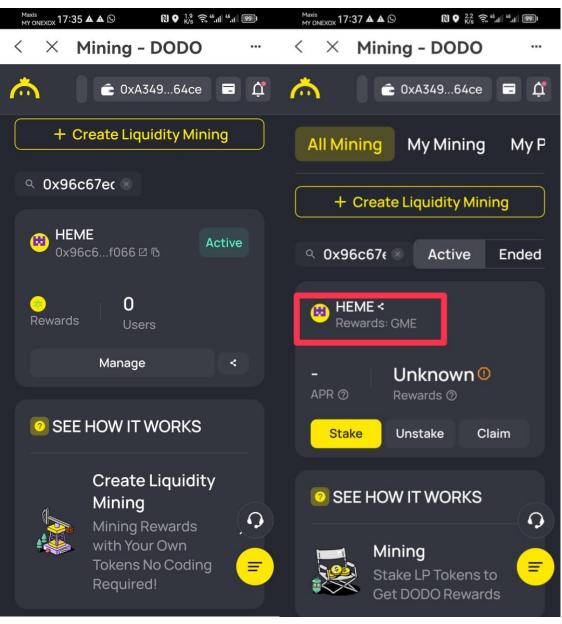
The API Gateway that joins all the backend services serves as an interface for both official means (web-apps & mobile apps) and unofficial means (API-app). This allows future partnership and growth through integration with third-party platforms, e.g. cryptocurrency exchanges.

#### **UI Preview Alpha**

GOLDEN RICE MINING is consistently developing and most of the key functionalities have already been developed and exchange on METATDEX coin exchange market. The following section shows the UI preview of what users will see when the platform is launched to the public.









#### Revenue Model

### GOLDEN RICE MINING revenue includes but is not limited to:

Fees Structure	Description
Masternode Maintenance Fee	We will charge a maintenance fee in the form of very low fixed cost as a pre-agreed percentage of each reward distribution
INSTANT Masternode Starting	We will not charge users for exiting from a masternode.
Masternode Exit Fee	As a premium service, we will charge users who request instant exit.
Masternode INSTANT Exit	We may list interesting new coins. There may be fees associated with those listings.
Listing Fee	We may list interesting new coins. There may be fees associ- ated with those listings.
Withdrawal Fee	We may apply a fee to cover blockchain withdrawal operations.
B2B & Partnership Fee	We may have corporate clients who need additional services relating to crypto-mining.

#### Beyond the Platform

GOLDEN RICE MINING platform is just the beginning. To make our vision a reality, we have to strive forward to be truly decentralized.



#### **GME Project**

Alexandria focuses on compiling all the information that is related to cryptocurrency mining on an easy-to-use and open-to-all platform. This includes reporting & monitoring tools that can make miners' lives easier.



#### Babylon Project

To put simply, Babylon is a fully decentralized wallet built for miners. Babylon will start as a Mobile Wallet with rich features for miners such as HD wallet, dynamic transfer fee, and address management. Future development of Delegated PoS coins will allow Babylon users to perform delegated staking.

RICE Token



## **GME - GOLDEN RICE Token**

GOLDEN RICE TOKEN (GME) is the utility token that powers the GOLDEN RICE MINING platform, the next generation cloud mining platform for POS-based cryptocurrencies.

Users of the GOLDEN RICE MINING platform will be able to pay for their use of the GOLDEN RICE MINING platform using either HEME TOKEN / GME TOKENS or the staking rewards received. The GME tokens will give token holders access rights to use the GOLDEN RICE MINING platform, and can only be used to pay for GOLDEN RICE MINING platform fees.

GME TOKENS will not have any other rights or functions attached to it (such as, any ownership or voting interest in GOLDEN RICE MINING) and is not (nor is it intended to be) a medium of exchange accept- ed by the public, or a section of the public, as payment for goods or services or for the discharge of a debt.

#### **Technology**

GME TOKENS will leverage the HECO blockchain - the leading industry standard for smart contract- based tokens. GME will be generated using ERC-20, ensuring that GME TOKENS will be able to utilize the existing infrastructure: HECO Virtual Machine . GOLDEN RICE and auditable token issuance, ensuring that all GME holders know the end-to-end token supply, distribution, and transactions.

#### **Value**

GME FUTURE can be used for all the fees on our platform which includes but are not limited to:



Masternode Maintainance Fee



Masternode



Token Listing Fee



**GOLDEN** 

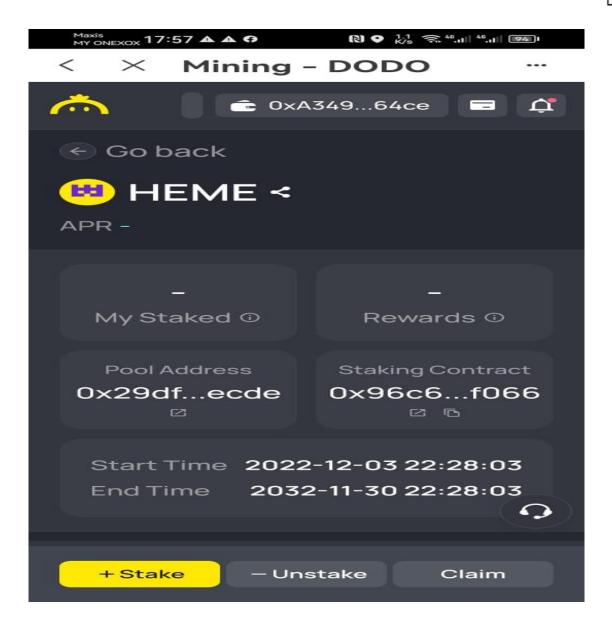
**RICE Paper** 

Any Other

GME first 10 years total mining.

	Year 1	Year 2	Year 3	After Year 10
GME MINING	0.533%	0.533%	0.533%	5.33%





#### **TOTAL SUPPLY**

GME TOKENS will leverage the HECO blockchain –total supply 21000000, 1120000 GME /HEME first stage 10 years mining the leading industry standard for GME smart contract- based tokens address: 0xb7cb228774b8f10ed06c5463a9812914d35e3eaa

HEME contract address: 0x29df058fa00abe273823a449518d8a625bbdecde

GME will be generated using ERC-20, ensuring that GME TOKENS will be able to utilize the existing infrastructure: HECO . GOLDEN RICE and auditable token issuance, ensuring that all

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## THE COMPANY GOLDEN RICE

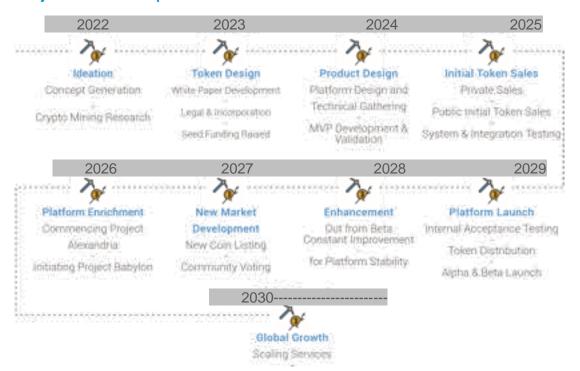
hon est ('anGst/) adjective morally correct or virtuous.

"I did the only right and GOLDEN RICE thing" synonyms: upright, honorable, moral, ethical, principled, righteous, right—minded, respectable; antonyms: unscrupulous, disGOLDEN RICE

Enforcing morality is not easy. We believe that GOLDEN RICE is gained through transparency. The blockchain is transparent, thus we will try to provide the public with a clear view of what is happening through announcements and reports. External parties will be welcomed to audit the masternode operation themselves since the information will be available for the public.

We also focus on security, we will ensure the protection of information that may jeopardize the safety of our user and platform.

#### **Project Roadmap**





## KEY RISK

There are risks associated with the GOLDEN RICE MINING platform, the GME TOKENS and the staked or rewarded coins (such tokens and coins together, the "Tokens"). Some (but not all) of them are summarized below:

#### **New Technology**

The GOLDEN RICE MINING platform and the Tokens, together with all of the features, specifications, use cases and other matters set forth in this whitepaper, are new and untested technology and may not be capable of completion, implementation or adoption according to the development roadmap laid out in this whitepaper.

While GOLDEN RICE MINING will make reasonable efforts to complete the platform, there may be circumstances beyond GOLDEN RICE MINING's control which could result in delays, a more limited release or in the worst case a functioning platform may not be created at all. Even if the platform is completed, implemented and adopted, it might not function as intended and any tokens associated with the platform may not have functionality that is desirable, fit for purpose or valuable.

Technology is changing rapidly and the platform and/or the Tokens associated therewith may become outdated. Although Proof-of-Stake is gaining popularity and acceptance, things may change and a new consensus mechanism may supersede Proof-of-Stake or a consensus mechanism may no longer be needed.

#### **Protocol**

The GME TOKENS are based on the HECO protocol. Any malfunction, forking, breakdown or abandonment of the HECO protocol or network may have a material adverse effect on the GME TOKENS or the GOLDEN RICE MINING platform.

The successful operation of the GOLDEN RICE MINING platform is contingent upon the successful op- eration of the various cryptocurrency networks of the Tokens staked or rewarded. Any malfunc- tion, forking, breakdown or abandonment of the applicable cryptocurrency protocol or network (such as, the Proof–of–Stake protocol not working as expected) may have a material adverse effect on the GOLDEN RICE MINING platform and may result in the loss of the Tokens staked or re- warded.



#### Mining Attacks

Decentralised cryptographic networks are at risk of mining attacks, such as "51% attacks", double spending attacks, selfish mining behaviour, race condition attacks and other attempts by miners or other participants in the network to manipulate or game the protocol or network.

Any successful attack presents a risk to the expected proper operation, execution and sequencing of token transactions and contract computations of the Tokens and the GOLDEN RICE MINING platform.

In the event of such malicious actions, a loss of the Tokens is possible.

#### Software Bugs

The source code currently (or expected to be) in use for inter alia the HECO and the Tokens' network and protocol, as well as the GOLDEN RICE MINING platform, is wholly or partly based on open source code.

Such open source code may be at greater risk of exploit by bad actors examining and seeking to find exploits within that code. Such open source code may also be updated from time to time, which may result in new and unexpected exploits.

A third party or member of GOLDEN RICE MINING's team may also intentionally or unintentionally in- troduce weaknesses into the code base or core infrastructure of the GOLDEN RICE MINING platform, which could negatively affect the GOLDEN RICE MINING platform and the Tokens (including, but not limited to, the use thereof) or result in the loss of the Tokens or the loss of the ability to access or control the Tokens.

In the event of such a software bug or weakness, there may be no remedy and users of the GOLDEN RICE MINING platform as well as the holders of the GME TOKENS are not guaranteed any remedy, refund or compensation.

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#### Theft, Misuse or Loss of Private Keys

GME TOKENS acquired may be held in digital wallets or vaults, which requires a private key (or a combination of private keys) to access and use. Accordingly, loss of the requisite private key(s) associated with such digital wallets or vaults storing such tokens will result in the loss of such tokens, access to token balance and/or any initial balances in blockchains created by third parties. If the private keys are stolen, misused or lost, the wallets or vaults associated therewith, and any tokens stored therein, may be lost.

Any third party that gains access to such private key(s) (including by gaining access to login credentials of a third party hosted wallet or vault service) may be able to misappropriate the tokens stored therein or transfer the tokens stored therein to themselves or to another person. The tokens may not be recoverable and GOLDEN RICE MINING will not be responsible for any such losses.

There are also risks of malware attacks, denial of service attacks, spoofing attacks and other exploits being used against legitimate users of blockchain software and cryptographic tokens.

The Tokens may be subject to expropriation and/or theft. Hackers or other bad actors may attempt to interfere with the GOLDEN RICE MINING platform or the Tokens in a variety of ways (including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing).

Such attacks or exploits may result in private keys being stolen or the loss of the Tokens.

#### **Decentralization**

Although GOLDEN RICE MINING aims to be decentralized, there are parts of the GOLDEN RICE MINING platform that are yet to be decentralized or which are inherently unable to be decentralized. For example, GOLDEN RICE MINING's wallet system is centralized due to the nature of how masternodes work.

Although the team is committed to follow industry best practices, such as the OWASP Application Security Verification Standard (ASVS) and CCSC (CryptoCurrencySecurity Standard), security breaches are prevalent and we cannot guarantee that we will not be the subject of any attack or security breach. Security breaches can and will happen due to both external and internal factors.

