

LITE PAPER

# DIGITAL GOLD

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The Case for a Shared Infrastructure



## Executive summary

Gold remains one of the world's most trusted strategic assets and store of value. As financial systems have digitised, gold's market structure has not evolved at the same pace. While digital gold products exist, they operate across fragmented infrastructure with inconsistent custody standards, redemption terms and governance frameworks. This fragmentation limits fungibility, constrains liquidity, and weakens gold's integration into modern financial systems.

This paper proposes Gold as a Service: a shared infrastructure that would connect physical gold custody with digital issuance and product lifecycle management. By standardising core operating functions while preserving issuer competition, Gold as a Service aims to strengthen trust, reduce complexity, and enable digital gold to function as a coherent, interoperable asset class fit for a digital financial era.

# 01 Introduction: The gold market today and the emergence of digital gold

Gold's role as a strategic asset remains strong. The global above-ground stock of gold, estimated at approximately 220,000 tonnes, represents over US\$30 trillion in value.<sup>1</sup> Annual mine supply adds only around 1.8% to this stock, reinforcing gold's scarcity and long-term store-of-value characteristics. Central banks and investors continue to cite diversification, crisis performance, and capital preservation as core reasons for holding gold.<sup>2</sup>

At the same time, investor behaviour is shifting toward digital access. Retail investors increasingly use digital platforms and expect fractional ownership, seamless transferability and real-time settlement. Recent ETF inflows and the growth of tokenised gold signal rising demand for digital exposure. Yet digital gold remains small relative to the broader market due to structural frictions that limit scale and integration.



1. World Gold Council, [Above Ground Stocks](#)

2. World Gold Council, [Central Bank Gold Reserves Survey 2025](#)

## 02 Context: Why digital gold matters now and what's holding the market back

Launching and operating a digital gold product today typically requires coordination across multiple independent providers: vaults, custodians, liquidity partners, compliance firms, insurers, logistics providers, and tokenisation platforms. Each issuer must independently build and maintain this stack. The result is high fixed cost, operational complexity and slow time to market.

More importantly, product standards vary. Custody models differ. Ownership structures are inconsistent.

Redemption terms are not uniform. Audit and assurance practices are not harmonised. As a result, one digital gold product is not automatically equivalent to another. Investors must evaluate trust product by product. Liquidity pools remain siloed.

These structural frictions constrain fungibility, fragment liquidity, and limit gold's broader financial utility. Without common infrastructure, digital gold risks remaining a collection of isolated products rather than a unified asset ecosystem.



### ISSUER ROADBLOCKS

For issuers, it's hard to build and scale a compliant offering

- Fragmented vendor landscape
- Challenging economics
- Operational complexity
- Legal differences across jurisdictions



### USER ADOPTION HURDLES

For users, it's hard to trust existing offerings or translate these into real-world use

- Inconsistent redemption rights
- Limited trust
- Limited utility
- Limited awareness

## 03 Vision: The future of digital gold and what is needed to achieve it

In a mature end state, digital gold would function as a coherent market rather than a collection of isolated products. Ownership would be clear and enforceable. Units of digital gold would be economically, legally, and operationally equivalent across platforms. Physical gold backing would be continuously reconciled with digital records using structured data and embedded controls. And investors would be able to hold, transfer, pledge, or redeem gold through trusted digital rails without sacrificing the integrity of physical custody.

This vision does not depend on a single product or technology. It depends on shared practices and shared infrastructure. Trust would not rely solely

on periodic audit and institutional reputation but would be supported by systems that continuously align physical inventory, digital issuance, and legal ownership records. Reconciliation engines, structured vault reporting, and defined issuance rules would provide assurance at the infrastructure level.

Importantly, such infrastructure would not change what gold is. It would change how gold participates in the financial system. Gold would remain physically backed, scarce and durable, while becoming more accessible, more mobile, and more interoperable within digital markets.

# 04 Gold as a Service: A proposition for the industry

Gold as a Service is proposed as a shared infrastructure platform enabling issuers to build and operate digital gold products without independently assembling the entire physical and digital stack.

Issuers would retain control over product design, branding, pricing and distribution. And the platform would provide the underlying infrastructure connecting the physical gold ecosystem with the digital issuance layer, coordinating custody, vaulting, insurance, liquidity, reconciliation, compliance, and redemption in a standardised manner.

This harmonisation reduces operational complexity, shortens time to market and lowers barriers to entry, while strengthening trust by applying consistent custody and assurance mechanisms across participating products.

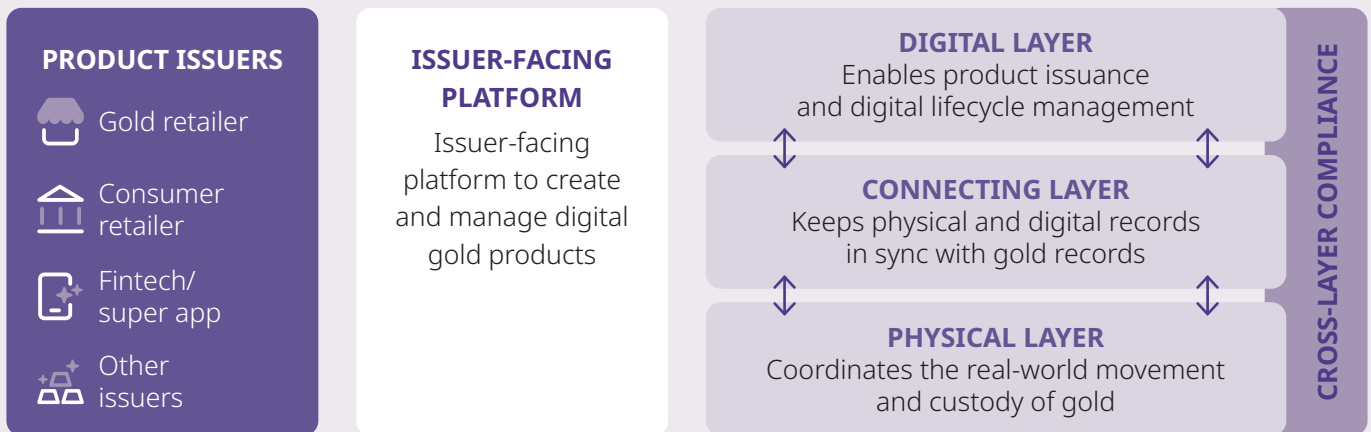
The infrastructure is structured around three integrated layers (Exhibit A):

**The physical layer** would coordinate sourcing, custody and movement of gold through approved vaulting, logistics, and insurance partners.

**The digital layer** would support issuance and lifecycle management of digital gold products, whether tokens, certificates, or digital account balances.

**The connecting layer** would synchronise physical and digital records, ensuring digital supply aligns with underlying gold holdings and that defined ownership structures are maintained.

## Exhibit A: Platform setup



## What are the implications of a market powered by Gold as a Service?

The central implication of shared infrastructure is that it could enable fungibility of digital gold at market level. In physical markets, gold is reasonably fungible because it is traded based on standardised measures of weight and purity within recognised custody networks. In digital markets, this principle breaks down when products differ in legal structure, backing, governance, and redemption rights.

For digital gold to function as a true financial asset, three forms of equivalence must align (Exhibit B). Economically, each unit must represent the same standardised gold value. Legally, each unit must carry enforceable and clearly defined ownership and redemption rights. Operationally, custody, reconciliation, and assurance processes must be consistent across systems.

When these conditions are met, digital gold can circulate across platforms without being revalidated at each step. Liquidity can consolidate rather than fragment. Redemption can become predictable and transparent. Gold can be pledged as collateral, integrated into structured products, or used in programmable payment environments without undermining its physical integrity.

In this context, gold evolves from being a digitally distributed product to functioning as a liquid, interoperable asset class embedded within modern financial infrastructure.

**Exhibit B: Fungibility**

**What fungibility needs**

- Economic equivalence
- Legal equivalence
- Operational equivalence

**FUNGIBILITY**  
 Fungibility turns fragmented products into a single investable category.

**What fungibility enables**

- Access
- Utility
- Mobility

**LIQUIDITY**  
 As digital gold is reimagined, it becomes exponentially more attractive as a source of liquidity.

# 05 Conclusion: The path forward

The objective of Gold as a Service is not to replace existing issuers or dictate product formats. It is to reduce duplication, strengthen trust, and enable innovation on top of common foundations. Issuers would continue to compete on distribution, brand, and customer experience, while relying on shared infrastructure for core operating functions.

Realising this vision requires engagement from across the gold value chain and the digital asset ecosystem. Bullion banks, vault operators, and logistics providers are essential in defining custody and redemption standards. Technology partners are critical in enabling scalable digital issuance and reconciliation. Regulators play a key role in ensuring legal clarity and investor protection. Issuers and platforms are best positioned to bring differentiated products to market.

The World Gold Council’s role is to act as a neutral convener and operator, actively bringing stakeholders together to develop shared infrastructure, test assumptions, and translate this vision into practical pathways forward.

Gold has endured because it has adapted thoughtfully at key moments of structural change. Digitisation represents such a moment. Without action, digital gold may remain fragmented and peripheral. With shared infrastructure, gold can remain what it has always been: a trusted strategic asset, while becoming fully fit for the digital era.

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