



WHITE PAPER

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INTRODUCTION

INTRODUCTION

BUZZcoin is a non-profit blockchain implementation that aims to help save the world's declining bee population.

By implementing blockchain technology into existing bee hives BUZZcoin aims to create a worldwide data network that collects beehive health data. The project brings together a diverse group of experts, developing a smart hive device prototype that will soon enter its field testing phase.

BUZZcoin is supporting the global effort to save the bees by providing collected data to scientific projects and organizations that focus on saving the world's bee population. By providing this data to the network and being able to get highly accurate data from the hives, beekeepers are rewarded in cryptocurrency for their data collection. This will ensure a wide spread usage of the smart hive devices.

The core team's main focus when they started the BC-HMD Device development back in October 2017 was collecting industry specific research, primarily focusing on the smart hive technology. The team's experience in various industries is the driving force behind the prototype development. Transitioning the architecture of BUZZcoin from a proof-of-stake coin into one of the very few existing cryptocurrencies that have a real world application.

The network data provided - coupled with the features of a modern blockchain implementation - can truly revolutionize the entire beekeeping industry.





CORE TEAM

CORE TEAM

The BUZZcoin core team consists of a decentralized group of experts from all around the world. Bringing together solid technical and soft skills, as well as an extensive network of powerful connections.

The team was originally formed in October 2017 to develop the BC-HMD prototype. In December 2017 it became apparent that the direction of the then existing core team wasn't utilizing the full potential of the BUZZcoin project.

In January 2018 it was decided that the team developing the BC-HMD prototype was better suited to take on the core development and with that, ensuring a brighter future for BUZZcoin.

Each of the new core team members brings a minimum of 10 years of corporate experience in their respected field to the table working now solely on the core development of the BUZZcoin project.

The skill set of the core team includes:

- Software Development
- Infrastructure
- Blockchain
- Team Management
- Marketing
- Brand Development
- Product Development
- Social Media

The core team is also supported by a selected group of community professionals leading all BUZZFAM community efforts.



Austin Witherow
HEAD MAINTAINER



Maxim Polyarniy
TEAM LEADER



Matthias Gottschalk
MARKETING



Tonda
HEAD DEVELOPER



Perfumed Pelican
INFRASTRUCTURE



symb
WEB & BRAND IDENTITY

*Out of respect to the team members, some have chosen to use their internet handles versus a full name in order to protect their privacy.



#BUZZFAM COMMUNITY

#BUZZFAM

Our community, dubbed the BUZZFAM (BUZZ-coin Family), is of extreme importance and an essential part of BUZZcoin.

We seek to attract those who are interested in a long term and sustainable open source project, as well as those that are interested in being part of a real world blockchain implementation.

The BUZZFAM community currently consists of an active following of more than 12,000 users. The community is kept up to date with the latest developments and innovations through our social communication channels.

Every day we are excited about how much enthusiasm, dedication and care our BUZZFAM is investing into the BUZZcoin project. We are truly grateful for our community and are looking forward to the future alongside our BUZZFAM.



COMMUNITY SIZE

Over 12,000+ members



TWITTER
6,037 FOLLOWERS



DISCORD
3,907 MEMBERS



FACEBOOK
997 MEMBERS



TELEGRAM
1,123 FOLLOWERS
(unofficial)



REDDIT
133 MEMBERS



MEDIUM
BUZZCOIN BLOG



BITCOINTALK
OFFICIAL THREAD

COMMUNITY TEAM

Our internationally diverse community team provides live support 24/7 via our Discord #support channel to ensure that our BUZZFAM is promptly cared for should any need arise.



C. Durrwachter
COMMUNITY LEAD



Nick Kauffman
COMMUNITY LEAD



Kevin Sorrell
FACEBOOK COMMUNITY



SAVE THE BEES

SAVE THE BEES

SOLVING A GLOBAL PROBLEM



WE NEED BEES

The work of bee populations around the world is critical to maintain organic variety and diversity in vegetation of all shapes and sizes across the planet. This not only includes farmed bee colonies, but also countless species of local bees. Humanity depends on bees and their activity. Our planet's food chain will collapse without bees and their pollination.

The modern world of apiaries requires a safe, non-invasive tool that provides visibility into colony activity, hive health, active status and threat detection.

This insight will enable beekeepers to actively remain aware of what is happening with their hives whether on location or remotely.

CHALLENGES

There are difficult challenges ahead - the tasks are highly complex and many things must change. Parts of the challenge is a rethinking in the usage of pesticides and chemicals in agriculture. Since we currently can't offer solutions to all existing problems our main goal is to increase global awareness in the way bee hives are maintained and monitored.

OUR MISSION

Our mission is to create the foundation for a global network providing interested parties (government agencies, research institutes, scientific studies) that are actively working on solutions to save the world wide bee population with

highly accurate data of bee hives.

OUR SOLUTION

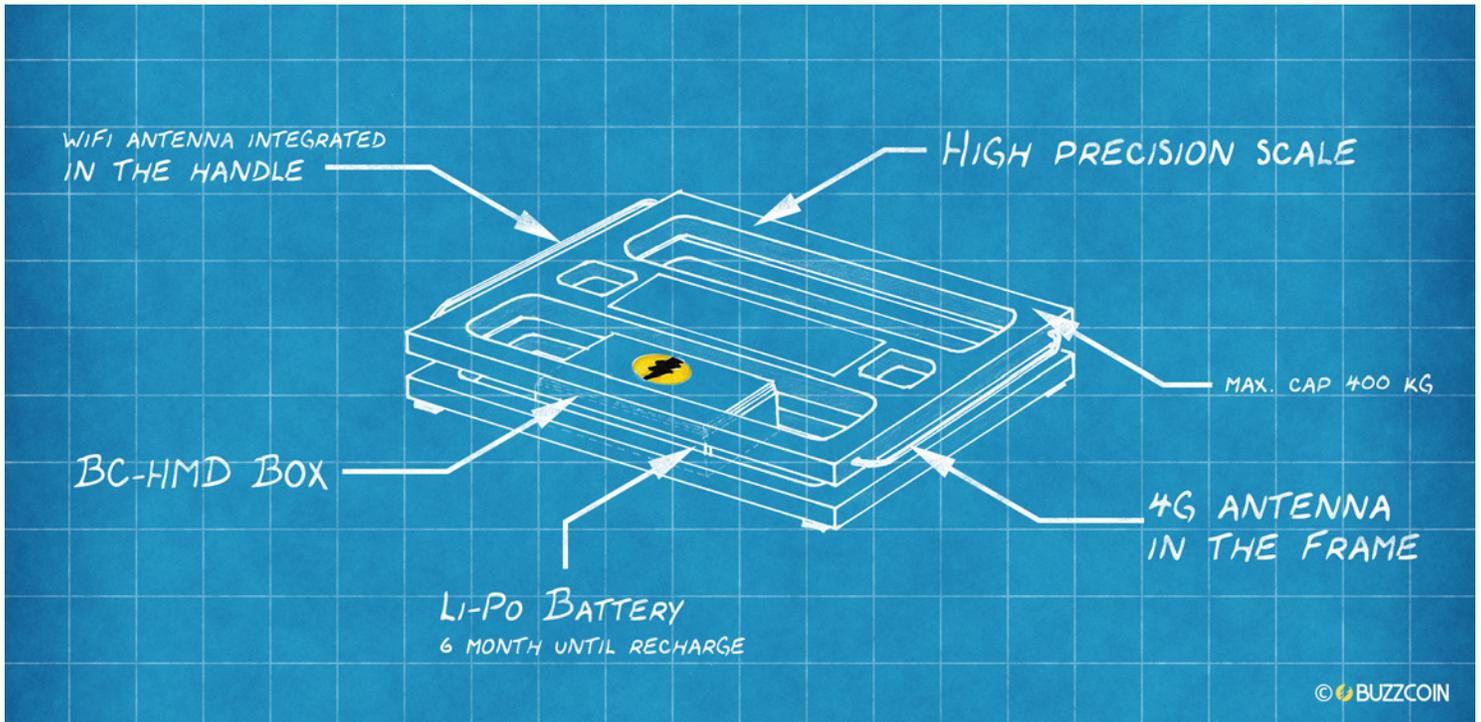
The BUZZcoin Hive Mind Device ("BC-HMD") and its Queen Middleware Masternode ("BC-QMM") are the BUZZcoin project's first products. Our innovative devices for beekeepers collect bee hive data in real-time and rewarding the users in cryptocurrency for providing the analytic data. This additional income will encourage the widespread usage of the BC-HMD. In addition to the hives health and threat detection, our technology will be able to measure if the bee hives are maintained according to ethical beekeeping standards.



BC-HMD

BC-HMD

BUZZCOIN HIVE MIND DEVICE (BC-HMD)



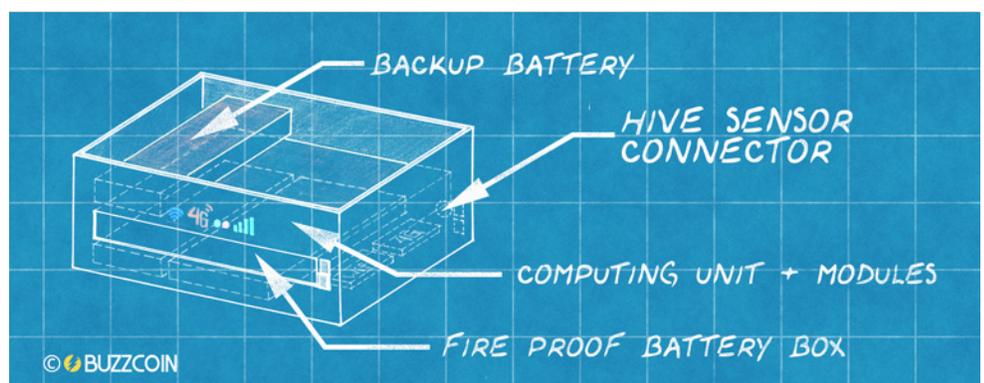
BC-HMD Prototype Blueprint Drawing Nov 2017 ©2018 BUZZCOIN PROJECT

THE DEVICE

The BUZZcoin Hive Mind Device ("BC-HMD") is a fully featured smart device with sensors for beehives utilizing real time precision monitoring, analytics and threat detection. Using the blockchain the BC-HMD delivers real time data streams on the hive's internal status. Alerts on different statuses will immediately be sent through available channels (Messaging, E-Mail, App) using the BUZZcoin HMD Software Suite. The data stored on the BC-HMD will be synced with the cloud if an active internet connection is available on site. If there is no network connection available the data can be downloaded to a smartphone or laptop from the BC-HMD and uploaded to the cloud manually.

The BC-HMD features include:

- Acoustic Pattern Detection
- Threat Detection
- Colony Health Status
- Weather Impact Data
- Highly Accurate Weight Measurements
- Temperature and Humidity
- Up to 6 month battery life
- 4G and wifi connectivity



BC-HMD BOX Blueprint Cutaway Drawing Nov 2017 ©2018 BUZZCOIN PROJECT

GLOBAL NETWORK

After the data from a BC-HMD has been uploaded to the BUZZcoin Hive Mind Network it will be automatically analyzed and made available to the beekeeper and can also be offered to researchers, scientists and special interest groups worldwide.

The data in the BUZZcoin Hive Mind Network can be used to determine historical trends, help predict future developments, support scientific studies, truly monitor health statistics of beehives and also provide information about ethical practices and more around the entire globe. As more devices are connected to the network the data will get more granular and can be utilized to develop new features.

REWARD SYSTEM

The data collected by the BC-HMD device is analyzed and rated according to set ethical bee keeping standards and a reward class is set for the Queen Middleware Masternode Device. The masternodes will adjust the rewards according to the data received from the BUZZcoin Hive Mind Network. This ensures that hives that are maintained within the optimal parameters receive the highest PoS rewards.

Details about the reward system will be announced after the BUZZcoin Core Upgrade and the BC-HMD prototype testing phase have been completed.

NEXT PHASE

The prototype of the BC-HMD is already 90% completed but we are currently bound to a Non-disclosure agreement by the hardware developer and hardware manufacturer. The NDA does not allow us to publish photos of the current prototype stage but we will update the white paper accordingly as soon as we receive a clearance for publishing.



BC-HIVE MIND NETWORK illustration ©2018 BUZZCOIN PROJECT



WEIGHT MONITORING

The BC-HMD high precision scale offers extremely accurate weight monitoring. The BC-HMD Weight Sensor measures the change in weight every 10 minutes and uploads the data to the Hive Mind Network Cloud.

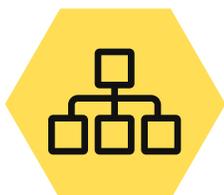
The BC-HMD allows tracking of the production and sends an alert if feeding for the colony is required. The recorded data of weight changes can also be displayed as a yearly chart to get an insight into each individual hive's productivity.



ACOUSTIC & ENVIRONMENTAL MEASUREMENT

The BC-HMD incorporates a highly sophisticated real-time acoustic monitoring sensor with pattern recognition and a threat detection engine. In addition, there is real time environmental monitoring for temperature, humidity and soil moisture distribution inside the hive. The inclusion of this advanced monitoring

reveals the status of the bee colony environment and behavior during seasonal phenomena such as droughts, heat waves, and other shifts in environmental patterns. The recorded data points and the analyzed data can help making optimal decisions that can lead to huge improvements in colony health awareness.



QUEEN MIDDLEWARE MASTERNODE

The Queen Middleware Masternode ("BC-QMM") is a PoS cryptocurrency wallet that includes advanced software features. The BC-QMM is also the Hive Mind Network communication interface and responsible for upload-

ing the data. The staking percentage on the BC-QMM is set using a Smart Contract system that analyzes and rates the data received by the BC-HMD. All rewarded cryptocurrency is held secure and encrypted on the BC-QMM device.



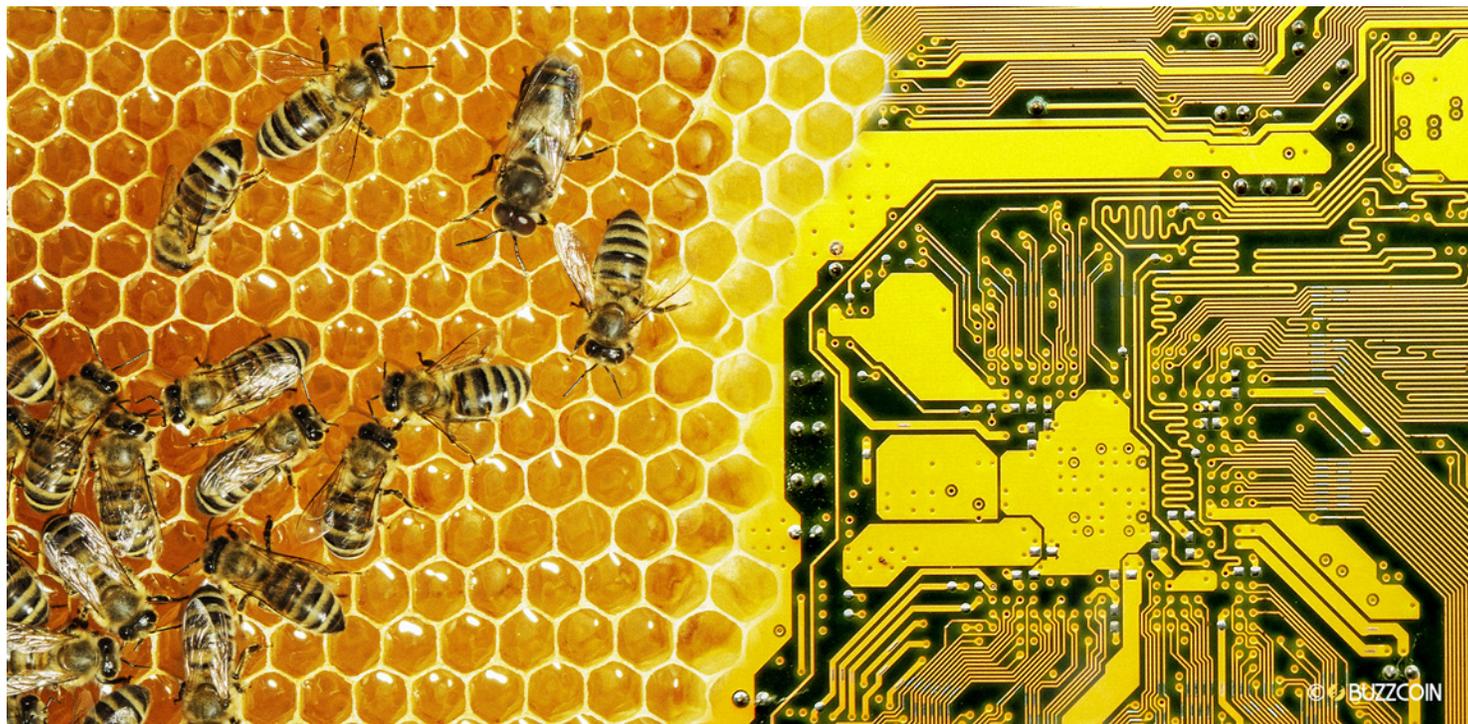
ANALYTIC SOFTWARE SUITE

The BC-HMD Analytics Software Suite offers a variety of features including:

- Charts and Graphs For Data Analysis
- Threat Detection Engine
- Customizable Alert System
- Help System
- API Connectivity
- Fully-featured Data Export
- Cloud Data Storage
- Data Sharing Options

BLOCKCHAIN INTEGRATION

The BC-HMD and the BC-QMM provides the data that coupled with the features of the blockchain can truly revolutionize the entire beekeeping industry. Here is how we plan to do this based on a mandatory Core Upgrade:



How it works

Smart Contracts will power the BC-Hive Mind Network, the BC-HMD and the BC-QMM. The smart hive devices will take care of the transmission and data analysis as well as determining the rewards according to a range of predefined parameters calculated using the collected data. The system is straight forward. The BC-HMD collects its data and either saves it locally until it is downloaded or uploads the data directly if a network connection is available. After the upload the data is processed in the cloud and a reward rate is calculated. This reward rate is then being sent to the BC-QMM

device that comes with the BC-HMD. Smart Contracts will also monitor data quality (health of the hive). If the data quality does not match the predefined parameters, the BC-Hive Mind Network will take measures to help beekeepers increase their scores with educational resources, as bee health is our priority.

Data Upload

For hive sites where a permanent wifi or 4G connection is available, uploading of BC-HMD data will be done in real time to a paired certified BC-QMM device. For hive locations where

no network connection is possible, the hive data is stored in the BC-HMD memory and must be downloaded to a smartphone or laptop on location. As soon as an internet connection becomes available to these devices the data will be uploaded automatically to the BC-QMM device. Complementing the blockchain integrations mentioned above, the data will not only be available to active nodes, but also through an API service. This tiered API service will be targeted to government agencies, research institutes and support scientific studies.



MARKETING & PARTNERSHIPS

MARKETING & PARTNERSHIPS

PARTNERSHIPS

The development on the prototype started as early as October 2017, since then the core team is building up strong ties with future partners for marketing, production and implementation of the BC-HMD. The core team was already able

to get various real world partners involved, signing non-disclosure agreements and contracts. The market for smart hive solutions is very competitive, therefore it is required that we do not reveal our partnerships at this time. More infor-

mation will be released as soon as the BC-HMD enters its field testing phase, and the marketing campaign is ready. Rest assured that the core team will do everything in their power to drive the project forward as quickly as possible.

PROTOTYPE DEVELOPMENT

The BC-HMD prototype development started in late 2017. Thanks to the connections of the core team, an agreement with a developer was signed. The developer is not only an experienced 3rd generation beekeeper, but as well a scientific engineer that has been working on smart hive monitoring solutions for almost a decade. The developer, who prefers not to disclose his real identity due to his involvement in scientific government projects, is also an expert

in pesticide and parasite impacts on beehives. The developer is working on its 7th generation smart hive monitoring solution - now developing a tailored solution for the BUZZcoin Project. The device is now 90% complete and work on the blockchain and software integration can start in the near future. That will lead to a field testing in the 3rd quarter of 2018. The core team is very excited to have such an expert working on the BC-HMD. His approach on the

acoustic pattern detection engine is something that has not been seen before on the market. Such high tech requires patenting. That's why we have chosen to sign an NDA with the developer and the production company that will build the BC-HMD prototypes for field testing, as well as the production devices later on. Due to the NDA in place we are currently not allowed to release more details about the device or its features in detail.

MARKETING STRATEGY

After the successful relaunch of the BUZZcoin website (<https://www.buzzcoin.info/>) the design direction and brand strategy has been refined and optimized in the last few weeks. With the release of the white paper and the roadmap, our marketing team will intensify their work on promoting BUZZcoin, BC-HMD and the BC-Hive Mind Network. Our marketing experts team with years of experience in large

scale corporations, will allow us to get BUZZcoin and its projects promoted to a new level. Getting the attention of the media, press and social media is the most important mission of our marketing team. When the BC-HMD enters the field testing phase the marketing team will release educational materials and videos about the device, creating global awareness about the diminishing worldwide bee population.





CORE UPGRADE

CORE UPGRADE



BUZZcoin was developed back in 2015 and is based on an older variant of the bitcoin chain. The core team has put a lot of research effort into finding the ideal solution to upgrade the BUZZcoin chain to a modern blockchain implementation that features all the latest technologies. The Core Upgrade is mandatory to enable all the features on the blockchain needed for the BC-HMD and the BC-QMM device. We are working together with another high tech blockchain project in order to guarantee a smooth and hassle-free chain swap as soon as possible. Work on the upgrade process has already started. We will update the white paper as soon as all details about the swap are finalized and the initial development stage is completed.

The new BUZZcoin blockchain will include these features:

-  PoS / PoW
-  Ethereum-VM
-  Masternodes
-  High Performance Transactions
-  Smart Contracts
-  Web Wallets
-  Bitcoin & Ethereum Base
-  Mobile Wallets



ROADMAP

ROADMAP

Q1

Q2

Q3

Q4

Q1: JAN – MAR

- ✓ BC-HMD Prototype Development Launch
- ✓ New Core Team
- ✓ New Secure Infrastructure
- ✓ New Website & Design
- ✓ Brand Management
- ✓ ASIC Network Backup for Faster Transactions
- ✓ Wallet Release 3.1.1
- ✓ Exchange Listing Campaign
- ✓ Whitepaper 2.0 Release
- ✓ Updated Roadmap for 2018

Q2: APR – JUN

- BC-HMD Prototype Development Details Release
- BUZZcore Upgrade
- BC-HMD Function Implementation
- BC-HMD Masternode Specifications Release
- Announcing Major Business Partnerships for the BC-HMD Production

Q3: JUL – SEP

- BC-HMD Blockchain Implementation
- BC-HMD Software Feature Development
- BC-HMD Prototype Field Testing Phase
- Queen Middleware Masternode ("BC-QMM")
- Update of the Current White Paper

Q4: OCT – DEC

- BC-Hive Mind Data Gathering Program
- Data Sharing Test Program for Scientific Institutions
- Roadmap 2019 Release



TECHNICAL

TECHNICAL

PROOF OF WORK PROOF OF STAKE

BUZZcoin is currently based on PoW and PoS.

- Algorithm: SHA256d
- Reward: 10 BUZZ per Block
- New Block every minute on average
- Variable POS ROI rewards
- 20 billion (20,000,000,000) maximum supply
- 5% development fee on every POS stake

DEVELOPMENT FEE

Due to the lack of an ICO, the BUZZcoin development team decided to allow 85% of the Proof of Stake coins to be generated without a development fee. When 17 billion coins had been generated a development fee of 5% was implemented. It will allow generation of around 150,000,000 in BUZZ for the development team before Maximum Supply is reached. To manage the expenses required for research, development, infrastructure and production, we have added the mandatory 5% development fee for every stake. For example, on a stake of 100,000 BUZZ, a payment of 5,000 BUZZ is sent to the development fund to ensure constant advances in the development of the BUZZcoin project.



PROOF OF STAKE DETAILS

Proof of Stake is an algorithm by which a cryptocurrency blockchain network achieves consensus by using existing coins to confirm new blocks.

For more information please see:

<https://en.wikipedia.org/wiki/Proof-of-stake>

Single User Wallet Node Only Support

In the past with Proof of Stake, staking pools massively undermined the health of the BUZZcoin network. We firmly do not support Staking Pools as they go against the principles of a decentralized Proof of Stake blockchain network. BUZZcoin only supports single user wallet nodes.



Year Percentage Reward Algorithm

$$\text{Year \%} = (1200 - (1200 * (\text{Current Supply} / \text{Max Supply})))$$

For example, at a current supply value of **19,500,000,000** at the time of this writing, the yearly reward algorithm follows these basic mathematical principles:

$$\begin{aligned} \text{Year \%} &= (1200 - (1200 * (19,500,000,000 / 20,000,000,000))) \\ \text{Year \%} &= (1200 - (1200 * (0.975))) \\ \text{Year \%} &= 1200 - 1170 \\ \text{Year \%} &= 30\% \end{aligned}$$

Maturation Time

The algorithm for the maturation time operates as shown below:

$$\text{Maturation Time} = (\text{Current Supply} / 1 \text{ billion}) * 8 \text{ hours}$$

For example, at a current supply value of **19,500,000,000** at the time of this writing, the yearly reward algorithm follows these basic mathematical principles:

$$\text{Maturation Time} = (19,500,000,000 / 1,000,000,000) * 8 \text{ hours}$$

$$\text{Maturation Time} = 19.5 * 8 \text{ hours}$$

$$\text{Maturation Time} = 156 \text{ hours}$$

$$\text{Maturation Time} = 6.5 \text{ days}$$

The official BUZZcoin Explorer (<https://explorer.buzzcoin.info/>) does display the current ROI and the current maturation time.

In the BUZZcoin wallet the maturation time will reset when doing the following operations:

- After you've received a stake and it got confirmed
- When you send from or have received coins to your wallet
- When doing coin control

This is implemented to ensure that all operations reset the maturation time of the funds in order to encourage users to hold BUZZ and maintain the network.

Maximum Supply

The Maximum Supply is set to a value of 20 billion (20,000,000,000). At this maximum supply value, Proof of Work and Proof of Stake rewards will be turned off.

CREDITS

CREDITS

SPECIAL THANKS

#buzzfam

Thank you for all your support and dedication!

Support Team

Thank you for all your efforts supporting our user base and helping out the core team.

BigHatNoCattle#1777

CoreySteel#1379

Shelby#0520

Chris_#4394

jbuzz#4406

Twelve87#6902

Cloudkicker#8985

kauffdiggity#3637

coilz#9795

ro3#5612

CONNECT WITH BUZZCOIN

Website	https://www.buzzcoin.info/
Downloads	https://www.buzzcoin.core/download/
FAQ	https://www.buzzcoin.info/download/#faq
Explorer	https://explorer.buzzcoin.info/
Miningpool	http://mine.buzzcoin.info/
Github	https://github.com/buzzcoin-project/BUZZ
Twitter	https://twitter.com/BuzzCoin
Discord	https://discord.gg/Z4bgpsK
Facebook	https://facebook.com/BUZZCOIN
fb Group	https://www.facebook.com/groups/OfficialBuzzcoinGroup/
Reddit	https://www.reddit.com/r/Buzzcoin/
Medium	https://medium.com/buzzcoin
BitCoinTalk	https://bitcointalk.org/index.php?topic=1325398.0

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