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# COMMODITY & HOLDINGS EXCHANGE (CHEX)

DECENTRALIZED ASSET EXCHANGE AND VERIFICATION

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# COMMODITY & HOLDINGS EXCHANGE (CHEX)

## WHITE PAPER

### Overview

Trading within individual commodity industries carries its own idiosyncratic business processes. Individual players within a specific industry also have their own idiosyncratic processes. The CHEX premium enterprise exchange platform provides a robust range of tools and feature sets to customize an individual business and also meet an entire industry's idiosyncratic requirements through process modularity. Examples of process modules include product bundling, lot specifications, order communication channels, logistics, settlement, social networking, etc. CHEX Process Modules can be swapped and linked in unique ways to provide all necessary features for a smooth user experience to establish a business, participate in widespread commerce and ensure regulatory compliance. The underlying blockchain layer integrating CHEX Token into individual exchange platforms establishes (1) a common transaction medium for asset exchange between parties and (2) a distributed, immutable ledger record of verifiable asset holdings and hard inventory. Token integration is an innovation for buyers and sellers to transact more favorably versus established networks. CHEX Tokens can and will be rewarded to power users that supply market activity and useful content to boost an industry's platform ecosystem. With CHEX Token units serving as a transaction medium for these platforms, the value of each token will provide a subsidy to all transactions. Thereby discounting the market buyers and ensuring sellers settle at top market price. Individual broker accounts who may navigate between industries also profit by connecting buyers and sellers. The CHEX Token Layer serves to bind all independent industry exchanges powered by a common blockchain. Our first proof of concept rollout of the CHEX technology is the active Cannabis Hemp Exchange (CHEX) platform.

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### Broad Decentralized Commodity & Holdings Layer

Commodity & Holdings Exchange (CHEX) Token layer is an innovation that will directly impact the optimization of established and unestablished commodity and asset exchange networks. This blockchain-based layer will serve as the financial foundation to an indefinite array of diverse industry sectors through a common transaction medium and distributed, immutable ledger records for asset verification and physical tracking. CHEX Token is an ERC20 compliant ethereum backed token. The verification validity of CHEX-initiated ledger records is backed and secured by the vast network of ethereum miners and nodes. This cancels out previously established middlemen in various industries, and also serves as a decentralized data store of all industry market activity. The CHEX Token layer powers the construction and operation of industry specific exchange and storefront networks or as we refer to them internally as a 'Pillar'. Our first Pillar is the Cannabis Hemp Exchange also superficially branded as CHEX. Pillars for multiple industry sectors will be constructed using our innovative and expeditious production pipeline of combining a multitude of generic process modules to serve the needs of that specific industry and the individual players within it. All individual Pillars from all types of commodity and asset sectors are bound together on the common CHEX Token layer allowing for all industries to reap the networking benefits and technological innovations that come with blockchain-backed, decentralized premium services.

### Pillar Construction through Process Modularity

From the beginning of CHEX development, we designed all of our features to be industry non-specific. This means, all features from one platform can be used and customized in another platform. It turns features into more of a toolbox or as we refer to them as Process Modules. Each feature on an exchange or storefront exists behind the scenes as part of a business process. These business processes are packaged into generic process modules. Examples of existing customizable process modules include:

- 1. Product Bundling**
  - a. Customize how products are sold in tiered bulk sets. Units of Measurement and Unit Variants.
- 2. Lot Specifications**
  - a. Commodity and Product lot orders are paired with a customizable set of lot specification tag that cater to the requirement desired for the traded asset.
- 3. Order Communication Channels**
  - a. At different points in the supply chain, focused and threaded communication is needed. Industry Ambassadors or individual businesses can decide where direct, contractual communication should reside between buyers and sellers.
- 4. Settlement**
  - a. Orders solve their contracts through a bid/ask/counteroffer process then move into mutually shared order tracking and settlement. Alternative order price types are limit and auction.
- 5. Integrated Quick Settlement Cart**
  - a. Traditional shopping cart processes can be an optional quick settlement feature or work as the primary settlement layer and serve the business as more of a storefront than an exchange dynamic.
- 6. Social and Business Networking**
  - a. All users can be representative of either individuals or companies. Companies can create an internal network of individual user accounts. Quick connection features such as QR scanning allows users to quickly add contacts in the wild with a scan.



**7. Affiliate Trees**

- a. A company user account can add and configure affiliate user platforms which operate their own exchanges or storefronts which funnel sales and market activity to the parent company.

**8. Compliance Verification**

- a. Industry sectors all require unique user verification documents and licenses.

**9. Verified Vouch Ratings**

- a. To enable a trustless exchange between users, a vouch system from verified clientele can be used to establish a reputation system amongst individuals and businesses.

**10. Manifest Order Tracking Logistics**

- a. Full end-to-end order tracking logs are tied to each order placed in exchanges and/or storefronts. Manifests can store any and all data created and synchronized in real-time with order bundle IDs and subset order item IDs.

**11. And Much More**

- a. There are many more robust and various features that can be listed here that are better served for onboarded Industry Ambassadors. The customization potential of all the process modules successfully serve all industry sectors and their idiosyncratic use cases.

**Cannabis Hemp Exchange – Existing Proof of Concept Pillar**

Our first proof of concept Pillar design was launched Q2 2017. Cannabis Hemp Exchange is currently in beta and serving two major cannabis clients representing different regions. Pacific Wholesale Network (Distributor) in California and High Frequencies (Producer) in Colorado. We also currently have several other clients being onboarded with CHEX to create their own regional private exchanges and digital storefronts. While each individual business will create and store their own unique products, the data generated through their private, individual CHEX usage is also primed simultaneously to be compatible with the expanded and public Cannabis Hemp Exchange. Businesses have the option to remain a private seller within their own cannabis exchange and/or storefront as well as the option to flip a switch and seamlessly post their commodity lots and products onto the greater open and public exchange. Regulatory compliance modules specifically for the Cannabis industries (Marijuana and Industrial Hemp) have been installed and only allow verified users in regulated markets to engage in active commerce.

We chose the Cannabis industry as our first proof of concept because of the infancy associated with the regulatory environment surrounding it. This gave us as a technology team a fresh opportunity to innovate over established processes and inefficiencies that are rampant in other industries. We spent over two years inventing technological solutions for all cannabis, hemp and general commodity and product use cases. The legality of these industries is strictly within the confines of U.S. States' rights. The U.S. federal government has defunded enforcement regarding this industry and States now benefit from regulatory guidelines on intrastate commerce. We are fully compliant with all targeted regional regulations.

As part of our Final Stage Development and Expansion phase post Token Sale, CHEX will be the first Pillar to demonstrate the full CHEX Master Suite which includes the brokerage layer, internal digital currency exchange featuring automated transaction liquidity and the CHEX Token Rewards system. See [Roadmap](#) for further details.



## Prospective CHEX Pillars

There are a multitude of commodity traded exchange networks that can be broken down into two major asset classes. All individual sectors can be onboarded to the CHEX ecosystem. The more sectors that adopt the technology, the more fungibility is attested to the CHEX Token which in turn increases the overall utility value prospect. The following asset classes are targeted by our team:

### 1. HARD COMMODITY ASSETS

- a. Metals (Precious, Industrial)
  - i. Gold, Silver, Platinum, Palladium, Copper, Lead, Zinc, Molybdenum, Tin, Aluminum/alloy, Nickel, Recycled Steel, Cobalt
- b. Energy
  - i. WTI Crude Oil, Brent Crude, Ethanol, Natural Gas, Heating Oil, Gulf Coast Gasoline, RBOB Gasoline, Propane, Purified Terephthalic Acid
- c. Petroleum
- d. Renewable Energy

### 2. SOFT COMMODITY ASSETS

- a. Agricultural
  - i. Corn, Oats, Rough Rice, Soybeans, Rapeseed, Soybean Meal, Soybean Oil, Wheat, Milk, Cocoa, Coffee, Cotton, Sugar, Frozen Concentrated Orange Juice, Cannabis, Industrial Hemp, Palm Oil, Rubber, Wool, Amber

### 3. DIGITAL ASSETS

- a. Cryptocurrencies
  - i. Bitcoin, Ethereum, Litecoin, DASH, CHX
- b. MMO Gold / In-Game Items, Steam Keys, Music, Art

Within the above targeted industries, our CHEX Master Suite feature set currently and prospectively benefits all the following industry specific players and their idiosyncratic use cases: **Producers, Wholesalers, Distributors, Processors, Retailers, Brokers, Double Brokers, Delivery Services, Regulators, Market Analysts and Speculators, and other Stakeholders.**

## Platform Usage Token Rewards

As part of the CHEX Token Strategic Supply and remaining crowdsale tokens, all platform users will be rewarded CHEX Token through usage of all CHEX Pillars. Every verified business and individual account will have a running CHEX Token (CHX) Balance. Through platform usage that contributes to the CHEX ecosystem and overall growth of the engaged industry Pillar, users will be rewarded CHEX Tokens. The algorithm to determine reward schedules will remain private and proprietary. Keeping the proprietary algorithm private and adaptive ensures that malicious users cannot find exploits to artificially pump their CHX balances. Examples of rewardable platform uses include but are not limited to: becoming a verified, licensed business class user, submitting complete new product and commodity specifications that are subsequently admin approved, placement of active market orders onto private or public exchanges, execution of active market orders that eventually reach verified settlement, providing vouch ratings on users after verified order settlements with the relevant party, successful brokerage



listings, third party quality verification services provided, active affiliate tree creation and subsequent verified market activity, etc. There will be an indefinite set of metrics to obtain when high user activity exists in future platforms. From these usage metrics, we can balance the CHEX Token reward system with economic forces to create a sustainable reward system.

The source of funds for all commodity and asset sectors begin with an object possessing intrinsic value. For example, cannabis flower has intrinsic value for the consumers of the end product derivatives. The initial source is the cannabis seed. Seeds grow by feeding on supplied nutrients, water, air and sunlight, which are all sustainable in a natural ecosystem. We mimic this ecosystem and build off of the harvested value the plant has consumed. Once the value has transferred to our systems, we can combine the economic forces of different industry players to feed off each other and grow symbiotically. For example, when a business user contractually settles with another user there will be an automatic conversion from fiat currency to CHEX Token as a cryptocurrency. Because CHX is used as the settlement layer, if either business class users already possess a balance of CHEX Token rewards then they are subsidized in their fiat purchases by normal usage of the CHEX platform. The subsidy creates a benefit for buyers and sellers alike. If CHX rewards are present at the time of purchase, a buyer will be able to bid for a higher purchase price than they would on an outside unaffiliated exchange network. This drives the highest bid price even higher than what other exchange platforms can offer. Sellers are able to liquidate volume at an exceptionally high market rate while buyers are either purchasing at normal or discounted rates. This reward subsidy structure helps both sides of the market. A third party who can earn CHEX Tokens through platform engagement is the individual broker account. Individuals can participate in the CHEX ecosystem in two major ways. (1) By buying and selling CHX on our internal regulated exchanges for fiat and other cryptocurrencies. (2) By facilitating B2B transactions. Businesses benefit from decentralizing brokerage services. Individuals who place their market sell orders on the internal exchange are guaranteed liquidation at the lowest asking price because the business users require a conversion of fiat to CHX at the time of transaction if their CHX Balances are insufficient. These are a few examples of how different, independent market makers can symbiotically benefit and grow from their individual market activity and needs. Thus, the CHEX Ecosystem is strengthened and sustainable. Further details regarding market use cases are detailed in the sections below.

### Business Class Token Use Cases

The primary utility of the CHEX Token for business class users will be as a transaction medium. Cryptocurrencies provide quick, trustless, verifiable, immutable, distributed transfer of value. CHEX Token is no exception and provides all of these features through the ethereum blockchain. Business class users may use their CHEX Tokens in a number of ways. They can maintain possession of them and transfer them to all CHEX compliant industry pillars for further fungibility. Or they can immediately liquidate to their regional fiat currency. The choice to use CHEX Token for transactions will be seamless and superficially invisible. However, all transaction activity can be verified by looking under the hood via the user's current Pillar modules or viewing the direct, public blockchain transaction records. Pillar design can choose to have encrypted or decrypted public ledger data. If encrypted, only relevant verified Pillar users may view actual market data and asset verification logs.

The secondary utility for the CHEX Token for business class users will be as a distributed, verifiable blockchain ledger. Every detail about the initiation of an order all the way through to the final logistics log will be



combined into an encrypted or plain text ledger record. This record can serve as a provable store of value and of physical inventory. It is backed and secured by the ethereum network of miners and active nodes. This can be used to record a store of any asset class including soft and hard commodities and digital assets. Market activity audits can be done publicly by regulators should the industry Pillar choose to store plain text market data.

### Individual Class Token Use Cases

The primary utility available for individual class users will be a regulated internal CHEX Token to regional fiat exchange. The CHEX Ecosystem enhances this exchange by its inherent need for CHX supply at the moment of a B2B transaction. When a B2B transaction occurs, there will be an automatic conversion of fiat to CHX. This conversion system will automatically liquidate the lowest asking price limit order on the internal CHX order book to obtain needed CHX. This creates a persistent super liquidity state for all internal Pillar exchanges and provides indefinite avenues to offload or onload CHEX Tokens.

The secondary utility available for individual class users will be to obtain a portion of B2B transaction fees by facilitating the purchase between active, verified buyers and sellers of the industry sector they are currently participating in. This brokerage system benefits businesses and individuals alike. Businesses automatically have a distributed sales force providing exposure for their commodities and products. Individuals are able to provide a compensated service on any industry Pillar that has regulatory guidelines open to brokerage accounts and activity. With CHEX Token being the common denominator of all CHEX Pillars, individual brokers can seamlessly apply their craft to multiple industry sectors. Brokers can also obtain reputation and be adopted by companies. This gives brokers a permanent share of the transaction fees whether or not they specifically routed a successful market order. Otherwise, broker IDs will be tied to the market order that brokers advertise and are subsequently paid out in CHEX Tokens upon successful transaction of an active market order.

### Encrypted Public Ledger

The primary benefit of any blockchain is its distributed store of verifiable data upon independent but linked hardware nodes and miners. The data recorded on these blocks of data are publicly available to anyone who seeks out the information. Due to the nature of this mechanism, some industry sectors and individual players would wish to remain anonymous for fear of the targeting of physical inventory based on high volume market activity. To solve this issue, we have provided a process module to allow encryption of all market data. This choice bars public audit but protects industry players. Some industry Pillars may choose to store market activity in plain text. There is value in plain text storage by having a fully decentralized, trustless and provable blockchain record of all asset class exchanges.



### CHEX Revenue Model

(1) Transactions between parties in the CHEX decentralized platform will have under a 0.5% fee per transaction structure. (2) Exchanges between fiat currency and CHEX Tokens will generate trading fees, and happen seamlessly at the time of purchase via regulated internal exchanges. Other revenue streams include (3) Market data; (4) Ancillary services (product certification, logistics, etc.); (5) Back office premium features (inventory management, reporting, integrations, etc.); (6) Targeted advertising; (7) Consulting services (brokerage, etc.); and (8) Derivatives market (futures, options, etc.). Revenue generated partially feeds automatic buyback of CHEX Tokens from traders (at lowest ask price, ensuring super liquidity) to be distributed to users. This only occurs should our strategic supply of CHEX Tokens be depleted.

**MARKET DATA** – Data acquired through heavily active platform use will be valuable for market analysts, marketing firms using targeted ad systems, and government body regulators. All sensitive data will uphold the highest available privacy standards according to regional laws.

**ANCILLARY SERVICES** – Services such as shipping, delivery, quality assurance verification, etc. Any services that can directly benefit our business class and individual users and simultaneously seek to have access to our clientele.

**TRANSACTION FEES** – A transaction fee of under 0.5% will be collected on all transactions on any Pillar in the CHEX Network. This will happen at the time a contracted order finalizes into agreement. CHX-to-Fiat transactions also bear a minimal transaction fee. Fee structures may adjust over time to sustain capacity.

**BACK OFFICE PREMIUM FEATURES** – Pillar software have a set of robust process modules and some of them require a premium subscription. Premium Inventory Management features, Advanced Reporting and integration with certain apps and networks may require a premium usage model.

**TARGETED ADVERTISING** – As part of the data acquired an intelligent demographic algorithm will allow for outside marketers to target relevant businesses and individuals should their accounts warrant that level of publicity.

**DERIVATIVES MARKET/CONTRACT TYPES** – Forwards, Futures, Options, Interest Rates / Swaps, Environmental Instruments, Freight contracts, Exchange-traded funds (ETFs)





### Token Sale Specifications

1. Token Sale Opens July 21, 2017 @ 11:20PM UTC
2. Token Sale Closes October 28, 2017 @ 11:20PM UTC
3. Total CHEX Token Supply
  - a. 2 Billion (2,000,000,000 CHX)
4. Supply Allocation
  - a. 50% (1,000,000,000 CHX) Crowdsale Supply
    - i. Crowdsale will end prematurely if this supply is depleted.
  - b. 25% (500,000,000 CHX) Partner Holdings
    - i. Developers and Founders hold a store of personal CHEX to incentivize the increase of the token's value.
  - c. 25% (500,000,000 CHX) Strategic Supply
    - i. The CHEX, Inc. Strategic Supply will be used to incentivize business class platform users to adopt the CHEX network, for promotional campaigns, and to forge strategic partnerships that enhance the technology and culminate in boosted transaction volume and cross-industry adoption.
5. CHEX Token is an Ethereum ERC20 Token
6. Contribution Methods
  - a. Bitcoin (BTC)
  - b. Ethereum (ETH)
  - c. Altcoins (via Shapeshift.io)
7. CHX conversion rate is calculated in real-time at the time of contribution transactions.
8. A 15-minute deposit portal is created when a user wishes to contribute and gain CHX.
9. The \$USD value of 1 CHEX Token will increase overtime and as crowdsale supply diminishes.
  - a. The price increase will coincide with pre-determined block discoveries.
10. Contributors can register for a CHEX account via the Contribution Page.
  - a. CHX Balances can be viewed within the 'MY TOKENS' tab of the Contribution Page when logged in.
11. Progress bars of the Token Sale milestones will be updated in real-time on the Contribution Page.
12. Users who provide an ERC20 compliant wallet address at the time of purchase will be awarded their CHX Tokens immediately.
13. Users who do not provide a wallet address can view their stored CHX balance in the 'MY TOKENS' tab.
  - a. At a near future date post Token Sale, users with stored CHX value on the CHEX platform will be able to transfer their CHX tokens to any compliant address and exchanges.
14. For more information regarding specific contract addresses and other information, see the FAQ section of the CHEX Token Sale website at: <https://tokensale.thechex.com>



### Roadmap Phases Post Token Sale

The CHEX Platform began development Q3 2014 and onboarded its first beta clients in Q2 2017. Development was started so early to preempt laws and regulations easing up in the United States. Early blockchain systems were put in place from the beginning of the development. It wasn't until ethereum's token contracts were publicly available that we can now proceed to be fully empowered by the innovations of the blockchain. Upon closure and final distribution of The CHEX Token Sale, The CHEX, Inc. will proceed into our Final Stage Development and Expansion.

#### **FINAL STAGE DEVELOPMENT AND EXPANSION** – Beginning Q4 2017

- i. Widespread Cryptocurrency Exchange Listings for CHX
- ii. Development and Deployment of Individual Brokerage Accounts
- iii. Regulated Internal Fiat-to-CHX Exchange Platform
- iv. Ramping up new engineering seats assigned to onboarding queue of clientele
- v. Cross-platform Native App Development
- vi. Expand Internal Marketing, Sales, Legal, Quality Assurance, Technical/Customer Support, Security & Administration Teams
- vii. Full Compliance for New Systems
- viii. Final Polish pass on all Internal Admin Systems
- ix. Final Polish Pass on External Application User Experiences. Including new user onboarding supplemented with tutorials and video.
- x. Heavy QA Testing Phase
- xi. Brand Awareness Campaigns

#### **CHEX MASTER SUITE V1.0 LAUNCH** – Q2 2018

- i. All systems finalized and polished for new user onboarding
- ii. Full public release for free Individual Accounts and verified Business Class Accounts
- iii. CHEX Token Layer fully operational
- iv. CHEX Pillar fully operational
- v. Internal Exchanges fully regulated and integrated with automatic fiat conversion systems
- vi. Pillar Process Modularity System enhanced with user friendliness
- vii. Industry Ambassador agreements in place
- viii. Affiliate Trees, Public and Private Exchanges, Business Storefronts (Public & Private) all Golden Master with no critical bugs and full UX/UI Polish.
- ix. New User polished experience with tutorial videos, tool tips and help documentation
- x. Easy customer and technical support channels
- xi. Grand Opening Promotional Campaigns
- xii. Founders and Core Team Developers get first day off in over 3.5 years. But only one.



## Conclusion

Newly empowered by blockchain innovations, smart contracts and token contracts, The CHEX, Inc. is moving our FinTech software into a new paradigm. Our proof of concept Pillar with the Cannabis Hemp Exchange has proven that our extensive auditing of a commodity and products exchange industry was key to implementing real-world solutions to solve all business and individual use cases. We are excited to have a direct relationship with you and to gain new eyes and new enthusiasts through this token sale. Our Core Team has been living nothing but CHEX for the past 3 years and are excited to move into the future with a large boost from the crypto community that we have watched and engaged in so closely throughout.

**The CHEX, Inc.**  
**Core Development Team**

## SOURCES AND FURTHER READING:

- [1] <https://tokensale.thechex.com/>
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- [3] <https://cointelegraph.com/news/billionaire-fortress-investor-cryptocurrencies-will-be-worth-5-trillion-by-2022>

