BITPUMPS

BitPumps Exchange

Whitepaper

Version 1.1

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| Abstract

With the emergence of crypto industry, we have seen a significant growth in open financial tools and services and primarily in exchanges. Exchanges are marketplaces that help us discover price in open supply and demand markets. As result exchanges create markets that are accessible to large number of participants whom can conduct transactions in a fair and efficient manner. Exchanges for a very long time have been multi-billion dollar area accessible to few, however it's becoming more accessible today due to cryptocurrency and blockchain demand in the market. BitPumps as a trading and exchange software technology provider introduced a new software package designed to enable businesses and individuals to launch and operate scalable exchange platforms on their own. This is achieved by creating a dynamic trading system with a flexible setup and configuration that can host infinite number of digital assets and cryptocurrencies. The solution provides a full trading platform including matching engine, APIs, real-time data feed and market data stream all available in a customizable trading terminal.

By utilizing blockchain technology based on Ethereum's smart contract, we created an exchange token known as BitPumps Token which is a utility token that fuels BitPumps software. It creates an open ecosystem for businesses and individuals to operate and run a friction-less exchange. It would also create an opportunity for investors and other participants to allocate funds and share liquidity for exchanges through BitPumps Token in the distributed exchange network in an autonomous manner.

In this Whitepaper we go through the exchange history and explain the motivation behind this ecosystem. We then describe the exchange and software specification of BitPumps, its design and architecture as well as its components. Afterwards we discuss about the BitPumps exchanges as participating nodes in the network and proceed with the token model and its distribution. Ultimately, future considerations, Roadmap and the conclusion to wrap up.

| Problems Facing Current Cryptocurrency Exchanges

User Friendliness

Newcomers to the cryptocurrency world face the most significant challenge as soon as they sign up to an exchange. The interfaces are difficult to use, and there is little help for getting started. It is challenging to get newcomers to operate on the platform if they can't figure out how to use an exchange, and fixing this problem would do a great deal in helping user adoption for cryptocurrency in general.

Customer Service

By far the biggest complaint users currently have with existing cryptocurrency exchanges is poor customer support. The issues are many and include long withdrawal times, login issues, unanswered support tickets, and nonexistent documentation. Horror stories abound with funds locked up for months due to something as simple as a 2-factor authentication reset with nobody there to help. When dealing with such large amounts of funds, users need a professional customer support experience.

Security

Some of the largest exchanges currently in operation have a history marked with security breaches and stolen funds. The largest, of course, was the infamous Mt. Gox hack, but many other exchanges have been compromised, having user data and funds stolen. Some eventually repaid the affected users, and some quietly closed shop. Such amateur levels of security are unacceptable when dealing with user funds and personal data.

Website Speed

Extreme trade volume, a massive influx of new users, inadequate IT infrastructure, and poorly coded frameworks have been driving poor user experiences. Many exchanges started small, some as hobbies, never expecting the popularity they are faced with today, and therefore were not designed to scale to meet demand. Redesigning while operating is a lengthy, heavily involved process and poses significant downtime risks. Rebuilding these platforms from scratch may be their only option, but may never happen.

Downtime

Even worse than just a slowly operating exchange, downtime can cause significant financial loss to users unable to place or modify trades, especially during times of high market volatility. The inability to access an exchange holding user funds destroys trust in not only the exchange, but cryptocurrency as a whole. With huge wallet balances at stake, uptime must be comparable to the standards set by traditional global financial systems.

Unclear Policies

With the recent Bitcoin hardforks, there has been much talk about cryptocurrency exchange policy regarding handling forks and airdrops. In nearly every case, current exchanges do not take any position prior to the fork or airdrop as to their policy of crediting or listing the new tokens. One recently even changed its policy after the fact, costing some users hundreds of thousands of dollars. This is simply unacceptable practice, and such decisions should be made crystal clear before the event so users can act accordingly and with confidence.

| The Solution: BitPumps Exchange

Bitpumps Exchange addresses these primary concerns in the current landscape by improving usability, scalability, and reliability while providing an innovative and stable environment for new traders, and a sophisticated and trustworthy experience for expert traders.

User Experience

As experienced cryptocurrency traders, the founders of BitPumps Exchange have noticed quite a few problems with the user experience on existing exchanges. With these in mind, the exchange has been designed from the ground up to offer a flawless user experience for both inexperienced and experienced traders.

Custom Markets Overview

Upon logging into the exchange, rather than being left alone with a random market page, users are sent to an overview page showing "at a glance" information pertaining to their account. Graphs detailing the value of their current holdings, and a customizable list of markets are available here. Clicking any market on the list brings them to the market page for that currency. In addition to having favorited currency prices listed on the overview page, a feed containing important news

items about the favorited coins is also shown. This allows users to stay up to date on what's happening with the currencies they care about and make well informed trading decisions. Not everyone has time to follow social media for every currency they hold to know if they need to buy or sell. BitPumps markets overview page puts all that information in one place, saving time and helping users make better, more informed trades.

Market Research Page

One basic feature most current exchange lack is the ability to do market research from within the exchange itself. BitPumps consolidates relevant information about each listed cryptocurrency in a market research page, easily accessible from the market page. Here users can find a detailed summary of the currency, links to social media profiles, whitepapers, community forums, as well as a live updating feed of recent news.

Customer Service

Customer service on current cryptocurrency exchanges is becoming a primary concern as exponential growth leads to an ever-larger backlog of issues. User trust is eroded when there is no reasonable expectation that a support ticket will be resolved in a timely manner, especially for time sensitive issues such as fund withdrawals and inaccessible accounts. User funds are often locked up for months without any answer from customer service. In an emergency, timely access to funds is essential, and these issues must be handled as expeditiously as possible.

At BitPumps Exchange, one of the top priorities is a pleasant user experience, and the largest user experience improvement to be made on current cryptocurrency exchanges is customer support. A customer support ticket system is essential, of course, but it is useless without adequate staffing and training. BitPumps customer support is overstaffed and easily scalable. As the number of users grows, so does the customer support team, seamlessly.

These are the customer service areas that are most important:

- Easy-to-use ticketing system
- Fully staffed and well-trained support team
- Fast resolution for login/account issues
- Fast processing of withdrawals

BitPumps sets the standard for quality responsive customer service.

| Platform

Technology

BitPumps Exchange is built on a modern technology stack using best practices from high-performance web application development and experienced developers from the financial sector. All trades and withdrawals are atomically safe transactions, and the system runs a full suite of unit tests and self-health checks once every hour. Every API function is load tested for speed and reliability, and the platform is deployed with proven auto-scaling technologies. The unit test suite is comprised of over 1,000 individual spot-checks that ensure all API calls behave in a sane and predictable manner. A robust staging environment has been deployed with thousands of bots continually placing hundreds of orders per second (which is more order-book activity than is seen on 99% of live exchanges as of time of writing), matching and executing up to 1 million trade actions daily; every night at midnight, all the bots stop trading and account for their funds, and a management routine verifies every single transaction and account balance across the entirety of the system.

Trade and account balances are stored in a primary database which replicates in real-time to 3 secondary failover databases on discrete power and networking grids in nearby data centers. The live database states are then encrypted and backed up every 60 minutes to five additional data center locations around the globe. Once per day, the latest full copy is downloaded to military-grade tape media rated to survive a nuclear-grade electromagnetic pulse. Database outages in up to three of the four primary availability zones can recover in up to 10 seconds, but have been seen to have no service disruption in 90% of cases.

All web services run redundantly, and in the event of a total datacenter failure, have been tested to fully recover in secondary and tertiary sites in less than 10 minutes of outage (the median catastrophic web service outage recovery time is 3 minutes and 52 seconds). All DNS and static asset hosting are propagated through a network of over 100 global points of presence, all API calls terminate at load balancers strategically placed around the world, and all API calls are both SSL encrypted and cryptographically signed to ensure tamper-proof connections.

Security

Any online service responsible for handling user funds has the responsibility to be as secure as possible. In the past several years, security breaches have been widespread, causing losses of user funds from exchanges and cryptocurrency related services in the millions. While no system can ever be considered 100% secure (especially one connected to the Internet), BitPumps Exchange has been engineered from the ground up with security in mind.

Cold Storage of Funds

Considering that such large balances of cryptocurrencies are being stored on major exchanges, it is important to have a strong 'deep cold storage' system to keep user funds secure. In such a system, only funds that are needed immediately to process withdrawals are made available to the exchange systems. This balance is called a 'hot wallet' and is always kept at a modest but adequate level as withdrawals and deposits are processed. The remaining funds are locked in 'cold storage' wallets. Cold storage wallets have private keys that are generated offline with a strong security policy in place to prevent anyone other than authorized personnel from accessing the funds.

Balance Sanity Checks

Periodically, BitPumps Exchange does a scan of its balances and compares them to user wallets to make sure there are no discrepancies. In the unlikely event an attacker was to gain access to the system's 'hot wallet' and maliciously withdraw user funds, the numbers would not match, and failsafe processes are activated to prevent further loss of funds.

Two-Factor Authentication

Two-factor authentication (2FA) is a requirement for any user wishing to withdraw funds from BitPumps Exchange. Without proper 2FA, logging into an account with stolen credentials and withdrawing funds is simply too easy. Setting up 2FA with services like Google Authenticator may be a bit advanced for the most basic user, and, there is a simple tutorial in the 2FA page of BitPumps Exchange.
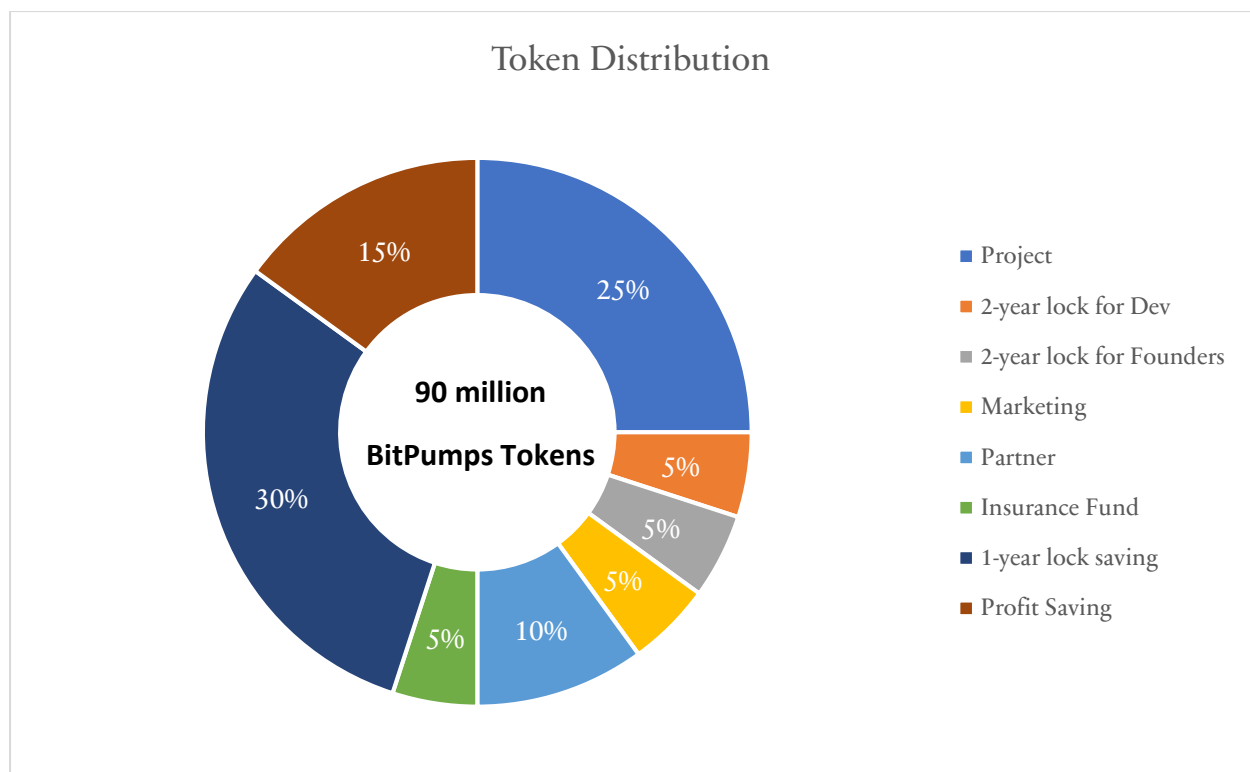
| Token Functionality and Loyalty Program

BitPumps Token (BPT) is a fully audited Ethereum based ERC20 utility token that is used for exchange fees on the BitPumps exchange. As an ERC20 token, BitPumps Token can be traded on BitPumps Exchange as well as any cryptocurrency exchange supporting ERC20 based tokens. When a user makes a trade on BitPumps Exchange, the transaction fee must be paid using BitPumps Token. The number of tokens required is calculated based on the current exchange rate for BitPumps Token on the exchange. When a user executes a trade but does not have BitPumps Token in their exchange wallet, or the user has not opted to use their balance of BitPumps Token for exchange fees, the exchange fee is taken from the base currency of the trade, and a market order is automatically executed to purchase BitPumps Token for the trade. This method not only makes for

a seamless user experience as it pertains to the utility token, but ensure an active market for BitPumps Token with constant demand. This automatically purchased token is the distributed to BitPumps Token Holders.

In order to encourage users to hold BitPumps Tokens in their BitPumps Token Wallets, any users who choose to hold BitPumps Tokens in their BitPumps Exchange wallet shall be granted gifts in the form of free BitPumps Tokens as part of the BitPumps Exchange's Loyalty Program. Such gifts shall be regularly distributed from transaction fees collected by the BitPumps Exchange and shall be granted to Users only when and for only if existing BitPumps Tokens are held in a User's BitPumps Exchange Wallet. The operators of the BitPumps Exchange may offer a proportionately larger amount of free BitPumps Tokens to users who hold a larger amount of existing BitPumps Tokens in their BitPumps Exchange Wallet. The operators of the BitPumps Exchange reserve the right to suspend, discontinue, or to alter the terms of the Loyalty Program at any time.

| Token Distribution

Token Distribution

90 million BitPumps Tokens

- Project — 25%
- 2-year lock for Dev — 5%
- 2-year lock for Founders — 5%
- Marketing — 5%
- Partner — 10%
- Insurance Fund — 5%
- 1-year lock saving — 30%
- Profit Saving — 15%

| Business Plan / Monetization

Use of Crowdsale Funds

The BitPumps team has a long-standing track record of building stable and scalable businesses. The goal is to have an up-and-running product in full operation as quickly and securely as possible, and thus the collected funds will be distributed according to the following: account on launch, so care should be taken to save the login credentials.

Engineering & Development 30%

The largest portion of the crowdsale funds will be allocated to the exchange development. An exchange requires a great deal of engineering and development work to function properly, and BitPumps Exchange has assembled a team of top talent to build the best platform possible. Features like social trading and margin trading are additional large undertakings that require a highly skilled development team.

Marketing 25%

In order to meet market share goals, large marketing pushes, both online and offline, will be required to bring in new users. The marketing team strives for the best and word of mouth alone will not be enough to make BitPumps Exchange the most popular in the industry.

Administration & Support 15%

Where most other exchanges fail, BitPumps Exchange will provide an overstaffed and well-trained support team, quickly responding to issues.

Security & Audits 13%

Security audits and penetration testing are both expensive and essential when being trusted with large amounts of user funds.

Legal 2%

A thorough legal review is important to keep in line with ever-changing international regulations.

Reserve 15%

Held in reserve for liquidity to be allocated as needed.

| User Acquisition / Marketing Plan

Before getting heavily involved in the cryptocurrency world, the founders of BitPumps Exchange were successful leaders in the marketing and advertising world. Bringing in a large user base is essential for any cryptocurrency exchange to thrive and have active markets. The strong execution of a well-prepared marketing plan is the best way to ensure success. Outside of simple organic word-of-mouth growth, BitPumps Exchange has plans in motion for paid advertising campaigns, a lead generation-based affiliate commission program, a generous "refer a friend" program, community outreach, and event sponsorships. Additionally, new users will be attracted by successful leaders in the social trading platform, as well as the potential success of the BitPumps Token.

Marketing Pushes

A few key members of the BitPumps Exchange team have extensive backgrounds in online marketing. Combining their knowledge of the cryptocurrency market as well as experience with large-scale paid marketing campaigns, a detailed online advertising plan has been created to build a great community and user base. A large portion of the crowdsale funds will be dedicated to onboarding new users through several marketing pushes before the exchange is launched, on launch, and when major features are released.

Referral Program

In addition to the large-scale paid marketing pushes, a rewarding referral program has been implemented, giving bonuses to those who refer new users to the exchange. Not only are existing users rewarded for a referral, but the new users are also given a sign-up bonus for being referred by a current user.

Community Outreach

BitPumps Exchange cares about the cryptocurrency community. The BitPumps founding team has been organizing international blockchain conferences and meetups since 2019. Conferences and meetups around the world are essential for the growth of the industry, and as such, sponsorships are in process for major upcoming events to not only help spread the news about the exchange, but

to help fund the events themselves to make sure the cryptocurrency community grows as much as possible.

BitPumps Token

The BitPumps Token being generated for the crowdsale will be immediately tradable on any exchange willing to list it, and certainly on existing decentralized Ethereum token exchanges. Each holder of BitPumps Token is involved with the success of the exchange, which will create a natural viral effect as more people buy, sell, or hold.

| Roadmap / Timeline

- ❖ 2019
  - ➤ First ideas

- ❖ Q1 of 2020
  - ➤ Develop foundation technology

- ❖ Q2 & Q3 of 2020
  - ➤ Cooperating with Partners
  - ➤ Release Native Token
  - ➤ Trade Option Launching
  - ➤ Listing to Exchange

- ❖ Q4 of 2020
  - ➤ Beta Trading

- ❖ 2021
  - ➤ Official Trading Exchange

| Potential Risks / Risk Management

When evaluating any investment, it is important to understand the potential risks involved. Cryptocurrency exchanges all have inherent risks, as demonstrated by numerous failures by previous exchanges, as well as current ones. Users are at risk every time they trust the exchange with their funds. Exchanges are at risk by simply being exposed to the internet. Crowdsale participants are at risk as soon as they trust the project with their own money. Minimizing these risks is an important part of the planning and development of BitPumps Exchange.

Risks to Users

The most obvious risk to a user of a cryptocurrency exchange is lost funds. As soon as funds are deposited to most cryptocurrency exchanges, there is the risk that the exchange will simply close and the funds will be lost. In 2014, Bitcoin worth more than US$6 billion at today's rates was lost when Mt. Gox, then the largest exchange in the world, unexpectedly closed its doors and filed for bankruptcy protection. Any time cryptocurrency funds are not in a wallet whose private keys are held by the user, they are at risk. Even with an established track record of quality service, there is no way to predict if an exchange will suddenly close and funds disappear. The best way a user can protect against this is by keeping funds they do not plan on immediately trading in a wallet they personally control. BitPumps Exchange helps users with this by providing easy and timely withdrawals as well as information about setting up their own wallet. Remember: Balances you do not hold the private keys for are not technically your balances.

Phishing and malware are another large threat to users of cryptocurrency exchanges as well as cryptocurrency in general. Phishing attacks have been rampant, showing users fake login pages for exchanges, or fake web wallets asking users for private keys. Many millions worth of coins have recently been stolen this way. The best line of defense for this is a well-educated user. Checking the URL in the address bar and the SSL security certificate details is a good start, along with regular malware scans. Using a hardware wallet is also a great way to prevent keylogging malware. Less experienced cryptocurrency users can't always be expected to be aware of all these threats and how to mitigate them, however. There are several steps exchanges can take to help as well. Extended Validation SSL certificates allow the users to clearly see the company name in the address bar in most browsers, and having a notice on the login page for the user to always check for this is also helpful.

Two-factor authentication

Two-factor authentication is another useful tool. Although it can still be attacked with phishing sites, malware keyloggers will be effectively stopped. Requiring verification of IP address range changes and email confirmation on withdrawals is another effective method to help reduce these risks.

In the same category as malware and phishing, account hacking is another risk. Hacked password databases are openly available, and it is easy to write a bot to attempt logging into a website with

hacked credentials from another website. Weak passwords contribute to this risk as well. On the end of the user, a strong password policy is important, but most don't know how to implement one. An exchange can provide users with password policy suggestions and links to help with this. Two-factor authentication can also help mitigate hacking attempts. Email alerts on unsuccessful logins and logins from new IP ranges and requiring email verification link clicks to allow these logins are helpful, as are login attempt rate limits and the IP address blocking of attackers.

| To Conclude: Why BitPumps Over Other Exchanges?

BitPumps Exchange is built on a state-of-the-art modern technology stack using best practices for high performance web applications by experienced developers from the financial sector. The team has integrated a few key leading-edge tools that you won't find on many other exchanges. Basic mode, expert mode, a masterfully inventive market research page, and social trading are just a few of the features that will help traders of all experience levels. Moreover, the BitPumps team has been deeply immersed in the cryptocurrency community for years, and understands that it is an ever-growing ecosystem that is meant to reward you, the user.

Bitpumps.com