

The Responsible Gold Ecosystem and G-Coin White Paper

June 2020



**Responsible
Gold™**

Executive Summary

THE FUTURE OF GOLD IS HERE.

Introducing the Responsible Gold Ecosystem and G-Coin™, a digital title to 1 gram of Responsible Gold™, now available via the [G-Coin Wallet](#).

THE RESPONSIBLE GOLD ECOSYSTEM DELIVERS UNPRECEDENTED VISIBILITY ON GOLD PROVENANCE, SOLVES THE SUPPLY CHAIN TRUST BURDEN, AND CONNECTS TRUSTED BUSINESS AND INDIVIDUALS IN ONE ECOSYSTEM. BY COMBINING THE STABILITY, LIQUIDITY AND SUSTAINABILITY OF RESPONSIBLE GOLD WITH THE BENEFITS OF A DECENTRALIZED BLOCKCHAIN AND GOLD TOKEN PLATFORM, EMERGENT TECHNOLOGY HOLDINGS AIMS TO CREATE RESPONSIBLE FINANCIAL SERVICES INNOVATION BY BRINGING RESPONSIBLE GOLD AND G-COIN TO AS MANY PEOPLE AROUND THE WORLD AS POSSIBLE.

I. MISSION

Emergent Technology Ltd (EmTech), founded in 2017, is a global privately held company headquartered in Houston, TX that operates in markets across North and Latin America, Asia-Pacific, the Middle East and Africa. At EmTech, we believe gold holds an intrinsic value as a store of value, medium of exchange and unit of account and we've made it our mission to make gold sustainable and globally accessible by leveraging the power of blockchain technology to redefine its future. **That future has arrived, and in August 2019 EmTech officially deployed the Responsible Gold Ecosystem and G-Coin, a digital title to one gram of a Responsible Gold kilobar.**

EmTech's Responsible Gold Ecosystem, forms a groundbreaking, blockchain-based platform of trusted participants that: provides the means for responsibly sourced gold to be transacted on a globally available financial network; solves the trust burden on the gold supply chain; and leverages regulatory compliance, instead of bypassing it, to provide trust in the ecosystem, in the financial platform, and between all ecosystem participants. In other words, EmTech's Responsible Gold Ecosystem aims to create responsible financial services innovation that is sustainable and globally accessible.

II. G-COIN

One G-Coin token (XGC) is a digital title of ownership to one gram of a Responsible Gold kilobar. Responsible Gold kilobars are securely stored in licensed vaults, with each kilobar tracked by a unique identifier and subject to on-going verification by independent auditors. G-Coin tokens are physically redeemable in 10 grams or one kilobar increments.

G-Coin tokens provide an alternative as a store of value and a medium of exchange. Individual and enterprise G-Coin consumer wallets, can be used to save, spend and send G-Coin tokens to other ecosystem participants with zero transaction fees and real-time settlement (1 second). In addition, EmTech is launching a G-Coin debit card and, in the near future, EmTech's goal is to embed G-Coin tokens into merchant paywalls for virtual point-of-sale transactions.

III. RESPONSIBLE GOLD

Responsible Gold is gold obtained through the Responsible Gold Supply Chain Application (RG SCA), which tracks the provenance and custody transfers of conflict-free and responsibly sourced gold from mine-to-refinery-to-vault, while conforming with the Responsible Gold Standards (Standards). The Standards, specifically developed by EmTech to encompass industry best practice regulatory requirements and environmental, social and governance controls, provide the framework

for the gold supply chain and its participants, so that its output can be affirmatively declared “Responsible Gold”. In 2018, the Shariah Supervisory Board of Amani Advisors declared that the Responsible Gold Supply Chain, using the Responsible Gold Standards, exceeds Shariah requirements for transparency and ethical trading.

The RG SCA successfully combines blockchain technology with web and mobile applications that revolutionize the way different participants capture, communicate, access and audit information.

Responsible Gold is available in two formats: XGC (G-Coin tokens or digital gold) and XRG (physical gold) available to sell or trade. Currently in operation, the RG SCA is comprised of a growing number of trusted participants, including miners, refiners, logistics providers and vaults.

IV. QOS BLOCKCHAIN PLATFORM

The G-Coin Wallets and the RG SCA run on top of the QOS Blockchain platform. A blockchain is a distributed ledger of transactions or events sustained by an independent decentralized network of node (computer server) operators. The decentralized nature of the storage provides protection against loss, tampering and denial of service attacks. The immutable, transparent and time-stamped, decentralized ledger technology simplifies and automates the settlement and reconciliation process when auditing or authenticating a transaction.

The QOS Blockchain platform, a 3rd generation blockchain, is based on Quorum, an enterprise-focused version of Ethereum, developed by J.P. Morgan. It is a public/permissioned type blockchain custom designed to offer a high transaction rate in excess of 1,000 transactions per second, to deliver high scalability potential, and to provide network consistency and safety in scenarios where up to 33% of the nodes are faulty.

All QOS node operators validate transactions and participate in the QOS blockchain consensus and governance. In addition, node operators may benefit from additional revenue streams from ecosystem participation.

The QOS blockchain has been running in stable capacity, with an increasing number of nodes, for over two years, supporting both the RG SCA and, more recently, the smart contracts used for G-Coin digital wallets.

V. TRUSTED PARTICIPANTS

Participants of the Responsible Gold Ecosystem including all G-Coin token customers, supply chain partners and QOS Blockchain node operators, are onboarded after meeting stringent, globally recognized approval standards. In the QOS blockchain/ Responsible Gold Ecosystem, these standards include whitelisting with KYC/AML rules and sanction-screening to achieve regulatory compliance. The compliance program encompasses jurisdiction-specific requirements that demand the mandatory identification of customers to prevent money laundering or terrorism financing. Technically, the whitelist is linked to the QOS smart contracts, effectively acting as a permit, i.e. where a participant attempts to send G-Coin tokens to a non-whitelisted address the transaction is rejected.

To ensure compliance with the multiple jurisdictions, EmTech is undertaking an extensive effort to discuss its business plan and proposed operations with attorneys and regulators in targeted U.S. states and countries. Formal advice is being sought from leading legal and regulatory, taxation and assurance advisors.

Permissioning participants generates trust in the Responsible Gold Ecosystem’s users, applications and smart contracts, making the QOS Blockchain more reliable and secure than recent blockchain offerings.

Table of Contents

Executive Summary	1
Table of Contents	3
I. Introduction	4
Problem Statement	4
Mission: The Responsible Gold Ecosystem	5
Blockchain-based Solution	6
Governance of the Responsible Gold Ecosystem	7
EmTech Ecosystem Sustainability Goals	8
EmTech Ecosystem Differentiators	9
About Emergent Technology Ltd	10
I. G-Coin	11
The Challenges with Digital Currencies	11
G-Coin Token (XGC)	12
G-Coin Wallets	13
II. Responsible Gold	16
Responsible Gold Standards	17
Responsible Gold Supply Chain Application	22
GoldID: Imaging Technology	28
Responsible Gold Storage	30
Responsible Gold: XRG	32
III. QOS Blockchain	34
IV. Trusted Participants and Ecosystem	36
Regulatory Landscape for G-Coin Tokens	36
V. Closing Remarks	38
Appendix A: Gold Market Overview	39
Appendix B: G-Coin and ETFs, A Comparative Analysis	44
G-Coin Risk Disclosure	46
Glossary of Terms	52
Disclaimer	57

I. Introduction

Problem Statement

Market Need for Trust, Connectivity and Liquidity

In emerging markets, in particular those with issues of trust with the local banking infrastructure, with monetary controls preventing divestment from volatile local currencies, and with government instability and corruption, the need for a trusted, simple and liquid store of value and medium of exchange is compelling. This need is also present in developed markets where a high level of friction exists in the transfer of value due to costly intermediaries and capital- and labor-intensive processes of verifying, reconciling and securing transactions.

Case for G-Coin™ and Responsible Gold™

Gold is a historically stable precious metal with relatively little inflation, minimal price fluctuation, and low correlation with any market, economy or state actor, making it a globally decentralized store of value and medium of exchange. As such, gold has been used to preserve wealth successfully over thousands of generations across the world. However, physical gold, usually in the form of big, heavy gold bars, is expensive to store and transport and thus is difficult to use as an everyday medium of exchange.

Moreover, the quality, purity and origin of gold bars is difficult to verify. This is particularly important since gold mining and the complex and not-so-transparent gold supply chains provide opportunities for illicit activities that may support and perpetuate armed conflict and human rights violations in politically unstable areas, thus earning gold the classification of “conflict mineral”. According to the OECD¹, “due diligence for responsible supply chains of minerals from conflict-affected and high-risk areas is an on-going, proactive and reactive process through which companies can ensure that they respect human rights and do not contribute to conflict.”² But implementing due diligence is challenging and has left the abuse of gold supply chains open to criminal and unethical behavior such as:

- Individuals or entities intervening during the transfer of custody to insert conflict gold in an attempt to legitimize it or siphon gold from legitimate sources to fund conflicts and terrorist activities
- Drug cartels and terrorist groups skirting anti-money laundering and other global banking regulations by laundering proceeds of illegal activities through gold refining.

¹ Organization for Economic Co-operation and Development (OECD)

² Recommendation of the Council on Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (as amended). OECD Council, 17 July 2012

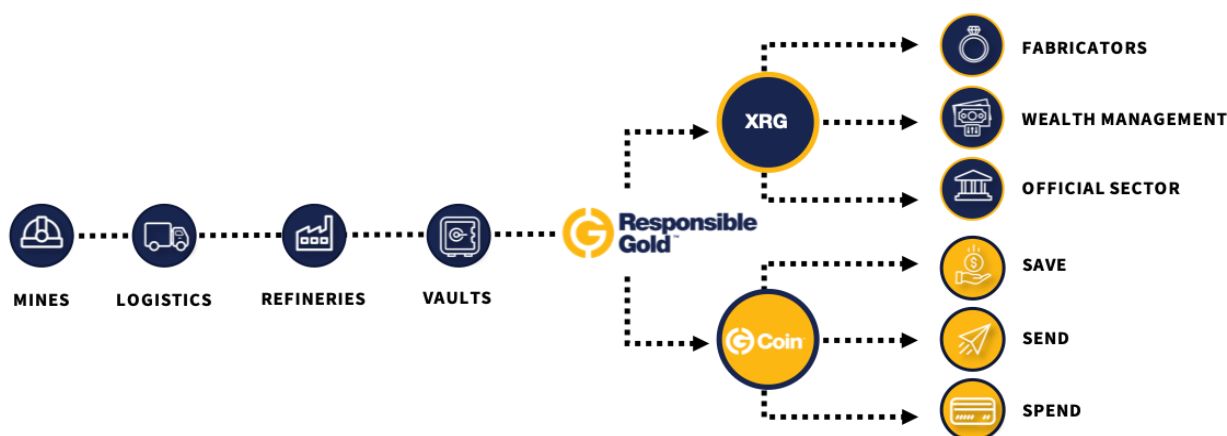
- Producers in disadvantaged regions pouring mercury into rivers to extract underlying gold inexpensively, creating irreparable environmental damage and introducing catastrophic health risks to workers and neighboring communities.
- Children working in confined spaces and unstable mineshafts, risking death from explosions, tunnel collapse, or exposure to toxic fumes.

Mission: The Responsible Gold Ecosystem

The mission of the Responsible Gold Ecosystem is to make gold sustainable and globally accessible by providing a blockchain-based platform of distributed applications and smart contracts, where the G-Coin token (XGC) is used as a store of value and medium of exchange.

This ecosystem has the unique and exclusive characteristic of being supported at its core by an established, transparent and trusted blockchain-based gold supply chain - the Responsible Gold Supply Chain Application (RG SCA) - which is underpinned by the Responsible Gold Standards (Standards). The RG SCA provides the physical gold, known as Responsible Gold, that backs up the G-Coin token (one G-Coin token is a digital title of ownership to one gram of Responsible Gold) and meets the increasing demand from consumers and investors with ethical mandates.

Figure 1: The movement of gold through the Responsible Gold Ecosystem



EmTech's Responsible Gold Ecosystem forms a groundbreaking platform that solves the trust burden on the gold supply chain and the compliance and price volatility problems that hamper wholesale digital asset adoption. By making Responsible Gold the most liquid asset on Earth, G-Coin tokens open financial channels to make gold a more accessible, liquid, everyday store of value and medium of exchange in emerging and developed markets.

EmTech's Responsible Gold Ecosystem is supported by four pillars: Responsible Gold, G-Coin, the QOS Blockchain and a robust KYC and regulatory compliance process that ensures only high integrity individuals and enterprises, Trusted Participants, can enter the ecosystem.

Figure 2: The pillars of the Responsible Gold Ecosystem



Blockchain-based Solution

Blockchain is a distributed digital ledger technology that enables and records digital transactions of information. Blockchain technology is considered a breakthrough technology due to its potential to change how value is created and exchanged, creating new ways of connecting people and creating new forms of economic activity. The ability to immutably and securely record and time-stamp information on a blockchain simplifies and automates the settlement and reconciliation process when auditing, validating or authenticating a transaction. Also, blockchain's inherent decentralized and distributed architecture enables value creation and secure automation of value transfer, effectively eliminating costly intermediaries.

Leveraging these advantages provided by blockchain technology, Emergent Technology Ltd developed QOS, a third-generation enterprise-grade blockchain protocol with the G-Coin token as a stable-value settlement layer.

Governance of the Responsible Gold Ecosystem

Governance is a critical success factor for the Responsible Gold Ecosystem. Multiple parties, including miners, refiners, logistics providers, market participants, industry and government organizations are being brought together to participate on a common technology platform for the first time. Additional stakeholders include technology service providers, regulators, professional service firms (including auditors), gold consumers, buyers and anyone wanting to participate in a sustainable ecosystem.

The governance model is two-fold, the governance of apps and services running on top of the QOS Blockchain and the governance of the QOS Blockchain itself:

1. **QOS Blockchain Governance:** The QOS Association is the QOS Blockchain governing entity comprised of all node operators (parties with computing devices that validate transactions on the blockchain), which may include representatives from the Responsible Gold Supply Chain. The mission of the QOS Association is to coordinate its stakeholders to promote, develop, and expand the network. To learn more about the QOS Blockchain Association please read the QOS white paper found [here](#).
2. **Governance of apps and services.** EmTech envisions a vibrant ecosystem of developers building apps and services running on top of the QOS blockchain that use the G-Coin token as a medium of exchange. On the QOS Blockchain platform, each application is independent from each other and thus their design, architecture and rules with respect to their operation are set by their developer while using the QOS network's distributed nodes and ledger as a way to facilitate transactions and decentralized storage of data. **In the case of G-Coin tokens and RG SCA**, EmTech manages the technical and administrative governance, including the Responsible Gold Standards. This includes releasing software upgrades and patches, operating system configuration changes, security standards, and infrastructure requirements on a routine basis.

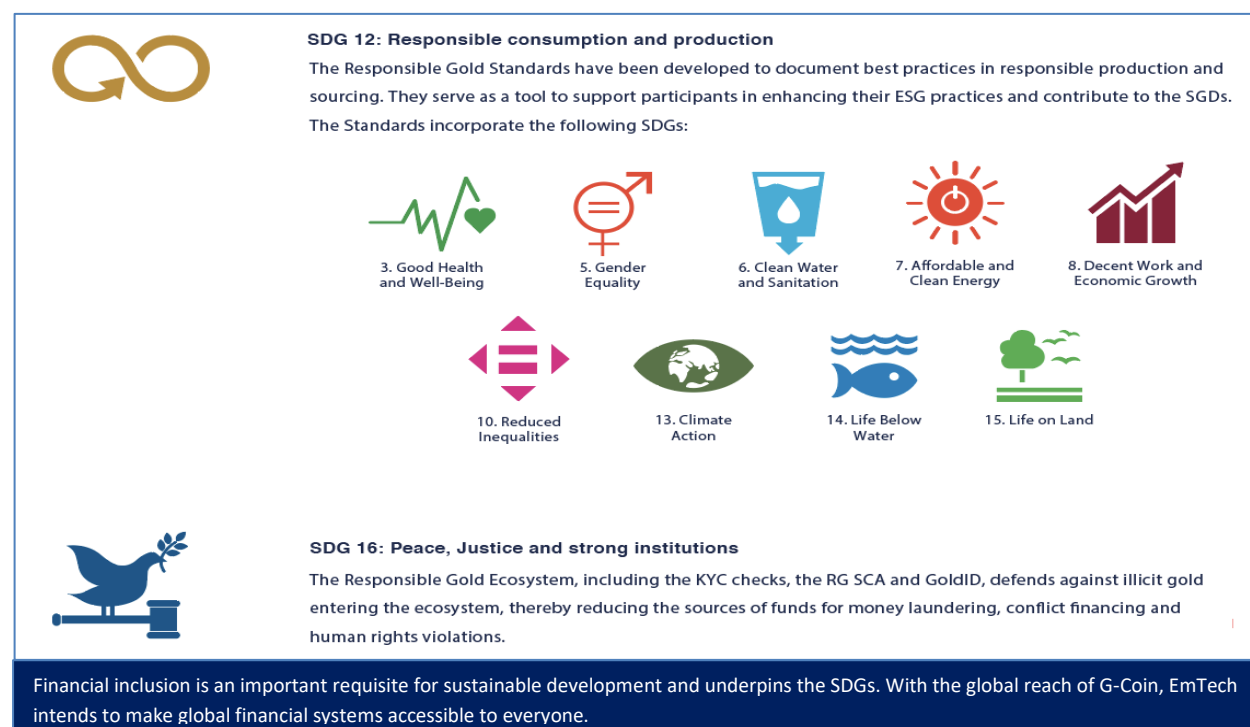
EmTech Ecosystem Sustainability Goals

EmTech's purpose is to leverage the power of technology to solve pressing global challenges. Our business was built to enhance trust, transparency and traceability in global supply chains, promote financial inclusion and accelerate sustainable development. The Responsible Gold Ecosystem, the QOS Blockchain platform, and the associated applications they support are designed to generate positive socio-economic impact and value which is shared with our partners, customers and society at large.

The UN's "Transforming our World" 2030 agenda, adopted by all member states, is a blueprint to eradicate global poverty, protect the planet, and ensure peace and prosperity through 17 Sustainable Development Goals (SDGs) and associated targets. EmTech is committed to contributing to the SDGs.

In addition to the Shariah validation on transparency and ethical trading, the Responsible Gold Ecosystem has been recognized by the International Telecommunication Union (ITU), a UN special agency, as a use case for supply chain management that contributes positively to the UN SDGs³.

Figure 3: EmTech's contribution to the Sustainable Development Goals



³ The ITU technical report highlights the competitive advantage brought by DLT to various use cases, describing the main barriers to DLT adoption and how new DLT business models contribute to the attainment of the SDGs. The report can be found [here](#). Page 32 of the report references the Responsible Gold Ecosystem IND 006 as a contributor to SDG 12.

EmTech Ecosystem Differentiators

1. **Price stability:** The one-to-one link between G-Coin tokens and Responsible Gold, effectively ensures G-Coin tokens will maintain value throughout time and across borders, as gold has historically held its intrinsic value, has minimal price volatility, and is immune to government and market instabilities.
2. **Responsible Gold:** The Responsible Gold Standards (Standards) developed by EmTech, encompass industry best practice regulatory requirements and environmental, social and governance controls for key supply chain actors. The Standards provide the framework for the gold supply chain so that its output can be affirmatively declared “Responsible Gold”. In 2018, the Shariah Supervisory Board of Amani Advisors declared that Responsible Gold Supply Chain exceeds Shariah requirements for transparency and ethical trading.
3. **Supply chain transparency:** The Responsible Gold Supply Chain Application, supported by the QOS blockchain and Internet-of-Things technology, is the first fully automated supply chain tracking mechanism. It optimizes transparency, traceability and efficiency across the gold supply chain. All participants in the gold supply chain - from the miner to the end user - benefit from a simpler, less costly and more efficient interconnected platform that ensures gold’s provenance.
4. **Established platform:** The QOS blockchain platform, a 3rd generation blockchain platform, in stable operation for over two years, provides the financial infrastructure and a decentralized platform for distributed applications and smart contracts. Multiple miners, refiner, logistics operators and vaulters have tracked Responsible Gold on the QOS blockchain platform.
5. **Trust :** Partnerships with leading gold industry players and financial institutions as well as EmTech’s robust and transparent KYC and AML procedures, instills confidence in the Responsible Gold Ecosystem.
6. **Speed and scalability:** The QOS Blockchain is custom-built for high speed and high-volume transactions (in excess of 10,000 transactions per second, better than point of service transactions speeds), with the chosen consensus mechanism allowing for secure and seamless operation of the network. EmTech envisions a global ecosystem of trusted participants building applications and services that run on top of the QOS blockchain and promote G-Coin tokens as a medium of exchange.

About Emergent Technology Ltd

Vision

We believe gold is a powerful wealth protector. Through our cutting-edge technology, we are making it sustainable and accessible to more people.

History

EmTech was formed with the objective of meeting a critical market need for a liquid form of conflict free and responsibly sourced gold that can be used as a store of value, gifted or sent to others, and spent on purchases. Emergent Technology Ltd (“EmTech”) was founded in 2016 and has offices in Santa Clara, CA; Durham, NC; Houston, TX; Dubai; Delhi; Geneva; London; Luxembourg; Singapore; and Shanghai. EmTech is a privately held company. Our investors include Yamana Gold Inc., IAMGOLD Corporation, Valcambi SA, Sprott Inc., and private investors.

Leadership Team

EmTech’s leadership team is comprised of former senior executives from the payments, precious metals, and financial services industries. They collectively draw upon decades of experience at financial institutions and companies that include J.P. Morgan, Credit Suisse, Deutsche Bank, Morgan Stanley, Deloitte, Western Union, PayPal, Symantec, Procter & Gamble, and the World Gold Council. Our leadership team’s experience is presented at emergenttechnology.com.

Commercial Partners

EmTech has developed a network of industry partners to ensure the successful adoption of the Responsible Gold Ecosystem. Blockchain technology business partners include: Chronicled, Ambisafe, 10Clouds and Trust Stamp. Our supply chain partners are presented at gcoin.com.

EmTech maintains active dialogue with precious metals industry organizations around the world, including the London Bullion Market Association, the Dubai Multi Commodities Centre and the World Gold Council. In addition, EmTech is working with leading legal and regulatory, taxation, technology, strategy, and assurance advisors.

Inquiries

For press and commercial queries, please contact inquiries@emergenttech.com

I. G-Coin

The Challenges with Digital Currencies

Digital currencies, such as cryptocurrencies have introduced us to digital forms of moving value on the internet via novel digital platforms such as blockchain-based platforms. However, cryptocurrencies face tremendous challenges stemming mainly from two components. The first is a lack of a stable value. Cryptocurrencies rely on their protocols, platform architecture and promise of future adoption to support them as an alternate store of value, but in fact they act as weak collateral, resulting in high volatility that often depends on the day-to-day enthusiasm and hype behind a specific cryptocurrency. In turn, asset-backed digital currencies can rely on the stability of a tangible physical asset, such as gold, to reduce volatility and provide long-term stability.

The second component is how trust on cryptocurrencies is guaranteed and implemented. Cryptocurrencies rely on using blockchain platforms to provide a certain level of trust through a decentralized ledger which does not need to be approved by a central authority, and instead, use a network of participants/nodes to validate transactions. In blockchain platforms which are permission-less, anyone can participate. Thus, trust is based mainly on the transparency of the settlement and reconciliation processes of the cryptocurrency transactions and not necessarily on the participants of the transactions. Although idealistically desirable, this poses very high risks as it provides an avenue for criminal behavior - money laundering, tax evasion - effectively reducing the trust among participants and inviting opposition from governments and law enforcement groups.

Addressing these challenges, EmTech officially deployed the G-Coin token, a digital title to Responsible Gold that provides an alternative as a store of value and a medium of exchange.

G-Coin's **long-term viability** is provided by a stable asset to reduce volatility and by the ESG compliant supply chain, which delivers provenance and transparency in the chain of custody of responsibly sourced gold.

G-Coin and the Responsible Gold Ecosystem deliver **functionality** by providing the ability to buy, save, send and spend digital gold via the G-Coin Wallet, a globally available mobile application.

G-Coin's **impact** will be to provide a stable, borderless gold-backed digital token, enabling financial inclusion for all.

G-Coin Token (XGC)

A G-Coin token is digital title of ownership to one gram of a Responsible Gold kilobar stored in a licensed vault. G-Coin tokens comply with the ERC-20 cryptographic token interface popularized by the Ethereum ecosystem and are compatible with next-generation digital asset exchange platforms.

G-Coin Token Characteristics

Token Name	G-Coin (XGC)
Token Value Peg	1 XGC = 1 gram of a Responsible Gold kilobar
Particulars	ERC-20 interface
Blockchain	Permissioned Ethereum/Quorum Distributed Ledger ("QOS")
Divisibility	8 decimals
Asset Type	Stable digital certificate of ownership of physical gold. Not a security or a commodity

G-Coin (XGC) uniquely provides:

- A **STABLE** token of exchange directly linked to physical Responsible Gold, unlike other stable coins.
- A **TRUSTED PARTICIPANT** registry that onboards users into the ecosystem using a robust KYC verification process.
- Account functionality that supports **INDIVIDUAL** and **ENTERPRISE** workflows to send, spend, gift, save, or trade G-Coin (XGC) - something other consumer wallets do not currently provide.
- The ability to **REDEEM** G-Coin tokens for the physical, underlying Responsible Gold

Ownership Interest	Right of Redemption	Issuance	Transfer Rights	Ecosystem Parties
1 G-Coin is a digital ownership in 1 gram of 99.99% grade Responsible Gold. As such, G-Coin will function as a title transfer instrument to the underlying Responsible Gold.	G-Coin holders, as owners of the underlying gold, generally have the right to redeem their G-Coin tokens for physical gold. Alternatively, G-Coin holders generally have the right to sell their gold.	G-Coin Tokens are created from the minting of Responsible Gold kilobars into G-Coin.	G-Coin holders may transfer G-Coin - i.e. tokenized certificates of ownership to physical gold - or fractions thereof, to any third-party with an established G-Coin wallet.	The Ecosystem is comprised of the supply chain partners, individual and enterprise G-Coin wallet holders, QOS blockchain participants as well as Responsible Gold entities (G-Mint, RGT, GCommerce)

G-Coin Wallets

G-Coin wallets are available for individuals and enterprises to:

- Buy, sell and transfer G-Coin tokens
- Send G-Coin tokens as a gift to family and friends
- See real-time G-Coin token value
- Compare to fiat currency or redeem G-Coin tokens for underlying Responsible Gold.

EmTech is also launching a G-Coin debit card that can be used anywhere MasterCard or Visa are accepted. In the near future, EmTech's goal is to move towards using G-Coin for virtual point-of-sale transactions using Near Field Communications (NFC) Technology and to make G-Coin available as a purchasing option on merchant paywalls.

Figure 4: Example of Gold path from the mine to the vault, minted to G-Coin and used in the G-Coin Digital Wallet

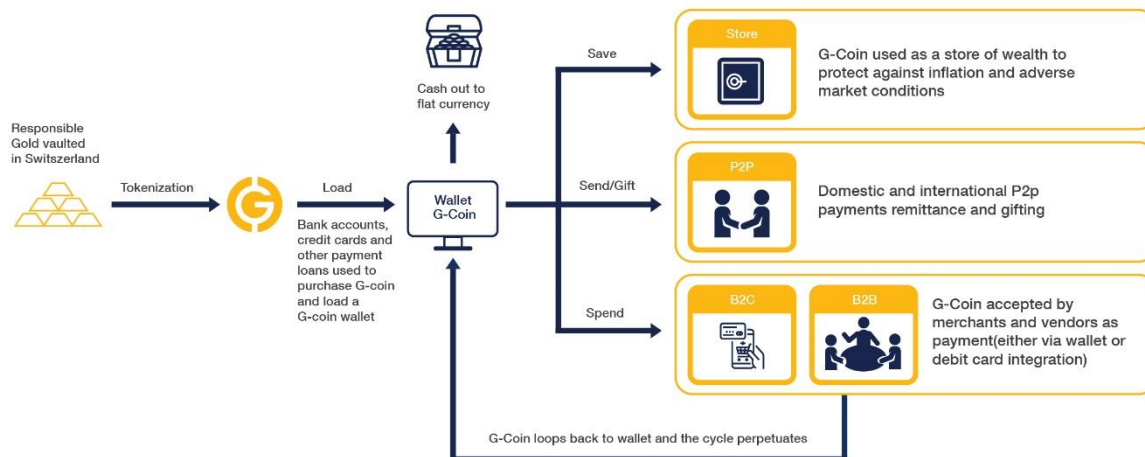
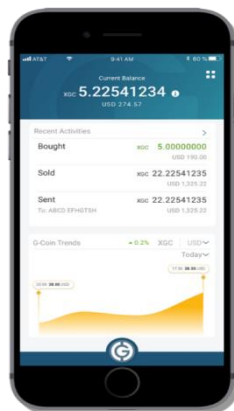


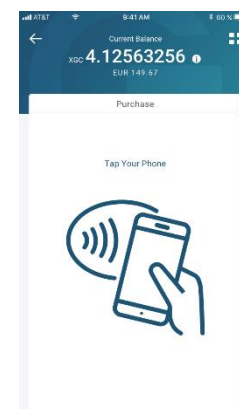
Figure 5: Functionality of G-Coin using various payment streams



Digital Wallet



G-Coin Debit Card



Virtual Point of Sale using NFC

Use Cases for G-Coin Wallets

The following is a selection of use cases for G-Coin developed by EmTech.

Use Case	Description
Store of value	In emerging markets where national currencies can be volatile and unpredictable, individuals can buy G-Coin tokens to hedge against inflation and currency devaluations. It can also serve citizens of developed countries as a hedge against geopolitical turmoil and economic crises.
ESG Mandates	G-Coin tokens are the only digital assets directly linked to Responsible Gold kilobars, meeting the demand of financial institutions, including pension and sovereign wealth funds and family offices with ethical mandates. For all parties interested in holding gold, G-Coin tokens are a simple way to purchase responsibly sourced gold.
Efficient Corporate Treasury	Over 280,000 multinational companies worldwide routinely move funds from their home offices to overseas subsidiaries and vice versa or to other subsidiaries. Managing international payments is complicated and expensive, requiring ongoing attention to tax, compliance, accessibility to funds in multiple currencies and the likely risk from un-hedged currency exposures. G-Coin tokens can be used for cross-border corporate treasury services and allow companies to seamlessly move value across borders, avoiding the delays and expenses of intermediaries and banks and limit exposure to the volatility of local currencies.
Infrastructure and Capital Funds	Emerging economies generally have less efficient FX markets. G-Coin tokens can significantly reduce FX time and transfer costs as a direct point-to-point value transfer without middlemen. Capital in the form of G-Coin tokens can be delivered to local operations instantly. The local operators can sell the G-Coin tokens for local currency. As an added benefit, G-Coin token traceability allows the capital provider and the recipient to irrefutably demonstrate the movement of funds, ensuring that the funds reach their intended recipients.
Gifting	In many cultures, for example in India, China and the Middle East, gifting gold remains an integral part of social and religious ceremonies. G-Coin tokens may be gifted to friends and family. G-Coin tokens can be physically redeemed and used to buy jewelry. In addition, jewelers can “pre-sell” products to customers through G-Coin tokens to be redeemed for the finished product at a later date. This locks in the cost of the gold in the jewelry for the customers.
E-Commerce	G-Coin wallets can be used for virtual point-of-sale transactions, where G-Coin is embedded in merchant paywalls. When paying for goods and services online, owners select the G-Coin payment option. Transactions can be completed by either scanning a QR code to automatically populate transaction details, or by logging into the G-Coin wallet to authorize the transaction. G-Coin tokens are depleted from the wallet in real time, once a transaction is authorized. The G-Coin debit card can be used anywhere MasterCard or Visa are accepted. Charges are debited at the price of G-Coin and interbank exchange rates as determined by RGT, providing significant savings over traditional debit and credit card FX fees for international transactions. The G-Coin token owner’s wallet balance is drawn down to pay for the charges.
Trading	In the decentralized ecosystem, banks, physical traders, miners and refiners are also expected to provide liquidity for buyers and sellers of G-Coin tokens by making one- and two-way prices in their wallets to serve customers and take advantage of trading opportunities. Other firms will also provide prices in pursuit of their trading strategies. The result: diverse participants coming together to buy, sell, or work orders 24/7, allowing G-Coin token customers to trade sizeable amounts on competitive spreads.
Purchase of Traditional Gold	Owners can spend G-Coin tokens on traditional gold products, such as American Gold Eagle coins. This is not a redemption since the products are not made from Responsible Gold kilobars, but rather a purchase of items with G-Coin tokens; the items just happen to be gold.

Physical Redemption of G-Coin Token for Responsible Gold Kilobar

G-Coin owners can physically redeem their G-Coin tokens for the underlying Responsible Gold in increments of ten grams up to a whole kilobar at any time. This is in contrast with many other gold investment options (ETFs and physical funds) which have minimum redemption amounts in thousands of ounces.

Owners request physical redemption using their G-Coin wallets or via the online portal. Existing G-Coin tokens are swapped for G-Coin tokens on redemption bars. The redemption bars are no different than other G-Coin token kilobars, they are responsibly sourced and have associated provenance information. When physical gold is shipped to the customer, the transaction is recorded on the blockchain and the customer's redemption bar G-Coin tokens are destroyed. If a customer owns 1000 G-Coin tokens on a single bar, they are entitled to redeem their tokens for that specific bar. Fabrication and shipping charges are paid in G-Coin tokens.

The customer's original G-Coin tokens, which may be in fractions and fragmented across multiple bars, are taken into EmTech's stock and consolidated into portions that are associated with whole grams on physical bars that are available for sale. EmTech calls this "defragmenting the gold." All transactions are recorded immutably on the blockchain.

XGC Trading

To ensure the continuous liquidity of G-Coin tokens (XGC), Responsible Gold Trading DMCC (RGT), makes markets in G-Coin tokens in US Dollars and over 50 other currencies. Pricing in US Dollars is currently available at gcoin.com and pricing for other currencies is available within the G-Coin wallets. G-Coin (XGC) prices will also be accessible on eFX platforms such as FXALL, Bloomberg, and 360T. G-Coin tokens are expected to trade at a higher price than over-the-counter, unallocated loco London gold, which is usually referred to as XAU on many trading screens, for the following reasons.

1. They give gold utility: G-Coin tokens are instantly spendable as well as serving gold's classic role as a store of value. XAU only serves as a store of value.
2. The Responsible Gold kilobar that underlies G-Coin tokens is certified as responsibly sourced, fulfilling new demand from buyers with ethical mandates.
3. Responsible Gold's kilobar format is more desirable and hence valuable per ounce compared to the approximately 400oz. "large" bars that back London trading.

XGC premium will be assessed by comparing the G-Coin token price to the LBMA Gold Price, a twice-daily auction of XAU.

II. Responsible Gold

To fulfill EmTech's mission to make gold sustainable, EmTech developed the Responsible Gold Standards, the Responsible Gold Supply Chain Application (RG SCA) and GoldID to produce **Responsible Gold**. Responsible Gold is 99.99% pure physical gold with irrefutable proof of provenance and chain of custody transparency that promotes ESG best practices.

- **The Responsible Gold Standards (Standards)** set the conditions for participation on the RG SCA. They comprise a series of on-chain and off-chain regulatory and ESG controls to continuously monitor and maintain supply chain integrity.
- **The Responsible Gold Supply Chain Application (RG SCA)** is the first automated solution to track the provenance and custody transfers of conflict-free and responsibly sourced gold from mine to vault and beyond.
- **GoldID™** is EmTech's proprietary AI-powered image identification and recognition technology used to verify the authenticity and provenance of stored gold.
- **Responsible Gold** is either tokenized into G-Coin tokens (XGC) or sold in physical form (XRG) to consumers with responsible sourcing and ethical mandates.

Responsible Gold Standards

The Responsible Gold Standards help supply chain participants ensure that gold in the supply chain:

- Is not susceptible to money laundering and financing of conflict and terrorist activities.
- Does not cause or contribute to infringements of internationally recognized human rights.
- Does not contribute to unacceptable health, safety, and labor conditions
- Minimizes impact on the natural environment

With cognizance of the existing responsible minerals supply chain guidance and standards released by the OECD and gold industry bodies, EmTech developed the Responsible Gold Standards to supplement supply chain participants' existing ESG management practices and obligations. The combination of traditional external audit processes with continuous digital compliance and media monitoring, and real time blockchain data analysis, which the Standards comprise, is expected to enhance participants' due diligence practices and maintain supply chain integrity.

Participants must comply with the Responsible Gold Standards on a continuous basis to remain on the RG SCA. EmTech has zero tolerance for the following compliance issues that will result in suspension or termination of the supply chain licensing agreement:

- Suspected money-laundering
- Suspected terrorist financing
- Suspected gross violations of human rights
- Qualified external assurance opinion on the Standards or a mutually recognized scheme
- Delisting from the LBMA Good Delivery List

Independent audits against Responsible Gold Standards' ESG Controls or mutually recognized schemes

Responsible Gold Supply chain participants are expected to demonstrate adherence to the ESG requirements of the Responsible Gold Standards through annual independent audits. Mutually recognized standards include the World Gold Council's Responsible Gold Mining Principles (WGC RGMP) and the London Bullion Market Association's Responsible Gold Guidance (LBMA RGG).

To aid other supply chain participants in raising their ESG practices, working with Deloitte's sustainability team in London, EmTech developed a Sustainability Toolkit. Many of the existing ESG standards seek to address specific challenges for specific actors. This has resulted

in supply chain participants adopting numerous issue-specific compliance requirements, with limited opportunity for holistic and efficient ESG management of direct operations and supply chains. The Sustainability Toolkit does not introduce new requirements but consolidates current industry best control practices recommended by mining, refining, and jewelry organizations, as well as the guidelines on responsible minerals supply chains set out by the OECD.

Figure 5: Responsible Gold Standards development



In doing so, the Sustainability Toolkit solve for:

- Increasing calls from supply chain participants for harmonization and mutual recognition of existing standards and streamlined compliance requirements
- Expanding ESG requirements of customers (e.g. jewelry producers and electronics manufacturers), industry associations (e.g. WGC or LBMA) and investors
- Standardizing independent audit efforts and quality

In addition, the Standards provide:

- Access to the first ever ESG best practice documentation for logistics providers and vault operators
- Effective supply chain due diligence tools
- An aide for smaller operators to elevate their practices for potential permission into the Responsible Gold platform

The Sustainability Toolkit comprises ESG Controls Cards, a Compliance Monitoring tool and Document Reference guide.

ESG Control Cards


Informed by existing standards and industry guidance, each ESG control card identifies a specific risk per ESG topic and per supply chain actor, with corresponding controls, sub-controls, examples of supporting documentary evidence, and control descriptions.

Figure 6: Example risk cards

Mine					
Human rights					
Risk	Risk of adverse human rights impacts in an organisation's own operations, including forced labour, child labour, torture, cruel, inhuman and degrading treatment or sexual violence, war crimes or other serious violations of international humanitarian law, crimes against humanity or genocide.				
Expected key control	Publicly available policy commitment to respect human rights. This could be a standalone human rights policy, or be included in another policy, such as the responsible business policy or a detailed code of conduct. There should be commitments to all aspects of human rights including child labour, forced labour, safe working conditions and discrimination.			Human rights due diligence. This involves assessing the potential and actual human rights risks and adverse impacts in the company's own activities and supply chain.	
Expected sub-control(s)	The policy, approved by senior management, is regularly reviewed and updated based on emerging regulations and requirements.	The policy is communicated internally and externally in an accessible medium.	Develop governance and management processes to implement and monitor policy compliance	Undertake due diligence exercise taking into consideration appropriate scope and boundaries and good practice frameworks.	Communicate results of due diligence exercise internally and externally with regulatory bodies where relevant.
Evidence	Human rights policy or inclusion in another policy.	Evidence of communication to employees (e.g. on display or online).	Description of internal accountability and management systems for implementing and monitoring policy compliance.	Due diligence report. No known, publicly reported instances of human rights abuse.	Evidence that the report has been communicated to relevant stakeholders.
Actual control description	The human rights policy states the organisation's commitment and approach for monitoring workers, labour standards, and working conditions. The policy is signed off by management and made available to all workers and externally. Compliance is regularly monitored through formal established processes.			The due diligence assessment should cover risks and actions to mitigate risks. The report should be distributed to relevant stakeholders. This process should be refreshed on a regular basis.	

Refiner

Anti-money laundering



Risk	Risk that the refiner / suppliers operates in a region with a high risk of money laundering or international sanctions (cont.)				
Expected key control	Assessment to identify whether the refinery or suppliers are located in an area with a high risk of money laundering, conflict or with international sanctions.				
Expected sub-control(s)	Use of external, objective criteria to for on-going assessments of whether the area in which the refiner or suppliers are located is high risk or has international sanctions (e.g. Gov't / UN watch lists / Heidelberg barometer).	Establish processes for the physical safe guarding of gold and gold bearing material; including access controls, physical security, vaults and tamper proof boxes.	Establish governance and management systems to maintain an internal inventory of all inputs and outputs including unique reference numbers and a chain of custody system.	Establish "green gold" smelting and refining processes to ensure appropriate segregation and measures against contamination.	Exercise due diligence on business partners and take appropriate action if there is reasonable cause to believe that the area could be considered to be high-risk.
Evidence	Evidence that the assessment is based on reputable criteria.	Description of security procedures.	Description of the inventory and chain of custody system from goods received through smelthouse and refinery to final output.	Evidence of due diligence on key business partners.	
Actual control description	The regional assessment considers whether the mine operates in a jurisdiction which has international sanctions imposed on it or is at a high risk of money laundering. This information should be distributed to relevant internal stakeholders and the process should be refreshed on a regular basis. For mines operating in high risk areas, additional internal controls and due diligence processes are in place with respect to physical security of gold, and when dealing with key business partners.				

Compliance Monitoring Tool

The Compliance monitoring tool is pre-programmed with ESG control card details and requirements from 12 key existing gold industry certification standards. These include:

1. Responsible Jewelry Council (RJC) Code of Practices
2. World Gold Council (WGC) Conflict-Free Gold Standard
3. London Bullion Market Association (LBMA) Responsible Gold Guidance
4. Responsible Minerals Initiative Responsible Minerals Assurance Process (RMAP, formerly Conflict-Free Smelter Program, or CFSP)
5. Initiative for Responsible Mining Assurance (IRMA) Standard for Responsible Mining
6. OHSAS 18001 Occupational Health and Safety Assessment Series
7. International Cyanide Management Code
8. International Council on Mining & Metals (ICMM) Principles
9. ISO 14001 International Standards Organization Environmental Management Systems
10. SA 8000 Social Accountability (social certification)
11. Extractive Industries Transparency Initiative (EITI)
12. Towards Sustainable Mining Assessment Protocols

Each sub-control from the ESG control card is tagged to relevant requirements from the above existing standards. A profile page allows participants to indicate the relevant certifications held by the company and the tool generates the relevant ESG controls covered (or not covered) through these certifications. The tool also identifies common requirements between the standards, streamlining compliance between schemes and eliminating duplicative audits.

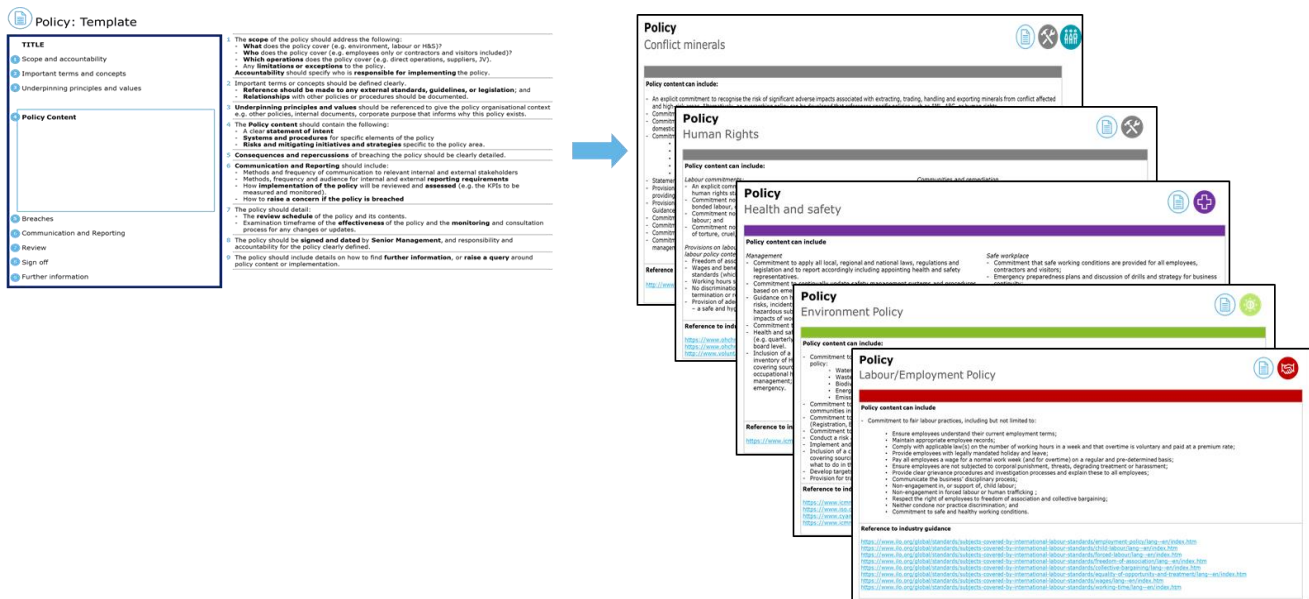
Figure 7: Compliance monitoring tool



Document Reference Guide

The Document Reference Guide includes templates and content guides for key supporting documents noted in the ESG Control Cards. The templates provide blueprints for policies, due diligence and risk assessments reports. Content guides outline the information to be included in each type of document as well as links to best practices and industry guides.

Figure 8: Example document templates and content guides



In addition to ESG audits the Responsible Gold Standards include the following controls.

Continuous Monitoring: Know your business / Know your customer

The onboarding process requires a robust KYB/KYC assessment. This includes verifying information that is updated annually, such as legal and operating structures and ultimate beneficial ownership, as well as continuous risk evaluations using sanctions and interdiction watchlists and adverse media screening in various categories: regulatory, financial, environment and production, social and labor.

Real time data analysis: Observer nodes

Independent service providers are provided access for regulatory and audit purposes to monitor real-time supply chain activity. Inconsistencies in assay data or gold quantity along the supply chain, for example, are flagged, audited, and resolved. Audit nodes also perform network security monitoring.

Independent Inspectors

On a periodic basis, independent inspectors engaged by EmTech audit the supply chain participants, to for example, check the refinery's controls over segregated refining or to inspect the gold stored in a certified vault by weighing a random bar and reconciling this information with the digital records in the RG SCA.

Standard operating procedures

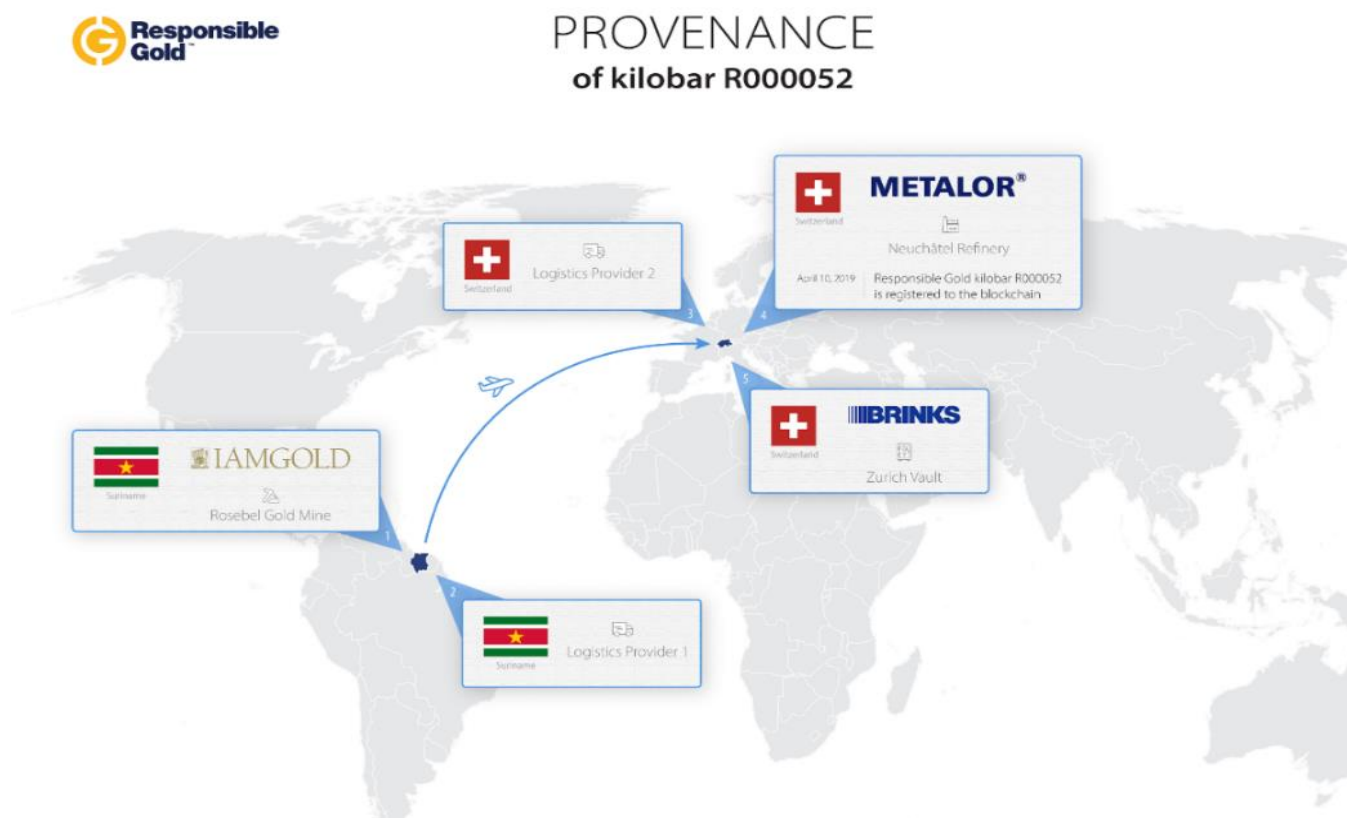
Supply chain participants sign licensing agreements which include specifications on the application and use of cryptoseals and the Responsible Gold brand and logos.

Responsible Gold Supply Chain Application

The RG SCA provides unprecedented visibility and transparency of gold's custody tracking from mine to refiner to vault or end user, helping to reduce delays and disputes while allowing ecosystem participants to quickly detect if and when the supply chain has been compromised.

The irrefutable and immutable blockchain records produce dynamic provenance maps which can be accessed by Ecosystem participants and end users (fabricators, investors or G-Coin customers). As an example, the following provenance map shows the blockchain records of Responsible Gold kilobar RG000052.

Figure 9: Provenance map for bar R000052



Supply Chain Physical and Digital Tracking

The RG SCA is an interconnected gold supply chain supported by blockchain and Internet-of-Things technology.

IoT: Hardware, Software and Protocols

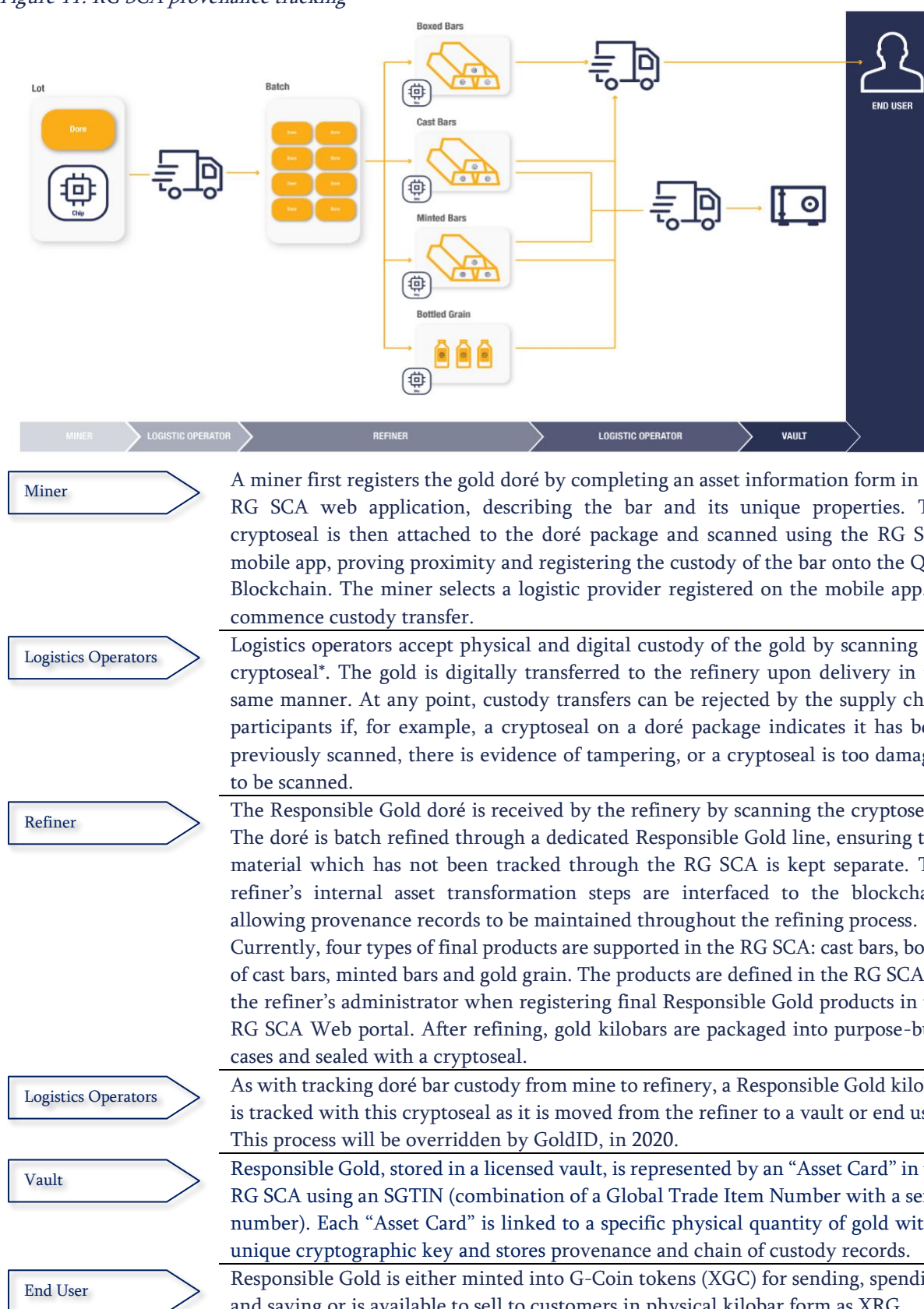
Internet-of-Things consists of a myriad of technologies, devices and connectivity layers that are used to link the physical world with the digital world. EmTech has developed an infrastructure of hardware, software and protocols to label, package and track the physical gold assets through the supply chain in real-time, that can also be used to detect fraud or tampering at any stage. This infrastructure

includes unique cryptoseals and GoldID technology, mobile scanners/phones, and the Responsible Gold Supply Chain Mobile and Web portals to capture, link, record and share tracking information as gold moves through the supply chain.

Figure 10: Kilobar packaging with tamper-resistant cryptoseal.



Figure 11: RG SCA provenance tracking

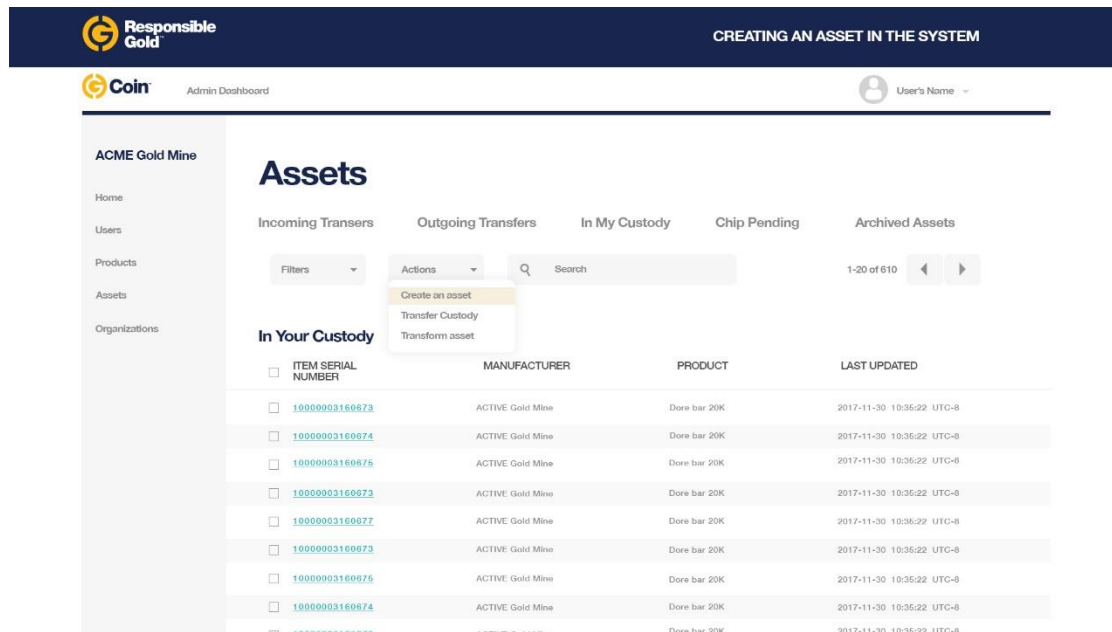


*In instances where cryptoseals are damaged or broken, for example by customs officials conducting an inspection, a new cryptoseal may be attached, generating a modified SGTIN. This "re-chipping" is recorded on the RG SCA mobile or web portal and becomes part of that gold provenance record on the blockchain, maintaining an immutable and transparent record of the gold supply chain.

Responsible Gold Supply Asset Management System

The RG SCA Web and mobile portals give access to the Responsible Gold Supply Chain asset management system which uses custody hashes, SGTINs and asset cards stored in the QOS Blockchain. The digital records link to the physical gold via the cryptoseals to track the provenance, custody and status (minted/non-minted) as gold is moved through the supply chain.

Figure 12: The RG SCA web application



SGTIN (Global Trade Item Number + Serial Number). The SGTIN is a unique identifier. It is a combination of a Global Trade Item Number and a serial number; it contains three values that establish the provenance of gold:

[org ID].[product id].[asset#]

This unique number identifies the asset across the entire RG SCA. This information stays with the asset in perpetuity.

Transfer of Custody - Smart Contract Design

A custody hash is a digital representation of a physical unit of gold (identified by a cryptoseal). A custody hash is created using three elements: a unit identity, such as SGTIN or public key of a cryptoseal, a custodian identity (i.e. Company ID), and a date time of the event (when a cryptoseal is scanned, for example) encrypted using SHA-256. This encryption prevents third-party observers to link the hash to a quantity of gold and does not reveal any confidential information about underlying units and custodians.

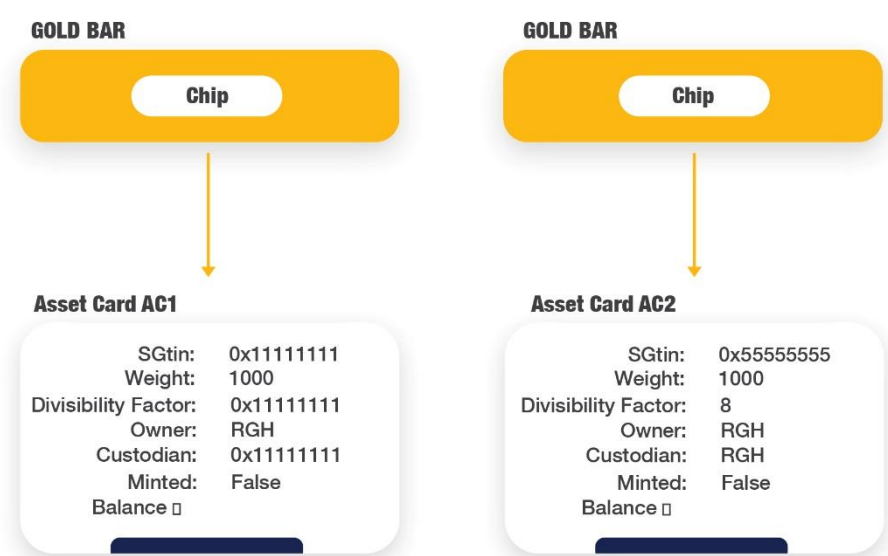
The RG SCA’s custody hashing functionality is implemented inside of an upgradeable smart contract framework. The core design principle of the custody hashing smart contracts is the separation of executable business logic from data storage. This separation allows for easy introduction of new components as well as updating the business logic of existing components without requiring data migration while maintaining a single-entry point before and after the upgrade.

A Smart Contract Controller allows for real-time monitoring of custody hash events throughout the supply chain which include committing, verifying, retrieving and obtaining total number of custody hashes in the blockchain. As gold moves through the supply chain, the custody hash is updated when the custodian identity, (i.e. company ID of the supply chain participant) changes by scanning the cryptoseal (using NFC to prove physical proximity to the gold itself) at each custody transfer.

Asset Cards: how gold is linked to an asset card

An asset card is a digital representation of a gold asset. It is created once the Responsible Gold product (kilobar) has been registered to the blockchain by the refiner. The asset card is used to store provenance and chain of custody records of the physical gold asset. Once it reaches a licensed vault, the asset card includes: a divisibility factor for the number of G-Coin tokens that can be generated from each gram in that bar (total G-Coin tokens for asset card = divisibility factor (which for G-Coin is 8 decimals) x weight in grams), the owner code, the custodian code of the licensed vault, and whether that gold bar has been “minted” to G-Coin or not.

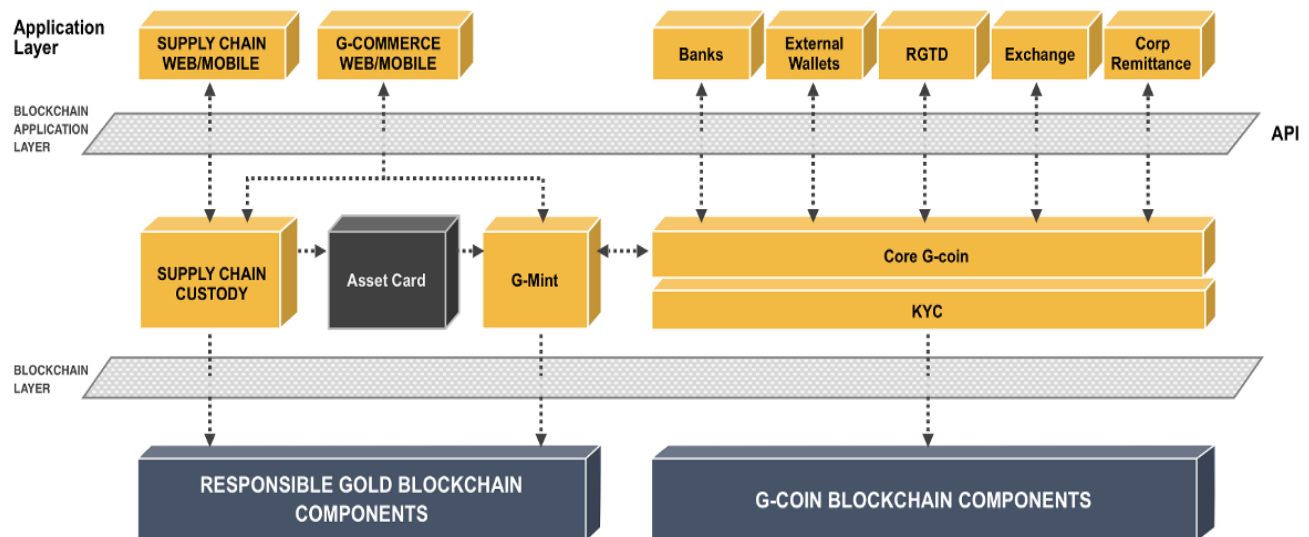
Figure 13: Asset Cards



Minting G-Coin Tokens from a Responsible Gold Asset Card

Using smart contract functionality in the G-Mint application, G-Coin tokens are minted from the asset cards representing Responsible Gold kilobars stored in a licensed vault. EmTech's G-Mint administrator creates G-Coin tokens by selecting the desired grams on the asset card. At this point, the Responsible Gold owner owns G-Coin tokens.

Figure 14: RG Supply Chain and Application Layers in RG Ecosystem



GoldID: Imaging Technology

During the development and evolution of the RG SCA, EmTech recognized the need to provide a more robust verification of authenticity of the stored gold (currently provided by cryptoseals) and to allow gold bars that have been stored outside of licensed vaults to be accepted back into the Responsible Gold Ecosystem. Currently, for instance, if a Responsible Gold kilo bar were to be moved outside of the ecosystem's vaults, the process to accept that gold kilo bar back into the ecosystem may include drilling or melting it to verify its purity as 99.99% gold. This process is common for gold refiners, who rarely re-accept bars (even those with their own logos) and is driven by known counterfeit cases of 'gold' bars filled with tungsten, an element with similar density to gold, or bars with counterfeit LBMA good delivery stamps.

GoldID is an EmTech developed AI powered imaging technology that utilizes computer vision to map and analyze multispectral readings and precise depth measurements on one or more surfaces of a gold cast bar. The surface of a gold bar may contain unique scars, marks, pores, and texture patterns resulting from the manufacturing process. Additionally, the bar's stamp and serial number leave detectable surface patterns variable from refiner to refiner and bar to bar. By exploiting these differences in surface finish, it is possible to map and identify a gold bar uniquely by using mature machine learning algorithms already deployed in biometrics and facial recognition software.

In particular, GoldID technology is aimed at answering three key questions:

1. **Authentication:** Is this the same gold cast bar that was imaged at a specific refinery?
2. **Provenance:** Was this gold cast bar produced by a registered refinery?
3. **Uniqueness:** Is this gold cast bar a duplicate of a gold bar stored somewhere else? A gold bar is unique if it cannot be found in two physical locations at the same time.

Using EmTech's IoT infrastructure of hardware, software and protocols, creating a kilobar's GoldID is a streamlined process.

By virtue of the low cost, ubiquity and convenience of the hardware/software required (a cell phone equipped with a camera and access to GoldID through the RGSC Web or Mobile Application) a refiner can accomplish enrollment (and equally verification) of multiple gold bars in parallel and

Figure 15: GoldID Mobile Application



without relocating the bars to a specific location such as a scanning station. By registering the GoldID bar in the RG SCA Web portal, a kilo bar's 'fingerprint' is stored on the QOS blockchain, making it immutable and accessible.

As long as the surface of the gold bars remains relatively unscathed over time, their GoldID will be verifiable. EmTech is evaluating expanding GoldID technology to include more image and surface qualities for the instances when gold bar surfaces have been extensively damaged over time.

Responsible Gold Storage

Responsible Gold is stored in vaults with high security facilities that comply with the Responsible Gold Standards. EmTech carefully researches storage jurisdictions and consistently visits and evaluates prospective vaults to assess their approach to securing gold. Vaults are reviewed for location risk, management and a trustworthy workforce, procedures and systems, auditing policies, and fee structure.

Vault Qualifications: Country Analysis

The vault location is of high importance from a financial perspective. A comprehensive evaluation of a country's financial regulations is accomplished to select preferable countries with transparent and reliable laws where regulations see a G-Coin token as an asset – not a security, not a leveraged instrument, not a derivative, and not any other instrument than an asset - and where the tax regulations are favorable towards gold from an income tax and gold storage perspective. Moreover, vaults will be strategically added as G-Coin token volume grows to provide geographic diversification. This is a widely used strategy by precious metals investors to address geopolitical risk.

Vault Qualifications: Security

For security qualification, at a minimum, vaults must be Class 3 or insured by Lloyds of London, or both. Class 3, a UL Standard⁴, is the highest security class of doors and modular panels used in vaults. However, vaults that were built before the UL standards were issued, and that have passed the proprietary assessment to be insured by Lloyds of London, may also be considered.

Additional Vault criteria

Additional vault criteria include:

- Vaults with government ownership or government oversight are strong vaulting candidates given the confidence the government link provides to customers
- Proof of insurance coverage must be shared at least annually
- The vault can have no uninsured (unexplained) losses on record
- The vault must conduct ongoing internal audits and provide a satisfactory certificate from an approved, licensed external auditor annually

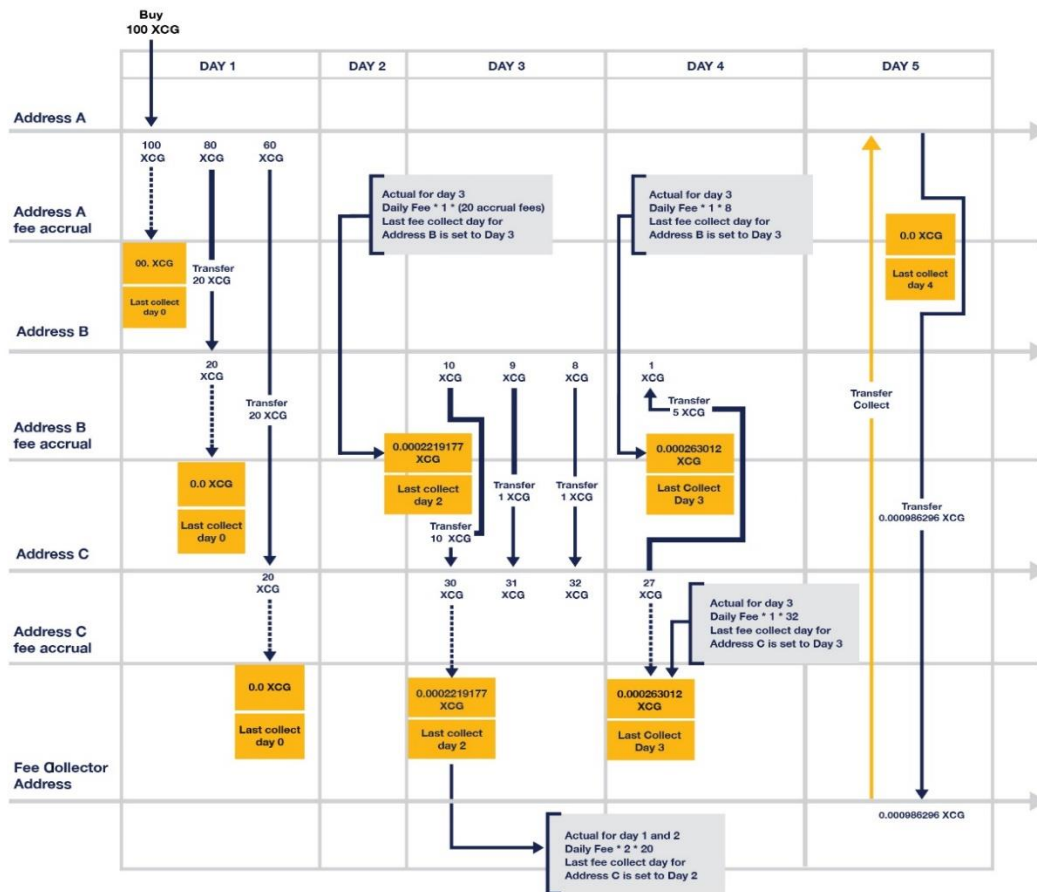
⁴ For reference, the "Class" standards for vaults are set by UL (Underwriters Laboratories), a U.S. independent product safety certification organization. The "Standard for Burglary Resistant Vault Doors and Modular Panels" is UL 608. Ratings are based on "the length of time they can withstand attack by common mechanical tools, electric tools, cutting torches, or any combination of these means...these requirements do not cover attacks with the burning bar (thermal lance) or explosives." Entry into Class 3 vaults using these latter methods would take at least two hours, but law enforcement would be notified immediately that a break in was underway and arrive within minutes.

G-Mint Sàrl

G-Mint Sàrl (G-Mint), a wholly owned subsidiary of EmTech, issues licenses and storage agreements to approved vaults. It is also responsible for the management and collection of service fees from G-Coin token owners to cover monthly costs for storage and related services. Costs for storage and insurance are reasonable as globally there is generally excess storage capacity. However, vaults owned by countries can sometimes attract a modest premium.

The collection of storage fees (which include insurance coverage) is completed via a smart contract on the QOS Blockchain. The smart contract deducts service fees, in G-Coin tokens, and credits them directly to G-Mint Sàrl; they do not pass through sister companies.

Figure 15: Storage Fee Collection Process



G-Mint Sàrl also serves as the “bailee,” or depository for G-Coin token owners, ensuring that all Responsible Gold kilobars are specifically identified as such, are physically segregated from other holdings at the vault, and have ownership tracked and verified using the blockchain based RG SCA. In this capacity, G-Mint delivers the underlying gold to G-Coin token holders in pre-determined circumstances and in accordance with the pre-agreed terms and procedures.

Responsible Gold: XRG

Responsible Gold presents the opportunity to sell, buy and trade gold with irrefutable proof of provenance, transparent chain of custody records, and assurance of ESG best practices. It satisfies the demands of buyers with responsible sourcing mandates, such as:

- Fabricators, e.g. jewelers and electronics companies, with a need to prove provenance
- Wealth managers and responsible buyers with ESG mandates
- Central banks looking to enhance the sustainability of their gold holdings

EmTech is making Responsible Gold globally available via its wholly own subsidiary, Responsible Gold Trading DMCC (RGT). RGT has offtake agreements with Responsible Gold Supply Chain participants to secure Responsible Gold for the digital minting of G-Coin tokens (XGC) and for creating physical Responsible Gold products in multiple forms, such as London Good Delivery large bars, kilobars, wafers and granules. Physical Responsible Gold metal is available on trading platforms and to buy, sell and trade under XRG.

Banks and asset managers can launch products backed by XRG to satisfy the requirements of responsible investors.

Structured Notes

A structured note is a debt security issued by financial institutions whose return is based on the underlying asset. It can be used to give investors access to the price action of Responsible Gold. Holders of Responsible Gold structured notes are not direct owners of the gold and do not deal directly with the vault. The minimum return of the note would be linked to the return of the LBMA PM Gold Price during the period, with additional alpha opportunity in the likely event that XRG outperformed XAU.

High net worth investors will access structured notes via a financial institution such as a bank or an investment bank. The financial institution will buy Responsible Gold from the refiner and package the structured note for sale to their internal wealth management division, for further distribution to private high net worth clients. The financial institution can choose where to store the Responsible Gold backing the note, as long as the vault meets the vaulting requirements set forth in the Responsible Gold Standards.

Exchange Traded Fund

A Responsible Gold ETF will give ethical investors exposure to the price of Responsible Gold in a product traded on exchange. It is another product where the investor does not have to manage storage directly. As with the SPDR Gold Shares ETF (GLD), Responsible Gold ETF customers will be able to buy, sell and borrow shares. HSBC and JPMorgan are examples of custodians for current gold ETFs. To run an XRG ETF, EmTech would open a licensed

subsidiary, which would engage G-Mint Trust to manage the custodial relationship. If EmTech launched a Responsible Gold ETF, the ETF would manage the storage of the keys and G-Mint Sàrl would manage the custodial relationship. For an analysis of current ETFs compared to a G-Coin ETF, see Appendix B.

Brokerage firms

A third way for investors to tap into exposure to the price of Responsible Gold is through brokerage firms. Customers can buy precious metals for their regular account or their self-directed IRA accounts. EmTech plans to integrate with major US brokerage firms to facilitate the distribution of Responsible Gold.

Shariah Compliant Funds

The Responsible Gold ecosystem is the world's first gold supply chain ecosystem to receive Shariah-compliance certification, providing important validation for the Muslim world and beyond that Responsible Gold is conflict free and ethically sourced.

The Shariah Supervisory Board of Amanie Advisors conducted a rigorous independent audit of the Responsible Gold Supply Chain and G-Coin tokens and concluded:

- Responsible Gold and G-Coin tokens exceed Shariah principles for transparency, traceability and accountability
- G-Coin tokens are a secure and safe way to buy Responsible Gold and exceed requirements on ethical trading
- The Responsible Gold Ecosystem and its products meet Shariah objectives in that the technology improves life and eliminates harms such as corruption and oppression.
“It is a known fact that there are a lot of uncertainties about the origin of gold entering the market. There are reports associating this problem with illegal trade and money laundering activities, which are harmful to society. The Responsible Gold Ecosystem can help solve this problem by tracking and safely storing all data and information about the gold supply chain onto the blockchain. From the Shariah perspective, the technology also helps ensure that upon issuance of G-Coin tokens, each token is backed by allocated responsibly sourced gold from the ecosystem,”
Datuk Dr. Mohd Daud Bakar, Amanie Advisors founder.

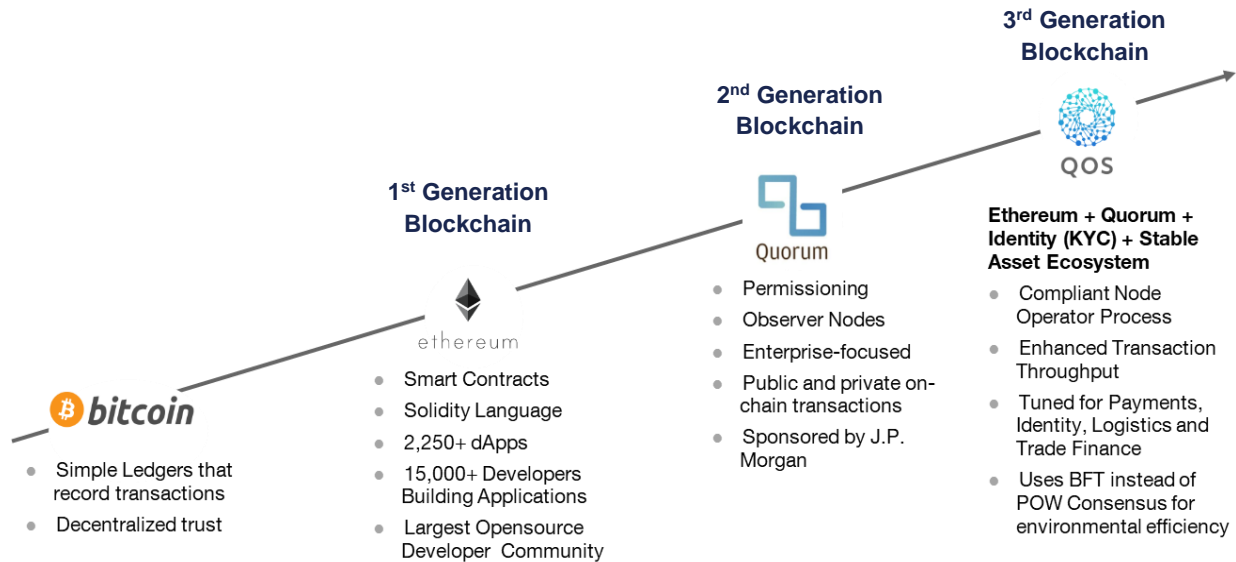
As a result of the RG SCA, for the first time, over one billion Muslims can buy Shariah compliant responsibly sourced gold with provenance assured.

III. QOS Blockchain

The QOS Blockchain platform is based on Quorum, an enterprise-focused version of Ethereum, developed by J.P. Morgan. The QOS blockchain, governed by the QOS Association, was built to solve the key challenges of enterprise adoption, trade finance, supply chain, logistics, and payments using the G-Coin token. The QOS blockchain offers the following features and enhancements:

- **Public/Permissioned Blockchain.** The QOS blockchain is a public/permissioned blockchain to ensure the highest standards of regulatory, KYC/AML compliance of all QOS participants and to securely manage all data sharing within the platform.
- **Node operators.** QOS node operators validate transactions (all events to be stored on the blockchain) and participate in the QOS blockchain consensus and governance. The QOS node operators are globally distributed to enhance system availability and reduce vulnerability to natural or man-made disasters. The QOS Association formed by all node operators, offers decentralized governance and the goal is to move towards increasing decentralization over time by increasing node participation.
- **IBFT Consensus Model with staking.** The QOS Blockchain network uses the Istanbul Byzantine Fault Tolerant (IBFT) consensus model. IBFT is computationally efficient, provides liveness and safety in scenarios where up to 33% of network nodes are faulty. The staking mechanism (similar to POS), to be launched in the future, is used to secure the network against a disproportionate level of control.
- **Speed and scalability.** QOS offers high scalability potential and high transaction rates in excess of 1,000 transactions per second, and has exhibited one second latency, with finality, i.e. a block in the QOS blockchain is created every second without the possibility of single block forking. QOS smart contract architecture and developer tools provide high performance and expandability of the platform.
- **Incentive mechanisms.** The QOS blockchain offers node operators the QOS native token as a reward for their time and resources to validate transactions and participate in the QOS blockchain consensus. A certain amount of QOS tokens gives node operators membership rights to the governance of the QOS platform, and to the revenue share from the growth of the platform.

Figure 16: Blockchain Evolution



The QOS blockchain has been running in stable capacity, with an increasing number of nodes, for over two years supporting the RG SCA and more recently the smart contracts used for the G-Coin digital wallets. For more on the QOS blockchain platform or how to become a node participant please contact us directly or read the QOS white paper found [here](#).

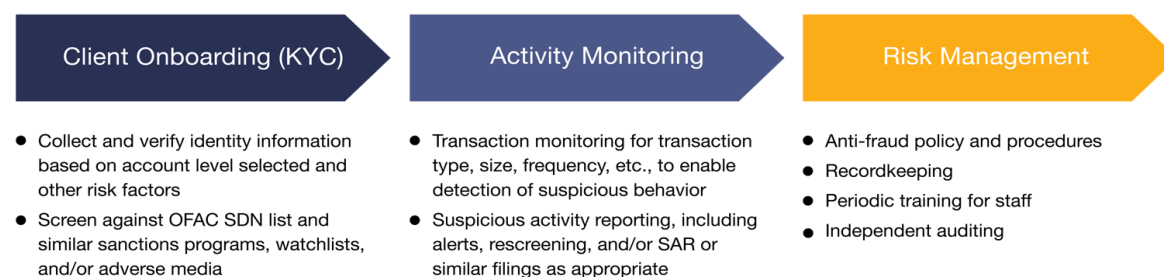
IV. Trusted Participants and Ecosystem

All ecosystem participants, G-Coin customers, supply chain partners (miners, refiners, logistic providers and vault operators), and QOS blockchain participants are subject to a robust KYC/AML compliance process to assess the participant's suitability, along with their potential risk of illegal intentions and if applicable, be whitelisted in the ecosystem. This process is accomplished to achieve regulatory compliance, encompassing jurisdiction-specific regulations that demand the mandatory identification of customers to prevent money laundering or terrorism financing. Technically, the whitelist is linked to the QOS smart contracts, effectively acting as a permit, in other words, if an attempt is made to send G-Coin to a non-whitelisted address, even with a different wallet provider, the transaction will be rejected.

The Responsible Gold Ecosystems KYC process uses industry best practices and tools to screen individuals and corporations (all ecosystem participants) and transactions (in G-Coin wallets), against a comprehensive list of sanctions, interdiction and adverse media lists. The process also includes continuous activity monitoring and risk management to provide a trusted ecosystem.

EmTech's goal is to move towards using open but trusted identity standards that would ensure privacy and self-sovereignty of the ecosystem participant's digital identity while satisfying the ecosystem regulatory compliance requirements. This digital identity solution, to protect and control individuals' electronic persona, named "e-Sona", is currently under development.

Figure 17: KYC Process



Regulatory Landscape for G-Coin Tokens

A consistent, international, state or federal regulatory framework for virtual assets (cryptocurrencies, stable coins and asset-backed tokens) and the platforms on which such assets are traded is lagging their market penetration. Major challenges for regulators include the application of decades-old securities and commodities laws to, and the implementation of traditional money transmission and payment schemes in the face of, new asset classes enabled by the use of blockchain technology.

Since its inception, EmTech has been aware of these regulatory challenges and has devoted significant time and resources, in collaboration with leading financial technology law firms and advisors globally, to create a solution that can operate within this evolving regulatory framework. As a result of such efforts, the G-Coin token, a digital title to physical gold, with very specific features and strong embedded AML controls, differs to traditional cryptocurrencies and utility tokens, limits the applicability of securities and commodities laws and narrows the likely regulatory oversight by money transmission and payments regulators.

EmTech has engaged reputable external advisors in more than 20 countries to conduct a thorough analysis of the legal and regulatory implications for the G-Coin token, proactively approaching regulators in many of these jurisdictions to gain a full understanding of the landscape. Based on these analyses and regulatory engagement, EmTech has developed a regulatory strategy and roadmap that will enable G-Coin to grow its global footprint in a fully compliant manner.

To date, EmTech has achieved several important milestones in its regulatory roadmap, including:

Securities and Commodities Laws US. The U.S. Securities and Exchange Commission (SEC) performs the Howey Test to determine whether a token is a security token or a utility token. G-Coin's definition as a digital certificate of title to one gram of a Responsible Gold kilobar means that it is neither a commodity nor a security and therefore not subject to securities regulations.

Money Transmission Laws US. EmTech is receiving money transmitter licenses for G-Coin in the 14 U.S. states that require them. In the remaining U.S. states, it has either obtained a no action letter confirming a license is not required or provided notice of its legal position that a license is not required. To find out which U. S. States G-Coin is available, click [here](#).

FinCEN US. EmTech has registered G-Wallet Corp as a Money Services Business with the U.S. Department of Treasury's Financial Crime Enforcement Network ("FinCEN").

FINMA Switzerland. EmTech has confirmed with the Swiss Financial Market Supervisory Authority FINMA that G-Coin Wallet activities under the Anti-Money Laundering Act (AMLA) do not require a license and has registered with the Financial Services Standards Association (VQF) in Switzerland.

CSSF Luxembourg. EmTech has received a no-action letter from the Commission de Surveillance du Secteur Financier (CSSF) in Luxembourg.

V. Closing Remarks

EmTech aims to create responsible financial services innovation that is sustainable and globally accessible with the introduction of G-Coin tokens - digital title to Responsible Gold. EmTech's Responsible Gold Ecosystem forms a groundbreaking blockchain-based platform, underpinned by the highest ESG standards, that delivers unprecedented visibility on gold provenance and supply chain sustainability and connects trusted business and individuals. Responsible Gold, 99.99% pure gold with irrefutable provenance records and best practice responsible sourcing standards, is digitally minted into G-Coin tokens to save, spend and send globally, or to fulfil the rising physical demand from consumers and investors with responsible sourcing and ethical mandates.

Using gold, which has historically held its intrinsic value, has minimal price volatility and an immunity to government and market instabilities, effectively ensures G-Coin will maintain its value throughout time and across borders.

EmTech seeks to bring Responsible Gold and G-Coin to as many people around the world as possible.

Appendix A: Gold Market Overview

Gold Supply

Refineries have historically produced a significant amount of kilobars from their feedstock and continue to do so today. The largest source of annual gold feedstock is newly mined material. Mining is conducted in open pit or underground mines and gold raw material (or “doré”) comes from gold mines or as a by-product from copper mines. 83% of gold comes from primary production⁵. The second largest source is secondary supply which comprises central bank, scrap and private investor sales. Responsible Gold is formed only from primary production.

2018 global gold production was a record 112.096 million oz. up 1.8% from 2017 and up 25% from 2010⁶. Global production is split as follows⁷:

- Africa 23.4%
- Asia 19.3%
- Central and South America 15.9%;
- North America 15.02%;
- The Commonwealth of Independent States, including Russia, 14.2%;
- Oceania 11.3%; and,
- less than 1% coming from Europe⁸.

In 2018 the top 10 gold producing countries were China, Australia, Russia, the United States, Canada, Peru, Indonesia, Ghana, and South Africa⁹.

World Gold Council Member Production

Nearly one-third of global gold production¹⁰, comes from 24 World Gold Council (“WGC”) member mining companies. At \$1,400/oz., that is worth \$44.04 billion. The WGC defines itself as the market development organization for the gold industry. Its’ goals include creating access to gold markets and stimulating demand. Importantly, the WGC has recently published the Responsible Gold Mining Principles for member companies to adopt. The Responsible Gold Standards recognize this standard and it is highly likely that gold from member companies would qualify for the Responsible Gold Ecosystem.

⁵ Metals Focus calculation March 2019

⁶ Gold Focus 2019, p.8

⁷ Ibid, pp.18-19

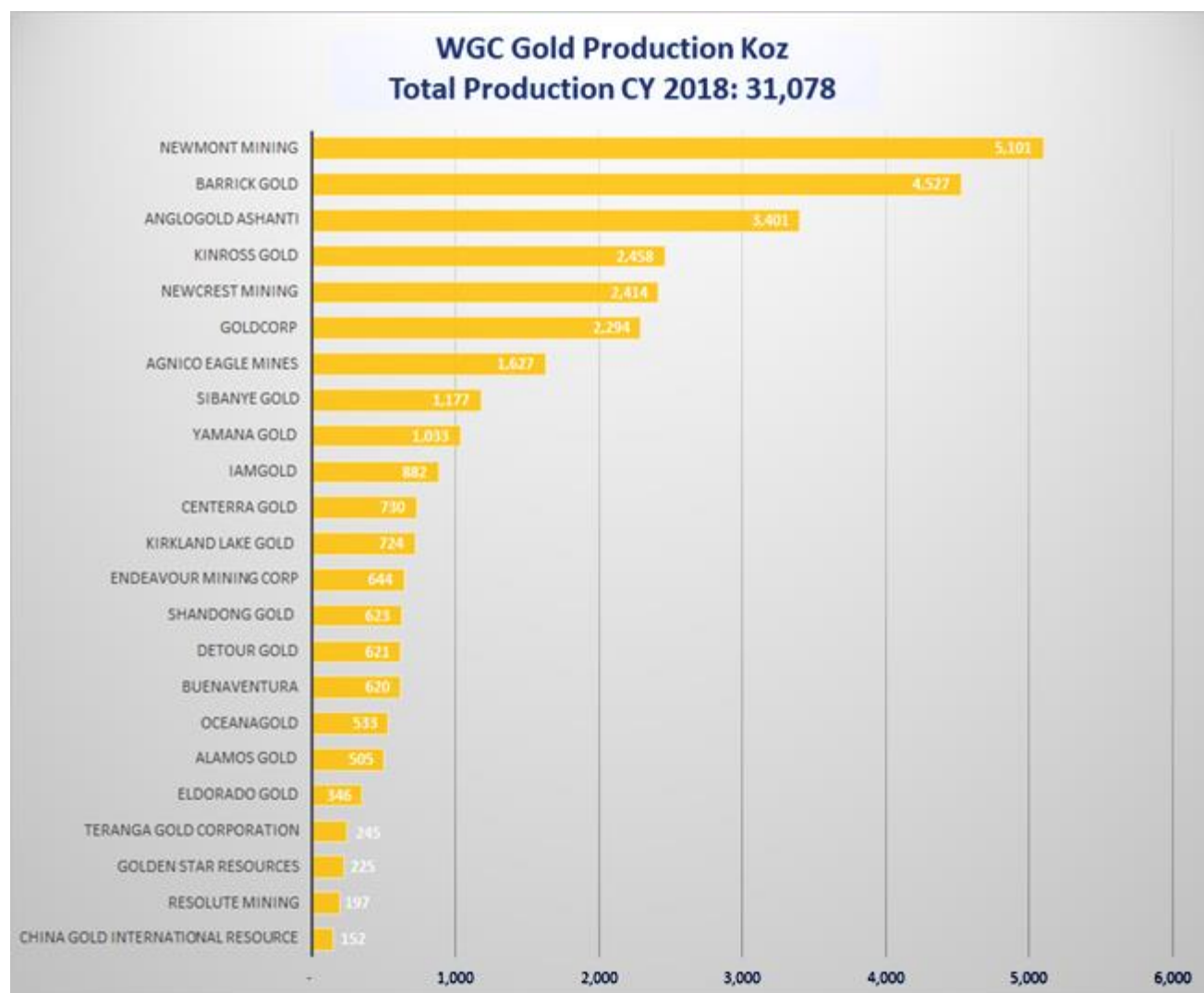
⁸ Ibid, pp.18-19

⁹ Metals Focus, Gold Focus 2019, p. 17

¹⁰ Metals Focus March 11, 2019 Metals Focus email; company websites

WGC members include some of the world's largest gold producers. Additionally, 3 large royalty and streaming companies belong to the WGC.

Figure A.1: World Gold Council Gold Production CY 2018



Gold Demand

In 2018, total gold demand was 140.3 million oz. up 8% from 2017. The components of gold demand include jewelry, industrial products, net physical investment, net hedging demand (mines buying back hedges) and net central bank buying. The largest holders of gold at a country level are the United States, Germany, Italy, France, Russia, China, Switzerland, Japan and the Netherlands. In 2018, the top five countries for gold demand by component were as follows:

- Jewelry fabrication: China, India, Italy, Turkey and the United States
- Industrial products: Japan, China (including Hong Kong), the US, South Korea and Switzerland.

-
- Net Physical Investment: China, India, Germany, Thailand and Iran.
 - Central banks: Russia and Turkey were the biggest official sector buyers.

Traders and institutions in some of these regions can open G-Coin wallets and take physical delivery to meet customer demand. They can also buy Responsible Gold kilobars directly from licensed refiners.

Kilobar Statistics

Kilobar demand is estimated to be 27.5% of total gold demand. Based on Swiss export data and detailed research, it has been discerned that in each of the last 3 years, from 2016 to 2018, on average, Swiss refineries have exported to Asia 1,108,726 kilobars¹¹, totaling more than 35.6 million oz. At \$1400/oz., that equates to over \$49.9 billion.

Based on UK import data, over the last 3 years, on average the UK imported 968,764 kilobars¹². At \$1400/oz., that equates to \$43.6 billion. In addition, it can be estimated from the data that during the same period of 2016 to 2018, the UK also imported, on an annual average, approximately 78,455 large bars.

Gold Trading

The global gold market is comprised of regional centers where the kilobar is often the standard deliverable in transactions. In the media and on trading platforms, gold prices are typically streamed in dollars per fine troy ounce. A troy ounce is slightly larger than the avoirdupois ounce that many countries use in everyday measurement and weighs 31.1035 grams. A kilobar weighs 32.1507 troy oz. At \$1400/oz., a kilobar is worth approximately \$45,000. Fineness refers to the proportion of gold in a gold product. Responsible Gold kilobars are 99.99% pure gold.

The London gold market is well-known but falls short for the investor requiring the benefits of owning physical gold, for which there is no liability. A London gold transaction is for unallocated gold, which means that owners have credit risk with the banks that store their metal. The unallocated gold is backed by a pool of large bars that each weigh approximately 400 oz. and whose refiners are accredited by the London Bullion Market Association. At \$1400/oz., one large bar (or “London Good Delivery bar”) is worth \$560,000. Unallocated gold transactions are processed by London Precious Metals Clearing Limited (LPMCL). LPMCL members include HSBC Bank, ICBC Standard Bank, JP Morgan, The Bank of Nova Scotia and UBS AG.

¹¹ Metals Focus proprietary estimate: In 2016, the Swiss exported 1,143,982 kilobars, in 2017 they exported 1,124,386 kilobars, and in 2018, the figure stood at 1,057,812 kilobars.

¹² Metals Focus and public reports. In 2016, the UK imported 1,447,439 kilobars; in 2017 it imported 834,424 kilobars and in 2018 it imported 624,430 kilobars.

The world's largest precious metals futures exchange by volume, the Comex, is owned and run by CME Group. The Comex has physically deliverable gold futures contracts. The Comex gold contract with the greatest volume is for 100 oz. The Comex accepts one 100 oz. gold bar and also three kilogram bars for delivery. However, Comex is largely used for speculating and hedging. Very few futures traders participate in physical delivery. As with the London market, New York falls short for the physical investor.

Asian Gold Hubs and Dubai

There are kilobar gold contracts on the Shanghai Gold Exchange, Shanghai Futures Exchange and Hong Kong Exchanges and Clearing. In 2018, the Shanghai Gold Exchange had volume of 5,821 tonnes.¹³ Shanghai Futures Exchange volume was 32,329 tonnes¹⁴. Kilobars are also traded in the over-the-counter market in Hong Kong, Singapore and other Asian cities.

The following firms have licenses to import gold into China.

Institutions with Chinese Import Licenses	
Commercial Banks	
China Construction Bank	
ICBC Bank	
Agricultural Bank of China	
Bank of Communications	
China Minsheng Bank	
China Everbright Bank	
China Merchant Bank	
Shanghai Pudong Development Bank	
Industrial Bank	
Ping An Bank	
Bank of Shanghai	
Australian & New Zealand Banking	
Bank of Ningbo	
HSBC Bank	
Standard Chartered Bank	
Mining companies	
Zijin Mining Co., Ltd	

The LBMA Gold Price

An important function of the London Bullion Market Association is to provide the twice-daily benchmark called the LBMA Gold Price. Formerly known as the Gold Fix, the benchmark price is set by a daily auction managed by ICE Benchmark Administration. Participants in the

¹³ Gold Focus 2019 by Metals Focus, p.91 The Shanghai Gold Exchange and the Shanghai Futures Exchange report both the buy and sale of each transaction. To compare with other futures exchanges such as Comex, divide by 2. 32,000 oz. = 1 tonne.

¹⁴ ibid

auction that trade amongst themselves settle in unallocated gold stored in LBMA clearing banks.

Smaller bars are relatively more expensive to produce than larger bars. On a per ounce basis, a one-ounce bar will cost several times less than a one gram “wafer” and a kilobar will be multiples cheaper than one-gram products. The most cost-efficient bar is the large 400 oz. London Good Delivery bar. Prices in the media and on trading platforms are generally for the London Good Delivery bar.

Importantly, traders around the world use the LBMA Gold Price to settle bespoke gold transactions around the world in formats other than large bars. For counterparties transacting in kilobars, this is done by their agreeing to a premium to the LBMA Gold Price.

Appendix B: G-Coin and ETFs, A Comparative Analysis

G-Coin and gold exchange traded funds (ETFs) both provide exposure to the price of gold, but there are several significant differences as outlined in the below table.

G-Coin vs. an Exchange Traded Fund (ETF) GLD is used for ETF example		
Product	ETF (GLD)	G-Coin
Structure	A continuously offered, open-ended investment trust; registered with the SEC under the Securities Act of 1933	Digital certificate of title stored on a private, permissioned blockchain
Access	A brokerage account to buy shares on NYSE Arca and on exchanges where it is cross listed (Mexico, Japan, Singapore, Hong Kong)	A digital wallet to buy digital certificates from a G-Commerce company. G-Commerce subsidiaries are located in countries and regions where Emergent Technology markets G-Coin
Underlying Assets	Allocated London Good Delivery bars	Responsible Gold kilobars
Gold Traceability	The refiner's stamp is on the bar. There is no available record of where the gold originated	Owners have ready access to irrefutable records of origin and custody transfers
Responsible Sourcing	LBMA Responsible Gold Standard applies to Good Delivery refiners only and includes paper-based supply chain due diligence requirements to be carried out on a periodic basis and verified by annual independent audits.	All supply chain participants - miners, refiners, logistic providers and vault operators - demonstrate compliance with the Responsible Gold Standards through annual independent audits or self-certificates. Every ounce of Responsible Gold is tracked through the RG SCA and activities and data are monitored continuously and in real time.
Gold Ownership	None. Instead, the buyer owns shares in the grantor trust that own the gold	Allocated, direct title to specific Responsible Gold kilobars
Counterparty Risk	ETF owners have exposure to the fund (which owns the gold)	G-Coin holders have direct title to their gold; these holdings are insulated from an EmTech credit event
Initial Pricing	Based on 1/10ths of an ounce of gold (decreases over time based on 40bp annual fee)	Based on 1 gram of Responsible Gold
Annual Expenses (including storage)	40 basis points	20 basis points

Product	ETF (GLD)	G-Coin
Transaction Fees	Based upon your broker's charges	Costs are built into the bid-offer spread and include fabrication costs for kilobars. The volume of gold traded, the country where the customer is based and what currency the transaction is done in all impact the bid-offer spread.
Settlement speed	2 business days after the order is filled	Instant (subject to cleared funds)
Ease of transfer	Complete a transfer request form through your broker	Frictionless and instant transfer to other G-Coin digital wallets; no cost
Ease of spending	Not possible	The G-Coin debit card is accepted in 200 countries at 14 million merchants, putting G-Coin on par with fiat.
Trustee	Administers trust pays expenses, calculates Net Asset Value, processes orders from Authorized Participants Currently: BNY Mellon Asset Servicing	G-Coin administrator: creates and redeems G-Coin, manages the distributed ledger, acts as bailee G-Mint Sàrl
Custodian	Safekeeps gold Currently: HSBC London	Safekeeps gold Brink's
Custodian features	Bank	Logistics companies with Category 3 vaults, independent of the banking system
Sub-custodian	The Custodian can use other custodians as needed	none
Party Responsible for Creation and Redemption of shares (GLD) or digital certificates (G-Coin)	An Authorized Participant (typically a bullion bank or large trading firm) creates and redeems shares of GLD	G-Mint Sàrl creates and redeems the G-Coin digital certificates of title and manages the distributed ledger that lists owners and their holdings.
Creation Process	Authorized Participant delivers unallocated gold to Custodian in exchange for ETF shares; transaction approved by trustee	Owners of Responsible Gold kilobars at a licensed depository deliver them to G-Mint Sàrl in exchange for G-Coin tokens
Redemption Process	Authorized Participant receives unallocated gold from Custodian in exchange for ETF shares; transaction approved by trustee	G-Mint Sàrl receives G-Coins from the owner and delivers physical. The G-Coins are destroyed by G-Mint Sàrl
Minimum Physical Redemption	100,000 shares (10,000 oz.) The trust can opt to settle in cash	10 G-Coins (10 grams)

G-Coin Risk Disclosure

*You should consider carefully the risks described below before purchasing or using G-Coin tokens. G-Coin tokens constitute ownership of responsibly sourced, physical gold maintained in a storage facility. G-Coin tokens may be redeemed for physical gold in accordance with G-Coin's Terms of Service but do not provide for future delivery of physical gold on any set date or upon the occurrence or non-occurrence of any event. G-Coin tokens are not designed or sold as securities or any other form of investment product. Accordingly, none of the information presented below is intended to form the basis for any investment decision, and no specific recommendations are intended. As with many commodities, the risk of loss in trading or holding gold can be substantial, and you should therefore carefully consider whether trading or holding gold via G-Coin tokens is suitable for you in light of your financial condition. G-Wallet Corp ("Company") and its affiliates expressly disclaim any and all responsibility for any direct or consequential loss or damage of any kind whatsoever arising directly or indirectly from: (i) reliance on any information contained in this **G-Coin Risk Disclosure**, (ii) any error, omission or inaccuracy in any such information, or (iii) any action resulting from such information.*

BY PURCHASING, HOLDING, AND USING G-COIN TOKENS, YOU EXPRESSLY ACKNOWLEDGE AND ASSUME THE FOLLOWING RISKS:

1. *Risks Associated with the Fluctuating Value of Gold*

Since G-Coin tokens constitute ownership of responsibly sourced, physical gold, the value of these tokens relates directly to the value of that gold, and fluctuations in the price of gold will materially affect G-Coin tokens. The price of gold has fluctuated widely over the past several years. Several factors may affect the price of gold, and thereby G-Coin tokens, such as:

- Global supply and demand, which is influenced by such factors as gold's use in jewelry; electronics; other technology and industrial applications; purchases made by investors in the form of bars, coins, and other gold products; forward selling by gold producers; purchases made by gold producers to unwind gold hedge positions; central bank purchases and sales; and production and cost levels in major gold-producing countries such as China, South Africa, the United States, and Australia;
- Global or regional political, economic, or financial events and situations, especially those unexpected in nature;
- Expectations with respect to the rate of inflation;
- Currency exchange rates;
- Interest rates;
- Investment and trading activities of hedge funds and commodity funds; and

Other economic variables such as income growth, economic output, and monetary policies.

Over time, gold has experienced significant price fluctuations. If gold markets continue to be subject to sharp fluctuations and you need to sell your G-Coin tokens at a time when the price of gold is lower than it was when you made your purchase, the sale of your G-Coin tokens will result in financial loss. Even if you are able to hold G-Coin tokens for the long-term, you may never experience a profit, since gold markets have historically experienced extended periods of flat or declining prices, in addition to sharp fluctuations.

In addition, users of G-Coin tokens should be aware that while gold is used to preserve wealth by investors around the world, there is no assurance that gold will maintain its long-term value in terms of future purchasing power. In the event that gold does not maintain its purchasing power relative to other assets (which could happen if gold appreciates in value less than other assets), the value of G-coin tokens will be proportionately affected. In the event that the price of gold declines, the value of G-Coin tokens should be expected to decline proportionately.

Economic crises may motivate large-scale sales of gold which could decrease the price of gold and adversely affect the price of G-Coin tokens. (See also Section 3 regarding *Risks Associated with Economic Crises*.)

2. *Risks Associated with the Blockchain Technology Industry*

General blockchain and crypto asset market trends may affect G-Coin tokens because G-Coin tokens are generated and maintained on a blockchain. The factors affecting the growth of the industry include, without limitation:

- Worldwide growth in the adoption and use of blockchain technologies and crypto assets;
- Government and quasi-government regulation of blockchain technologies and crypto assets;
- The availability and popularity of other forms or methods of buying and selling goods and services, or trading assets, including new means of using fiat currencies;
- General economic conditions; and
- A decline in the popularity or acceptance of crypto assets.
- The slowing or stopping of the development, general acceptance and adoption and usage of blockchain networks and crypto assets may adversely affect the price of G-Coin tokens.

3. *Risks Associated with Economic Crises*

The possibility of large-scale distress sales of gold in times of crisis may have a short-term negative impact on the price of gold and adversely affect the value of gold you hold, including via G-Coin tokens. For example, the 1998 Asian financial crisis resulted in significant sales of gold by individuals which depressed the price of gold on an international basis. Crises in the future may impair gold's price performance or relative purchasing power which would, in turn, adversely affect the value of gold held via G-Coin tokens.

4. *Substantial Sales of Gold by the Official Sector Could Adversely Affect the Value of Gold You Hold, Including via G-Coin Tokens*

The "official sector" consists of central banks, other governmental agencies, and international organizations that buy, sell, and hold gold as part of their reserve assets. The official sector holds a significant amount of gold, most of which is static, meaning that it is held in vaults and is not bought, sold, leased, or swapped or otherwise mobilized in the open market. A number of central banks have sold portions of their gold over the past 10 years, with the result that the official sector, taken as a whole, has been a net supplier to the open market. Since 1999, most sales have been made in a coordinated manner under the terms of the Central Bank Gold Agreement, as amended, or CBGA, under which 21 of the world's major central banks (including the European Central Bank) agree to limit the level of their gold sales and lending to the market. In the event that future economic, political, or social conditions or pressures require members of the official sector to liquidate their gold assets all at once or in an uncoordinated manner, the demand for gold might not be sufficient to accommodate the sudden increase in the supply of gold to the market. Consequently, the price of gold could decline significantly, which could adversely affect the value of gold you hold via G-Coin tokens.

5. *Risk of Lack of Active Trading or a Halt in Trading*

Although currently gold trades on a variety of markets and via a variety of investment vehicles, there can be no assurance that an active trading market for gold will be maintained. If a holder of gold, via G-Coin tokens, wants or needs to sell gold at a time when no active market for such gold exists, or there is a halt in trading of gold generally, this will most likely adversely affect the price you receive for your sale of the gold (assuming you are able to sell it).

6. *Risks Associated with Local Laws and Regulations Impacting Gold Ownership*

Although the regulatory status of gold is reasonably settled in many jurisdictions, current or future changes to local laws and regulations may prevent you from owning gold via G-Coin tokens. For example, some laws may require you to store any gold you receive via remittance or via purchase with domestic custodians exclusively, and if you are not in a jurisdiction with a custodian that stores gold associated with G-Coin tokens, such laws may prevent you from lawfully owning gold associated with G-Coin tokens. Similarly, some laws related to capital controls may impact your ability to own gold via G-Coin tokens, specifically when the physical gold is stored with a non-domestic custodian. Such laws related to remittances, domestic custodians, and capital controls may not exist in your jurisdiction today, but may come into effect in the future, particularly should widespread economic crisis impact your jurisdiction. (See Sections 1, 3, and 21 for further risks related to the fluctuating value of gold, economic crises, and regulatory uncertainty.)

7. *Gold Prices May be Affected by Purchases and Sales of Gold by Exchange Traded Funds ("ETFs") or Other Exchange Traded Vehicles or Trusts*

To the extent existing ETFs or other exchange traded vehicles tracking gold markets represent a significant proportion of demand for physical gold bullion, large redemptions of the securities of these ETFs or other exchange traded vehicles could negatively affect physical gold bullion prices and hence affect the price of gold owned via G-Coin tokens.

8. *Holders of Gold via G-Coin Tokens do not Have the Rights Enjoyed by Investors or Shareholders in Certain Other Gold Investment Vehicles*

As direct owners of gold bullion, G-Coin token holders have none of the statutory rights normally associated with the ownership of shares of a corporation (including, for example, the right to bring “oppression” or “derivative” actions). In addition, the G-Coin tokens provide the holder with no voting or distribution rights (such as those which might exist in certain vehicles to, for example, have the right to elect directors and receive dividends).

9. *The Value of Gold Held via G-Coin Tokens may be Adversely Affected by Competition from Other Methods of Holding or Investing in Gold*

Company competes with other sellers of gold bullion as well as other financial vehicles, including traditional debt and equity securities issued by companies in the gold industry and other securities backed by or linked to gold, direct investments in gold, and other investment vehicles (including ETFs and other gold investment vehicles). Market and financial conditions, and other conditions beyond Company’s control, may make it more attractive to acquire gold via other means, or to invest in financial or investment vehicles backed by or linked to gold, which could limit the market for the direct ownership of gold and reduce the liquidity of gold, including gold held via G-Coin tokens.

10. *You Might not be Able to Redeem Your G-Coin Tokens for Physical Gold if you do not Have a Sufficient Amount of G-Coin Tokens in your Digital Wallet or are Unable to Pay Associated Redemption Fees*

G-Coin tokens are divisible such that you may own a small fraction of a G-Coin token. This feature allows for wide ownership of physical gold but your ability to redeem your G-Coin tokens may be subject to minimum redemption amount requirements. If you do not have the required minimum amount of G-Coin tokens in your digital wallet, you may not be able to request a redemption for physical gold. The minimum amount required for redemption may be dictated by your agreements with Company, the custodian(s) who store your gold, and other related service providers, and may change from time to time. Additionally, you may be required to pay fees associated with the redemption of G-Coin tokens for physical gold. These fees are set forth in your agreements with Company, the custodian(s) who store your gold, and other related service providers, and may change from time to time. If you are unable to pay these fees, you may not be able to redeem your G-Coin tokens for physical gold.

11. *Concerns About the Integrity or Reliability of the Responsibly Sourced Nature of the Gold Owned via G-Coin Tokens, even if Eventually Shown to be Without Merit, Could Adversely Affect the Value of Gold You Hold via G-Coin Tokens*

Because the gold owned via G-Coin tokens adheres to a specific responsibly-sourced standard, any concern about the integrity or reliability of that standard, or any changes to the standard, has the potential to impact the market for such gold and could thus have an adverse impact on the value of gold you hold via G-Coin tokens.

12. *G-Coin Token Purchasers or Holders do not Have the Protections Associated with Ownership of Shares in an Investment Company Registered under the Investment Company Act of 1940 or the Protections Afforded by the Commodity Exchange Act (“CEA”)*

Gold held in the form of G-Coin tokens constitutes direct ownership of physical gold rather than a structured claim to or interest in gold assets held by another person or entity, and as a result, Company is not registered as an investment company under the Investment Company Act of 1940 and is not required to register under the Act. Consequently, purchasers and holders of G-Coin tokens do not have the regulatory protections provided to investors in registered investment companies.

G-Coin tokens do not provide the holder with an interest in a vehicle that holds or trades commodity interests, including futures and swaps. G-Coin tokens constitute direct ownership of physical gold maintained in storage and do not provide you with an interest in commodity interest positions held by Company or any of its affiliates. Accordingly, G-Coin tokens are not interests in a “commodity pool” as defined in Section 1a(10) of the CEA and Company is not registered with or regulated as a commodity pool operator or commodity trading advisor. Consequently, purchasers and holders of G-Coin tokens do not have the regulatory protections provided to investors in commodity pools or regulated commodity interests.

13. *Gold Held by a Custodian may be Subject to Loss, Damage, Theft, or Restriction on Access*

There is a risk that some or all of the gold bars owned via G-Coin tokens and held by any custodian or any sub-custodian on your behalf could be lost, damaged, or stolen. Access to your gold via G-Coin tokens could also be restricted by natural events, (such as an earthquake) or human actions (such as a terrorist attack). Any of these events may adversely affect the operations of Company or the value of the gold you hold via G-Coin tokens.

In addition, the liability of the custodian is limited under the agreements which govern the relationship between you, Company, and the custodian(s) responsible for storage of your gold, so you should carefully review each such agreement (collectively, the “**Custody Agreements**”). Among other things, the custodian will not be liable for any delay in performance or any non-performance of its obligations under the Custody Agreements by reason of any cause beyond its reasonable control, including acts of God, war, or terrorism. Moreover, gold bars may be held by one or more sub-custodians appointed by the custodian, or employed by the sub-custodians appointed by the custodian, and the custodian may not be liable for the acts or omissions of its sub-custodians unless the selection of such sub-custodians was made negligently or in bad faith.

Although the custodian or custodians responsible for storing the gold may hold certain insurance policies with respect to the gold stored on your behalf, there is still a risk of incurring uninsured losses associated with your gold. (See Section 20 regarding *Risks of Uninsured Losses*.) If the gold bars associated with your G-Coin tokens are lost, damaged, stolen, or destroyed under circumstances rendering a party liable, the responsible party may not have the financial resources sufficient to satisfy your claim.

14. *The Gold Bullion Custody Operations of the Custodian may not be Subject to Specific Governmental Regulatory Supervisions*

The custodian is responsible for the safekeeping of gold owned by you via G-Coin tokens. Although the custodian may be subject to certain rules, such as those promulgated by Responsible Gold in connection with its responsible gold standard, or by certain gold industry organizations, such organizations are not official governmental regulatory bodies. In addition, while a custodian may be subject to certain general banking regulations by U.S. regulators, or to similar regulations in other jurisdictions, such regulatory provisions do not necessarily directly cover the custodian’s custody operations.

15. *Risks Associated with the QOS Blockchain Network*

Because G-Coin tokens are issued and maintained on a blockchain-based, distributed ledger technology (the “**QOS Blockchain Network**”), any malfunction, breakdown, or abandonment of the QOS Blockchain Network and its associated blockchain may have a material adverse effect on the usability of G-Coin tokens, including for the services provided by Company. Moreover, advances in cryptography, or technical advances, such as the development of quantum computing, could present risks to the QOS Blockchain Network, including the usability for G-Coin tokens, by rendering ineffective the cryptographic consensus mechanism that underpins the QOS Blockchain Network.

The QOS Blockchain Network relies on a number of third-party solutions, including power and Internet connection, that are out of Company’s control. Transactions may be delayed, cancelled or suspended due to interruptions of such third-party solutions. Transactions for goods and services between users, including the delivery, quality, safety, legality, or any other aspect thereof, are not under Company’s control. Failure to use supported fiat currency, digital currencies or other tokens on the QOS Blockchain Network may lead to loss of such currency or token.

16. *No FDIC or SIPC Insurance*

No digital asset, including a G-Coin token, is a deposit in a bank that is a member of the Federal Deposit Insurance Corporation (“FDIC”) nor a holding with a broker that is a member of the Securities Investor Protection Corporation (“SIPC”) insurance program. Therefore, a G-Coin token is not subject to the protections enjoyed by bank depositors with FDIC insurance coverage or by broker-dealer customers with SIPC insurance coverage. As a result, if a party that you use to hold your assets goes insolvent, abandons its business, is hacked, or otherwise loses the digital asset, you do not have recourse to such insurance programs and may have no practical recourse against any party for the complete loss of your G-Coin tokens or the value of your G-Coin tokens.

17. *Risk of Losing Access to G-Coin Tokens Due to Loss of Private Key(s), Custodial Error or Purchaser Error*

Company and a third-party service provider maintain certain private keys associated with each G-Coin digital wallet, and at least one private key will be stored by Company in an encrypted format where only your username and password will decrypt such private key. Company and the third-party service provider will need to utilize the private keys to facilitate certain

actions taken with respect to your account, including transfers or sales of G-Coin tokens and the recovery of your account should you lose or forget your username or password. In addition, in some circumstances you may have the option to store one or more private keys associated with your G-Coin digital wallet with a third-party qualified custodian of your choosing. Company, the third-party service provider, and/or the third-party qualified custodian may fail to receive, misplace, or fail to safely provide custody of the private key, in which case you may lose your G-Coin tokens.

You are responsible for the transactions that occur on your account. Carefully consider each transaction. If a transaction is initiated on the QOS Blockchain Network it may not be possible to modify or reverse such transaction, which may result in the loss of your G-Coin tokens.

18. *Risk of Attacks on the QOS Blockchain Network Nodes or Consensus Mechanisms*

As with other methods for reaching consensus with respect to data that is shared and managed on a distributed basis, the QOS Blockchain Network could be susceptible to attacks by nodes on the QOS Blockchain Network, in the course of validating G-Coin transactions on the shared ledger – including, but not limited to, double-spend attacks and majority node power attacks. Although becoming a node operator on the QOS Blockchain Network requires the party to enter into certain contractual relationships, any successful attacks by such node or nodes present a risk to the QOS Blockchain Network and G-Coin tokens, including, but not limited to, accurate execution and recording of transactions involving G-Coin tokens.

19. *Risk of Hacking and Security Weaknesses*

Hackers or other malicious groups or organizations may attempt to interfere with the QOS Blockchain Network or G-Coin tokens in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, because some components of the QOS Blockchain Network are based on an open-source protocol, there is a risk that a third party or a member of Company team may intentionally or unintentionally introduce weaknesses into the infrastructure of the QOS Blockchain Network, which could negatively affect the QOS Blockchain Network and usability of G-Coin tokens.

20. *Risk of Uninsured Losses*

Although the custodian or custodians responsible for storing the gold that you own via G-tokens may hold certain insurance policies with respect to the gold stored on your behalf, there is still a risk of incurring uninsured losses associated with your gold. In addition, there is no public insurer for gold or G-Coin tokens, such as the Federal Deposit Insurance Corporation which insures certain bank deposits, or private insurance arranged by us, to offer recourse to you. You should consider whether to obtain private insurance to insure the gold that you own via G-Coin tokens.

21. *Risks Associated with Uncertain Regulations and Enforcement Actions*

Although the regulatory status of gold is reasonably settled in many jurisdictions, the regulatory status of owning gold via G-Coin tokens, and more specifically via distributed ledger technology and its applications (i.e., the QOS Blockchain Network), is generally untested. It is difficult to predict how or whether regulatory agencies may apply existing regulations with respect to such technology and its applications. It is likewise difficult to predict how or whether legislatures or regulatory agencies may implement changes to law and regulation affecting distributed ledger technology and its applications, including the QOS Blockchain Network and G-Coin tokens. Regulatory actions could negatively impact the QOS Blockchain Network and holding gold via G-Coin tokens in various ways, including, for purposes of illustration only, through a determination that the purchase, sale, delivery or use of G-Coin tokens constitutes unlawful activity, or that registration or licensing is required for G-Coin tokens or for some or all of the parties involved in the purchase, sale, delivery, or use of G-Coin tokens. Company may cease operations in a jurisdiction in the event that regulatory actions, or changes to law or regulation, make it illegal to operate in such jurisdiction, or commercially undesirable to obtain the necessary regulatory approvals to operate in such jurisdiction.

22. *Risks Arising from Taxation*

The tax characterization for your transactions involving the ownership of gold via G-Coin tokens may vary by U.S. Federal, U.S. State, and other non-U.S. jurisdictions. You must seek your own tax advice in the appropriate jurisdiction(s) in connection with purchasing, transferring, redeeming, or selling gold via G-Coin tokens, which may result in adverse tax consequences to you, including withholding taxes, income taxes, non-income taxes, and tax reporting requirements.

23. *Risk of Catastrophic Event Affecting the QOS Blockchain Network*

While Company has taken reasonable precautions for the continuation of the QOS Blockchain Network in Company's absence, whether due to bankruptcy, insolvency, cessation of its business or other catastrophic failure of Company, such absence may nevertheless cause disruptions, delays, malfunctions or other issues with the QOS Blockchain Network and any services provided by Company in relation thereto.

24. *Risk of Competing Protocols and Platforms*

It is possible that alternative platforms could be established that utilize some of the same open source code and protocol underlying the QOS Blockchain Network, and that alternative platforms could be established that utilize entirely different underlying protocols but offer similar functionality as the QOS Blockchain Network. The QOS Blockchain Network may compete with these alternative platforms, which could negatively impact the adoption and use of the QOS Blockchain Network and G-Coin tokens, including for the services provided by Company.

25. *Risk of Insufficient Interest in the QOS Blockchain Network or Decentralized Applications*

It is possible that the QOS Blockchain Network will not be used by a large number of individuals, companies, or other entities or that there will be limited public interest in the creation and development of distributed protocols and decentralized applications, more generally. Such a lack of use or interest could negatively impact the development of the QOS Blockchain Network and the usability of G-Coin tokens, including for the services provided by Company.

26. *Risks Associated with the Development of the QOS Blockchain Network*

Although the QOS Blockchain Network has been deployed and is operational, participants or interested parties may contribute to ongoing development proposals and the QOS Blockchain Network may undergo significant changes over time as a result. How other participants, nodes, and other users will use the QOS Blockchain Network is largely, if not entirely, outside of Company's control. This could create the risk that G-Coin tokens or the QOS Blockchain Network, as further developed and used, may not meet the expectations you had at the time you first began to use G-Coin tokens. It is also possible that the QOS Blockchain Network will experience malfunctions or otherwise fail to be adequately developed over time, which may negatively impact the QOS Blockchain Network and the functionality of G-Coin tokens. This includes, but is not limited to, the possibility that the underlying protocol may be subject to a change in operating rules and that such a change may materially affect the functionality of G-Coin tokens and the QOS Blockchain Network.

27. *Risks Associated with New and Evolving Laws Impacting Decentralized Application Technology*

Distributed ledger technology and, by extension, the QOS Blockchain Network, may be subject to a variety of federal, state, and international laws and regulations, including those with respect to consumer privacy, data protection, consumer protection, content regulation, network neutrality, cyber security, intellectual property (including copyright, patent, trademark and trade secret laws), and others. These laws and regulations, and the interpretation or application of these laws and regulations, could change. In addition, new laws or regulations affecting the QOS Blockchain Network could be enacted, which could adversely impact Company, the QOS Blockchain Network, and the G-Coin tokens.

Additionally, the users and developers of the QOS Blockchain Network may be subject to industry specific laws and regulations or licensing requirements. If any of these parties fails to comply with any of these licensing requirements or other applicable laws or regulations, or if such laws and regulations or licensing requirements become more stringent or are otherwise expanded, it could adversely impact the QOS Blockchain Network and the G-Coin tokens.

28. *Unanticipated Risks*

Cryptographic blockchain tokens such as G-Coin tokens are a relatively new and untested technology. In addition to the risks included in this **Risk Disclosure**, there are other risks associated with your purchase, holding and use of G-Coin tokens, including those that Company cannot anticipate. Such risks may further materialize as unanticipated variations or combinations of the risks discussed in this **Risk Disclosure**.

Glossary of Terms

Asset Card	An asset is represented as asset card on the Blockchain. An Asset card represents a gold bar (which can be different weights) - as a result, the asset card is not fungible. It represents ownership. Only RG can create asset cards. When minting G-Coin tokens from an asset card, the entire asset card must be used. An asset card can represent kilobars that have been minted into G-Coin tokens or Responsible Gold that has not been minted into G-Coin tokens. Gold that is represented in the Responsible Gold Supply Chain Application. Assets may have an SGTIN (the combination of a GTIN with the serial number for this specific asset). An example of an asset is “Asahi 1 kilogram 999,9 bar with serial # 591”.
Assay	Assaying is an investigative procedure conducted typically in laboratories or refineries to quantitatively measure the presence and quantities of a target constituent. In gold, assaying is the process by which fineness is determined.
Bailee	A person or party to whom goods are delivered for a purpose, such as custody, without transfer of ownership.
Block	A block is a collection of transactions. Blocks are synonymous with digital pages in a ledger, also known as record-keeping book. These files store unalterable data related to the network.
Blockchain	A blockchain is a shared distributed edger where transactions are permanently recorded by appending blocks. The blockchain serves as a historical record of all transactions that ever occurred, from the genesis block to the latest block, hence the name blockchain.
Bullion	Bullion is gold, silver, or other precious metals in the form of bars or ingots. Typically, bullion is used for trade on a market. Its value is typically determined by its precious metal content, measured via its mass and purity.
Conflict Mineral	“Conflict minerals,” as defined by the US legislation, currently include the metals tantalum, tin, tungsten and gold, which are the derivatives of the minerals cassiterite, columbite-tantalite and wolframite, respectively. Downstream companies often refer to the derivatives of these minerals as 3TG. Note: Conflict minerals can be extracted at many different locations around the world including the Democratic Republic of Congo (DRC). The SEC rules define conflict minerals as 3TG metals, wherever extracted. For example, tin extracted in Canada, Russia or Argentina is considered a conflict mineral by definition. In the SEC rule, “DRC conflict-free” is defined as minerals that were extracted and did not directly or indirectly benefit armed groups in the covered countries. Therefore, tin extracted from Canada is considered “DRC conflict-free” under the definitions of the SEC rule. The internationally recognized OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, has a broader scope and covers all minerals, not only 3TG.
Consensus Model	Consensus Model. Consensus is the mechanism by which node operators reach agreement on the validity of a transaction and record it as a new block of data on the blockchain; the nodes must agree the new block of data is legitimate, complete, and recorded only once.
Cryptocurrency	A scarce digital asset built on or running on top of a blockchain protocol and exchanged via that blockchain system.
Cryptographic seal/Cryptoseal	Electronic ‘badge’ that is adhered to packaging of gold Doré and final finished institutional grade (Responsible Gold kilobar). NFC-enabled computer chip with cryptographic identity that enables mathematically and cryptographically closed loop integration between assets and a blockchain.
Digital Gold	Electronic document of title to physical gold – Responsible Gold – denominated in one-gram tokens that are divisible down to eighth decimal points.

Digital Wallet	A software that manages a user's private keys. It usually contains a software client that allows access to view and create transactions on a specific blockchain that the wallet is designed for.
Distribute application (DApp)	DApps are a new type of architecture being used in distributed ledgers (blockchains). DApps store data and source code in a decentralized manner that is distributed on the blockchain. The biggest advantage to this structure is that a DApp ensures the blockchain application is always online and is not reliant on a single server's availability.
Distributed Ledger	Another term for blockchain. Distributed ledgers are ledgers in which data is stored across network of decentralized nodes. A distributed ledger does not have to have its own currency and may be permissioned and private.
Doré bar	A semi-pure alloy of gold and silver usually created at the site of a mine. It is then transported to a refinery for further purification. The proportions of silver and gold can vary widely.
EmTech	Emergent Technology Ltd.
ESG	Environmental, social and governance (ESG) criteria are a set of standards for a company's operations that socially conscious investors use to screen potential investments. Environmental criteria consider how a company performs as a steward of nature. Social criteria examine how it manages relationships with employees, suppliers, customers, and the communities where it operates. Governance deals with a company's leadership, executive pay, audits, internal controls, and shareholder rights.
Fault Tolerance	A consensus protocol provides fault tolerance if it can recover from failure of a node participating in consensus.
Fiat currency	Fiat currency is any money declared by a government to be valid for meeting a financial obligation, like USD or EUR.
Finality	In the blockchain setting, finality is the affirmation that all well-formed blocks will not be revoked once committed to the blockchain.
G-Coin™	A G-Coin token is a digital title of ownership to one gram of a Responsible Gold kilobar stored in a licensed vault. Holders can redeem the tokens for physical gold on demand. G-Coin tokens can be sent, spent, gifted or purchased through the G-Coin wallet. G-Coin is neither a "commodity interest" nor a "security" under U.S. law.
G-Coin Wallet	A service that allows an individual or enterprise to make electronic transactions with G-Coin tokens.
G-Wallet Corp ("G-Co")	A Delaware Corporation.
G-Mint Sàrl	Operating entity in Switzerland for all Vaulting and G-Coin token Issuance handled by RG Trading. G-Mint Sàrl is a standalone entity which manages and distributes storage fees accrued from the G-Coin network. G-Mint Sàrl is a self-sustaining, autonomous operating entity that is central to EmTech's vaulting solution. Based in Geneva, Switzerland, G-Mint Sàrl is organized so that it can operate independently for as long as people have G-Coin tokens stored in licensed vaults.
GTIN	The Global Trade Item Number (GTIN) is an identifier for trade items, developed by GS1, is a not-for-profit organization that develops and maintains global standards for business communication. The uniqueness and universality of the identifier is useful in establishing which product in one database corresponds to which product in another database, especially across organizational boundaries.
Hash	A cryptographic function that turns any input into a string of characters of a fixed length that serves as a virtually unforgeable digital fingerprint of the data, called a hash.

IBFT	The IBFT mechanism utilizes a system whereby nodes in the network are allocated the privilege of producing new blocks for the chain using a round-robin or other arbitrary system. A “proposer” node is selected from the full nodes based on availability. This node proposes and creates new blocks with the transactions that have been validated and agreed by a majority of the other full nodes. The main difference from other crash fault tolerance models, is that instead of blindly trusting a leader, in IBFT a validator never assumes the “leader”, or “block proposer”, to be correct or honest. Instead it verifies the proposed block just like other consensus engines operating in an untrusted environment (Proof-of-Work, etc.).
KYB (Know your business)	The process of checking and verifying a Business Entity. Due diligence documentation is recorded in accordance with jurisdiction regulations.
KYC (Know your customer)	The process of checking and verifying the identity of an Individual and recording due diligence documentation in accordance with jurisdiction regulations.
Latency	In the blockchain setting, network latency also referred to as “block time”, is the time required to generate the next block of transactions in the chain. In other words, it is the amount of time a user has to wait, after pressing the “send” transaction button, to see their transaction appear on the blockchain
LBMA and the Responsible Gold Guidance	<p>The London bullion market is a wholesale over-the-counter market for the trading of gold and silver. Trading is conducted amongst members of the London Bullion Market Association (LBMA), loosely overseen by the Bank of England. Most of the members are major international banks or bullion dealers and refiners.</p> <p>The LBMA released version 8 of its Responsible Gold Guidance in December 2018. The Guidance is aimed at Good Delivery Refiners in order to combat systematic or widespread abuses of human rights, to avoid contributing to conflict, comply with high standards of anti-money laundering and combating terrorist financing practice. In addition, the Guidance has been developed to recognize the increasing importance of having strong corporate governance and addressing environmental and sustainability responsibilities.</p>
Logistic provider	A company that provides management over the flow of goods and materials between points of origin to end-use destination. The company will often handle shipping, inventory, warehousing, packaging and security functions for shipments.
Live Wallet	A software application used to store an Emergent Tech entity’s credentials (cryptographic private keys) which are associated with the state of one of our accounts tied to a Country. Ownership of G-Coin tokens will pass through the live wallet from the master, to the end customer.
Liveness	A consensus protocol guarantees liveness if all non-faulty nodes participating in consensus eventually produce a value.
Lloyds of London	Lloyds is a partially mutualized insurance marketplace within which multiple financial backers, grouped in syndicates, come together to pool risk. These underwriters, or “members” are a collection of both corporations and private individuals.
Master Wallet	A software application used to store Emergent Tech’s credentials (cryptographic private keys) which are associated with the state of our master trading account on the blockchain. This address is the “master” for trading, which disseminates tokens through jurisdiction’s address (i.e. G-Commerce USA) to interact with a customer of that jurisdiction.
Miner	A miner is a person who extracts ore, coal, or other mineral from the earth through mining.
Node	A participant in a blockchain network. A node may participate in the consensus model or simply store a copy of the blockchain for querying.
OECD	The Organization for Economic Co-operation and Development (OECD) is an intergovernmental economic organization with 36 member countries, founded in 1961 to stimulate economic progress and world trade. The OECD released the latest addition of its <i>Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas</i> in April 2016. The guidance provides

detailed recommendations to help companies respect human rights and avoid contributing to conflict through their mineral purchasing decisions and practices. This Guidance is for use by any company potentially sourcing minerals or metals from conflict-affected and high-risk areas. The OECD Guidance is global in scope and applies to all mineral supply chains.

Participant	A participant is a user of the system interacting via the JSON-RPC API. A participant may be a human, an automated process, or an enterprise participant.
POS	Proof of Stake is a type of consensus algorithm by which a blockchain network aims to achieve distributed consensus. In PoS-based blockchains the creator of the next block is chosen via various combinations of random selection of 'stake' and age (i.e., the stake). By using a POS model, nodes are not required to spend computational effort to solve a cryptographic puzzle as in POW but instead only nodes with a certain amount of 'stake' can produce blocks in the blockchain. See also 'Staking Mechanism'.
POW	Proof-of-Work is a type of consensus mechanism. It deters denial of service attacks and other service abuses such as spam on a network by requiring some work, like solving a cryptographic puzzle, from the service requester, usually meaning processing time by a computer, (typically using exorbitant number of GPUs to provide a higher chance of solving the puzzle).
Privacy	As defined in ITU X.800, privacy is "The right of individuals to control or influence what information related to them may be collected and stored and by whom and to whom that information may be disclosed." For the purposes of this Specification, the rights of individuals can be extended to the rights of organizations.
Ethereum	Ethereum is an open source, public, blockchain-based distributed computing platform and operating system featuring smart contract functionality.
Quorum	Based on Ethereum, Quorum, developed by J.P. Morgan, is an open source blockchain platform with enhancements to support enterprise needs.
QOS Blockchain	EmTech's proprietary blockchain platform. The QOS Blockchain platform is based on Quorum, an enterprise-focused version of Ethereum, developed by J.P. Morgan. It is a public/permissioned type blockchain that utilizes an Istanbul Byzantine Fault Tolerance (IBFT) consensus model and staking mechanism that result in a high transaction rate (in excess of 1,000 tps) and high scalability potential.
Refiner	A Refiner company is a company that procures and processes mineral ore, slag and/or materials from recycled or scrap sources into refined metal or metal containing intermediate products. The output can be pure (99.5% or greater) metals, powders, ingots, bars, grains, oxides or salts.
Responsible Gold™	Responsible Gold is, 99.99% pure gold with irrefutable proof of ethical provenance and chain of custody that meets the Responsible Gold Standards.
Responsible Gold Standards	The rules and processes developed by Responsible Gold Operations to manage the integrity of the Responsible Gold Supply Chain and issued by Responsible Gold Operations to Supply Chain Participants, including without limitations the guidelines, policies and procedures relating to the provenance and responsible sourcing, refining and vaulting of gold, the use of RGO Services (including without limitation the use of cryptoseals), the use of Marks and KYC / KYB checks.
Responsible Gold Supply Chain Application (RG SCA)	Emergent Technology's Supply Chain Application that tracks gold from mine- to-refinery – to-vault and end user, while conforming with a set of ESG compliant Responsible Gold Standards. The RG SCA is comprised of a growing number of trusted participants, including miners, refiners, vaults and auditors. The RG SCA successfully combines blockchain technology and Internet-of-Things with an RG SCA web and mobile applications that revolutionizes the way the different participants capture, communicate, access and audit information on an immutable, secure, and transparent blockchain platform.
Responsible Gold Trading DMCC	EmTech's subsidiary. Dubai entity that handles the buy and sell of physical Responsible Gold, issuance of G-Coin tokens and hedging of Responsible Gold and currency positions.

SGTIN	SGTIN (the combination of a GTIN with the serial number for this specific asset), a number that uniquely identifies the asset across the entire RG SCA, it contains [org ID].[product id].[asset#]
SHA-256	SHA-256 is one of the successor hash functions to SHA-1 (collectively referred to as SHA-2) and is one of the strongest hash functions available.
Smart Contract	A computer protocol used to digitally facilitate a contract in terms of its verification, negotiation, or performance. A smart contract allows transactions to be carried out and tracked without the use of intermediaries.
Staking Mechanism	A mechanism to determine a node operator's chance of validating transactions, the 'chance' depends on how a node operator's stake (typically a set quantity of native tokens) compares with the stakes of all other node operators and how long the tokens have been staked for. Staking helps secure a blockchain and maintain integrity of the transactions. For example, if a node operator were to validate a suspicious transaction, that node operator would risk losing their 'stake' once the other node operators reach a consensus contradicting it. Hence each node operator is financially encouraged to validate transactions properly. If a group of malicious node operators were to decide to attack the blockchain, they would need to control 51% of the staked tokens.
Transaction	A transaction is a string that represents a transfer of money from a user with public address X to another user in the system with public key Y. Transactions can involve one or more participants.
World Gold Council and the Responsible Gold Mining Principles	<p>The World Gold Council (WGC) is the market development organization for the gold industry. It works across all parts of the industry, from gold mining to investment, and their aim is to stimulate and sustain demand for gold.</p> <p>The WGC released its Responsible Gold Mining Principles in September 2019. They are a new framework that set out clear expectations for consumers, investors and the downstream gold supply chain as to what constitutes responsible gold mining and address key environmental, social and governance issues for the gold mining sector.</p>
XGC	XGC is the ticker symbol for G-Coin tokens.
XRG	XRG is the ticker symbol for kilobars of Responsible Gold.

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**CONTACT
INFORMATION**

Emergent Technology Ltd
109 N.Post Oak Lane, Suite 435
Houston, TX 77024
www.responsiblegold.com
info@responsiblegold.com



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