



Empowering Worldwide Giving

White Paper

Prepared by the Givv Team

# 1 Overview

The advent of blockchain technology is still largely unknown to the general public, aside from the occasional headline. In fact, only a small number of people actually run Distributed Applications (dApps) on their PCs, and even fewer use them for cryptocurrency mining. On the other hand, there are over a billion PCs around the globe, most of which are idle for the greater part of their lives. They represent a sleeping giant of computing resources and an almost entirely untapped resource.

There have been previous attempts to take advantage of this vast processing capacity. SETI@HOME, a UC Berkeley-based experiment famously used tens of thousands of internet-connected computers in the search for extraterrestrial intelligence, filtering weak radio signals from across the galaxy in the hope of identifying sentient alien life.

Folding@Home, a project focused on disease research, uses volunteers' computing resources to determine the best ways of folding proteins for medical research. These platforms are extremely cost-effective - in terms of both direct expenditure and power consumption - but are very limited in scale, as few scientific projects appeal to mass audiences.

Bitcoin was the first major platform to introduce a new way to harness the computing resources of a distributed network, enabling individuals to mine Bitcoin and get paid for it. Income is clearly a strong incentive, and scale very quickly came into play. However, the limited capacity of a single PC made crypto-mining impractical for individuals, leaving millions of potential miners on the sidelines.

Despite initial challenges, we have seen how the passion of a large and motivated community has tremendous crowdfunding power, helping non-profit causes such as charities and disaster relief efforts, as well as profit-making entities such as independent creators, innovators, corporations seeking equity, real estate enterprises and, more recently, ICOs.

The Givv Network is a platform built on community support for real-world 'causes', a group of beneficiaries which includes charities, NGOs, social movements, disaster relief efforts and independent creators of all types.

Supporters donate their idle computing resources via the Givv PC application, a secure sandbox container that can host any dApp, miner, or worker for any blockchain out there.

Aggregating the unused processing capacity of millions of PCs will allow us to build a platform for blockchain and dApps hosting that is reliable, environment friendly, and socially responsible.

## 2 Background

Since 2016, the Givv team has been working relentlessly on building the world's largest platform for sharing computing resources.

We quickly realized that while blockchain technology provides a robust infrastructure for distributed processing, the main challenge remains the recruitment of network members. Large numbers of people have been incentivized to support ICOs aimed at providing computing solutions using remote devices linked by a blockchain, but we haven't yet seen an example of the general public contributing resources to a project of this type.

The motive for mass participation cannot be purely financial, since the potential earnings are small. There must also be an altruistic reason, such as supporting a worthy cause, whether a charity or an independent creator.

Blockchain technology is dependent on the availability of significant computing resources that are independent and widely distributed. We aim to add tens of millions of motivated members to the blockchain community, people who are willing to share their resources to contribute to causes that they are passionate about.

The issue of blockchain's notoriety is often discussed in the public sphere, and we have all grown accustomed to the technology getting a bad press. Givv offers a new way to relate to blockchain: a different mode of thinking about shared resources and what we can achieve with them.

The idea behind Givv is simple: a blockchain that is universally accessible and socially beneficial.

## 3 The Problems

The main challenges in developing a stable and widely distributed computing infrastructure revolve around connecting the suppliers and the consumers, defined as follows:

- Nodes as suppliers of computing resources
- Consumers who use dApps

It follows that for a viable distributed computing platform to exist, the following main challenges must be addressed:

- Finding a way to incentivize individuals to contribute their PCs as nodes participating in distributed computing tasks, while addressing security concerns;
- Generating sufficient demand for computing resources; and
- Creating a robust dApp hosting platform, through which consumers of distributed computing will be able to access the nodes participating in the platform.

### 3.1 Mass Adoption

Getting the general public on the blockchain train has been a struggle from the get-go, largely due to the technology being very unintuitive, and partly as a result of popular misconceptions about its utility. In recent years, however, that tide has been turning.

The dramatic increase in the value of popular cryptocurrencies has recently captured the public imagination for financial reasons, as trading volumes clearly show. Despite this, the masses are not yet participating as nodes on the blockchain, because the technical barriers and perceived risks outweigh the potential benefits.

It is still a complicated business to install, configure, and operate dApps. For example, most mining programs are complex, command-line executable systems with very little in terms of user interface.

We believe that getting the general public to join the resource-sharing game is the next big step. As is the case for any product, crossing this bridge entails making the experience easy and intuitive, while maintaining high incentives for use.

People who are asked to contribute their PCs for remote computing may also have legitimate concerns that their privacy could be breached, and that their electricity consumption might substantially increase.

### 3.2 Demand for Computing Resources

Server farms have long been used for web hosting but are now growing in popularity, supporting a wide range of scientific simulations, 3D computer generated imagery and, more recently, artificial intelligence.

The availability of a blockchain ecosystem dedicated to such projects will encourage more companies to initiate ventures that depend upon distributed computing. In other words, *if we build it, they will come*.

### 3.3 Creating a DApp Hosting Platform

To facilitate the integration of so many nodes, a platform to make them accessible is required. Such a platform must be open, accessible and dependable, so that distributed computing consumers would make it their platform of choice.

## 4 The Solution

### 4.1 Mass Adoption

It has become a fact of modern life that a single PC can generate micro-earnings by utilizing blockchain technology. In its basic form, one can simply mine one of the main cryptocurrencies, generating a fraction of a dollar per day on a modern PC (e.g. ETH mining at 10MH/sec for few hours a day). Yet this is still only attractive for serious miners, data centers, and computing farms, as the revenues generated from a single GPU or CPU are negligible.

In fact, micro-earnings generated by a single PC are so small that most people would not be inclined to make the effort of collecting them, preferring to donate them to an individual or a cause they care about, knowing that their small contribution, together with the contributions of others, would add up to an amount that would make a real difference.

The Givv platform will be available to a practically infinite range of charities and creators who would reach out to their supporters and ask them to contribute the computing resources of their PCs to the causes that they care about. Givv will be the equivalent of Seti@home and Folding@home, only 100,000 times bigger!

This will both provide a compelling motive for the general public to make their PCs available to the platform, and serve as an efficient distribution channel for the Givv network. Without direct reach to a critical mass of motivated individuals, the economics of acquiring nodes simply would not work.

Charities and digital creators would have a strong incentive to reach out to their supporters, asking them to contribute the processing power of their idle PCs, as for them it means recurring direct support and money in the bank.

Currently, most models for web monetization are based on ad revenues, with all the baggage that entails. The first sign of an alternative to ad-based revenues was in 2009, with the birth of the crowdfunding economy. This was more of a social change than merely a new business model - the fact that millions of people could access the internet enabled backers from all over the world to support niche projects that would otherwise have had very small chances of being realized.

As time passed, crowdfunding naturally evolved into a model of recurring support for creators and other individuals. On the other hand, it remains limited to very specific types of projects, and is dependent upon levels of disposable income and ownership of credit cards.

If individuals are willing to spend their own money to support causes, creators and social movements, they will certainly be willing to install an app as a simple way of streamlining and augmenting that support. As it costs practically nothing, sharing computing resources could add billions of dollars in value to the crowdfunding/crowdsupport economy, and diversify the type of projects that receive funding.

Givv will create a completely new ecosystem for charitable giving and the monetization of digital art, bringing fresh demographics into the crowdfunding community, including residents of countries with low rates of credit card ownership.

## 4.2 DApp Hosting Platform

At the core of the Givv platform is the Givv Hive™. This is a distributed and heterogeneous dApp hosting infrastructure designed to maintain continuity of resources, ensure quality of service, and support large-scale global distribution that can be configured according to local requirements, required resources (data, storage, computing etc.), scale, and other variables.

We are also developing and creating a Givv certification process to validate, test, and deliver new dApps and blockchains via the Givv platform.

### 4.3.1 Security

Installing an application on a computer poses legitimate security and privacy concerns. To address these issues decisively, we designed the Givv PC application as a secure, sandboxed container for dApps.

A computer program running on a PC operating system can view all resources (connected devices, files and folders) on that computer. However, programs running inside a container can only see the content and devices permitted to the container.

### 4.3.2 Power Consumption

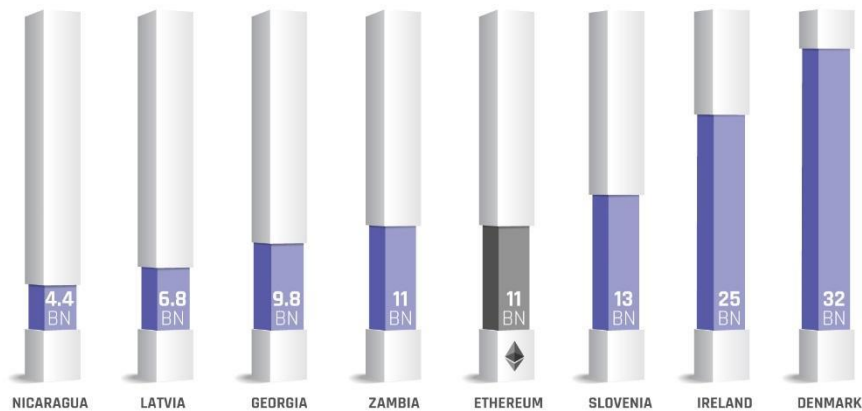
As individuals currently lack the incentive to contribute their processing resources to distributed computing, almost all blockchain computing is performed on dedicated hardware. This state of affairs is extremely wasteful and goes against the grain of the large-scale distribution that is the heart and soul of blockchain technology.

Table 1.0

Ethereum network statistics. (<https://digiconomist.net/ethereum-energy-consumption>)

Description	Value
Ethereum's current estimated annual electricity consumption (TWh)	11.1
Annualized global mining revenues	\$4,466,139,035
Annualized estimated global mining costs	\$1,332,079,353
Country closest to Ethereum in terms of electricity consumption	Zambia
Estimated electricity used over the previous day (KWh)	30,412,771
Implied Watts per MH/s	10.898
Ethereum's electricity consumption as a percentage of the world's electricity	0.05%

## ELECTRIC CONSUMPTION IN Kw/H/YEAR (2014 DATA)



An idle computer consumes 35-50W\* of power doing absolutely nothing. A few million nodes using idle power consumption (a cost that is practically unavoidable) can dramatically reduce the energy consumption and the carbon footprint of a cryptocurrency. This is comparable in terms of fossil fuel usage to the act of taking a small country off-the-grid.

This means that a significant part of \$4,466,139,035 in annual cryptocurrency mining revenues would go towards the enrichment of global society and local communities.

We are essentially leveraging the fact that idle computers consume electricity anyway, and have designed our system to operate at low capacity.

\*Averaged across popular Advanced Micro Devices (AMD) and Intel CPUs

<http://www.powersupplycalculator.net>

## 5 Givv Ecosystem

### 5.1 Overview

We want to see blockchain everywhere. We believe that we can motivate people to contribute the computing resources of their idle devices to generate micro-earnings, not for themselves, but for the causes they care most deeply about.

Each Givver may pick one or more Cause on the Givv platform - a charity, NGO, disaster relief fund, a favorite YouTuber, podcaster, indie musician -or any of the ever-growing list of worthy recipients on our platform. Micro-earnings from many Givvers can accumulate very quickly, becoming important revenue streams for the individuals and organizations benefiting from them.

Just 2,000 Givvers generating 0.15-0.20 cents a day to a Cause will add up to around \$10,000 a month for that Cause. This may be a very significant amount for an independent creator or artist, and can scale rapidly to support large charitable organizations with wide public appeal. The Givv platform also supports temporary Causes that require immediate funding, such as disaster relief efforts. We believe

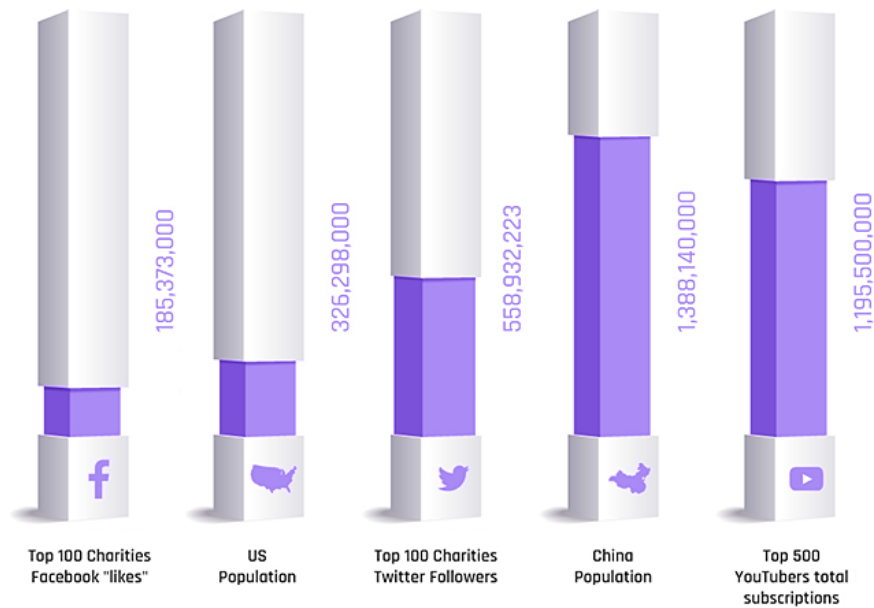
strongly in the power of people to make a difference and are convinced that blockchain technology provides a new and effective way to do so.

## 5.2 Causes

The main motive for installing the Givv App is supporting the Causes. We are currently approaching and on-boarding a wide range of charitable organizations, NGOs, independent creators, artists, social movements and many others to the Givv Platform.

Every Cause can simply add a Givv button or a link to their web page, YouTube channel, or social media platform. This button will install the Givv Node on the Giver's PC with the Cause pre-selected (which can be changed later by the user).

It is the popular appeal of the Causes and the goodwill of the people that will drive the growth of our install base, and it is the success of the platform and the revenue generated for the Causes that will grow our network of recipients. Our goal is to establish a socially valuable application for blockchain technology that will democratize and simplify philanthropy and patronage.



A factor of -30% to -70% was applied to Social Media numbers to negate overlap and multi-following



## 5.3 Use Cases

In recent years, the internet crowdfunding scene has grown rapidly to become an important engine for innovation, patronage, interpersonal help and charitable giving. However, there are a number of limitations. Firstly, crowdfunding platforms generally charge high commission of 15-20%, largely due to their reliance on conventional payment methods which continue to dominate the global market. Secondly, they are limited to those who can contribute money out of their own pocket, and thirdly, it is much harder to get someone to commit to a recurring donation. Givv requires no credit card, and the Givver incurs practically no expense, as most of their contribution is generated by an otherwise unused resource - namely the Givver's idle computer.

### 5.3.1 Charities and NGOs

NGOs and charitable organizations can now translate their wide public reach and brand appeal into direct recurring contributions. With Givv, local and relatively small organizations, typically with tens of thousands of supporters, can quickly mobilize their entire communities.

### 5.3.2 Disaster Relief

Temporary causes, such as disaster relief efforts in the wake of hurricanes, earthquakes and other acts of nature, garner immense public attention. As tens of millions watch the aftermath of disasters, Givv provides them with a mechanism for offering direct assistance, whether on an individual basis or as part of their school or professional community, for example. Contributing computing resources to fund relief is a great way for people to reach out and connect with significant world events, and feel empowered in the process.

### 5.3.3 Digital Creators

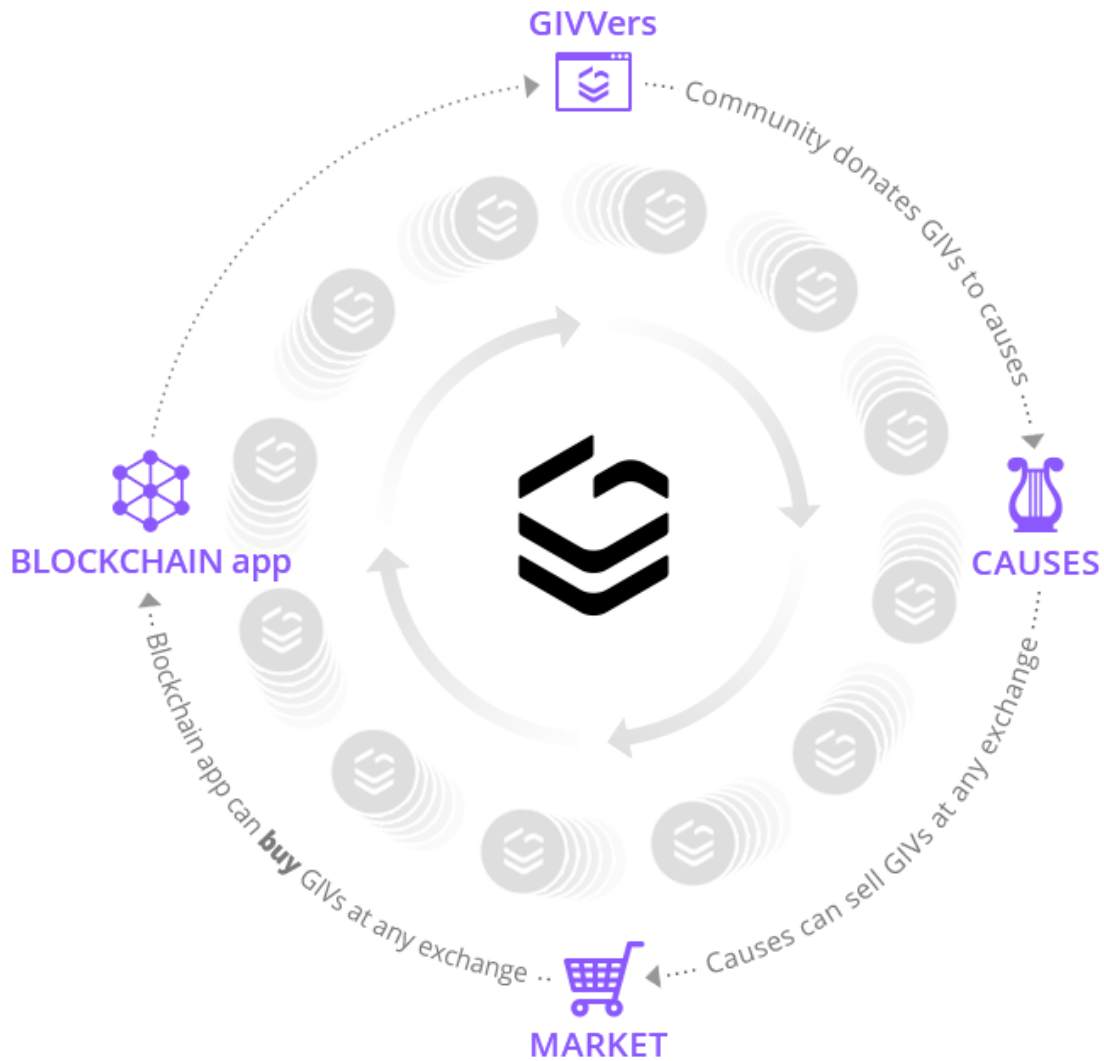
A modestly popular YouTuber would typically have a subscriber community of around 10K-100K people. This substantial reach, however, is difficult to monetize into a stable income. Earnings for a YouTuber in a developed country, even one with as many as one million views per video, are around \$1,000 per month, and this is only if all of the content is monetized. This is easier said than done, as the rules governing YouTube monetization keep changing and have become notoriously unpredictable. Many popular YouTubers are now finding it almost impossible to make money from their content.

Digital creators in developing countries have an even harder time monetizing content due to far smaller advertising spend. Givv will allow YouTubers in all languages to garner support for their video creations, including in countries with low credit card adoption rates.

A popular YouTuber with a large teen audience will also find it very difficult to get their fans to use a crowdfunding platform or to make any other direct contribution requiring a credit card, whereas anyone can install a Givv Node and begin contributing.

Givv changes the balance of power in the giving economy, by empowering anyone with a PC to support the Causes they care about.

## 6 The Givv Platform



The Givv Ecosystem is based on several key components:

- Givv PC App
- Givv Mobile App
- Givv Hive™ infrastructure
- Givv Stake Pool

Coupled with a certification process for the submission of new dApps to ensure the integrity of the Givv ecosystem, these components create a massive general purpose dApp hosting service that is flexible, secure, and powerful.

## 6.2 Givv PC App

The Givv PC Application Is an easy-to-install dApp container that can be set up in less than a minute on all major operating systems. It is a secure sandbox for distributed applications that has absolutely no access to the filesystem outside of its confines. No knowledge of blockchain technology is required, and no maintenance is needed. In fact, everything is managed from the sleek Givv Mobile App.

Once installed, the Givv PC App automatically creates an anonymous computing profile for the PC. The container may host a miner on an ETH mining pool, or a node in a fog computer running AI or rendering 3D, or any other dApp from the Hive™. Givvers may also install the Givv App on more than one PC and funnel all micro-earnings to a single Givv account.

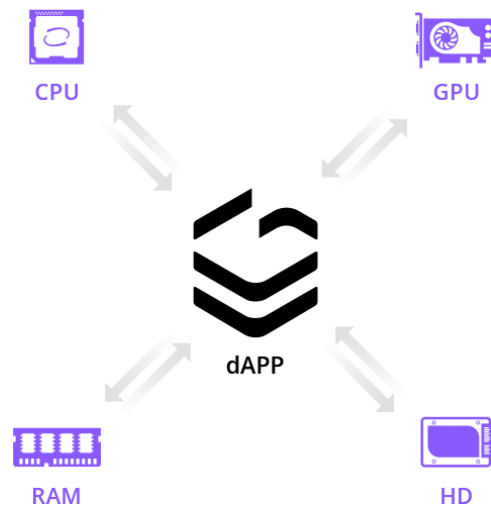
The Givv roadmap includes the development of nodes for PCs and laptops, and we are developing a framework to enable storage and even bandwidth contributions, adding hundreds of millions of PCs with modest computing capabilities to the network.

### 6.2.1 What is a Container?

A container is an execution sandbox for dApp packages. The packages are stand-alone, executable bundles of software that include everything needed for them to run. Containers separate the software from its host PC, and enable a secure and simple installation process.

Givv containers work within the confines of the PC operating system, as we do not install virtual machines. Givv containers run on all major Linux distributions, Macs, Microsoft Windows, and even VMs and cloud machines.

As part of our commitment to the development and distribution of dApps, we are developing a Givv SDK that will include packaging tools, local test environments, and a testnet for dApps. We are also developing a certification protocol and process for new dApps to be packaged and added to the Givv Hive™.



## 6.3 Mobile Application

The Givv Mobile App is the interface between the user node and the Givv platform. The App is where Givvers can choose and change the Causes they support, see how much they have contributed, check how much has been collected by the community, redeem special rewards awarded by the Causes, and communicate with the organization or individuals they support. The App also serves as a remote control application for multiple Givv Nodes owned by each Givver, who can set times, limit contributions, check on node stats, or set the app to auto and let us optimize everything.

Each Cause has its own page with information on how funds are used, special content for the community and other perks. The Givv app will be available to download from the Apple App Store and Google Play.

## 6.4 Givv Hive™

Givv Hive™ is a set of protocols, services, and repositories that are the backbone of the Givv network. Its main components are:

- Honeycomb™ - a repository for all certified dApp packages
- Tanz™ - load balancing, resources allocation, and resources continuity management
- Swarm™ - blockchain pools management
- Keeper - statistics gathering service
- Hive™ - secure API

### 6.4.1 Honeycomb™

Honeycomb™ is the repository for all certified dApp packages. In essence, it is a simple storage service for file distribution. Honeycomb™ is responsible for the delivery of all relevant packages to the PC containers, and every package contains the executables, the configuration files, and all dependencies for a dApp.

Future development of Honeycomb™ includes a distributed dApp delivery system. We are considering both the options of in-house development and collaboration with various distributed storage companies.

### 6.4.2 Tanz™

The Givv network uses Tanz™ to optimize the utilization of the dynamic resources available at any given moment. The word "tanz" is derived from Tanzsprache, the term coined by von Frisch for the dance language of honeybees.

The Givv Hive™ determines the right mix of dApps running on the Givv platform based on various parameters - including the resources available, hardware profile, location, and price - to determine the right mix of dApps on the network. The development of Tanz™ is focused on the development of machine learning algorithms using standard AI libraries (TensorFlow™, Torch™) to automate the allocation of resources. Traditionally, allocation has been done by heuristics and statistical analysis. A high level of automation is an important prerequisite when considering the scale and variety of resources available on modern computers. Tanz™ is capable of commanding and controlling millions of concurrent hosts, taking into consideration many factors such as:

- Type of resources contributed
- Hardware profile of the host PC
- Geographical location of resources
- Anonymous contribution history of the node
- Availability of dApps
- Market Prices

Tanz™ constantly senses the Hive™ state, and can make decisions in a split-second, keeping the network both dynamic and effective.

### 6.4.3 Swarm™

Givv Swarm™ is a pool management system that handles all blockchain mining pools which are optimized for long-term, stake-oriented mining. As with Honeycomb™, our long-term development plan includes the development of a distributed pool, and we are also looking into cooperation with some exciting companies that are working on the same problems.

### 6.4.4 Keeper™

Givv Keeper™ is the statistics framework for Givv platforms. It collects data from all parts of the network to report on hash rates, connectivity, errors, dApps distribution and more.

### 6.4.5 Hive™ Secure API

A set of public web APIs is accessible through port 433 (HTTPS).

These include:

1. GIVV Public Statistics API (contributions, hash rates, tokens, mining stats etc.)
2. Application API (registration, selecting causes, adjusting power, user stats etc.)

### 6.4.6 Givv Certification

Givv Certification is the way new dApps are added to the Pool. it is a transparent process of testing, measuring and validating blockchain dApps and frameworks on various hardware profiles. All the data collected during this process will be available on the Givv website as part of our commitment to transparency and as a service to the blockchain community.

## 6.5 Givv Stake Pool

Owners of GIVs (Givv Tokens) may exchange them at any public exchange, as GIV is an ERC20 token. Alternatively, a GIV owner may deposit GIVs to the Givv Stake Pool to buy computing resources at the price the Givv network offers (see 'Token' section).

When adding GIVs to the Pool, every participant can select the token of compensation. A user can add GIVs to the Pool and ask to be compensated with ETH, ZCash or any other blockchain token available on the Givv network. The Givv website and API will provide real-time information on GIV buying power vs. all tokens available. The Givv Stake Pool compensates all stakeholders in in proportion to their stakes.

s: Total GIVs participating in the Relay

x: Some single participation in the Relay (by number of GIVs)

v: Daily Volume consumed in GIVs

p: GIV buying power vs. the compensation token (ETH in example)

Daily compensation (w) for pool-participation (x) in the Givv Relay will be as follows:

$$w = \frac{x}{S} \cdot vp$$

Participants are compensated proportionally to the number of GIVs they added to the Pool, relative to their total participation in the Pool. The Pool compensation is performed on a daily basis.



## 7 Marketing

Givv's success will be founded on the fact that growth is a common interest of all parties interacting within the Givv ecosystem. Givvers want to watch how, together with others, their small contributions make a big difference to the causes they care about. For the supporters of Givv who buy GIV Tokens, growth is what increases their computing buying power and the usability of their Tokens. For us at Givv, more nodes mean more possible uses, more dApps and more opportunities.

Our work with the Causes participating in the Givv network is multifaceted. It starts with a simple and straightforward proposition that every Cause can deliver to its community: "just a couple of clicks to provide substantial support". The Givv "Button" is more than just a thumbs-up - it is a genuine helping hand.

Mobilizing community support is at the heart of our path to success. From a couple of thousand supporters keeping a local rescue shelter running to an international drive for a disaster relief effort, Givvers can help directly, en masse, quickly and with minimum friction.

To make it easy for the Causes to motivate their communities, we are developing Givv Widgets, so every Cause can simply embed the Givv Button into their content, share statistics on their Givv community, or hold a fundraising event.

We are building the safest and simplest installation process possible to ensure that everyone can use the Givv App. After installing it, a Givver does not need to interact with the node, since everything is done via the mobile app. The PC application is a silent taskbar app that doesn't consume any resources while the computer is in use.

We are also designing the Givv App to ensure a compelling user experience, making it fun and satisfying to give. There will be a social aspect too: Givvers will be able to follow the real-life impact of their contributions, while monitoring their total lifetime contributions in comparison to those of others.

## 8 GIV Token

GIVs are used to buy computing resources over the Givv network. GIV financial transactions are executed over the Ethereum platform through a set of smart contracts. GIV implements the ERC20 protocol for open exchange.

### 8.1 Token Buying Power

As GIV is the token used to pay for computing across the Givv network, its intrinsic value represents its buying power. Although market buy-sell will determine the actual price of GIV in ETH or in USD, the computing value of GIV is expected to have an impact on the actual price of the GIV Token (in ETH or USD). As GIV is required for fueling the Givv Stake Pool (the "Pool"), if the market price of GIV is lower than its value in ETH, this can be achieved by utilizing the mining power of GIV. In other words, there is an inherent arbitrage mechanism. However, since the Pool is open to all, we believe the market will constantly smooth out this issue.

The second factor that must be accounted for is the size of the Givv network, since a 100-node network does not have the same computing power as a 1,000,000-node network.

For calculating the GIV internal value, we denote:

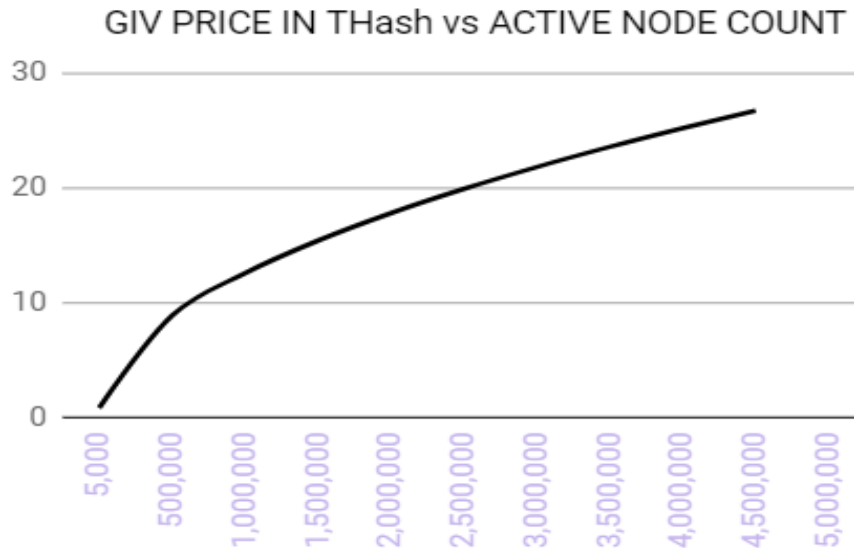
- N as the number of nodes
- k as the average computing power harvested from a PC in 1 hour

The general function for calculating GIV values is:

$$\text{GIV Value} = k \cdot \sqrt{N}$$

The logic behind the square root of the GIV buying power is that while the network is growing linearly with N, we are dividing this growth between the increase in buying power of a single GIV and the total GIVs consumed by the Pool per day (which also grows with the square root of N). One can easily determine that the ratio between the GIV buying power and the number of GIVs required per day remains constant.





### 8.1.1 Buying Power Calculation Example (vs. ETH)

For the sake of simplicity, in this example we assume that we only mine ETH (in reality a combination of dApps will be executed according to the best ROI for the Nodes).

We also assume 100,000 nodes in the network:  $N = 100,000$  nodes.

As of December 2017, the value harvested from one node in one hour (k) if mining only ETH is 0.0126 THashes. THIS IS NOT A RATE - this is the average hash count computed by single node in 1 hour.

This simple yet effective scheme guarantees that the value of the GIV will always represent the size and strength of the Givv network as a whole, and that in time, growth will be rewarded through Token appreciation.

### 8.1.2 Stake Pool Calculation Example

We will calculate a case for 100,000-node network.

Daily consumption by these 100,000 nodes is 7,200 GIVs. This number reflects how many GIVs are needed for 24 hours' operation. We also assume that the Pool has a total value of 100,000 GIVs.

Now consider the case of a participant adding 1,000 GIVs to the Pool.

The Pool will pay the participant at the end of the first day:

- s: Total GIVs participating in the Relay
- x: Some single participation in the Relay (by amount of GIVs)
- v: Daily Volume consumed in GIVs
- p: GIV buying power vs. the compensation token (ETH in example)

## 9 Initial Offering

In total, 300,000,000 (three hundred million) GIVs will be issued. This will be the final number of GIVs.

1. 30% of Tokens minted will be offered to the public for sale. The proceeds, as well as whatever unsold tokens, will be used to fund company operations as outlined in the Roadmap:
  - a. R&D (contracts, software development, Apps) 40%
  - b. Community Relations 15%
  - c. Marketing 20%
  - d. Business Development 10%
  - e. Operations 15%
2. 30% of the Tokens will be used as a reserve to “Airdrop” GIVs on Causes in the Givv community, incentivize developers of new dApps, and support future development.
3. 20% of the Tokens will be used as compensation for service providers.
4. 20% of the Tokens will be assigned for incentivizing team members and service providers via a 3-year vesting program. Tokens will be blocked until the earlier of: 100,000 active nodes, or the laps of 12 months from the ICO.

GIV prices at the exchanges will be determined by market forces.

### Governing Law and Arbitration

Any dispute or controversy arising from the crowdsale shall be resolved by arbitration in accordance with the Rules of International Arbitration of the Swiss Chamber of Commerce in force on the date when the Notice of Arbitration is submitted, in accordance with these Rules. The arbitration panel shall consist of one arbitrator only. The seat of the arbitration shall be Zug, Switzerland. The arbitral proceedings shall be conducted in English.

## 10 Team Members

### **Amos Pickel – Founder, CEO**

Amos Pickel is an Executive Director of Swiftstake Technologies SA., and the CEO of his fully owned consultancy firm, Alpha Golf Papa.

He has previously been the Chairman of the Board of Directors of Berggruen Residential Ltd., a Non-Executive Director of 888 Holdings plc, the Chief Executive Officer of Atlas Management Company Limited and Chief Executive Officer and member of the Board of Directors of Red Sea Hotels Ltd. A former Non-Executive Director of Gresham Hotel Group plc, he is a non-practicing solicitor, holding a master's in Law from New York University and an LLB from Tel Aviv University.

### **Haim Vanunu – Founder, Chief Technology Officer**

Haim Vanunu is a technology expert with vast experience in leading complex development projects. Over the past two decades, Haim has supervised the development of various projects ranging from ERPs for the transportation industry and real-time platforms for online trading to deep learning frameworks for image recognition.

### **Amir Bernstein – Foundation Director**

Amir Bernstein is a founder and owner of Swiss Real Management AG, a real estate and asset management firm, and formerly Managing Director of Gazit Globe Europe, one of the world's leading multinational real estate companies, traded on several of the world's largest stock exchanges and holding assets of approximately \$18.5B. Amir oversaw its operations in over 20 countries. Holding a master's degree in Law from Boston University, Amir worked at some of the top law firms in Israel, before moving on to manage a series of international businesses over the past decade.

### **Yana Sofovich – Charities Liaison**

Yana Sofovich has a decade of business development experience in various fields, including with a major multi-family office serving Eastern European and Southeast Asian clients.

Having served as a key project manager for the London 2012 Olympic committee, Yana's familiarity with complex, multi-lingual operations is invaluable for Givv's international approach.

### **Roi Sorezki – Marketing**

Roi Sorezki has been involved in the internet optimization and marketing community since 1997. After creating several technology and commercial websites, Roi founded a marketing and technology agency to develop state-of-the-art products for the SEM and SEO industries.

As CEO of twik.io, a cutting-edge web analytics tool, Roi continues to oversee the development and expansion of his businesses and also acts as an independent consultant for several large technology firms.

# 11 Roadmap

## 1<sup>st</sup> Quarter 2018

- Givv Website goes live
- Community channels on Telegram, Reddit etc.
- Onboarding of major Charities, NGOs, and YouTubers
- Blockchain development of contracts, tokens, and infrastructure

## 2<sup>nd</sup> Quarter 2018

- Public Coin Sale to raise capital to develop, operate, and establish Givv Global Platform
- GitHub release of Givv platform documentation
- Givv Hive™ beta
- Givv Stake Pool beta
- Limited engagement beta program starts. Testing 1,000 nodes

## 3<sup>rd</sup> Quarter 2018

- Givv Container invites only beta release. Testing 10,000 nodes
- Givv Mobile App release to app stores. App is open only for Beta users
- Givv dApp for Altcoins (list of tokens to be determined)
- dApp submission initiative starts. Testing, and validating new dApps for Givv Application Pool

## 4<sup>th</sup> Quarter 2018

- Givv Stake Pool is open to the public
- Givv Mobile App release to app stores. App is open to all
- Givv platform 1.0 is UP and running
- Causes registry opens to the public, personal causes, intra-personal help, etc.

## 1<sup>st</sup> Quarter 2019

- Givv Community: Causes can add content and communicate with Givvers
- Enabling of temporary Causes for major events e.g. natural disasters, fundraising drives, crypto-telethons, etc.

## 2<sup>nd</sup> Quarter 2019

- Givv Nodes support contributing Storage beta version
- Givv Nodes support contributing Connectivity beta version

## 3<sup>rd</sup> Quarter

- Givv distributed Pool beta
- Givv Toolset for DApp packaging to enable developers to package dApp into a Givv container

## 4<sup>th</sup> Quarter

- Givv Hive™ 2.0 (connectivity, storage, distributed pools)
- Givv Container 2.0 (connectivity, storage, distributed pools)

## 12 Additional Information

### 12.1 General Information

The GIV Token does not have the legal status of a security, since it does not confer any rights to dividends or interest. The sale of GIV Tokens is final and non-refundable. GIV Tokens are not shares and do not confer any right to participate in the general meeting of Givv i.o. S.A. (Givv). GIV Tokens cannot have a performance or a particular value outside the Givv Platform. GIV Tokens shall therefore not be used or purchased for speculative or investment purposes. The purchaser of GIV Tokens is aware that national securities laws, which ensure that investors are sold financial products that include all the proper disclosures and are subject to regulatory scrutiny for the investors' protection, are not applicable.

Anyone purchasing GIV Tokens expressly acknowledges and represents that she/he has carefully reviewed this white paper and fully understands the risks, costs and benefits associated with the purchase of GIV.

### 12.2 Knowledge Required

The purchaser of GIV Tokens undertakes that she/he understands and has significant experience of cryptocurrencies, blockchain systems and services, and that she/he fully understands the risks associated with crowdsales, as well as the mechanism related to the use of cryptocurrencies (including the storage thereof).

Givv shall not be responsible for any loss of GIV Tokens or situations making it impossible to access GIV Tokens, which may result from any actions or omissions of the user or any person undertaking to acquire GIV Tokens, as well as from hacker attacks.

### 12.3 Risks

Acquiring GIV Tokens and storing them involves various risks, in particular the risk that Givv may not be able to launch its operations and develop its platform and provide the services promised. Therefore, and prior to acquiring GIV Tokens, any user should carefully consider the risks, costs and benefits of acquiring GIV Tokens in the context of the crowdsale and, if necessary, obtain any independent advice in this regard. Any interested person who is not in the position to accept or to understand the risks associated with this activity (including the risks associated with the non-development of the Givv platform) or any other risks as indicated in the Terms & Conditions of the crowdsale, should not acquire GIV Tokens.

#### 12.3.1 Important Disclaimer

This white paper shall not and cannot be considered as an invitation to enter into an investment agreement. It does not constitute or relate to securities in any way, nor should it be considered as an offering of securities in any jurisdiction. This white paper does not include or contain any information or indication that might be considered as a recommendation, or that might be used as a basis, for any

investment decision. GIV Tokens are simply utility tokens which can be used only on the GIV platform and are not intended to be used as an investment.

The offering of GIV Tokens on a trading platform is done in order to enable the use of the GIV platform and not for speculative purposes. The offering of GIV Tokens on a trading platform does not change the legal status of the Tokens, which remain a simple means for the use of the GIV platform and are not a security.

Givv i.o. S.A. is not to be considered as an advisor in any legal, tax or financial matters. Any information in this white paper is provided for general information purposes only and Givv i.o. S.A. does not provide any warranty as to the accuracy and completeness of this information. Givv i.o. S.A. is not a financial intermediary according to Swiss law and is not required to obtain any authorization for Anti-Money Laundering purposes.

Acquiring GIV Tokens shall not confer any right or influence over Givv i.o. S.A.'s organization and governance to the Purchasers.

National and supranational regulatory authorities may periodically scrutinize businesses and operations associated with cryptocurrencies. In that respect, regulatory measures, investigations or actions may impact Givv i.o. S.A.'s business and even limit or prevent it from developing its operations in the future. Any person undertaking to acquire GIV Tokens must be aware that the Givv i.o. S.A. business model, the white paper, and/or terms and conditions may change or need to be modified because of new regulatory and compliance requirements related to any applicable laws in any jurisdiction. In such a case, purchasers and anyone undertaking to acquire GIV Tokens acknowledge and understand that neither Givv i.o. S.A. nor any of its affiliates, directors, officers, employees and advisors shall be held liable for any direct or indirect loss or damage caused by such changes.

Givv i.o. S.A. will do its utmost to launch its operations and develop the Givv platform. Anyone undertaking to acquire GIV Tokens acknowledges and understands that Givv i.o. S.A. does not provide any guarantee that it will succeed in this endeavor. They therefore understand and acknowledge that Givv i.o. S.A. (including its affiliates, directors, officers, employees and advisors) assumes no liability or responsibility for any loss or damage that might result from or relate to the inability to use GIV Tokens, except in case of intentional misconduct or gross negligence.

### **12.3.2 Representation and Warranties**

By participating in the crowdsale, the purchaser agrees to the above and in particular, represents and warrants that they:

- Have read carefully the terms and conditions attached to this white paper and agree to their full contents and accept to be legally bound by them;
- Are authorized and have full power to purchase GIV Tokens according to the laws that apply in their jurisdiction of domicile;
- Live in a jurisdiction which allows affiliates, directors, officers, employees and advisors to sell GIV Tokens through a crowdsale without requiring any local authorization;
- Are familiar with all related regulations in the specific jurisdiction in which they are based and that purchasing cryptographic tokens in that jurisdiction is not prohibited, restricted or subject to additional conditions of any kind;

- Will not use the crowdsale for any illegal activity, including but not limited to money laundering and the financing of terrorism;
- Have sufficient knowledge of the nature of the cryptographic tokens;
- Have significant experience with, and functional understanding of, the usage and intricacies of dealing with cryptographic tokens and currencies and blockchain-based systems and services;
- Are purchasing GIV Tokens because they wish to have access to the GIV platform;
- Are not purchasing GIV Tokens for the purpose of speculative investment or usage.