Goldentix - A Digital Token Backed by Physical Gold

Important Considerations for all Recipients of this Whitepaper: Please review the "Important Considerations" section of this whitepaper carefully. It contains important information about the nature, purpose and limitations of this whitepaper and what you acknowledge, accept and agree with should you choose to read this whitepaper.

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Introduction

Once synonymous with the term "money", gold is a substance of immense intrigue and historical significance. Known to the Incas as "tears of the sun", gold was described by Homer in the Iliad and the Odyssey as "the glory of the immortals and a sign of wealth among ordinary men". Having featured in both the Old and New Testaments, the timeless and universal cultural relevance of this shiny metal cannot be denied.

Today, however, gold is *not* synonymous with "money". There exists instead of a vast array of monies, each associated with sovereign political authority and used predominantly only within national boundaries. These national systems of money were originally based upon redeemability to fixed amounts of gold, either directly or via a peg to the U.S. dollar – the whole point of paper money was to represent physical gold in a manner conducive to transacting.

By enabling gold to effectively be divided, stored, and transported in a much easier manner, representative paper money enhanced the economic functionality of gold, greatly stimulating trade. But the superior medium-of-exchange properties of gold-representative

paper introduced a new problem: trust in scarcity. Put simply, there are geophysical limits to the supply of physical gold which do not apply to the gold-representative paper. This potentially enables a dishonest issuer to print representative notes exceeding the gold supply they hold. This added element of trust – a new form of counterparty risk – means that gold-representative paper is an inherently lesser "store-of-value" than gold itself.

For this reason, among others, many countries began to repatriate their gold from American vaults, starting in 1965. In the post-war period two decades earlier, the Bretton Woods agreement had established the U.S. dollar as the world's reserve currency. All other major currencies would be convertible at fixed rates into U.S. dollars, remaining convertible to gold at $35 per ounce. This caused much gold to flow into the United States, which exported many U.S. dollars. As these flows reversed, American gold reserves began to rapidly deplete, leading to a unilateral suspension of international convertibility of U.S. dollars to gold. This move completed the formal unbundling of gold from the international monetary system, thrusting the world into the current era of unbacked, fiat money.

A new entity, Etheronic Holding AG. (**GoldenTix Gold**), digitizes the value of gold using the new token, GoldenTix coin. This novel token gives GoldenTix coin holders the ability to own digitally allocated gold, in small sums, that are highly transferable and with comparably low fees. This whitepaper unbundles monetary principles to highlight the innovation and benefits provided by the GoldenTix coin.

The Evolving Financial Ecosystem

For the current generation of finance professionals, the idea of fixed exchange rates for national currencies based on a peg to the U.S. dollar (or gold itself) is entirely foreign. Since the 1970s, these rates have been permitted to 'float'; that is, they are determined in the global

foreign exchange markets based on supply and demand, relative to other fiat currencies. This new system had several major implications for global finance.

First, the global supply of money was no longer pegged in any way to the global supply of gold. This led to sharply rising gold prices and high levels of inflation within many domestic economies. With these new, fiat money supplies being wholly unpegged from gold, the scarcity of money became only artificially ensured. Trust in the physical scarcity of gold, and of its existence within vaults, was replaced by trust in the economic stewardship of national monetary authorities.

Second, and relatedly, was the emergence of global foreign exchange markets. With rates no longer fixed, market mechanisms were required to discover the relative prices of foreign currency. Whereas the fixed exchange rates under the gold-based system largely precluded speculation, freely-floating rates transformed the foreign exchange markets into a global arena for speculative activity, wholly separate from the production of goods and services. The Bank of International Settlements has reported that since 1992, foreign exchange turnover has clearly increased more than the underlying economic activity, whether measured

by GDP, equity turnover, or gross trade flows.[1]

These and other issues associated with physically unconstrained fiat monies are what has perpetuated the economic function of gold. Despite its lesser monetary role, gold remains a universally popular 'safe-haven' asset, and is still held by many central banks. There are an estimated 6.1 billion ounces of physical gold above ground, of which about half are connected to financial markets, implying a market cap of approximately $4.7 trillion USD.[2] With over $200 billion combined daily trading volume, gold markets are among the most liquid in the world. One major reason that gold continues to be held in many investment portfolios is as a hedge against financial instability.

i. Fiat Money & Financial Instability

The post-Bretton Woods era of unbacked, fiat money, has coincided with numerous periods of currency-related financial instability around the world. The Latin American debt crisis of the early 1980s, the 1997 Asian financial crisis, and many other smaller-scale emergency situations all had their roots in this relatively new global monetary system. More recently, the Global Financial Crisis has shed light on the financial turbulence associated with debt-based fiat money. Its aftermath, an unprecedented global monetary expansion coordinated by leading central banks, has raised concerns about these monetary authorities' economic stewardship.

[1] Michael R. King, Dagfinn Rime, "The $4 trillion question: what explains FX growth since the 2007 survey?", Bank of International Settlements Quarterly Review, December 2010, at p. 30

[2] Based on January 2,2020 closing gold prices.

ii. Bitcoin & Digital Tokens

The Bitcoin network commenced on January 3rd, 2009 and was originally introduced as "a purely peer-to-peer version of electronic cash [that] would allow online payments to be sent from one party to another, without going through a financial institution".[3] This description speaks to Bitcoin's financial aspect (payments), but there is also a fully internal, decentrally secured monetary unit: bitcoins. Massively enhanced global payments efficiency is a major financial innovation, but the invention of digital scarcity – e.g. a hard cap of 21 million bitcoins – is a landmark monetary innovation; it is why some call bitcoin "digital gold".[4]

Embedded within the first bitcoin 'block' was the following text: "The Times 03/Jan/2009 Chancellor on brink of second bailout for banks". This British headline was a reference to the fallout from the Global Financial Crisis, hinting at the motivation of Bitcoin's pseudonymous creator, 'Satoshi Nakamoto'. Bitcoin and its underlying technologies seem intended to address problems and moral hazards associated with fiat money and the implied concentration of economic power in the hands of monetary authorities and major banks.

With truly humble origins, bitcoins were first used to purchase a real-world item in

2010, when 10,000 bitcoins were used to pay for two pizzas in Jacksonville, Florida.[5] Bitcoin's market value has since experienced a tumultuous ascendency, regularly expanding by multiples and then contracting by over 50%. For example, in 2011, the price first reached $1 USD, surged to $31, and then fell back to $2. Reaching $1000 in 2013, bitcoin's price peaked at $19,500 in 2017 before falling back to $3,500, and was approximately $7,200) as of midnight UTC on January 1, 2020. Though generally trending upwards, bitcoin's meteoric rise has been accompanied by extreme volatility.

These massive price movements caused media coverage of bitcoin to soar, particularly during the latter half of 2017. With value and popularity continuing to rise, politicians and financial regulators began paying attention. Amidst the frenzy surrounding this still-nascent technology, many around the world began to ask: is bitcoin money? For its biggest proponents, bitcoin was undoubtedly money, and of an entirely superior form.[6] However, for its detractors, bitcoin could never be money; it was associated with nefarious activities, was not "backed" by any government, and its price was far too volatile.[7]

[3] 'Satoshi Nakamoto', "Bitcoin: A Peer-to-Peer Electronic Cash System" (2008)

[4] Nathaniel Popper, "Digital Gold: Bitcoin and the inside story of the misfits and millionaires trying to reinvent money" (Harper Collins, 2016)

[5] Grace Caffyn, "Bitcoin Pizza Day: Celebrating the Pizzas Bought for 10,000 BTC", (Coindesk.com, May 22nd, 2014) <https://www.coindesk.com/bitcoin-pizza-day-celebrating-pizza-bought-10000-btc>

[6] Brian Patrick Eha, "'This is how money should be': Digital asset pioneer Eric Voorhees", (American Banker, August 16th, 2017) <https://www.americanbanker.com/news/this-is-how-money-should-be-digital-asset-pioneer-erik voorhees>

[7] Paul Krugman, "Bitcoin is Evil" (New York Times, December 28th, 2013)

These debates raised the question: what is money? With dictionary definitions lacking consensus on its meaning, one popular way to conceptualize this English term is by considering the following three functions: 'medium-of-exchange', 'store-of-value', and 'unit-of-account'. For bitcoin's detractors, the regularity of major price movements precluded bitcoin from being a store-of-value, meaning it could not be money. The purchasing-power uncertainty associated with holding this volatile asset would preclude its widespread use as a medium-of-exchange.

iii. 'Stablecoins'

With bitcoin's price volatility seemingly holding back a ground-breaking enhancement to the transactional utility of money (i.e. medium-of-exchange functionality, cheap and fast global value transfers, etc.), attempts were made to create digital tokens with stable values. This was done by pegging the value of a digital token to a fiat monetary unit, to achieve the best of both worlds: the transactional utility of a decentralized digital token, but the price stability of fiat money. These projects came to be known as 'stablecoins'.

Tether was created on October 6th, 2014 in response to a clear market need to transfer funds quickly and globally, whilst benefiting from the relative stability of fiat money. Since then, the value of outstanding tethers has surpassed $4 billion, with versions now available both in numerous fiat denominations and on a variety of blockchains. Price stability is maintained by Tether always valuing the token at the monetary unit to which it is pegged, a policy supported by holding reserves equal in fiat value to all outstanding tethers.[8] Maintenance of this policy generates arbitrage activity in the secondary markets, keeping prices near their pegged fiat values.

With the highest daily traded volume of any digital token[9], Tether is the undisputed global leader in fiat-backed stablecoins. Built on top of open blockchain technologies but backed by reserves , Tether's effective unbundling of monetary principles marks a new frontier in the evolution of money, particularly regarding transactional utility.

The Evolution of Money: Unbundling Monetary Principles

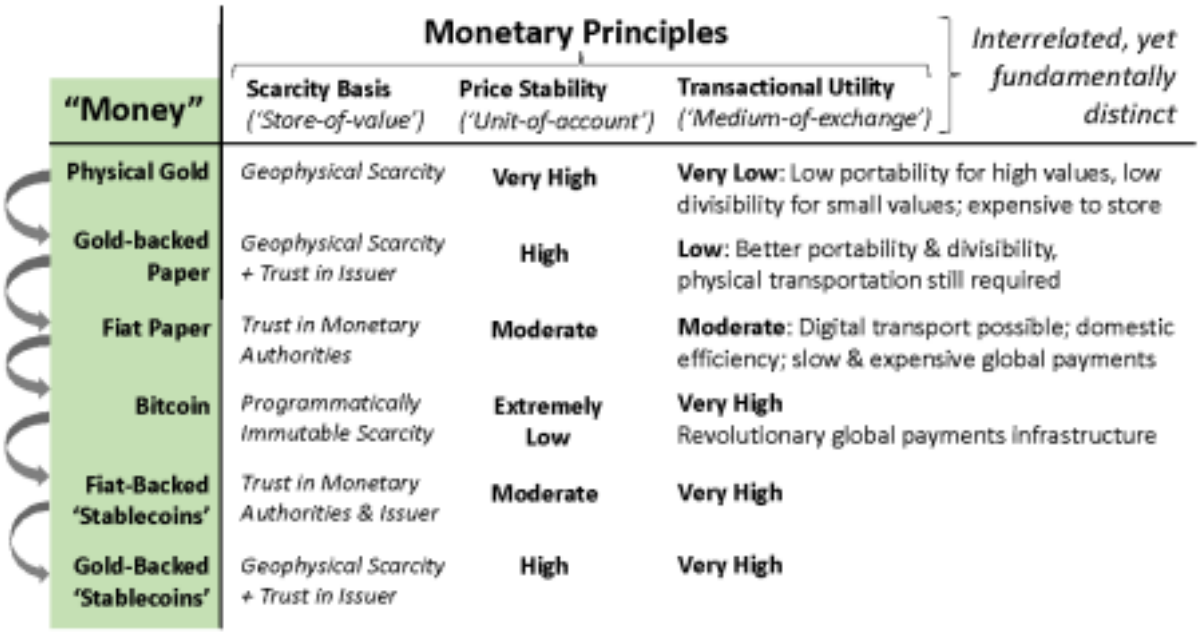
Before the emergence of Bitcoin and its underlying technologies there were no alternatives to fiat money. Now, with plausible alternatives, individuals are beginning to make their own trade-offs between monetary principles[10] in their choices of money. Dramatically

[8] Reserves include traditional currency, cash equivalents and, from time to time, may include other assets and receivables from loans made by Tether to third parties, which may include affiliated entities. [9] Based on January 1, 2020 data from https://coinmarketcap.com/

[10] Money serves three functions – medium-of-exchange, store-of-value, and unit-of-account. These functions, or "monetary principles", are interrelated. For example, a medium-of-exchange must also be a store-of-value in the

accelerated by the emergence of Bitcoin and its underlying technologies, the evolution of money has long been characterized by an unbundling of monetary principles:

The Evolution of Money: An Unbundling of Monetary Principles



"Money"	Monetary Principles: Scarcity Basis ('Store-of-value')	Price Stability ('Unit-of-account')	Transactional Utility ('Medium-of-exchange')
Physical Gold	*Geophysical Scarcity*	**Very High**	**Very Low**: Low portability for high values, low divisibility for small values; expensive to store
Gold-backed Paper	*Geophysical Scarcity + Trust in Issuer*	**High**	**Low**: Better portability & divisibility, physical transportation still required
Fiat Paper	*Trust in Monetary Authorities*	**Moderate**	**Moderate**: Digital transport possible; domestic efficiency; slow & expensive global payments
Bitcoin	*Programmatically Immutable Scarcity*	**Extremely Low**	**Very High** Revolutionary global payments infrastructure
Fiat-Backed 'Stablecoins'	*Trust in Monetary Authorities & Issuer*	**Moderate**	**Very High**
Gold-Backed 'Stablecoins'	*Geophysical Scarcity + Trust in Issuer*	**High**	**Very High**

Interrelated, yet fundamentally distinct

Tether's existing line of fiat-backed 'stablecoins' create value by unbundling and repackaging the monetary principles associated with fiat money and bitcoin, respectively. In exchange for bearing the counterparty risk of Tether, the issuer, holders of tether tokens are rewarded with a transactional utility far exceeding that of traditional fiat money, all while maintaining the price stability of the domestic fiat monetary unit.

Tether's introduction of a gold-backed product is a natural progression in the evolution of money. Since gold is more physically cumbersome than fiat money, the incremental benefit of a gold-backed stablecoin is commensurately greater than for its fiat-backed counterparts. In the GoldenTix Gold token, users will have access to an asset with a scarcity basis and price stability
akin to gold, but with the transactional utility of a digital token – a novel permutation of financial characteristics. By relentlessly expanding the potential for individuals to make their own trade-offs between monetary principles, Tether has become a global leader in financial empowerment.

Existing Markets for Gold

Predating modern securities markets and the globalization of financial services, markets for physical gold have a history that stretches to antiquity. When gold was used as money, the price of gold was expressed in other goods, e.g. food items, other metals, etc. However, in the modern financial system, the price of physical gold is most commonly expressed in fiat money value, particularly U.S. dollars. As such, whether gold is held as a safe-haven asset, is traded for speculative purposes, or is made part of a well-diversified investment portfolio, it is exposure to the fiat money price change of gold that is sought. As the global financial system matured, new financial products were designed that could provide economic exposure to the fiat money price change of gold, without having to hold the physical gold itself. There are currently three primary ways to gain economic exposure to the price of gold:

i. Physical Gold

The global standard for investment grade physical gold is the London bullion market, a wholesale over-the-counter (OTC) market for trading gold and silver. Trading is conducted amongst members of the London Bullion Market Association (LBMA), and is loosely overseen by the Bank of England. The LBMA issues a Good Delivery specification, a set of rules regarding the physical characteristics of the gold and silver bars used in settlement in the market. With most members being major international bullion dealers and refiners, the public can typically only access this market indirectly, through a third-party.

ii. Exchange-Traded Products

Exchange-traded gold products include exchange-traded funds (ETFs), exchange-traded notes (ETNs), and closed-end funds (CEFs), which are all traded like shares on the major stock exchanges. Gold ETFs have come to represent a large share of the market for gold, as they allow investors to put small amounts of capital to work more effectively. Within this category there are a range of products to choose from, with some designed to track the price of physical gold itself, and others designed to invest in companies that specialize in gold. These products provide only varying levels of indirect exposure to the price of gold, but they save investors the burden of storage and verification of physical gold.

iii. Derivatives

Financial derivatives, such as gold forwards, futures, and options, are a third primary way for investors to gain exposure to the fiat price changes of physical gold. These products currently trade on various public exchanges around the world, as well as in various OTC private markets. Gold futures are used as hedging tools by commercial producers and users of gold, facilitating both global gold price discovery and opportunities for portfolio diversification. Derivatives enable purchasers to tailor their economic exposure to physical gold to suit their specific situation, e.g. strike price, duration.

Each of the above three ways to gain economic exposure to the price of gold has pros and cons. Holding physical gold provides direct economic exposure to a highly liquid market for physical gold, but the costs of storage, transfer, and verification can be prohibitive, particularly for smaller investors. Exchange traded products largely overcome these high expenses, but can only provide indirect exposure to the price of physical gold. Although many ETFs hold large volumes of physical gold, investors are not entitled to any specific allocation, meaning that some counterparty risk is baked into the product. Gold derivatives are free of such counterparty risks, but their use requires fine tuning and sophistication. They are not generally a cost-effective way for typical investors to gain economic exposure to gold prices.

GoldenTix Gold

The economic alternatives to holding physical gold has expanded the potential for

individuals and entities to make trade-offs between monetary principles, e.g. accepting indirect rather than direct exposure to the price of gold (counterparty risk), in exchange for lower storage and transaction costs (accessibility). But the traditional market still lacks an inexpensive way in which investors could gain direct exposure to the price of physical gold. GoldenTix coin will combine the best of the following three distinct worlds: direct exposure to the price of physical gold, the accessibility of traditional financial assets like ETFs, and the transactional utility of a digital token:

	Gold Exposure Type	**Costs**	**Accessibility**	**Transactional Utility**
Physical Gold	Direct	High	Low	Very Low
Gold ETFs	Indirect	Low	High	Moderate
GoldenTix Gold	Direct	Low	High	Very High

By applying the technology and functionality of GoldenTix's fiat-backed stablecoins to physical gold, GoldenTix coin will dramatically mobilize gold markets, proceeding to significantly reduce the barriers to entry for non-institutional investors in the process. GoldenTix coin will mirror GoldenTix's already existing products in various ways, however, there are several salient differences, including the establishment of a new entity, GoldenTix Gold, which will issue GoldenTix coin tokens.

i. Basic Functionality

An individual GoldenTix coin token represents 1 troy fine ounce of Swiss gold, secured within a vault in Switzerland, and will be capable of being fractionalized up to six decimal places (i.e. increments as small as 0.000001 troy fine ounce).

Holders of GoldenTix coin will be able to redeem their tokens for the associated physical gold, becoming subject to the payment of fees and minimum repossession requirements. The gold will be delivered to the location of the holder's choice in Switzerland or Singapore. As a substitute for physical deliveries in Switzerland, a holder may ask GoldenTix Gold to create arrangements in an attempt to sell the gold and receive proceeds from that sale.

Certain gold bars will be associated with each on-chain address that holds GoldenTix Gold tokens. GoldenTix Gold will make a "Look-up Website", where individuals will have the ability to identify the specific gold bar(s), and their associated on-chain address(es) where

GoldenTix coin tokens are accommodated.

When an on-chain transaction transfers GoldenTix coin from its initial on-chain address to a second on-chain address, the physical gold associated to an ISIN No. with the GoldenTix coin held at each on-chain address, will be relocated by GoldenTix Gold on behalf of the GoldenTix coin holders, in an attempt to minimize the number of physical gold bars associated with each address holding GoldenTix coin. This relocation will happen instantly, to ensure that each GoldenTix coin token will always represent ownership of physical gold linked to a particular gold bar.

In order to either purchase or redeem GoldenTix coin with GoldenTix Gold, users will be required to complete an identity verification process, agree to a set of specific terms for service for GoldenTix coin, and meet applicable purchase or possession minimums.

ii. Product Details & Fees

GoldenTix coin tokens will initially be available on the Binance Blockchainl, with others to follow. All purchases and repossession will be stated in U.S. dollars and Euros.

GoldenTix Gold will purchase, or arrange for the purchase of Swiss gold from a gold dealer in Switzerland, which will then be securely stored by Orsuisse in a vault in Switzerland. The gold will be held for the benefit of GoldenTix coin token holders, not for GoldenTix Gold. The custodian maintains insurance with regard to its business in such amount and on such terms and conditions as it considers appropriate. Unlike some other gold-backed stablecoins, as of the date of this whitepaper, GoldenTix will not charge 'gas' fees. The only fees will be on issuance and repossesion.

As of the date of this whitepaper, to buy GoldenTix coin directly from GoldenTix Gold verified users will be required to purchase a minimum of 50 fine troy oz of gold (i.e., 50 GoldenTix coin tokens) and pay the cost to purchase the gold in the Swiss gold market plus a 25 usd fee.

As of the date of this whitepaper, to redeem GoldenTix coin for the physical gold associated with it, the holder must generally have a minimum of 10 GoldenTix coin tokens (i.e., 10 fine troy oz of gold).

repossessions can only occur with full bars of gold, and gold bars are not exactly 430 fine troy oz (they usually range in size from ~385 to ~415 fine troy oz), the holder of GoldenTix coin seeking to redeem them will be responsible for the difference. In the highly unlikely event that the gold bar is greater than 430 fine troy oz, the holder will either have to: (a) provide additional GoldenTix coin to be burned to cover the excess, or (b) pay an amount of fiat necessary to cover the cost of the excess gold (based on the then current cost for purchasing the gold in the Swiss gold market). If the gold bar is less than 430 oz, the holder seeking to redeem will only be entitled to redeem the number of GoldenTix coin tokens equivalent to the amount of gold on the bar, rather than the full 430 GoldenTix coin they sought to redeem.

As of the date of this whitepaper, the fee for physical delivery of gold in Switzerland will be 25 bp of the then current cost to purchase gold in the Swiss gold market, as well as the cost of physical delivery to the location in Switzerland, which was selected by the holder. If the holder requests GoldenTix Gold to make arrangements to attempt to sell their gold, GoldenTix Gold will attempt to proceed in the Swiss gold market. If the gold is successfully sold, GoldenTix Gold will provide the holder of the GoldenTix coin with the fiat money they were able to sell it for, less a fee of 25 bp.

Fees and minimum possession or purchase amounts may be charged from time to time. GoldenTix Gold terms of sale and service will provide information on the current fees and minimum repossession and purchase amounts.

iii. Potential Use Cases

GoldenTix's fiat-pegged products have been adopted for a variety of purposes, particularly those requiring high degrees of global transactional utilities. Fiat money could already be moved around the world, but the enhanced speed and efficiency of fiat-pegged stablecoins spurred adoption by users, who value these traits the most. With physical gold being significantly less mobile than fiat money, a gold-pegged stablecoin such as GoldenTix coin opens the door to entirely novel forms of economic activity, as the token represents an even greater step-change in the transactional utility of the underlying asset:

a. Highly Mobile 'Safe-Haven' Asset

Physical gold has long been held as a safe-haven asset. However, with its physically cumbersome nature, physical gold is difficult and costly to transact with and store. By imbuing a digital token with the economic characteristics of physical gold, GoldenTix coin removes a great deal of friction and cost associated with holding the underlying asset. While the physical gold itself will largely remain in vaults, the GoldenTix coin will enable certain economic qualities of gold – e.g. ownership, value – to flow seamlessly around the world.

b. Liquid & Effective Portfolio Hedge

Being unpegged from the global monetary system, many investors include gold in their portfolios as a hedge against financial instability. However, despite the existence of numerous gold-related investment products today, it has been historically costly and burdensome for non-institutional investors to gain exposure to physical gold, particularly smaller quantities. Lower cost gold-related investment products are widely available, but these often lack the liquidity and hedge effectiveness of physical gold itself. By allowing smaller denominations at wholesale prices, GoldenTix coin will democratize access to physical gold as an asset class.

c. Sovereign-Neutral Monetary Unit

The broadest use case of GoldenTix coin is as a sovereign-neutral monetary unit. By unbundling and repackaging the monetary principles associated with gold and bitcoin, respectively, users will gain access to a money-like asset that has the scarcity-basis and price stability of gold. While many herald bitcoin's lack of political affiliation and the resistance to censorship that this implies, physical gold was the original sovereign-neutral monetary unit. Bitcoin and physical gold both exist outside the control of monetary authorities, but bitcoin's massive price volatility has precluded its use as a monetary unit upon which to base trade. By combining the most desirable qualities of these two assets, the GoldenTix coin could become the first widely-traded sovereign neutral monetary unit with a high degree of price stability. By making gold-based contracting and global settlement accessible to everyone, GoldenTix coin tokens will provide a new and feasible monetary basis for global trade. Governments may no longer adhere to a 'gold standard', but the GoldenTix coin will empower individuals to do so.