



TOKES
P L A T F O R M

Tokes White Paper

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EXECUTIVE SUMMARY

The Tokes Platform is a blockchain focused company building software solutions for merchant adoption of cryptocurrency and data provenance of supply chains. This includes, but is not limited to, point of sale processing software, ecommerce storefronts, mobile applications, Platform as a Service (PaaS), and Blockchain as a Service (BaaS). Initially, the platform was developed for the legal cannabis industry as a solution to the cash-only problem caused by federal prohibition resulting in banking restrictions. To solve this issue, Tokes created a tokenized payment solution known as Tokes (TKS) along with consumer mobile apps, merchant point of sale software, and ecommerce modules to transact in the token. While the cannabis vertical and tokenized payments are still our core focus, the services now provided by the platform extend past tokenization and cryptocurrency. Within the cannabis industry, blockchain provides utility for more than payments, as ensuring the provenance and transparency of cannabis production data from seed-to-sale is not only a preferred scenario for consumers but regulated by states agencies. In building robust infrastructure for tokenized payments and blockchain based data storage, the Tokes Platform now has an ecosystem of offerings that extend well beyond the cannabis space and can be utilized to serve supply chains in any industry vertical. Additionally, in building our suite of software, the Tokes Platform now has “high availability” deployment environments – infrastructure that can be sold or utilized by startups in and out of the blockchain space.

This whitepaper is a living document, and will be periodically revised as new partnerships, use cases, and technologies are integrated into the Tokes Platform.

WHY WE EXIST

Problem 1

Due to federal prohibition of cannabis, businesses within the legal industry must operate primarily in cash. These cash transactions occur at the point of sale, for business to business transactions (e.g., dispensary to cultivator), and for employee payroll. Until conventional banking allows cannabis businesses to utilize their services, this cash only ecosystem has an added liability of potential loss and increased accounting difficulty in a compliance heavy market. From the perspective of regulatory or tax authorities, this cash dependence also adds a layer of complexity to financial reporting of cannabis revenue and tax remittances.

Solution

The Tokes Merchant Gateway software provides a point of sale application for cannabis business to accept the tokenized asset Tokes (TKS) or other cryptocurrencies in lieu of cash payments. Consumers are onboarded to the process using in-store kiosks or by loading their mobile wallet prior to visiting a merchant. The result is a fast, auditable, and inexpensive way to transact, which removes the cash handling liability of the merchant, while providing an auditable history of transactions, all on blockchain. The Gateway point of sale software has fully functional product management, employee sales tracking, exportable sales history, and integrations with state auditing systems like [Metrc](#).

Problem 2

State legislation mandating specific protocols around tagging, tracking, testing, transporting, and security of cannabis products varies state to state. Operators within the industry must contract with multiple entities to ensure full compliance of various state laws, increasing overhead costs. In the process, cannabis businesses are required to utilize several, non-integrated legacy systems to meet state standards. Additionally, reliance on centralized storage systems for this data has previously resulted in disastrous outcomes (relevant articles via [MJBizDaily](#) and [LAWeekly](#)). Standardization of this reporting data across states will not come until we see Federal decriminalization, and data structures will need to be put into place for eventual interstate transport of cannabis goods.

Solution

The international standard for supply chain management; Electronic Product Code Information Services (EPCIS), provides a framework for tracking objects as they move from point of origin to the consumer. This standard makes it possible for an electronics manufacturer in China to transmit the appropriate data to the container shipment company providing transport of the goods to the U.S., through the receiving port, to warehouses, inevitably to a retailer's back of house and into the hands of a consumer. Currently the cannabis industry has no such standardization in place, with each state jurisdiction dictating the data points within that geographic market.

With this in mind, the Tokes Platform is developing the EPCIS Blockchain, using the already well established EPCIS framework, and putting it on the blockchain for redundancy of the data storage, ensuring single points of failure will not be catastrophic to businesses and regulators. Despite the standardized nature of EPCIS, building within this framework does not inhibit the ability to deploy within a regulatory environment with specific reporting variables. Further, the nature of this data structure uniquely positions the Tokes' EPCIS data chain to facilitate communication between jurisdictions, when the legal framework allows for interstate transport of cannabis products. It is important to note that the EPCIS Blockchain is not a seed-to-sale software system, but rather a data layer that can immutably log the data from existing seed-to-sale systems and provide a standardized backbone to reduce business reliance on multiple reporting systems.

The EPCIS Blockchain is being produced by Tokes working closely with partners like [Applied DNA Sciences](#), a company developing aerosol sprays that tag the cannabis plant with molecular biomarkers in order to ensure the origin of cannabis products within a supply chain. For example, by tagging a plant with this biomarker, the consumer can be sure that the product they are purchasing came from a licensed cultivator; rather than an illicit grow, tagged erroneously, slipping past testing requirements and taxation. By combining these two innovations, the EPCIS Blockchain solves the "[garbage in, garbage out](#)" (GIGO) problem inherent to supply chain tracking.

Problem 3

While public awareness of cryptocurrency and blockchain has increased considerably over the past few years, software solutions for merchants to accept cryptocurrency as a form of payment are scarce and difficult to use. Mobile and desktop wallets have a wide proliferation among cryptocurrency enthusiasts, however full software suites facilitating USD to cryptocurrency conversions, inventory management, and bookkeeping are not easily accessible to merchants wanting to accept cryptocurrencies as payment.

Solution

The Tokes Merchant Gateway provides a complete software solution for merchants with brick and mortar establishments to accept Tokes (TKS) and additional cryptocurrencies for customer payments. Features of the current version include inventory and product management, price conversion from cryptocurrency to a USD equivalent, easy checkout processes using the accompanying mobile wallet, dashboard with sales data and employee performance tracking, accounting data management, and integration with regulatory reporting systems. The Merchant Gateway is deployable on desktop PCs, tablets, and mobile devices. Future releases will include a suite of tools for ecommerce integration and plug and play deployment of an online storefront – all accepting cryptocurrencies natively. While the Merchant Gateway can serve any business by processing cryptocurrency payments, the software serves a more immediate need for cash only cannabis businesses wishing to accept cryptocurrency as a payment method, eliminating cash handling headaches and security vulnerabilities associated with cash-only operations.

TOKEN SPECIFICATIONS

A total of 50,000,000 Tokes (TKS) exist (never to increase – locked as non-reissuable on the Waves Blockchain)
See our latest quarterly transparency report in the news at tokesplatform.org for the currently circulating total.

- Initial offering ran from December 2016 to January 2017
- Tokes runs on the Waves Blockchain (Wavesplatform.com) – a decentralized blockchain with over 200+ full nodes distributed globally
- Transaction speed runs under one minute making Waves a fast blockchain for transactional purposes (compare to Bitcoin: 10 minute block times). Upcoming Waves releases will reduce Waves' block times to less than a second
- Tokes Waves Asset ID: BDMRyZsmDZpgKhdM7fUTknKcUbVvkDpMcqEj31PUzjMy
[View this asset on the Waves Block Explorer](#)
- Mobile Tokes Wallets available for both iOS and Android



<https://itunes.apple.com/us/app/tokes-wallet/id1402808821?mt=8>



<https://play.google.com/store/apps/details?id=com.multichainventures.tokeswallet>

- Desktop Wallet available via Wavesplatform.com
- Trading on Bittrex.com, CoinSwitch.co, and the Waves Decentralized Exchange
- Price history available at Coinmarketcap.com/currencies/tokes/

Uncirculated Tokes will likely be locked via smart contracts. These will be distributed to teams developing software around the token, or released within cannabis verticals to facilitate business to business and consumer to business transactions.

For the purposes of clarity and confidence to those with interest in the success of the Tokes Platform, we produce quarterly transparency reports to discuss non-confidential matters related to the corporate reserve balance, transfers, and sales of TKS. These reports will continue into the future until such a time as they are deemed no longer necessary, which can occur under one of several scenarios:

1. The remaining balance of Tokes is “burned” through a process of permanently making them irretrievable – an event that would only occur should the Platform be funded sufficiently to persist indefinitely.
2. The remaining units are locked in a smart contract vesting schedule, making them inaccessible until various conditions are met.
3. A combination of the above scenarios.

SOFTWARE PRODUCTS

Merchant Gateway – Point of Sale

Cryptocurrency is a new emerging technology. While many users have transacted in Bitcoin or alternative cryptocurrencies using a mobile wallet or exchange account, simple tools for merchant adoption are scarce and still require businesses to track their cryptocurrency transactions by manually logging them within existing accounting or inventory management software – while processing the transactions on a desktop or mobile wallet. This process is inefficient for the merchant, and prone to user error, as transacting through existing cryptocurrency wallets tends to have a steep learning curve for the novice crypto user.

Our Merchant Gateway aims to be the first full-featured point of sale software suite that solves these hurdles for cryptocurrency adoption at the merchant level. The software includes features such as inventory and product management, accounting, sales and employee performance tracking, and integration with regulatory reporting systems. Initially deployable for brick and mortar use inside of physical businesses, future versions of the software will allow the merchant to create a full ecommerce webstore using the same inventory data. This suite is fundamentally designed to be an “out of the box” solution for merchants to accept cryptocurrency with minimal setup required. In its current version, the Merchant Gateway natively accepts Tokes (TKS), however, subsequent versions will allow merchants to accept any number of cryptocurrencies including but not limited to: Bitcoin, Litecoin, Ethereum, Waves, Monero, etc.

The typical transaction will look as follows:

A merchant will enter a dispensary or participating merchant, having already downloaded the mobile Tokes Wallet. In an ideal scenario, the customer will have already acquired Tokes (TKS) and transferred the balance to their wallet. If this is not the case, the customer will be able to purchase Tokes (TKS) via a Smart ATM on site through our partner [Vault Logic](#). The Vault Logic kiosk allows for easy buying and selling of Tokes (TKS) and other tokens, and is one of the most user-friendly cryptocurrency ATMs on the market today. After their mobile wallet is loaded with Tokes (TKS), the consumer will select the products they want to purchase, and the merchant, using the cashier screen in the Merchant Gateway can quickly select the products for checkout. The Merchant Gateway

calculates the total number of Tokes (TKS) the consumer must send to settle the full USD value of the sale. This creates a seamless process, not requiring the merchant to do any manual calculation or head scratching. If a product costs \$5, the merchant will receive \$5 worth of Tokes (TKS) at the current market rate. This calculation takes fractions of a second, after which, the merchant will be presented with a QR code for the consumer to scan. The consumer scans this QR code with the mobile wallet, which auto-fills the amount of Tokes (TKS) required for payment settlement, and presses the send button. Within moments the merchant will see the payment processing page signal a “PAID” notification, and the customer is finished with their purchase. The merchant will now have Tokes (TKS) in their wallet. This entire process takes less than a minute.

Current Features of the Merchant Gateway Include:

- Easy inventory and product management
- Price conversion from cryptocurrency to USD equivalent (*with zero volatility in settlement value)
- Easy checkout process using QR codes scannable by our mobile wallet application
- Dashboard with top sales data and employee performance
- Employee sales management
- Order history reporting data and accounting
- Deployable on desktop PCs, tablets, and mobile devices

Upcoming Features:

- Product import and export – full inventory management system integration
- Choice of settlement assets (i.e., automatic portfolio allocation into USD stable assets or other cryptocurrencies)
- ecommerce integration (discussed further below)

The current build of the Merchant Gateway is accessible via gateway.tokesplatform.org – for access contact suport@tokesplatform.org.

Merchant Gateway – ecommerce

The ecommerce suite currently in development will take the existing point of sale version of the Merchant Gateway and integrate ecommerce functionality. This will use the same inventory data as the POS, but in a quickly deployable online storefront. The purpose here is twofold – first, it provides a quick and easy way for brick and mortar merchants already using the Merchant Gateway to fulfill online orders using cryptocurrency. Second, it will be the first easily deployable online store for cryptocurrency payments, as a plug and play solution. The scope of the latter development goes well beyond serving cannabis businesses in a cash-only environment. Despite the digital nature of

cryptocurrency, solutions for ecommerce payments using cryptocurrency are inelegant and scarce. There are several players in this space offering plugins for existing storefronts (e.g., Coinbase, Shapeshift, or BitPay), however these services require the merchant to already have an existing online storefront, and use payment plugins to their current site that may require some web development knowledge to implement. While these forms of integration are important and serve a small subset of users, they do not offer an easy solution to onboard crypto novices to start accepting these new digital tokens.

In order to make this process as frictionless as possible, Tokes is producing both conventional plugins that allow the customer to select cryptocurrency as a payment option at checkout, along with a full featured web-store ready to use – out of the box. Similar solutions exist for conventional payment processes, with sites like Shopify or Big Cartel offering storefronts that allow the user to add product inventory, tie in their checking or PayPal account, and launch the site in a matter of minutes. Tokes aims to offer a similar product but with cryptocurrency payments as the key standout feature. While it is not expected that a small online business would want to exclusively accept cryptocurrency payments for their goods or services, this site is expected to be a complement to their existing online sales gateways. For example, many merchants choose to sell on their independent storefront, generating traffic organically through social media sites like Instagram or Facebook, but also syndicate the same products through services like Etsy, eBay, or even Fulfillment By Amazon in order to generate additional sales leads and expose their products to wider audience. The ecommerce version of the Merchant Gateway will fulfill a similar purpose, as an easy to use storefront that exposes businesses to a growing demographic of users wanting to spend cryptocurrencies for goods and services.

Additionally, the ecommerce portion of the Gateway will allow merchants with existing ecommerce sites to create a payment widget for their storefront permitting Tokes or additional cryptocurrency payments at checkout. The first iteration of this feature will support WordPress based sites, with functionality for systems like WooCommerce, Joomla, Drupal, and Magento coming later down the road.

Additional upcoming ecommerce Features:

- Custom site themes for plug-and-play version, allowing the merchant to tailor the out of the box version of the gateway to match their own branding.

- Full inventory management software (IMS) integration with their existing storefronts

Potential Pricing Models for the Merchant Gateway / ecommerce suite:

- Subscription based (monthly charge – discounted if paid in Tokes)
- Transaction fees absorbed by the consumer at the time of checkout – built into settlement price
- Transaction fees absorbed by the merchant at time of trade processing – as part of portfolio allocation feature

Mobile Wallet

In order to interact with both versions of the Merchant Gateway, Tokes has created a mobile wallet specific to the Tokes (TKS) token. While the Waves Platform has already produced an easy-to-use desktop client that allows users to hold Waves and digital tokens including Tokes, our Merchant Gateway required a Tokes branded solution for easy payments at the point of sale. To this end, Tokes has produced one of the most user friendly cryptocurrency wallets around. The Tokes mobile wallet allows users to send and receive Tokes and Waves via QR code or by manually entering the user's wallet address. Additional cryptocurrencies can be integrated in the future.

Additional features include:

- Vendor locator to find participating merchants
- Biometric security (e.g., FaceID, Fingerprint)
- Manual seed phrase backup and import
- Market rate querying of current Tokes (TKS) price
- Push notifications for discounts and promotions



Tokes Block Explorer

The Tokes Block Explorer (explore.tokesplatform.org) serves as a means of auditing all Tokes transactions from the beginning of the asset's creation. In its current form, the Block Explorer allows users to search transactions by block ID, transaction ID, sender's address, or receiving address – yielding a history of transactions and balances associated with public addresses. Because the Block Explorer is specific to Tokes, rather than the entire Waves network, Tokes is presently building a feature set that allows for more detailed auditing of merchants within our ecosystem. Particularly for the purposes of cannabis exchange visibility and tax authority audits, Tokes is creating a private iteration of the Block Explorer that will tie dispensary transactions to the public addresses of the dispensary in order to facilitate transparent accounting for taxation purposes.

EPCIS Chain & Blockchain as a Service (Baas)

Tracking a product from materials procurement to production, through packaging, distribution, warehousing, back-to-front of house, and ultimately to the consumer is a painstakingly detailed and meticulous task. While many pieces of conventional enterprise software exist for this purpose, there are inherent flaws in the data structures underlying these systems (e.g., security vulnerabilities of centralized systems). Decentralizing the storage and syndication of this data produces a network of data more resistant to attacks, and potentially greater auditability throughout the chain of custody. To this end, Tokes is building what is known as the EPCIS Chain. Electronic Product Code Information Services (EPCIS) is a [GS1](#) global protocol for standardizing the tracking of events and movements of physical goods within supply chains and across businesses. For example: how does an electronics manufacturer in Shenzhen, China communicate the appropriate data points of shipping container contents to the port of Oakland, California; and subsequently how is the distribution of the container's contents tracked to multiple warehouses tracked before eventual delivery to retailers and consumers? EPCIS is the global standard for tracking and logging these processes, currently utilized across many conventional supply chain software suites. This same system can be used for tracking the cultivation, processing, packaging, and sale of a cannabis product - from "seed to sale." Using the same [asymmetric encryption](#) of other blockchains ensures that private data remains private, while data points needed to ensure the provenance of goods within the supply chain are visible to authorized parties.

Rather than reinvent the wheel by entering the market as a competing front-end software provider, Tokes aims to strengthen the provenance, security, and immutability within the existing EPCIS infrastructure. This is where the blockchain comes in. Centralized data structures can be prone to data loss, breaches (hacks), and fraud committed by both internal and external agents. By placing the EPCIS data of conventional supply chains on the blockchain, Tokes serves to mitigate these vulnerabilities. The EPCIS Chain is fundamentally front-end software agnostic, designed to integrate with existing enterprise and legacy tracking systems.

EPCIS data is stored as “objects” representing typically physical items, such as products, logistic units, or documents. These objects are tied to “events” which are tagged with a detailed set of descriptors for the object including: “what” – the description of the object, “when” – the date and time that the event related to the object took place, “where” – the location where the event occurred and where the object is expected to be following this event, and “why” – the business step taking place (e.g., shipping or receiving) along with the state of the object (e.g., active, damaged, etc.). Additionally, there are many different event types and modifiers to these basic descriptors. This data is all entered via a capture interface that inputs object information via RFID tags, QR, or bar codes into a query interface – a front end software system. It is this query interface that the EPCIS chain will interface with.

Currently being developed by Tokes using J.P. Morgan’s Ethereum based [Quorum](#) blockchain development framework - EPCIS Chain contains the object oriented data points required for tracking within the EPCIS framework. The blockchain solution Tokes produces is robust enough to contain additional data points required by any industry vertical. In the case of cannabis, this includes testing data for potency and contaminants. Through partnerships with [TheraCann](#) and [Applied DNA Sciences](#), our blockchain can log entries from plant biomarkers at the molecular level, ensuring the provenance of a cannabis product from seed-to-sale.

Use Case: TheraCann and Applied DNA Sciences

Through our partnership with [TheraCann International](#), Tokes is deploying the EPCIS chain as the data layer for TheraCann’s TheraCannSYSTEM seed to sale software. Within this software is ETCH Biotrace, a fully vertically integrated software solution for cannabis tracking, which captures data points from cultivation, processing, packaging, quality assurance, and security – all logged and auditable to the compliant standards of the operator’s license. Compliance is the name of the game,

and the TheraCann solution provides a blockchain backed enterprise resource platform that ensures standards are met on a jurisdiction by jurisdiction basis.

By partnering with the Tokes Platform, the TheraCann system will integrate blockchain based tracking and sale systems for the purposes of transparent accounting as well as genetic tracking of individual strains and crops – with a genetic tagging component being developed by [Applied DNA Sciences](#). The process looks as follows:

Cannabis plants in cultivation are tagged with Applied DNA's CertainT® tag via aerosol, leaving a molecular biomarker on the plant. This marker will survive processing, and can be detected in cannabis oils, Rick Simpson oil, budder, or shatter. This solves a pervasive problem inherent to current tracking systems ensuring the provenance of cannabis data; if the tagging process does not touch the plant itself, there is no protocol in place to ensure black market product is not slipping into your supply chain, subverting testing protocols and taxation. By tagging the plant matter at this very fundamental level, regulators can be certain that product sold within the supply chain came from a licensed supplier and not from an unlicensed or interstate grow. Under the current systems, QR tags can easily be applied to packaged cannabis products grown in unlicensed grows, with minimal recourse.

Use cases such as this will take Tokes through the next decade as a leading provider of supply chain visibility. While eventual federal legality may solve the cash-only issue of the cannabis industry, the same decriminalization will require new standards for interstate transport of product and provenance. By producing solutions today utilizing international standards and best practices, Tokes will be uniquely positioned as a blockchain provider for years to come. Further, in providing a standard in supply chain visibility, Tokes stands to aggregate large sums of supply chain data, resulting in a data store full of critical industry analytics.

Blockchain as a Service (Baas)

Blockchain as a Service or BaaS is another product Tokes provides as an extension of the EPCIS Chain. As a byproduct of building a robust blockchain on Quorum using same the deployment environment employed for other Tokes applications, the Tokes Platform is in a unique position to provide the personnel and technical expertise coupled with deployment infrastructure to build white-

label versions of the EPCIS chain for other business verticals. This particularly targets customers or regulators within other industries looking for auditable, decentralized, and secure data provenance for the tracking of goods.

Platform as a Service (PaaS)

In building the numerous applications discussed above, Tokes has produced a high availability, scalable platform of development operations built upon cloud services. Having this infrastructure allows us to package it for sale to other development teams in need of these services. This resulted in a subsidiary company (name TBA) focusing on providing this infrastructure to other teams. Setting up deployment architecture for a software product is time consuming and requires many personnel hours which could better be deployed on critical development issues. The PaaS model provides services on existing hosting providers in order to ease the development headaches of deployment architecture. Our infrastructure is fundamentally hosting provider independent and can be utilized with Amazon Web Services, Microsoft Azure, Google Cloud, Digital Ocean, and more.

Some of the infrastructure and automation tools provided include:

RAML, Travis CI, Docker, Github templates, Express.js API, Static File Server, example modules, unit tests, API tests, ESLint, automatic documentation, Docker Compose, Kubernetes deployment files (via Compose), Prometheus, Grafana, & more.

While this is a revenue generating stream for the company as a subsidiary, teams producing products that complement the Tokes ecosystem can have direct access to PaaS services and may be incentivized for their integration. For example, the key solutions provided by Tokes software targets cryptocurrency point of sale, ecommerce, and supply chain visibility – with cannabis being the first vertical to deploy these services; startups targeting these solutions or producing software for the cannabis industry may benefit from potential integrations with our core offerings. We can incentivize these teams with payment in our native currency: Tokes (TKS). Further, many development projects may be in need of a tokenized payment module or incentive mechanism. Tokes can serve as the token, with the existing Tokes treasury providing this allocation.

We encourage small development teams interested in utilizing our architecture to [apply to join](#) our ecosystem and development platform.

TOKENOMICS

Tokes is more than just a token for legal cannabis industry. While consumer-to-business and business-to-business transactions will account for a high volume of Tokes transactions within the network, Tokes has a number of additional use cases, incentive models, and mechanisms underlying the tokenomics of the Tokes Platform. Below is a selection of use cases for Tokes (TKS) as well as integrations in development.

General Consumer Transactions & Ecommerce

- Consumer entry points
 - Conventional cryptocurrency exchanges (Bittrex, CoinSwitch, WavesDEX and other exchanges)
 - Cryptocurrency ATMs via Vault Logic
 - In app purchase (potential development)
- Merchant acceptance at point of sale using Merchant Gateway software (dispensaries or other participating merchants)
- Merchant acceptance online via Merchant Gateway ecommerce webstore
- Discounted transactions and trade processing fees when payment is made in Tokes

Business-to-Business

- Transactable via mobile or desktop wallet clients

Service or Subscription Models with Token lockup, “Proof of Balance”

- White label development of Wallets, Gateway or Block Explorer for other token projects – payment can be made in Tokes or a required “proof of balance” to be held via smart-contract lockup
- Similar to “[proof of stake](#),” smart contracts can facilitate a lockup of tokens on the Waves blockchain – Tokens locked for a minimum staking period will receive payouts at predetermined intervals (monthly, quarterly, etc.) – this model is pending legal review.
- Discounted subscription fees for the Merchant Gateway or EPCIS Chain when paid with Tokes

Notable Software and Platform Integrations

Budsy

budsy.io

Budsy is a “one touch” cannabis delivery service utilizing smart button IOT devices to automate cannabis purchases and delivery. Tokes is working to integrate our token for Budsy’s payment purposes.

TheraCann International

theracanncorp.com

TherraCann produces TheraCannSYSTEM ERP seed-to-sale software. Tokes is integrating the EPCIS Chain with TheraCannSYSTEM for better “track and trace” provenance, and integrating our Merchant Gateway for cashless point of sale workflows.

Cannabis Hemp Exchange (CHEX)

thehex.com

The CHEX is developing modern software and blockchain technology solutions to power industry-agnostic B2B marketplace platforms, such as commodity exchange. Tokes is the digital asset for conducting cannabis or hemp transactions on the platform.

FREQUENTLY ASKED QUESTIONS

Why does cannabis need its own cryptocurrency?

Due to the federal prohibition of cannabis, decriminalized cannabis sales are only legal at the state level of government. Because of this federal illegality, most cannabis businesses do not have access to banking, resulting in cash-only businesses. This includes consumer purchases at the point of sale, wholesale purchases from suppliers, employee payroll, payment for supplies and utilities, and even tax remittances to the state. This results in a business ecosystem where accounting is difficult, and risk of theft or loss is high. For those cannabis businesses that do find banks willing to work with a high risk industry, fees for compliance and account maintenance are high. Cryptocurrency payments are fundamentally cheap and reduce accounting headaches and risks for the merchant. Tokes produces convenient software for businesses and consumers alike to get out of an all cash ecosystem while improving transparency.

Why not just use Bitcoin?

While Tokes advocates for Bitcoin adoption, it is important to remember that Bitcoin is a protocol, not a company. Tokes however, is a business, but also part of the larger socioeconomic movement of cryptocurrency. By targeting an industry with a banking problem (cannabis), Tokes is taking cryptocurrency technology and producing easy-to-use solutions that solve specific payment needs for the industry. While development of user friendly software is key to adoption, Tokes is marketing and deploying the software directly with merchants and consumers. Bitcoin has no such set of advocates pounding the pavement to garner adoption. Tokes provides the tech, educates the industry on how to use it, and provides support when necessary. Lastly, Tokes transactions are far faster and cheaper than Bitcoin at the present time, making Tokes an ideal solution for point of sale payments.

There are several benefits to using Tokes (TKS) over Bitcoin from a technological perspective as well. Tokes (TKS) transactions settle on the network in less than 30 seconds on average, and cost less than 1 cent per transaction regardless of the full dollar value of the transaction (Bitcoin costs more per transaction). Also, businesses using our technology completely avoid paying the standard 2-3% interchange fees for processing typical on credit card networks. Another bonus to utilizing

cryptocurrency as a form of consumer payment is that transactions cannot be charged back to the merchant after the sale.

Isn't cryptocurrency a means of money laundering and used for illegal purchases?

While traditionally, cryptocurrencies such as Bitcoin have seen use on black markets via Tor hidden services, our purpose is to fulfill commercial needs in decriminalized or legal markets. The Tokes Platform provides a secure digital ledger (visible on the Tokes Block Explorer <http://explore.tokesplatform.org>), facilitating transparency of asset history, and providing full auditability for regulators. A dispensary utilizing Tokes for payments can demonstrate the history of their transactions using their public address, which is securely and immutably stored. This is something that cannot be done easily with cash. Further, the agnostic nature of our platform can facilitate needs in non-regulated retail markets as well wishing to accept cryptocurrency in addition to conventional forms of payment.

What are the pros and cons of using cryptocurrency rather than cash or credit?

First and foremost, the storage and transportation of physical cash is a huge security risk for those in the cannabis industry. It turns these businesses into targets for theft and violence, which has received a great deal of media coverage. Additionally, from a legislative perspective, cash has low traceability and makes it relatively easy to skirt taxation.

In contrast, cryptocurrencies are stored securely via complex cryptographic functions on a local digital currency "wallet." To the extent that a user follows standard security measures: uses strong unique passwords, backs up wallet files, keeps wallets offline unless sending transactions, and ensures they don't have viruses or malware on their computer, a cryptocurrency wallet is virtually impossible to break into. One particularly beneficial feature of cryptocurrency is a sort-of built in escrow without the need for a third party. Through what is called a multi-signature wallet, it is possible to require more than one party to sign off on any individual transaction. This is great for businesses with more than one owner who want to prevent any individual partner from absconding with the totality of the funds in a digital currency wallet, as they cannot move them without all parties signing off. Finally, cryptocurrencies are not susceptible to asset seizure like bank accounts and custodial accounts, as there is no centralized service holding those assets.

On the legislative and tax front, blockchain and cryptocurrency provides significantly higher transparency than a cash transaction. Every single transaction is recorded on a public ledger, reviewable and auditable by anyone with the desire to do so. The pseudo-anonymity is a result of the fact that wallet addresses are not directly associated with an individual or business. However, we foresee an environment where each dispensary or business has a registered wallet address, and all transactions that flow through that account will be directly reportable to the appropriate agencies.

How would cryptocurrency provide solutions to both ancillary service providers in the industry (with bank accounts) and to licensed operators transacting in cash only?

One of our core focus areas in addition to consumer transactions, is business to business transactions. While the end user - the dispensary customer- is pivotal to the entire system functioning, larger value transactions will take place between parties such as a dispensary and cultivator, or even a dispensary and tax authority.

One often overlooked component of cannabis sales is that transactions received from customers to the business (dispensary), don't need to be immediately converted into cash - although they can be stabilized to avoid market volatility. However, not every point in the supply chain needs to liquidate their digital currency holdings. Rather, it would be more efficient for each of those points to continue moving their holdings up the supply chain to the next product input. For example, a dispensary might use their holdings of Tokes (TKS) to procure their next shipment of flower and concentrates. Continuing on, the cultivator can use Tokes (TKS) to purchase things like nutrients, light bulbs, perhaps even pay the power company. This is in fact quite beneficial to the industry because the currency can ultimately end up at a business that isn't restricted by the same federal banking issues that direct industry members are subject to.

In that example, the fact that an energy company does in fact have a bank account provides them with the ability to liquidate their digital currency holdings for conventional fiat holdings, thereby completing the cycle of cash on and cash off. The supply chain management solution Tokes is building with EPCIS Chain will help track the flow of goods for crypto, as well as the conversion between currencies.

Why does Tokes run on Waves, why not Ethereum?

While we recognize the appeal of using Ethereum for launching blockchain based tokens, Waves provides specific features that directly appeal to our core aims. Succinctly, their proposal of fiat gateways for consumer use will ease entry into the Tokes ecosystem, coupled with existing iOS and Android app functionality. Further, Waves has a decentralized exchange built into their blockchain, and offers some of the fastest transaction times of any blockchain in the cryptocurrency ecosystem (less than 1 minute). Waves NG is one of the fastest blockchains to date, and an ideal candidate for consumer transactions. Lastly, as of this writing, Waves is launching Turing complete smart contract functionality in the next iteration of their blockchain, similar to Ethereum.

The founders hold many Tokes in reserve, why?

This underlies the main purpose of the Tokes transactional protocol: facilitating consumer to business and business to business transactions. We need to possess enough tokens in reserve to provide a healthy ecosystem of Tokes up the cannabis supply chain within the verticals we service. The team has strict protocols in place that determine when, if ever, we sell Tokes into any of the existing markets. Additionally, reserve Tokes (TKS) will be used to incentive development of new applications or uses of the token. To instill user confidence in our ability to adhere to these protocols, we release quarterly transparency reports (available in the news portion of our website, <http://tokesplatform.org>), detailing the current status of our reserve accounts and accompanying wallet addresses.

Can my team develop within the Tokes ecosystem or integrate Tokes into our app?

Yes, we are always looking for other projects to integrate Tokes with. Whether your team develops applications, is a traditional brick-and-mortar business, or online retailer, we are open to discuss integrating any of our products with your existing development stack or business flow. To this end, we incentivize teams to develop products utilizing our token. Those interested in developing an application or integrating with Tokes are encouraged to [apply to join the ecosystem](#).

Can Tokes (TKS) be used outside of the cannabis industry?

Yes, while we are targeting the cannabis space for initial deployment of our software, the solutions we develop are fundamentally industry agnostic. Merchant ready cryptocurrency payments solutions are not yet widely adopted, and we intend to spread that adoption with our Merchant Gateway suite

of commerce applications. Additionally, Our supply-chain solutions are customizable, and designed to integrate with any industry's conventional enterprise software via API.

How does blockchain benefit supply chain management?

Centralization of any data structure can be a point-of-failure resulting in potential data loss. By decentralizing the ledger of data behind a supply chain, blockchain allows greater security, transparency, and traceability of goods. Every time a product changes hands, it can be logged on this decentralized ledger, creating a permanent history of the product, one that is immutable. This has obvious benefits for responsible consumers concerned about the provenance of their products, but also for auditors and the business stakeholders themselves. The EPCIS Chain produced by the Tokes Platform utilizes international GS1 standards for business vocabulary and applies these to data endpoints for data storage within a decentralized network.

What if cannabis becomes legal and banking is no longer a problem?

Fundamentally our software is industry agnostic, and there are still major hurdles to consumer adoption of cryptocurrency. Our Merchant Gateway software fulfills basic requirements for cryptocurrency adoption at the point of sale and can be deployed in any industry. The ecommerce integrations to follow will further ease this process for merchants wanting to adopt cryptocurrency for online payments.

FOUNDERS AND TEAM

Michael Wagner – CEO & Founder

Gabriel Allred, Ph.D. – Cofounder

Deb Lucas – Director of Operations

Ryan Deneau – CTO

Thomas Diab – Business Development

Eugene Lopin – Project Management & Business Development

Michal Mikolajczyk – Development Lead

Jacob Floyd – Development Lead

Danny Floyd – UI/UX Development Lead & Project Management

Michael Lu – Developer

Rafael Jimenez – Developer

Vaughn Murphy – Marketing & Community Management

Stephen Atchison – Marketing

Davey Pierce – Social Media Management

STRATEGIC PARTNERS



Waves Platform – wavesplatform.com



Applied DNA Sciences – adnas.com



Vault Logic – vaultlogic.com



herbologytours

Herbology Tours – herbologytours.com



Cannabis Hemp Exchange (CHEX) – thechex.com



BUDSY

Budsy – budsy.io



TheraCann International – theracanncorp.com

DISCLOSURES

TKS Ventures NV LLC (the “Company”) is a relatively new Company. The Company is not registered with the United States Securities and Exchange Commission, with the state of New York under its BitLicense, or any other foreign, federal or state regulatory agency. The Company is not subject to any public reporting or filing, has little operating history for purchasers of “Tokes” tokens to review. The Company has recently entered into a joint venture with Theracann International, as described. However, Theracann is not involved in the Tokes Platform Token Generation Event. TOKES MAY NOT BE AVAILABLE FOR PURCHASE IN EVERY JURISDICTION, AND WILL NOT BE SOLD IN NEW YORK, CHINA, SINGAPORE, OR ANY JURISDICTION WHERE SUCH SALES ARE PROHIBITED.

RISKS

RISKS RELATING TO THE US FEDERAL LAWS AFFECTING THE LEGAL CANNABIS INDUSTRY

CERTAIN ACTIVITIES INVOLVING MARIJUANA REMAIN ILLEGAL UNDER US FEDERAL LAWS. SUCH ACTIVITIES INCLUDE BUT ARE NOT LIMITED TO:

- (A) DISTRIBUTION OF MARIJUANA TO MINORS,
- (B) TRANSPORTING MARIJUANA FROM STATES WHERE IT IS LEGAL TO OTHER STATES,
- (C) DRUGGED DRIVING AND OTHER ADVERSE PUBLIC HEALTH CONSEQUENCES,
- (D) GROWING MARIJUANA ON PUBLIC LANDS,
- (E) MARIJUANA POSSESSION OR USE ON FEDERAL PROPERTY, AND
- (F) OTHER CRIMINAL ACTIVITY OR VIOLENCE ASSOCIATED WITH THE SALE OF MARIJUANA.

TO THE EXTENT THE COMPANY MAY NOT PREVENT CERTAIN OF ITS USERS FROM USING TOKES IN VIOLATION OF US FEDERAL LAW, IT MAY SUBJECT THE COMPANY TO CIVIL AND/OR CRIMINAL LIABILITY AND THE UTILITY OF TOKES WILL BE ADVERSELY AFFECTED.

Tokes Platform Token Generation Event Risk Factors

You should carefully consider and evaluate each of the following risk factors and all other information contained in the Terms before deciding to participate in the Tokes Platform Token Generation Event (the “Tokes sale”). To the best of TKS Ventures NV LLC (US/Nevada) (the “Company”) knowledge and belief, all risk factors which are material to you in making an informed judgment to participate in the Tokes sale event have been set out below. If any of the following considerations, uncertainties or material risks develops into actual events, the business, financial position and/or results of operations of the Company and the maintenance and level of usage of the Tokes platform and the Tokes could be materially and adversely affected.

1. RISKS RELATING TO PARTICIPATION IN THE TOKEN GENERATION EVENT

There is a limited prior market for Tokes and the Sale may not result in an active or liquid market for the Tokes. Prior to the Tokes sale, there has been a limited market for the Tokes. Although the Company will use reasonable endeavors to seek the approval for availability of the Tokes for trading on a cryptocurrency exchange, there is no assurance that such approval will be obtained or maintained. Furthermore, even if such approval is granted by a cryptocurrency exchange, there is no assurance that an active or liquid trading market for the Tokes will develop, or if developed, will be sustained after the Tokes have been made available for trading on such cryptocurrency exchange. There is also no assurance that the market price of the Tokes will not decline below the original purchase price (the "Purchase Price"). The Purchase Price may not be indicative of the market price of the Tokes after they have been made available for trading on a cryptocurrency exchange. The Tokes are not being offered or sold as an investment. Any expectation that the value of the Tokes will increase is purely speculative.

The Tokes are not a currency issued by any central bank or national, supra-national or quasi-national organization, nor is it backed by any hard assets or other credit. The Company is not responsible for, nor does it pursue, the circulation and trading of Tokes on the market. Trading of Tokes will merely depend on the consensus on its value between the relevant market participants. No one is obliged to purchase any Tokes from any holder of the Tokes, including the purchasers, nor does anyone guarantee the liquidity or market price of Tokes to any extent at any time.

Furthermore, Tokes may not be resold to purchasers who are citizens or permanent residents of China, Singapore, New York or any other jurisdiction where the purchase of Tokes may be in violation of applicable laws (including but not limited to laws regulating controlled substances, such as cannabis). Accordingly, the Company cannot ensure that there will be any demand or market for Tokes, or that the Purchase Price is indicative of the market price of Tokes after they have been made available for trading on a cryptocurrency exchange. Tokes are intended for transactional purposes (i.e., the purchase of cannabis products at a participating legal cannabis dispensary) on supported software services including but not limited to the Tokes Merchant Gateway and ERP system.

Future sales or issuance of the Tokes could materially and adversely affect the market price of Tokes. Any future sale or issuance of the Tokes would increase the supply of Tokes in the market and this may result in a downward price pressure on the Tokes. The sale or distribution of a significant number of Tokes outside of the Token generation event (including but not limited to the sales of Tokes undertaken after the completion of the crowd sale, issuance of Tokes to persons other than purchasers for purposes outlined in the White Paper and issuance of Tokes as a reward to users of the Tokes platform), or the perception that such further sales or issuance may occur, could adversely affect the trading price of the Tokes.

Negative publicity may materially and adversely affect the price of the Tokes. Negative publicity involving the Company, the Cannabis Revolution, or the Company's venture with Theracann International, the Tokes platform, the Tokes, or any of the key personnel of the Company, regulation of cannabis in the US or worldwide, and/or regulation of cryptocurrencies in the US or worldwide, may materially and adversely affect the market perception or market price of the Tokes, whether or not it is justified.

We may not be able to pay any anticipated rewards in the future. There is no assurance that there will be sufficient engagement in the Tokes platform such that you will receive any rewards anticipated to be distributed to active users of the Tokes platform. Further, even in the event there is substantial engagement and interactions among the users and the Tokes platform, there is no assurance you personally will receive any part of the rewards. This is because the ability of the Company to pay any reward to you will depend on the future results of operations and the future business and financial condition of the Company, and there is no assurance of the future results of operations and the future business and financial condition of the Company.

There is no assurance of any success of Tokes platform or any Future Business Line

The value of, and demand for, the Tokes hinges heavily on the performance of the Tokes platform and the continuous active engagement of its users and success of its contemplated business lines. There is no assurance that the Tokes platform will gain sufficient traction after its launch and achieve any commercial success. Furthermore, there is no assurance that any of the business lines contemplated by the Company will be launched and generate sufficient customer traction.

The funds raised in the Token Generation Event are exposed to risks of theft. The Company will make every effort to ensure that the funds received from the Tokes sale will be securely held in an escrow wallet, which is a multi-signature address with access thereto by private keys held by reputable and trusted parties. Further, upon receipt of the funds from the Company, will make every effort to ensure that the funds received by it from the Company will be securely held through the implementation of security measures. Notwithstanding such security measures, there is no assurance that there will be no theft of the cryptocurrencies as a result of hacks, sophisticated cyber-attacks, distributed denials of service or errors, vulnerabilities or defects on the Company website, in the smart contract(s) on which the escrow wallet and the Tokes sale relies, on the WAVES or any other blockchain, or otherwise.

Such events may include, for example, flaws in programming or source code leading to exploitation or abuse thereof. In such event, even if the Tokes sale is completed, the Company may not be able to receive the cryptocurrencies raised. In such case, the Tokes platform and the structuring and licensing of any future business lines might be temporarily or permanently curtailed. As such, distributed Tokes may hold little worth or value.

2. RISKS RELATING TO THE ESCROW WALLET

The private keys to the escrow wallet may be compromised and the cryptocurrencies may not be able to be disbursed.

The escrow wallet is designed to be secure. Each of the holders of the three (3) private keys to the escrow wallet will use all reasonable efforts to safeguard their respective keys, but in the unlikely event that any two (2) of the three (3) keys to the escrow wallet are, for any reason whatsoever, lost, destroyed or otherwise compromised, the funds held by the escrow wallet may not be able to be retrieved and disbursed, and may be permanently unrecoverable. In such event, even if the Tokes sale is successful, the Company will not be able to receive the funds raised.



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