GBBC
Global Blockchain
Business Council

101 REAL-WORLD BLOCKCHAIN USE CASES HANDBOOK

2026 EDITION

101 Real-World Blockchain Use Cases Handbook, 2026 Edition

Compiled and Edited by
Global Blockchain Business Council (GBBC) and Community

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Dedicated to our global community

FOREWORD FROM GBBC

Welcome back to the second Global Blockchain Business Council (GBBC)'s 101 Real-World Blockchain Use Cases Handbook (the 'Handbook'), 2026 Edition!

What is the backstory?
GBBC has existed since 2017, and yet, we are asked the same question time and time again, so we decided to answer it: What is 'real' in blockchain technology? Forget about the hype. Show me the use cases in 2026!

What was the reaction to the inaugural handbook?
BIG hit! GBBC made friends from all over the world, across public and private sectors, especially regulators, government agencies, and even law enforcement and courts. We received a U.S. Library of Congress Control number and printed 500 limited edition copies which we distributed throughout the second half of 2025 into 2026. People love a good hard copy of a book! Analog forms are resilient against the test of time...

What is the purpose of the Handbook again?
The Handbook is our best attempt to collate, edit, and segment across different industries, jurisdictions, and organizations, drawing from our GBBC members and wider community.

From tokenization of financial products to tracking and tracing commodities to help farmers and consumers to regulatory innovations—this is a snapshot, and by no means comprehensive, nor encompassing the biggest or most well-known use cases. Some use cases fall into multiple categories. This is our best effort to organize topics into understandable sections.

For government agencies, regulators, and central banks wanting a hard copy of this handbook, please send us an email, and we will do our best to send one your way at no cost: info@gbbc.io

All GBBC publications are open-access, open-source, and for our curious community.

Please use the Handbook as a reference, share it with others, give us feedback, and join our community by following us online and engaging in our work.

Sincerely,
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GBBC
Global Blockchain Business Council

Global Blockchain Business Council (GBBC) is the largest leading non-profit association for the blockchain, digital assets, and emerging technologies community. Founded in 2017 in Davos, Switzerland, GBBC comprises more than 500 institutional members and 251 Ambassadors across 119 jurisdictions and disciplines.

GBBC furthers adoption of digital technologies by engaging regulators, business leaders, and global changemakers to harness these transformative tools for more secure and functional societies.

INITIATIVES

GBBC BITA Standards Council
CAPITAL MARKETS RISK MITIGATION FRAMEWORK (RMF)
GBBC Digital Media
GBBC Giving
GBBCGSMI
GBBC InterWork Alliance
THE INTERNATIONAL JOURNAL OF BLOCKCHAIN LAW
GBBC U.S. Blockchain Coalition
GBBC USA

LEARN MORE

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Global Blockchain Business Council (GBBC)
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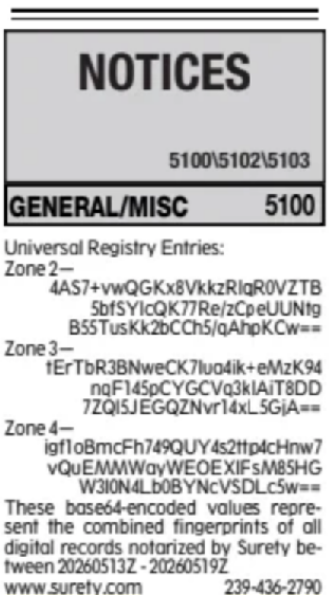
THE ORIGINAL USE CASE

Did you know?

This continuously published series of widely witnessed hashed values has appeared in the print edition of the Sunday New York Times since October 13, 1991.

Dr. Scott Stornetta and Dr. Stuart Haber, whose academic publications are cited in 3 of the 8 references in the Bitcoin white paper, laid the foundations for blockchain technology with their research on time-stamping in the 1990s. Their joint endeavor through a company called Surety pioneered the first blockchain use case by verifying records.

A weekly hash of the digital records on this early—but still continuing—blockchain infrastructure is still made publicly available, as seen in the image to the right from the May 24, 2026 edition of the New York Times, page 19 (New York edition).



NOTICES

5100\5102\5103

GENERAL/MISC 5100

Universal Registry Entries:

Zone 2—
4AS7+vwQGKx8VkkzRlqR0VZTB
5bfSYlcQK77Re/zCpeUUNtg
B55TusKk2bCCh5/qAhpKCw==

Zone 3—
tErTbR3BNweCK7luo4ik+eMzK94
nqF145pCYGCVq3klAiT8DD
7ZQI5JEGQZNvr14xL5GjA==

Zone 4—
igf1oBmcFh749QUY4s2ttp4cHnw7
vQuEMMWqyWEOEXIFsM85HG
W3I0N4Lb0BYNcVSDLc5w==

These base64-encoded values represent the combined fingerprints of all digital records notarized by Surety between 20260513Z - 20260519Z

www.surety.com 239-436-2790

SECTION I

AGRICULTURE, COMMODITIES & ENERGY

#1: 2TOKENS

TOKENIZING THE AMELANDER ENERGIE COOPERATIE

AEC, a community energy cooperative on the Dutch island of Ameland, was set up to support collective ownership using tokenization of local renewable energy assets. In a second phase, the focus shifted to energy sharing, exposing challenges in the fair allocation of locally produced energy among members. Citizens without rooftop solar remained excluded from shared ownership, peer-to-peer exchange was not possible, and the cooperative lacked sufficiently transparent governance tools. Dependence on centralized intermediaries and manual reconciliation further constrained AEC's operation as a self-governing local energy community.

THE SOLUTION

The 2Tokens consortium designed a blockchain-based infrastructure built around an Energy Token, integrated with AEC's existing smart metering and reconciliation systems. The solution delivered three core capabilities: fractional ownership, allowing citizens to acquire tokenized stakes in shared solar parks regardless of whether they could install rooftop panels; self-consumption, enabling token holders to offset their home energy use against production from their remotely owned panels; and peer-to-peer energy sharing, allowing members to exchange surplus energy through tokenized transactions rather than through conventional grid intermediaries. Smart meters and distributed ledger technology (DLT) work with the existing reconciliation process to enable real-time energy allocation based on actual consumption rather than forecasts.

Governance was addressed through a Decentralized Autonomous Organization (DAO) model, in which members hold tokenized ownership stakes proportional to their investment, entitling them to energy production at cost price. The model extends participation to:

- **Members** (local households, companies, municipalities): tokenized ownership and governance rights

- **Local non-member consumers:** energy contracts with AEC at fair market prices
- **External investors:** financing of startup assets through tokenized bonds (eBonds)

The AEC use case gained significant traction when it was selected as part of the **third cohort of the European Blockchain Regulatory Sandbox**, a flagship initiative of the European Commission. 2Tokens led the consortium—including ABN AMRO, EnergyBlocks, Hypha Energy, and Value X—through months of regulatory dialogue across Europe. Key regulatory questions addressed included:

- The legal status of Energy Tokens under MiCA (EU crypto-asset regulation)
- Tax implications of tokenized energy sharing under DAC7 and DAC8
- Privacy and data protection requirements (GDPR compliance)
- Cross-border transaction monitoring and regulatory cooperation between national authorities

The case now serves as a reference model for Renewable Energy Communities across Europe, demonstrating how smart contracts, tokenization, and DAOs can make local energy governance more transparent and financially inclusive.

Learn more: powerofthemany.org

#2: 677 FINANCIAL GROUP

NATGOLD DIGITAL LTD. NON-EXTRACTIVE TOKENIZATION OF VERIFIED IN-GROUND GOLD RESOURCES

677 Financial Group serves as a strategic partner to NatGold Digital Ltd. (NatGold) in advancing their digital mining ecosystem as it pertains to market-related activities including on-exchange token launch, secondary market (OTC and Exchange) liquidity, structured transactions, and advisory.

NatGold is the creator and global operator of the NatGold ecosystem—a platform built to transform in-ground gold into a fully sustainable, real-world crypto commodity. Using a patent-pending digital mining process, NatGold converts NatGold Certified Resources into NatGold Tokens (NATG): non-dilutive digital assets that combine gold's enduring value with Bitcoin's digital efficiency.

BACKGROUND

Gold has long been valued as a monetary and store-of-value asset, but the traditional path to gold ownership has also drawn criticism. Conventional gold mining can be capital intensive, environmentally disruptive, and socially contentious, particularly where local communities bear the impacts of extraction while receiving limited lasting benefit. Gold held mainly for financial exposure is then often refined, transported, and vaulted (all at considerable cost); many investors never take physical possession of it.

BLOCKCHAIN-BASED SOLUTION

NatGold's differentiated model, through a patent-pending digital mining process, converts qualifying in-ground gold resources into a blockchain-native real-world asset without physical extraction. Verified and legally controlled gold resources remain undisturbed in the ground while their value is represented digitally through NatGold Tokens (NATG).

NatGold applies blockchain within a framework that combines recognized geological reporting, legal rights, compliance review, evidentiary recordkeeping, and governed token issuance.

MECHANICS

NatGold identifies qualifying gold projects supported by recognized technical disclosure standards such as NI 43-101, the JORC Code, or Regulation S-K 1300. Each project then moves through technical, legal, compliance, and governance review before tokenization.

Once those requirements are satisfied, token issuance is aligned with legal control of the underlying rights. Subsurface mineral rights associated with NatGold Certified Resources are placed into custody, while corresponding surface rights are held separately. Following approval and custody alignment, NATG is minted as an ERC-20 token on Ethereum through controlled smart-contract processes. Each NATG is intended to represent one troy ounce of NatGold Certified Resources remaining undisturbed in the ground, linking token value to independently reviewed in-ground gold resources rather than to extracted bullion, future production revenue, or conventional corporate claim.

REAL-WORLD IMPACT

NatGold is intended to address an inefficiency in one of the world's oldest asset classes. A central reference point is NatGold's Baseline Intrinsic Value (BIV), which reflects the gold price less a recognized extraction-cost benchmark and expresses the in-ground economic value of qualifying certified resources without physical mining. For investors seeking gold as a monetary or store-of-value asset, the conventional system depends on extraction and vaulting even when the gold is not intended for productive use. NatGold offers an alternative in which qualifying gold can remain in the ground while still supporting digital value representation.

The model is designed to reduce dependence on extractive and logistical steps associated with bullion realization, introduce blockchain-based transparency and transferability, and broaden access through digital asset infrastructure.

It also speaks to environmental and societal concerns associated with mining by creating the potential for economic participation and value creation without many of the impacts historically associated with mine development.

WHY IT MATTERS

NatGold illustrates how blockchain can support a different economic framework for a legacy asset class. Its digital mining framework links blockchain infrastructure with independently verified in-ground gold resources, secured mineral rights, and governed issuance. In that respect, it provides an example of a real-world asset use case: a gold-linked digital asset designed to combine selected attributes of gold with the efficiency and mobility of blockchain.

Blockchain-based digital mining of gold brings the benefits of modern finance and technology to all gold investors and provides accessible and cost-efficient gold investing to a much broader audience. Individual investors can benefit from accessibility typically available only to institutional investors investing at scale. The investor benefits are many: 24/7 liquidity, blockchain transparency, immutability, instant settlement, elimination of transit and storage costs, mobile custody, and accessibility with zero friction.

Learn more: natgold.com and youtube.com/@NatGold_Digital

#3: BLOCKCHAIN FOR ENERGY

TRANSFORMING THE ENERGY INDUSTRY THROUGH A SHARED DIGITAL PLATFORM

Energy operations depend on coordination between multiple independent organizations, each maintaining their own systems and records. This fragmentation leads to inconsistent data, delayed validation, and limited trust between participants.

As a result, critical processes—such as operational reporting, compliance verification, and cross-company workflows—require manual reconciliation and oversight. This creates inefficiencies, increases the risk of errors, and makes it difficult to meet evolving regulatory and sustainability requirements.

Without a shared mechanism to validate and standardize data across participants, the industry lacks a scalable way to ensure accuracy, transparency, and accountability in multi-party interactions.

THE SOLUTION

The B4E Network & Platform (N&P) provides a shared infrastructure and validation layer that enables organizations to securely exchange, standardize, and verify data across company boundaries.

The platform acts as a neutral coordination layer where data generated by different participants can be validated against common standards and governance rules. By anchoring key interactions on a distributed ledger, the N&P ensures that shared data is immutable, auditable, and trusted by all parties without reliance on a central intermediary.

At its core, the N&P establishes a framework for governance, compliance, and interoperability. Standardized data models and validation mechanisms enable consistent interpretation of information across systems, while embedded controls support regulatory alignment and auditability.

This reduces the need for manual reconciliation and enables more efficient multi-party workflows.

The platform is designed as an infrastructure layer on which applications can be built. For example, it supports operational coordination across supply chains, standardized emissions data for carbon reporting, and secure identity and credential management for participants.

These implementations demonstrate how multiple use cases can operate on a shared foundation while leveraging common validation and data exchange capabilities.

By providing a shared environment for collaboration, the N&P enables organizations to integrate more easily, reuse existing infrastructure, and contribute to a growing ecosystem.

This approach supports continuous improvement and innovation without duplicating systems.

In practice, this enables faster cross-company workflows, reduces reconciliation effort, improves auditability, and strengthens compliance and sustainability reporting. By shifting from fragmented systems to a shared validation layer, B4E supports more efficient, transparent, and scalable collaboration across the energy industry.

Learn more: blockchainforenergy.net

#4: CATTLEPROOF VERIFIED

MODERNIZING LIVESTOCK IDENTITY INFRASTRUCTURE

CattleProof operates at the critical intersection of **agricultural policy**, **verification standards**, and **digital infrastructure**—delivering a more secure, transparent, and efficient cattle economy. With the potential to facilitate trillions of dollars in global cattle transactions, CattleProof enhances both domestic market performance and U.S. competitiveness in international trade. The platform initially targets more than 700,000 U.S. ranches, many of which are family-owned and vital to the health of rural economies.

THE PROBLEM

Despite the scale and importance of the cattle industry, its core transaction systems remain virtually unchanged since the 19th century. Current processes are plagued by:

- **Inaccurate or missing data**
- **Delayed payments and settlement**
- **Limited traceability**
- **Rampant fraud**, including "ghost cattle" schemes and animal misrepresentation

These systemic issues erode producer profitability, undermine food safety, and weaken trust in U.S. beef on the global stage.

THE SOLUTION

CattleProof Verified introduces a USDA Process Verified identity system for individual animals, powered by blockchain technology. Each animal is assigned a secure, tamper-proof digital ID that persists across its lifecycle and ownership changes.

This next-generation infrastructure enables:

- **Faster, more secure payments**
- **Improved regulatory compliance and auditability**
- **Streamlined access to domestic and international marketplaces**
- **Real-time, shareable data for buyers, sellers, and supply chain partners**

WHY IT MATTERS

CattleProof Verified represents more than a technological upgrade—it's a foundational transformation in how cattle are identified, verified, and traded.

The platform's far-reaching impact includes:

- **Strengthened food system integrity** through trusted, verifiable data
- **Fraud mitigation** and enhanced financial transparency
- **Greater liquidity and access to financing** through cattle tokenization
- **Future-proof compliance** with evolving regulatory and trade requirements
- **Digital enablement** for ESG reporting, risk underwriting, and carbon markets

As the global food system demands greater transparency and sustainability, CattleProof Verified is poised to become the **standard for modern livestock identity**.

EARLY ADOPTERS

- **Choctaw Ranches:** Managing livestock across 63,000 acres, the Choctaw Nation is using CattleProof to enhance agricultural trust and profitability at scale
- **Jorgensen Land & Cattle:** The largest registered bull seller in the U.S., Jorgensen is implementing CattleProof to support verifiable animal identities and data-backed transactions

Learn more: cattleproof.com

#5: CINTEL

CINTEL AGROTRACK: BLOCKCHAIN-BASED DAIRY TRACEABILITY SYSTEM

CINTEL AgroTrack enables reliable and verifiable traceability across the entire dairy production chain, where product information is often dispersed, fragmented, or manually recorded by multiple stakeholders. This situation makes it difficult to accurately determine the origin, journey, production conditions, and collection and transformation processes of milk into dairy products, thereby limiting a producer's ability to demonstrate product quality, transparency, and traceability to customers, partners, and regulatory authorities.

CINTEL AgroTrack provides a traceability solution that operates through a web-based platform with mobile device support for recording on-farm and collection activities across the dairy value chain. It combines blockchain technology, smart contracts, and mobile device integration to capture, validate, and access information in real time.

Operations begin at the farm level, where the system records location data, animal identification, and key events such as vaccination, feeding, health status, and daily animal production.

Each critical data point is anchored to the blockchain as an immutable record, enabling verification of origin, compliance with best practices, production conditions, and certification support, while enhancing transparency, security, and trust among producers, buyers, and regulatory entities.

During collection and transportation, AgroTrack records collected volumes, origin and destination, laboratory testing of product samples, and organoleptic analysis. Smart contracts enforce business rules to validate data and support product payment mechanisms based on quantity and quality.

At the dairy processing plant, the system links the received milk to its farms of origin. It records milk transfers between tanks, production inputs, quality controls, production orders, and batch-level traceability of the final dairy product. End consumers can access traceability information through QR codes.

In this way, AgroTrack transforms a fragmented value chain into a digital infrastructure that enables the sharing of auditable and verifiable information. Key benefits include:

- **Risk Reduction:** Reduces errors and improves inventory reconciliation
- **Consumer Confidence:** Strengthens consumer trust and enables access to higher-value markets through demonstrable traceability and product authenticity, thereby reinforcing food safety
- **Operational Efficiency:** Allows authorized stakeholders to access a single source of truth, accelerates audit processes, and supports logistics management
- **Responsiveness:** Enables a rapid response to quality incidents or regulatory requirements

Learn more: cintel.co

#6: FUNDACIÓN PACHAMAMA
THE BIOCULTURAL JAGUAR CREDIT

The Amazon rainforest is one of Earth's most vital ecosystems, playing a critical role in maintaining global biodiversity and regulating the planet's climate. However, this irreplaceable resource faces escalating threats from deforestation, habitat destruction, and climate change. Regen Network, in partnership with Indigenous communities and allies including Fundación Pachamama, is leveraging cutting-edge blockchain technology to address these challenges through innovative and regenerative solutions.

A cornerstone of our work in the Amazon is our collaboration with the Sharamentsa and the broader Achuar Nation. This partnership places Indigenous wisdom and ancestral land stewardship at the heart of ecological preservation. The Sharamentsa community has long protected their biodiverse territories, including jaguar habitats and pristine rainforests, ensuring the vitality of these ecosystems for generations.

Regen Network amplifies their efforts by providing the tools and infrastructure to tokenize ecological assets while respecting their sovereignty over the design, deployment, and management of these assets. Regen, Sharamentsa, and allies worked together to develop the Biocultural Unit Paradigm. As Regen Network Development CEO Gregory Landua explained, "...Biocultural Units are a profound theory of reweaving relational value, symbolizing a harmonious balance between human activities and the Earth's ecosystems. This initiative heralds a shift towards more equitable, transparent, and effective mechanisms for environmental stewardship, grounded in the principles of ancestral wisdom and collaborative partnership."

The Biocultural Jaguar Credit system exemplifies this integrated approach, linking cultural and ecological conservation by safeguarding approximately 10,000 hectares of jaguar habitat. Each credit represents a measurable commitment to preserving biodiversity while aligning with the values and traditions of the Achuar Nation.

By facilitating transparent and equitable relationships between Indigenous communities, buyers, scientists, conservation organizations, and institutions, the project resolves longstanding challenges that have historically plagued interactions between Indigenous stewards and global organizations. The credit design ensures that the value generated directly benefits these communities, empowering them as equal partners in global ecological markets.

This initiative with Fundación Pachamama is strengthened through deep partnerships with organizations such as Stoknes Futures and the Amazon Sacred Headwaters Alliance. After a successful launch of the pilot, IDB Lab and NaturaTech LAC have joined our coalition to support program expansion to neighboring communities, in an effort to hold the line against road encroachment into Indigenous territories. These allies work in concert to support the Sharamentsa and Achuar Nation, combining technical expertise, cultural advocacy, and ecological strategies to ensure the success and scalability of the project. Together, these collaborations create a robust network that integrates Indigenous leadership, conservation science, and technological innovation.

At the heart of Regen Network's efforts is its powerful Regen Ledger, an open-source, decentralized blockchain purpose-built for ecological markets. Regen Ledger provides the infrastructure needed to securely store, verify, and exchange ecological data, ensuring transparency, accountability, and trust among all stakeholders. It serves as the foundational platform for tools such as the Ecocredit Module, which facilitates the creation, verification, and trading of ecological credits, and the Regen Data Stream, a robust data pipeline that integrates satellite imagery, ground-truth observations, and scientific inputs to verify ecological outcomes in real time.

Together, these technologies create an ecosystem of trust and scalability that empowers communities, organizations, and investors to collaborate effectively in the preservation and regeneration of ecosystems.

This approach addresses more than ecological concerns; it also creates sustainable economic opportunities for the Sharamentsa and other Indigenous communities. By funding their unparalleled stewardship of the land, these communities secure a sustainable income stream that reinforces their role as guardians of the Amazon. The model ensures a balance between local economic development and environmental regeneration, creating a template for equitable, long-term sustainability. To date, the Biocultural Strategy group has facilitated the sale of approximately $132,000 worth of Biocultural Jaguar Credits, further validating the model's ability to connect Indigenous stewardship with real-world ecological markets.

Looking forward, Regen Network, Fundación Pachamama, and the Biocultural Jaguar Strategy group remain committed to scaling these efforts, deepening partnerships, and exploring new applications of blockchain to amplify Indigenous-led stewardship and planetary regeneration. Together, we can ensure the Amazon thrives and continues to provide the rest of society with clean air, water, and the depth of biological and cultural diversity Earth needs for a resilient future.

#7: PRISMIQ

BLOCKCHAIN-ENABLED TRACEABILITY AND CARBON VERIFICATION FOR AGRICULTURAL SUPPLY CHAINS IN EAST AFRICA

Global agricultural supply chains, particularly for high-value commodities like coffee, suffer from pervasive traceability gaps that undermine sustainability claims, enable fraud, and erode consumer trust. In East Africa, where smallholder farmers produce much of the world's premium coffee, an estimated 30% of exported goods cannot be reliably traced to origin. Paper-based records are vulnerable to falsification, and fragmented data systems make verifying compliance with standards such as Verra or Gold Standard nearly impossible.

Carbon markets compound the challenge. Buyers and regulators demand verifiable proof that sequestration claims are tied to specific plots with measurable biomass data, not estimates. Without an immutable mechanism linking geospatial field data to certification and export documentation, producers in Kenya and Tanzania face exclusion from premium markets and carbon finance, despite managing thousands of hectares of productive land.

SOLUTION

PrismiQ, along with its implementing partner BlueBridge AI, has developed a blockchain-powered ESG traceability platform deployed with agricultural partners in Kenya and Tanzania.

The system assigns a unique digital identity to every registered plantation plot, anchored on the Polygon proof-of-stake blockchain through three Solidity smart contracts: PlotRegistry (recording GPS coordinates, planting year, species, and agronomic practices), ChainOfCustody (logging every event from harvest through processing, transport, and export), and CarbonAnchor (linking satellite-derived biomass estimates and field-measured carbon sequestration to specific land parcels).

In the current coffee-focused deployment, each lot is tagged at origin and tracked through harvesting, wet/dry processing, grading, warehousing, and export, i.e., every transaction hashed and written to Polygon.

The platform has registered over 340 plantation blocks covering approximately 4,200 hectares, with geospatial data from field surveys and satellite imagery processed through a PostGIS spatial database. Over 1,200 verified carbon data points link biomass measurements to on-chain transaction hashes. Certification records, lab results, and transport manifests are stored on IPFS via Pinata, with content hashes recorded on-chain for tamper-proof provenance. An API connects mobile field data capture to the blockchain and a React dashboard providing real-time visibility into custody status, carbon metrics, and compliance readiness for verifiers such as Verra and Gold Standard.

PrismiQ and BlueBridge Ai are working with their Nairobi-based partner and Tanzanian cooperatives to scale across additional coffee regions and commodities in 2026-2027.

Learn more: prismiqlabs.com

#8: SEATREES

SEATREES BIODIVERSITY BLOCKS: USING BLOCKCHAIN TO OPTIMIZE BIODIVERSITY CREDIT METHODOLOGY, MANAGEMENT, AND MARKETING

Despite their critical role in stabilizing the climate and supporting life on Earth, ocean ecosystems are drastically underfunded, receiving just 4% of global conservation funding and only 0.2% of carbon market funding. This imbalance leaves marine environments vulnerable at a time when we are approaching irreversible tipping points in both climate and biodiversity.

Biodiversity credits can help close this gap, but most credit schemes are based on 1990s-era cap-and-trade mechanisms, making them too complex, expensive and slow to scale. This discourages innovation, and projects cannot match the accelerating rate of climate tipping points. Finally, many biodiversity crediting systems lack the transparency, speed, and reliability needed to deliver both meaningful impact and marketability. Seatrees created Biodiversity Blocks to offer a fast, cohesive, and cost-effective crediting option for ocean ecosystem conservation. Blockchain is an indispensable component of this model.

THE SOLUTION

Biodiversity Blocks are the foundational units underpinning Seatrees+ Biodiversity credit projects, representing a next-generation approach to biodiversity crediting designed for ocean ecosystems.

Rather than relying on abstract metrics, they directly fund tangible outcomes such as restoration, long-term monitoring, and community-led stewardship. The Seatrees+ Biodiversity crediting methodology is grounded in peer-reviewed science, delivering measurable ecological and social benefits with transparency and accountability.

It is optimized for community-led restoration in complex marine and coastal environments, where traditional systems have struggled to operate effectively or capture true impact.

The Biodiversity Blocks framework is also built for rapid innovation: projects are encouraged to deploy new scientific methods and technologies and receive third-party validation and verification following a peer-reviewed structure. This process is supported by a blockchain registry on the Regen Network, which provides transparency, traceability, and flexibility across the lifecycle of each credit.

The blockchain system also strengthens marketability through the automatic creation of NFT-based digital receipts. These connect the Regen Network to the Solana Network, allowing credits to remain on the former while retirement data is accessible and trackable on the latter. Each NFT contains relevant purchase and retirement metadata for donor reporting and verification, while powering a bespoke impact dashboard (dashboard.seatrees.org) that showcases real-time monitoring data and visual stories from the field. Each Biodiversity Block purchased contributes directly to ecosystem restoration, supports local livelihoods, and provides transparent, continuously updated reporting on biodiversity uplift and social benefits, linking financial participation to verifiable impact.

Learn more: seatrees.org

#9: SCOTTISH ENTERPRISE

OPENGRID: A BLOCKCHAIN-ENABLED ENERGY DATA PLATFORM DEVELOPED BY STORM ENERGY, WITH TRACKGENESIS AS TECHNOLOGY PARTNER

Traditional energy markets are designed for centralized generation, where electricity flows one-way from large power plants to passive consumers. However, the rapid rise of Scottish "prosumers" (households and businesses with solar, wind, and battery assets) has created a decentralized surplus that existing infrastructure cannot efficiently manage. Under the current model, local generators often receive low export rates while neighbors pay high retail prices, with intermediaries capturing the margin. Furthermore, verifying the green provenance of energy and carbon credits at a granular level is manually intensive and prone to double-counting.

Without a secure, real-time "trust layer" to coordinate these distributed resources, local communities face 15–30% higher energy costs and lack the regulatory-ready data required for automated peer-to-peer (P2P) settlement. This bottleneck hinders Scotland's transition to a Net Zero economy and limits the financial return on local renewable investments.

SOLUTION

The OpenGrid platform, developed by Storm Energy in partnership with TrackGenesis and supported by Scottish Enterprise, transforms the local grid into a decentralized digital marketplace. By integrating blockchain technology directly with smart meters, EV chargers, and renewable inverters, the solution creates a tamper-proof "data layer" for energy transactions. This removes the need for centralized intermediaries, allowing electricity to be traded and settled peer-to-peer within the local network.

The solution utilizes an AI-powered matching engine to pair local supply with demand in real-time.

When a prosumer generates excess solar power, the blockchain acts as an immutable ledger to record the exact volume, timestamp, and "green" attributes of that energy.

Automated smart contracts then execute the trade, ensuring generators earn up to 40% more than standard grid export rates while consumers access clean energy at prices significantly below the grid average. This "plug-and-play" architecture allows for automated billing and settlement that meets strict regulatory requirements, such as those set by Ofgem, without requiring manual intervention.

Beyond simple trading, the platform provides a "trust layer" for carbon tracking. Each kilowatt-hour traded is cryptographically anchored to the blockchain, providing a verifiable record of provenance that prevents tampering or duplication of green claims. By aggregating distributed assets into a single, transparent ecosystem, OpenGrid enables local communities to participate in flexibility markets and demand-side response programs. This shift from a centralized "push" model to a decentralized "exchange" model optimizes working capital for businesses and strengthens community energy resilience, providing a scalable blueprint for Scotland's 2045 Net Zero targets.

#10: TETHER GOLD

TETHER GOLD TOKENS (XAUT): BRIDGING PHYSICAL GOLD AND DIGITAL FINANCE

While gold is often attractive as a safe-haven asset because it is perceived as a long-term store of value during periods of inflation, currency instability, or market stress, everyday individuals often face challenges such as high costs, storage and security concerns, limited liquidity in physical form, and barriers to fractional ownership. Existing alternatives to achieve economic exposure to gold have increased options for individuals and entities to access gold exposure, but they require trade-offs between monetary principles. Products available in traditional financial markets lack a low-cost way for investors to gain direct exposure to gold prices.

(a) Mobile "Safe-Haven" Asset
Physical gold has long been held as a "safe-haven" asset. However, because it is physically cumbersome, gold is difficult and costly to transact with and store.

(b) Liquid Portfolio Hedge
Many market participants include gold in their portfolios as a hedge against financial instability. Although numerous gold-related investment products exist today, it remains costly and burdensome for non-institutional investors to gain exposure to physical gold, particularly in smaller quantities. Lower-cost investment products that offer indirect exposure to gold are widely available, but they often lack the liquidity and hedging effectiveness of physical gold.

THE SOLUTION

A gold-backed digital token can make gold more accessible by enabling fractional ownership, easier transferability and liquidity, lower storage burdens, and programmable, globally accessible exposure to gold through digital financial infrastructure.

Tether Gold Tokens ("XAU₮") seek to combine the best of three distinct worlds: direct exposure to the price of physical gold, the accessibility of traditional financial assets like ETFs, and the transactional utility of a digital token. XAU₮ are digital assets offered by TG Commodities, S.A. de C.V. which each represent ownership of an undivided specific interest in one fine troy ounce of gold on a specific gold bullion bar meeting the quality assurance requirements of "London Good Delivery" set by the London Bullion Market Association (LBMA) and held by a custodian, on behalf of the XAU₮ Token holders, in a vault, identifiable by a unique serial number, weight, and purity (such gold held by the custodian on behalf of the XAU₮ Token holders). TG Commodities, S.A. de C.V. operates a "Look-up Website" where it is possible to search the specific gold bar(s) associated with each on-chain address. The following comparison illustrates how XAU₮ addresses the trade-offs inherent in existing gold exposure products.

These advantages manifest across several use cases:

(a) Mobile "Safe-Haven" Asset
By imbuing a digital token with the economic characteristics of physical gold, XAU₮ reduces friction and the cost associated with holding the underlying asset. While the physical gold largely remains in vaults, XAU₮ enables the ownership interest of that physical gold to flow more easily.

(b) Liquid Portfolio Hedge
XAU₮ democratizes access to physical gold as an asset class by enabling smaller denominations.

(c) Sovereign-Neutral Monetary Unit
The broadest use case for XAU₮ is as a sovereign-neutral monetary unit. Through XAU₮, holders gain access to a money-like asset with the scarcity and price stability of gold. While Bitcoin and physical gold both exist outside the direct control of monetary authorities, Bitcoin's price volatility has often precluded its use as a monetary unit upon which to base trade. By making gold-based contracting and global settlement accessible to a much broader range of users, XAU₮ offers a monetary unit for global trade. Governments may no longer adhere to a "gold standard", but XAU₮ aims to empower individuals and businesses to benefit from this monetary unit.

#11: UN DEVELOPMENT PROGRAMME (UNDP)

PLASTIKS: BLOCKCHAIN-BASED VERIFICATION, TRACEABILITY AND FINANCING FOR PLASTIC RECOVERY

THE PROBLEM

The global waste management ecosystem is failing at scale. Despite growing regulatory ambition, only a fraction of plastic waste is actually recycled; the vast majority is landfilled, incinerated, or released into the natural environment, driving microplastic contamination, biodiversity loss, and escalating public health risks worldwide. Governments are responding through Extended Producer Responsibility (EPR) frameworks, but a critical infrastructure gap persists: ministries and EPR organizations lack reliable, real-time data on what waste is being recovered, by whom, and where. Without that visibility, enforcement weakens, policy planning stalls, and investment in circular systems cannot scale.

THE SOLUTION

Plastiks, in collaboration with the UNDP SDG Blockchain Accelerator, has deployed its Cardano-based verification and traceability layer, building on a methodology operational since 2019 and previously scaled on Celo with partners such as Danone Spain, Bayer 04 Leverkusen, and FC Barcelona. The platform converts real-world plastic recovery events into tamper-proof digital certificates and plastic credits, providing governments, EPR schemes, and global brands with trusted, auditable data to support policy compliance, enforcement, and ESG reporting.

The platform complements government-led EPR systems by delivering transparent MRV (Measurement, Reporting, and Verification) infrastructure for recovery projects across geographies and waste streams. Plastiks is also piloting how this verified recovery model can extend beyond plastics into other material categories, while keeping plastics as the first fully scaled application.

THE IMPACT

In 2025, the platform verified 4,242,658 kg of recovered plastic across four regions: 1,310,650 kg in the EU, 701,773 kg in LATAM, 1,048,125 kg in South Asia, and 1,182,110 kg in Africa, with each kilogram backed by an immutable on-chain certificate.

Plastiks has active collaborations with UNDP Country Offices in Armenia, El Salvador, India, and Zambia, with additional engagements under development in other countries. Anchor commercial partners include Danone Spain, Bayer 04 Leverkusen, FC Barcelona, and the Alliance to End Plastic Waste.

Over 4.2 million kilograms of plastic have been verified, traced, and attributed across four continents, directly supporting recovery entities, empowering frontline workers (often in unbanked regions), and providing governments and brands with the auditable data required to scale circular economy infrastructure.

Learn more: plastiks.io

SECTION I

AGRICULTURE, COMMODITIES & ENERGY

A. CARBON MARKETS

#12: CARBONMARK

API INTERFACE LAYER FOR THE BLOCKCHAIN-ENABLED CARBON MARKET

New carbon market stakeholders have novel requirements for completing carbon credit purchases and retirements. These changes necessitate market infrastructure changes to better integrate offsetting functionality into other technology stacks—traditional manual OTC transaction flows are simply not suitable. Blockchain technology offers a solution, but the gap between available tokenized liquidity and the wider world of software must be crossed.

Blockchain-based carbon trading has held promise to bring about increased transparency, traceability, and automation potential for the market. However, as with many new Web3 innovations, realizing these benefits and onboarding market participants is challenging due to difficulties around interfacing with the underlying blockchain networks themselves. Furthermore, maintaining smart contract automation advantages while abstracting Web3 complexity results in another layer of technical difficulty that must be overcome.

THE SOLUTION

Carbonmark has developed a 'bridge' solution that satisfies market access challenges while general purpose blockchain interfacing matures. The Carbon Retirement API provides a REST API interface that allows users to programmatically purchase and retire tokenized carbon credits on the Polygon blockchain. Settlement is completed via Carbonmark on-chain tooling, freeing users from individual token transactions, USDC accounting, or fiat on/off ramping. Essentially, the API removes any client interaction with the blockchain directly, while maintaining an automated means for sourcing and retiring tokenized credits.

The solution also provides a data access endpoint for companies to easily query the status of the tokenized carbon market, including project types available, liquidity levels, and live pricing.

In this manner, the movement of credits and general market dynamics can be analyzed in real-time, a stark contrast to the current market's often retrospective and survey-based reporting.

Carbonmark's API provides a key mechanism for new use cases to emerge that leverage the programmability native to tokenized carbon credits. For example, the solution enables embedding carbon offsetting into carbon SaaS products, e-commerce platforms, and other transactional offsetting applications. Concurrently, it delivers such credits in a manner that provides full traceability and cryptographic proof related to their origin registry, trading and pricing history.

Blockchain technology is a catalyst for radically increasing carbon market velocity. Achieving this requires maintaining the benefits of transparency, traceability, and automation, while expanding access to these features. Looking ahead, as novel innovations emerge that leverage the security of blockchain networks as an infrastructure layer for agentic interactions, the benefits of blockchain networks in the carbon market, and interface layers such as Carbonmark's API, will expand further.

Learn more: carbonmark.com

#13: ECOREGISTRY

END-TO-END INTEGRITY FOR MULTI-ATTRIBUTE CARBON MARKETS

The Voluntary Carbon Market (VCM) and emerging compliance schemes face a "crisis of confidence" driven by data fragmentation and opacity. Stakeholders—from project developers to corporate buyers—struggle to verify the singular uniqueness and specific attributes of carbon credits. Credits are often treated as generic commodities, obscuring critical value differentiators like Sustainable Development Goals (SDGs), vintage years, or specific regulatory eligibility (e.g., carbon tax vs. CORSIA).

In legacy systems, this metadata is frequently detached from the asset itself, living in static PDFs or disconnected spreadsheets. This disconnection creates systemic risks: double-counting, difficulty in auditing diverse portfolios, and an inability for buyers to trust that the credit they retire actually delivers the specific environmental and social impacts claimed.

THE SOLUTION

EcoRegistry solves these fragmentation issues by deploying a blockchain-native registry that functions as a "single source of truth" for the entire lifecycle of a carbon asset. The solution moves beyond simple transaction recording to provide a dynamic, multi-layer data infrastructure.

1. **Granular Asset Identity & Immutable Metadata:** Rather than treating a carbon credit as a simple number, the platform tokenizes units with intrinsic, immutable metadata. As evidenced in the registry's architecture, every distinct batch of credits carries specific tags—such as SDG compliance icons (e.g., SDG 13, 15) and regulatory labels (e.g., "Carbon Tax" or "CORSIA"). This ensures that attributes travel with the asset, preventing the separation of a credit from its quality claims.

2. **Precision Portfolio Management:** For market participants managing complex inventories, the solution offers granular control down to the serial number block. Users can manage sub-accounts and view exact "Vintage" and "Available" quantities in real-time. This capability is critical for traders and corporates who need to retire specific vintages for specific reporting years, eliminating accounting errors.

3. **Radical Transparency & Connectivity:** The system bridges the gap between private holding and public verification. It enables public observability where anyone can filter projects by eligibility status or view "Retirement Certificates" that serve as immutable proof of offset. Furthermore, by aligning with global data standards (like those of the Climate Action Data Trust), the infrastructure ensures that these digital assets are interoperable and recognized across international borders, solving the silo problem of isolated registries.

Learn more: ecoregistry.io

#14: FAIRFOOD INTERNATIONAL, IN COLLABORATION WITH HASHGRAPH

PIONEERING FAIR PAYMENT FOR FARMERS THROUGH CARBON MARKETS WITH HEDERA GUARDIAN

Fairfood International and Hashgraph, in collaboration with the Hedera Foundation, are working to transform the food system: starting with fairer payments for the smallholder farmers who sustain it. Through digital innovation and decentralized infrastructure, this partnership empowers farming communities by equipping cooperatives and exporters, strengthening the foundations of sustainable supply chains.

By leveraging the Hedera Guardian—a decentralized, policy-enforced data framework built on the Hedera network—Fairfood is raising the bar for transparency and accountability in sustainability claims. From farmer payments to carbon credits, every data point recorded via our digital tools becomes verifiable, auditable, and trust-enhancing, ensuring real impact for farmers and their communities.

A NETWORK OF TRUST: PARTNERING WITH INDUSTRY LEADERS

Fairfood collaborates with leading agri-food companies—including Dole, Sucafina, Tradin Organic, and Verstegen Spices & Sauces—to embed fair and transparent practices across supply chains. These partnerships span diverse origins and commodities, supporting farmers producing coffee in Uganda, cocoa in Sierra Leone, fruit in South Africa, and spices in Indonesia.

The Hedera Guardian powers this work as a digital policy engine, hosting the world's largest open-source library of environmental and carbon methodologies. It enables users to embed data with full methodological lineage and compliance metadata. By automating verification rules, Guardian translates raw data into audit-ready, comparable evidence, making it easier for supply chain partners and funders alike to trust the numbers.

VERIFYING PAYMENTS, SUPPORTING LIVELIHOODS

In many countries, smallholders form the backbone of farming responsible for sourcing the globe. Yet, they struggle due to low compensation and financial security. By linking farmer transactions to Hedera's decentralized ledger, Fairfood ensures that payments are traceable, verifiable, and directly linked to the individual farmer.

This not only improves transparency and accountability in supply chains, but also helps farmer unions and cooperatives build digital payment histories, unlocking access to better contracts, loans, and financial services. Or, in techy words: an online ledger takes shape, potentially allowing farmers to become bankable and eligible for micro loans. Back to the practical world: farmers working with big international companies like Dole, Sucafina, or Verstegen, can access digital receipts that confirm their earnings and are securely stored on the Hedera Network.

LOOKING AHEAD

Transparent, verified payments not only rebuild trust across supply chains and with consumers, they also lay the groundwork for financial inclusion. By extending these systems to other origins and linking digital records to microfinance, we envision a future where farmers can access affordable credit, invest confidently in their farms, and build resilience against climate and market shocks. In short: credible, verifiable transactions become the foundation for fairer livelihoods and future-proof supply chains.

Learn more: guardian.hedera.com

#15: KLIMA PROTOCOL

DUAL-LAYER MARKET DESIGN FOR PRICING HETEROGENEOUS CARBON CREDITS

Verified carbon credits represent a highly heterogeneous asset class. Projects differ in methodology, durability, co-benefits, geography, and verification quality. Spot market trading remains primarily a bilateral OTC process, with price discovery driven by liquidity, short-term demand, and negotiation.

This creates two structural issues:

1. Carbon credit supply may be misvalued because qualitative attributes are not directly priced
2. Market participants lack a transparent, systematic mechanism to express preferences over those attributes beyond bilateral OTC trades

As a result, price signals may misprice carbon, limiting efficient capital allocation across project types.

SOLUTION

Klima Protocol introduces a dual-layer pricing mechanism for carbon credits, deployed on a public blockchain.

LAYER 1: CONTINUOUS SUPPLY AND DEMAND PRICING

Carbon credits are made available within a liquid on-chain inventory where price adjusts algorithmically based on inflows, retirements, and available inventory. This establishes a transparent base price reflecting real-time market activity.

LAYER 2: QUALITATIVE PREFERENCE SIGNALING

Participants can allocate governance weight toward specific carbon classes (e.g., removals vs. avoidance, region, methodology). These allocations do not directly set prices, but influence them, and adjust capacity within the system.

The result is a market where:

- Quantitative scarcity is priced continuously through trading activity
- Qualitative preferences are expressed through structured voting mechanisms

The intention is a model that leverages Web3 tooling to gather and organize crowd sentiment to influence price discovery. However, instead of pricing a binary event, this mechanism prices a spectrum of heterogeneous environmental commodities.

The design enables:

- Differentiated capital allocation without fragmenting liquidity into isolated silos
- A public, auditable link between market activity and environmental preference signaling
- Availability of a 24/7, dynamically priced, and liquid carbon market for use by carbon sellers (e.g., project developers) and demand-side participants (e.g., corporate buyers)

This structure aims to improve price discovery for complex environmental assets by integrating both economic demand and qualitative evaluation into a unified on-chain market framework.

Learn more: klimaprotocol.com

SECTION I

AGRICULTURE, COMMODITIES & ENERGY

B. SUSTAINABILITY

#16: NATURE WIRED

PARTICIPATORY FUNDING OF NATURE-BASED PROJECTS THROUGH LIVE ENGAGEMENT AND ON-CHAIN VERIFICATION

Corporate sustainability and sponsorship budgets represent tens of billions of dollars annually. Yet stakeholders, including employees, customers, and fans, often lack visibility into how funds are allocated or what impact is achieved.

At the same time, verified nature-based projects remain largely inaccessible to the public, existing within technical registries and institutional systems. This disconnect limits transparency, reduces stakeholder engagement, and weakens trust in sustainability efforts. Without mechanisms that link participation to verifiable outcomes, environmental funding remains a back-office process rather than a shared, accountable experience.

SOLUTION

This use case introduces a participatory funding model that connects stakeholders directly to verified nature-based projects through digital engagement and on-chain verification. Nature Backers is an implementation of this model, functioning as an engagement layer that enables organizations to connect stakeholders with verified projects and transparently link participation to funding outcomes.

Using Hedera network infrastructure and Guardian-based data sources, the system surfaces projects aligned with recognized standards and sustainability frameworks. Organizations curate a selection of projects and make them accessible to stakeholders through a mobile interface, typically via QR codes or internal platforms. Participants review project information and select ("back") a project.

Engagement data is aggregated and secured using cryptographic proofs (Merkle roots), which are anchored on the Hedera Consensus Service (HCS) to create an immutable record of participation. Funding allocation is then linked to participation levels, ensuring that capital distribution reflects collective input rather than predetermined decisions.

This approach introduces a verifiable "proof of engagement" mechanism, where environmental funding is contingent on measurable stakeholder participation. The model can be applied across multiple contexts, including live events such as women's sports, public activations, and corporate environments, where employees participate in sustainability allocation decisions. Initial prototype validation has demonstrated the feasibility of linking real-time engagement with transparent, on-chain records.

By making sustainability participation visible and auditable, the model strengthens accountability and enables broader stakeholder involvement in environmental decision-making.

Learn more: naturewired.earth

SECTION II

AI & BLOCKCHAIN

#17: ELLIPTIC

ELLIPTIC'S COPILOT: ACCELERATING THE PATH FROM INTELLIGENCE TO DECISION

Blockchain analytics produces actionable intelligence: risk scores, entity attributions, fund flow visualizations, and exposure breakdowns. But acting on that intelligence requires significant manual effort. For every flagged result, an analyst must review the risk, build context about the entities involved, construct an auditable narrative, and carry out repetitive operational tasks. As businesses grow their digital asset operations, this workload scales faster than headcount.

Compliance talent is scarce, and professionals who combine compliance expertise with a working understanding of cryptoassets and blockchain are even scarcer. Training levels vary and the margin for human error or omission is real. The result is bottlenecks, inconsistent decisions, and unnecessary cost. Organizations need a way to move intelligence through the operational pipeline faster and more consistently, without compromising the quality or auditability of their decisions.

THE SOLUTION

Elliptic's copilot applies AI directly to blockchain risk management workflows, automating the repetitive, manual steps between receiving intelligence and making a decision about it. Built natively into Elliptic Lens and the Elliptic API, Elliptic's copilot generates detailed insight for every flagged result. Its screening summaries explain which risks were triggered and why. It surfaces key details such as exposure classification (direct or indirect), dollar and percentage exposure figures, relevant assets, transaction dates, and shortest path to risk. Additionally, its risk graph analysis describes how funds moved and which entities were involved, surfacing context that would otherwise require a separate investigation to uncover.

In effect, Elliptic's copilot handles the foundational groundwork of reviewing results, building context and creating a narrative.

This accelerates Level 1 analysis and allows analysts to move more quickly to Level 2 work. The quality of analytical output becomes more consistent across the team, regardless of an individual analyst's experience level. Teams using Elliptic's copilot report that their research time per notification drops from around five minutes to under one minute, and SAR filing time drops by 40 to 50%.

Summaries produced by Elliptic's copilot can be lifted directly into case notes and regulatory reports, creating a consistent audit trail regardless of which analyst handled the case. Elliptic's copilot is not a standalone solution. It is built into the compliance workflow that analysts already use, and its output reflects each organization's own risk rules and thresholds. When Elliptic's copilot summarizes a screening result or explains a risk graph, it does so through the lens of that organization's risk appetite, not as a one-size-fits-all model.

With Elliptic's copilot, compliance teams spend less time on manual groundwork and more time on the decisions that matter. It turns every analyst into a more effective one.

Learn more: elliptic.co

#18: NVNM LABS

NVNM CHAIN: CRYPTOGRAPHIC ACCOUNTABILITY FOR THE AGENTIC ECONOMY

AI agents are no longer just analyzing data—they are executing transactions, adjusting collateral, and making compliance decisions at machine speed across organizational boundaries. When they act, operators bear legal liability. But accountability without verifiability is hollow. The records that would settle a dispute—what the agent saw, what it computed, what state the world was in when it acted—are kept in systems the operator controls, and therefore systems the operator can curate after the fact.

This is not a problem limited to financial markets: the same accountability gap appears in clinical trials, supply chains, and regulated AI compute. As tokenized real-world assets accumulate at scale, the absence of verifiable data infrastructure has become the binding constraint on institutional adoption—not market demand. Existing infrastructure has no answer for any of it.

THE SOLUTION

NVNM Chain is a purpose-built blockchain on which the trail of every consequential agent interaction with data—what was consulted, how it was processed, and what state it was in at the moment of action—is hashed and anchored as a cryptographic attestation, independently verifiable by any authorized counterparty, without any vendor in the middle.

When an agent acts, three questions must be answerable after the fact: where did the data come from, how was it transformed, and what exact state was it in when the agent acted? NVNM Chain answers all three through three composable primitives: Proof of Origin, Proof of Process, and Proof of State. Together they make a tamper-evident, independently verifiable claim about every consequential agent action. Critically, underlying data never leaves the operator environment—NVNM Chain stores only cryptographic fingerprints, preserving data sovereignty as a design property, not a trade-off.

Each agent carries a unique persistent on-chain identity through a convention called Know Your Agent (KYA), making audit across counterparties a query against a known address. As AI regulation tightens, NVNM Chain provides the on-chain record operators need to demonstrate compliance. At launch, Inveniam.io serves as an integrated use case partner, connecting enterprise data environments across private equity, private credit, and real estate to the agents that act on them—with the cryptographic hashes of those interactions submitted for anchoring on the chain.

The chain itself is platform-agnostic; any data provider whose agent interactions produce valid cryptographic proofs of data provenance can anchor records on equal terms. Incorporated under the ADGM framework, NVNM Chain provides the accountability infrastructure that lets agentic capital markets, regulated AI operations, supply chains, and clinical trials function at institutional scale—relocating trust from vendors to cryptographic constructions available to any participant.

Learn more: nvnmchain.io

#19: REGEN NETWORK

IMPACT INTELLIGENCE INFRASTRUCTURE: HOW BLOCKCHAIN AND AI CREATE A SHARED VERIFICATION LAYER FOR ECOLOGICAL OUTCOMES

Ecological impact data is fragmented across incompatible systems, inconsistently structured, and rarely traceable to its source. Project developers, conservation NGOs, and government agencies generate this data—but capital allocators, regulators, and grantmakers who need to trust it have no shared infrastructure to verify it. The costs compound: diligence is duplicated, government programs cannot produce auditable national reports, field-rich NGOs struggle to package evidence for funders, and project developers reproduce the same documentation for every registry. As net-zero pledges and national biodiversity targets demand credible measurement, this accountability gap is no longer manageable.

THE SOLUTION

Compass by Regen addresses this fragmentation through a modular intelligence platform combining structured data organization, a blockchain-anchored verification layer, and AI-powered tools—configurable for capital allocators, governments, NGOs, and project developers.

A shared data foundation. Compass ingests existing sources—field reports, spreadsheets, PDFs, third-party registries—and structures them into a queryable impact library built around open ecological data standards. No existing systems need replacing.

Blockchain as a verification layer. Impact claims—sequestration rates, biodiversity indices, water quality metrics—are anchored to the Regen Ledger, a public blockchain creating tamper-evident, independently verifiable records. Each claim links to supporting evidence, methodology, and verifier credentials. Any party can verify provenance without depending on a single controlling entity.

AI intelligence for each stakeholder. Purpose-built AI tools serve distinct needs: portfolio dashboards and diligence workflows for capital allocators; cross-departmental reporting for governments; evidence packaging for NGOs; and automated reporting for project developers—informed by seven years of expertise in ecological science and carbon methodology.

The result: one verified evidence record can simultaneously satisfy an investor's diligence requirement, a government's reporting obligation, a funder's grant review, and a project developer's registry submission—without duplicating effort or compromising data sovereignty. Applicable across carbon markets, national biodiversity strategies, climate finance, supply chains, and frameworks including GRI, TNFD, and Article 6.

Learn more: regen.network

#20: SUREMARK DIGITAL
MAKING DEEPFAKES IRRELEVANT

The recent great advances in AI techniques have made it easy for many non-expert users to create deep-fake images, audio, and video of the highest quality. Seeing is no longer believing, and hearing is no longer believing. This has harmful consequences both in the public sphere, with disinformation and misinformation compromising political discourse throughout the world, and in the private sphere, with scams and frauds of all varieties, where attackers' age-old social engineering is enormously strengthened by the use of deepfakes for harm and loss of the general public. Humans alone can't verify identity in real time.

Moreover, detection tools generally analyze content after it exists and guess whether it's synthetic. Generative AI deployed by bad actors can advance faster than detection models can catch up.

THE SOLUTION

SureMark Digital provides cryptographically secure identity assurance, advancing the gold standard for identity verification. While conventional detection mechanisms ask 'is this fake?' SureMark's provenance approach asks 'is this from who it claims?' SureMark protects organizations where impersonation causes the most damage—from executive fraud and wire theft to deepfake disinformation and roster impersonation.

For its customers, SureMark attempts neither to detect deepfakes nor to defeat them. Rather, it allows them to make deepfakes irrelevant. For private content, it provides a secure identity network (a VPIN, a virtual private identity network). For public content, it provides an internet overlay for social media and traditional news media.

SureMark has three product offerings:

1. SureCircle™, providing real-time identity assurance, enables users to cryptographically verify who they're talking to in real time. This can stop fraud by allowing any platform to verify its users with unforgeable proof by means of cryptographic identity
2. SureDocs™ enables users to verify the authenticity of private business documents such as invoices, contracts, and wire-transfer instructions
3. The Verified Web™ enables users to verify assertions of authorship and commentary about publicly posted content

SureMark's basic tool is the use of digital signatures, with a carefully managed public-key infrastructure (PKI), backed up by a transparency log. All verifications are checked against SureMark identity credentials contained in a universal, decentralized registry. This is an open-source verification: transparent by design, where anyone can verify—building on the design of the proto-blockchain first deployed by SureMark co-founders Scott Stornetta and Stuart Haber in 1991.

The 2025 inaugural edition of GBBC's 101 Real-World Blockchain Use Cases Handbook was verified and credentialed using SureMark Digital, applying peer-to-peer blockchain and public-key cryptography to secure the provenance of that publication, demonstrating the technology in a live, real-world application.

Learn more: suremark.digital

SECTION III

CIVIC SOCIETY & HUMANITARIAN RESPONSE

#21: APPALACHIAN WILDLIFE REFUGE

PHILANTHROPY IN WILDLIFE REHABILITATION: FACILITATING DIRECT-TO-CAUSE CRYPTO DONATIONS

THE PROBLEM

Wildlife rehabilitation centers are facing an extreme surge in patient intakes driven by key factors such as increased human expansion, changes in climate, and habitat destruction. These record-high intakes are outpacing traditional funding models.

Each vulnerable wild animal requires:

- Specialized medical treatment to stabilize them upon arrival and to heal their injuries and sicknesses during their rehabilitative stay
- Around-the-clock feeding so they can regain their strength with appropriate species-specific nutrition
- Species-specific habitats complete with life support systems to keep them safe during their full recovery period
- Developmental enrichment so they can learn how to live and thrive in the wild once released

These fundamentals create a high-cost environment with immediate liquidity needs. Traditional donation methods often involve processing delays or high fees, and they fail to engage a growing demographic of generous digital-asset holders. Without a way to seamlessly convert digital wealth into real-world conservation resources, the gap between wildlife needs and available funding widens.

THE SOLUTION

Appalachian Wildlife Refuge® (AWR) has expanded its donation offerings to include cryptocurrency. The integration of a cryptocurrency donation gateway provides a direct pipeline between digital assets and wildlife conservation. By accepting crypto directly, AWR bypasses the friction of traditional liquidation, allowing donors to leverage the appreciation of their assets for immediate impact.

Key Functional Benefits:

- **Enhanced Capital Efficiency:** Direct transfers allow donors to ensure that the full market value of the asset is applied toward medical supplies, surgical equipment, life support systems, and other critical rehabilitation costs
- **Global Accessibility:** Cryptocurrency enables borderless contributions, allowing AWR to tap into a global network of supporters without the complexities of international wire fees or currency conversion delays
- **Transparency and Verification:** Utilizing blockchain technology provides an immutable record of the transaction, fostering trust by demonstrating the tangible utility of digital assets in biological conservation

Learn more: appalachianwild.org

#22: THE ASSOCIATION FOR WOMEN IN CRYPTOCURRENCY (AWIC)

EMPOWERING WOMEN THROUGH BLOCKCHAIN EDUCATION, NETWORKING, AND ADVOCACY

Despite rapid growth across the blockchain, cryptocurrency, and digital assets industry, women remain underrepresented in leadership, technical roles, and professional opportunities. Many individuals interested in entering the space face barriers including limited access to education, professional networks, mentorship, and inclusive industry communities. This lack of representation and accessibility can restrict innovation, diversity of thought, and broader participation in the future of digital finance.

THE SOLUTION

The Association for Women In Cryptocurrency (AWIC) provides a global platform focused on increasing inclusion, education, and opportunity for women and supportive allies across the blockchain, cryptocurrency, digital assets, and Web3 ecosystem. Through a combination of advocacy, networking, and educational initiatives, AWIC helps create greater accessibility to an industry that has historically lacked diverse representation.

AWIC supports advocacy efforts aimed at expanding opportunities for women in the digital assets industry by conducting research on the challenges women face, sponsoring forums and discussions that promote gender equity, and working with organizations to improve workplace inclusion and employee well-being. These initiatives help encourage broader participation and foster a more inclusive environment across the sector.

In addition, AWIC provides educational and professional development resources including webinars, scholarships, written materials, and affordable access to industry-focused courses through educational partnerships.

The organization also creates networking and promotional opportunities that allow members to connect globally, explore business and career opportunities, and gain visibility for their contributions to the growing digital assets ecosystem. By combining education, advocacy, and community engagement, AWIC helps strengthen the role of women in shaping the future of digital finance and innovation.

Learn more: womenincrypto.org

#23: MERCY CORPS

STABLECOINS FOR AID IN SYRIA AND AFGHANISTAN

In conflict-shattered regions like Syria and Afghanistan, traditional humanitarian aid delivery faces severe structural roadblocks. International banks often steer clear of these high-risk jurisdictions, and scarce physical cash makes large-scale distribution dangerous and inefficient. Existing remittance services frequently charge fees as high as 10%, diverting significant portions of aid away from intended beneficiaries.

Furthermore, traditional cash assistance lacks real-time transparency; donors often struggle to verify that funds reached the correct hands, particularly under pressure to demonstrate integrity in an era of fluctuating foreign assistance. These "fragile states" require a financial infrastructure that bypasses broken central banking systems and provides a digital trail to prevent fraud, while maintaining compliance with international databases to mitigate risks like money laundering and terrorist financing in areas where oversight is historically difficult or impossible.

SOLUTION

HesabPay utilizes a blockchain-based mobile platform to facilitate instant, transparent, and low-cost humanitarian transfers. By using digital wallets and stablecoins, pegged to the U.S. dollar in Syria or the local currency in Afghanistan, aid organizations can sidestep traditional banking "roadblocks" and move funds directly to beneficiaries.

The core of the solution is a phone-based application and physical plastic cards that act as digital lifelines. In a major public blockchain initiative, the U.N. and Mercy Corps have deployed this technology to support more than 86,000 families.

The platform enables organizations to deliver millions in aid with reduced transaction fees and eliminated waiting periods. Unlike physical cash, which is difficult to track, the blockchain creates an immutable digital record of every transaction. This allows for "atomic" oversight: a real-time dashboard enables donors to monitor exactly how much was sent and where it was spent.

To ensure institutional-grade security, the system incorporates automated safeguards that cross-check wallet activity against international compliance databases. It can automatically flag suspicious patterns—such as potential scams or illicit financing—the moment they occur. This behavioral monitoring provides a level of accountability rarely seen in fragile states, allowing for immediate investigation rather than waiting months for forensic reports. By integrating with local money changers for "off-ramping," the solution provides a bridge between digital innovation and the immediate needs of recipients who require fiat currency to restart farms or rebuild lives. This shift from physical cash to a non-physical, traceable medium represents a transition toward a more agile and accountable global aid function.

Learn more: mercycorpsventures.com and mercycorpsventures.com/blog

#24: RIPPLE IMPACT

DELIVERING ANTICIPATORY AID WITH RIPPLE USD STABLECOIN

For nomadic pastoralists in Kenya, the tools that could help them manage climate risk—insurance, savings, credit—were either unavailable or unaffordable. Geographic isolation and high administrative costs made these communities economically unattractive to traditional financial institutions, leaving them with few formal safety nets against the droughts that threaten their herds and their livelihoods.

SOLUTION

A live parametric and anticipatory aid solution using climate data, smart contract triggers, Ripple USD stablecoin payouts, and M-Pesa distribution—putting funds in the hands of Kenyan pastoralists within hours of a stress event, at a fraction of the cost of conventional humanitarian transfers.

The campaign assessed vegetation health using the Normalized Difference Vegetation Index (NDVI) at nine checkpoints (every 10 days) during the Oct-Dec 2025 short rains season and disburses funds to participating pastoralists. The maximum cover amount of $75 per pastoralist intends to subsidize the provision of food for one livestock animal over a period of six months.

The pasture condition is assessed using the NDVI indicator, a widely-used metric for quantifying the health and density of vegetation using sensor data. It serves as a reasonable metric for assessing drought as vegetation density generally correlates with rainfall patterns.

Payouts to pastoralists are determined based on the NDVI values measured on each checkpoint date, If the NDVI value is below 0.55, 100% of the funds associated with the checkpoint (1/9th of overall contributions) will be disbursed. No payouts will be made if the NDVI is at or above 0.55. For technical reasons, the reported NDVI will be shifted by +1.

Learn more: divadonate.xyz

#25: UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES (UNHCR)

BLOCKCHAIN-POWERED PAYMENTS TRANSFORM AID FOR DISPLACED COMMUNITIES

DELIVERING ASSISTANCE AMID LARGE-SCALE DISPLACEMENT AND SHRINKING FUNDS

With 117 million people forced to flee conflict and persecution globally and with aid dwindling under brutal funding cuts across the whole humanitarian sector, UNHCR, the UN Refugee Agency, and partners are faced with the challenge to continue delivering aid effectively and efficiently, while reaching as many people as possible. Delivering financial assistance in humanitarian contexts is often constrained by fragmented banking systems, high transaction costs, delays, security risks, and limited access in crisis-affected or remote areas. Humanitarian actors require more efficient, secure, and adaptable financial mechanisms that can operate across contexts while ensuring accountability and enabling people forced to flee to access assistance safely and effectively.

BLOCKCHAIN AID DELIVERING FAST, EFFECTIVE SUPPORT TO DISPLACED PEOPLE

UNHCR addresses key barriers to humanitarian aid delivery through the Digital Hub of Treasury Solutions (DHoTS), a centralized digital platform launched in 2021 that connects humanitarian actors directly to global financial systems, enabling faster, more secure access to funds, even in hard-to-reach or crisis contexts. By automating payments and transaction processes, it reduces delays and costs while strengthening transparency, compliance, and real-time tracking.

The platform integrates blockchain-based payment solutions, including the use of stablecoins. In contexts where traditional banking systems are costly or inefficient, these tools can significantly reduce transaction fees and help protect donor value, resulting in estimated purchasing-power gains of approximately 10-20%.

A core component of the Digital Hub of Treasury Solutions is the UN Financial Gateway with its digital payment rails, which is designed to streamline more than 2 million humanitarian and development transactions each year across over 100 countries. The Gateway enables the direct delivery of financial assistance, including lifesaving support to refugees, internally displaced people, and refugee returnees.

From 2022 to March 2026, UNHCR supported over 613,000 people forced to flee in Ukraine, Argentina, and Afghanistan through blockchain-powered financial assistance. Since December 2022, UNHCR delivered $4.6 million to 2,500 displaced families in Ukraine using Circle's USD stablecoin (USDC) in partnership with the Stellar Development Foundation, reducing banking fees by 4%. In Argentina, the same approach helped mitigate the impact of currency depreciation by supporting refugee livelihoods.

Since February 2025, over $34 million has been delivered to more than 136,000 Afghan refugee families returning home through blockchain-enabled digital wallets and prepaid cards. By partnering with local Afghan financial technology company, HesabPay, and using the Algorand blockchain, this allowed for reduction of overall transaction costs by approximately 1%, decrease risks and delays, improve traceability, and significantly increase purchasing power through direct access to market exchange rates.

UNHCR continues exploring digital and innovation tools, prioritizing solutions that are least costly, most effective, transparent, and appropriate to each setting—while keeping the protection, safety and wellbeing of people forced to flee at the center of its response.

UNHCR can also receive donations in digital currency and uses blockchain technology to ensure safety and transparency in its fundraising efforts.

As Switzerland has currently one of the most favorable legal frameworks for blockchain and is the base of many companies and foundations from the blockchain industry, UNHCR's National Partner Switzerland for UNHCR has been engaging with private partners such as the Cardano Foundation to raise flexible funds for people forced to flee through staking-based mechanisms such as ETPs and Stakepools.

Learn more: unrefugees.ch

#26: WORLD FOOD PROGRAMME

SMART COORDINATION FOR EQUITABLE AID

The global humanitarian landscape is increasingly complex. In crisis situations, multiple organizations often provide overlapping support (such as food, healthcare, shelter, and/or protection) to the same groups of people, using different systems and processes for program design and assistance allocation.

Without a way to share information among different organizations about who is being assisted and how, some individuals can inadvertently receive more or less than they need. There is a clear need for better coordination to maximize the impact and transparency of humanitarian assistance.

THE SOLUTION

Building Blocks is the world's largest blockchain-based humanitarian platform. Developed by WFP, it enables multiple organizations to share information on who is being assisted and how in order to coordinate assistance while protecting personal data. On the platform, each person is assigned to a unique blockchain account, allowing agencies to see what aid has been provided, thereby avoiding unintended duplicated assistance.

Starting in 2017, Building Blocks has supported humanitarian organizations in coordinating assistance through redemption harmonization. From 2020 onward, it has also helped prevent unintended assistance overlap at scale, with a rapid expansion in Ukraine in 2022.

Across all operations, the platform has helped avoid spending USD 288 million in unintended assistance, including more than USD 270 million in Ukraine alone, while facilitating coordinated support for 4.8 million households.

Building on established operations in Jordan, Bangladesh and Ukraine, the system is now being rolled out in Syria and Palestine.

In 2025, 159 organizations across Ukraine, Syria, and Palestine used Building Blocks to align assistance and improve transparency. The platform continues to expand as a shared, privacy-preserving service that helps humanitarian actors deliver more equitable and efficient support.

Learn more: wfp.org

SECTION IV

DIGITAL IDENTITY, INFRASTRUCTURE & WALLETS

#27: ANIMOCA BRANDS

MOCA NETWORK: BUILDING THE IDENTITY LAYER FOR PROGRAMMABLE ECONOMIES

Digital identity systems are fragmented across platforms, jurisdictions, and applications. Users often need to repeatedly verify the same attributes, such as identity, age, or credentials across ecosystems. This creates inefficiencies, raises compliance costs, and unnecessarily exposes sensitive personal data.

Current models are largely centralized and disconnected from financial and incentive systems, treating identity as a one-time onboarding step rather than a reusable layer for transactions and engagement. Meanwhile, stablecoins have introduced new opportunities for global payments, remittances, and financial access. However, adoption remains constrained by fragmented onboarding, poor fiat-to-crypto ramping, and a lack of identity-linked trust.

As applications increasingly "financialize" by embedding payments, rewards, and economic incentives, unified infrastructure is needed, so identity, money, and incentives are interoperable, programmable, and privacy-preserving by default.

MOCA NETWORK'S AIR KIT

Moca Network is building AIR Kit, a chain-agnostic infrastructure that unifies identity, payments, and loyalty into a single programmable stack. At its core, identity is the backbone of the internet—a persistent layer enabling onboarding, verification, and application logic across ecosystems.

- **AIR Identity** enables reusable, verifiable credentials (e.g., KYC, financial attributes, reputation) secured via client-side encryption and non-custodial storage. Data is encrypted and selectively disclosed using ZKProof, allowing verification without exposing underlying data, making identity composable across on and off chain environments

- **AIR Money** is an embedded wallet with non-custodial account abstraction and stablecoin settlement rails. It enables programmable payments, remittance, and yield within applications. Fiat-to-crypto onboarding is abstracted via gateways, allowing users to fund wallets through familiar methods like card payments while interacting with on-chain assets

- **AIR Loyalty** enables programmable incentives through interoperable reward systems. Applications reward verified users with stablecoin incentives or loyalty points "AIR SP", issued for verified actions and redeemable across applications, including air.shop for travel, retail purchases, or sweepstakes

These components integrate through Moca Chain, with AIR Kit enabling developers to embed a universal account—identity, money, and loyalty into any application. Real-world flow:

» A user completes KYC and receives a reusable credential, users onboard to new apps with instant verification
» Each verification generates on-chain fees shared across participants
» Applications reward users with incentives or loyalty points
» Users off-ramp stablecoins to bank accounts in supported markets—Moca Network enables a model where users own their data, privacy is enforced by default, and financial access is global, allowing users to access accounts across apps, move value seamlessly, and reuse trust across ecosystems

Learn more: moca.network

#28: CHAINLINK LABS

CROSS-BORDER SETTLEMENT WITH VISA, ANZ, CHINAAMC, AND FIDELITY INTERNATIONAL, UNDER THE HONG KONG MONETARY AUTHORITY'S E-HKD PILOT PROGRAM

The fragmentation and public nature of blockchain ecosystems create significant barriers to achieving interoperability while maintaining the privacy and confidentiality required by traditional firms. Operating across multiple networks faces unharmonized standards, limited connectivity to existing financial systems, and constraints around securely sharing sensitive information and transferring tokens without exposing details on public ledgers. This results in overly complex processes, longer development timelines, and heightened compliance risks, often stalling digital asset innovation, especially in regulated industries where data confidentiality and integration with existing systems are critical.

Today's solutions often force a trade-off between interoperability and privacy, preventing organizations from fully realizing the benefits of decentralized infrastructure while still maintaining control over proprietary and personal data when needed.

THE SOLUTION

The e-HKD Pilot Programme Phase 2 shows how interoperable, compliance-enabled infrastructure enhances the utility of digital money in cross-border settlement. By connecting tokenized money, blockchains, and financial platforms, the solution enables secure, programmable transactions across jurisdictions. Chainlink delivers privacy-preserving interoperability and identity verification, keeping sensitive investor information offchain while preserving on-chain verification.

Chainlink's Cross-Chain Interoperability Protocol (CCIP) enabled seamless communication and value transfer between permissioned and public chains.

This aligns with the need for secure, compliant interoperability in tokenized asset ecosystems. Specifically, CCIP relayed wrapped e-HKD details from Australia and New Zealand Banking Group (ANZ)'s DASChain to public chain contracts, ensuring tamper-proof delivery to facilitate the purchase of Fidelity International's tokenized money market funds issued on the public network. CCIP enabled verification of identity credentials in real time while keeping personally identifiable information securely offchain, maintaining privacy, and supporting real-time compliance enforcement. The use case also leveraged Chainlink's Digital Transfer Agent (DTA) technical standard to fetch Net asset value (NAV) data and automate the issuance of tokenized fund units as part of a cross-chain transaction, reducing operational complexity at the point of issuance.

> "By working with ANZ, Fidelity International, and other leading institutions under the Hong Kong Monetary Authority's e-HKD Pilot Programme, we have proven how Chainlink powers real-world financial applications within existing regulatory frameworks and across public and permissioned blockchains. Using the Chainlink platform to coordinate identity, compliance checks, and asset issuance across networks in a single transaction flow offers a clear path forward for more advanced tokenized fund and cross-border use cases."
>
> -Fernando Vazquez, President of Capital Markets, Chainlink Labs

Learn more: visa.com

#29: CHINA ACADEMY OF INFORMATION AND COMMUNICATIONS TECHNOLOGY (CAICT)

ASTRON NETWORK: BUILDING CROSS-BORDER DIGITAL TRUST INFRASTRUCTURE

Against the backdrop of accelerating integration of the global digital economy, issues such as fragmented digital infrastructure and inadequate cross-border mutual trust among countries have severely constrained cross-border data flows, identity mutual recognition and business collaboration efficiency, and widened the regional digital divide.

THE SOLUTION

In 2021, the China Academy of Information and Communications Technology (CAICT) led the launch of ASTRON Network, leveraging blockchain technology to build cross-border digital trust infrastructure. Focusing on core application scenarios such as cross-border trade and carbon neutrality, ASTRON Network injects "trust momentum" into global digital governance and sustainable development.

ASTRON Network innovatively proposes a "permissioned public blockchain" architecture and actively advances the global deployment of "super nodes," having established super nodes in multiple locations across Mainland China and countries and regions such as Malaysia, Hong Kong, China, and Macau, while international nodes in Singapore, Vietnam, Indonesia, Mongolia, and other countries are under concurrent development, forming a cross-border digital trust network.

ASTRON Network has achieved remarkable results in both economic and social dimensions. In the field of cross-border trade, the China-Singapore Electronic Bill of Lading project has been successfully implemented in Beijing, Chongqing, Suzhou, and other regions, increasing document processing and transmission efficiency by 60% while reducing operational costs by over 30%.

The customs clearance process has been significantly optimized, earning high recognition from Singapore's Ministry of Trade and Industry and multiple international bills of lading platforms. The application of the China-Malaysia trade document verification platform has effectively reduced cross-border trade friction costs and enhanced the international competitiveness of enterprises.

Learn more: astron.bitfactory.cn

#30: DEUSS

NEW EUROPEAN FINANCIAL INFRASTRUCTURE: A SHARED MARKET INFRASTRUCTURE FOR SME FINANCING

European SMEs depend heavily on bank lending, while bond markets remain difficult to access. Many firms sit in a structural gap: too large for local financing, but too small to issue bonds efficiently through traditional market structures. Issuance costs are high relative to ticket size, SME data is inconsistent, credit analysis is costly, and national processes remain fragmented, limiting cross-border investor participation. As a result, European savings are not effectively channelled into SMEs that need growth capital. The challenge is not a lack of capital, but a lack of shared market infrastructure that can make SME bond financing workable, standardized and scalable across Europe.

DEUSS addresses this by building a shared infrastructure layer on the European Blockchain Services Infrastructure (EBSI), with a primary focus on enabling a pan-European secondary market for SME bonds, while also supporting primary issuance and lifecycle management.

By creating the conditions for cross-border investor participation and improved liquidity, the infrastructure aims to make SME bond markets more functional and scalable across the EU. Rather than creating a parallel market outside regulation, the use case improves how regulated participants issue, distribute and service SME bonds across borders. DEUSS acts as a common European infrastructure layer—shared financial "rails" on which regulated market participants operate—that standardizes processes, harmonizes SME information frameworks, and connects issuers, financial institutions, and investors across markets. The infrastructure is designed to be interoperable with other distributed ledger environments, enabling integration with existing and emerging market infrastructures and supporting the convergence of traditional financial systems and distributed ledger technologies.

Interoperability is being validated in practice, including piloting interoperability with TokenCity on ISBE (Spain's Blockchain Services Infrastructure). Financial institutions remain central to the model, supporting origination, structuring, distribution, and investment activities within a regulated framework, while benefiting from improved operational efficiency and transparency. The use case demonstrates how public, interoperable and regulated DLT infrastructure can make SME bond markets more accessible and support the development of a more integrated and scalable European capital market, in line with the objectives of the Savings and Investment Union.

Learn more: deussblockchain.eu

#31: DEUTSCHE BÖRSE GROUP

THE EVOLUTION OF MARKET INFRASTRUCTURE

Financial market infrastructure is entering a new phase of digitization, driven by the increasing adoption of tokenized assets and distributed ledger technology (DLT). While these technologies introduce new capabilities, particularly in settlement and asset programmability, the broader market structure remains in transition.

From the perspective at 360X, adoption is progressing, but unevenly. Tokenized real-world assets have reached tens of billions in on-chain value, with activity concentrated in relatively simple, yield bearing instruments such as U.S. Treasuries and money market funds. More complex asset classes, including equities, or binary contracts, remain smaller and less liquid despite increasing issuance. This reflects a structural constraint: the absence of integrated, institutionally compatible trading and post-trade infrastructure.

As a result, much of today's activity remains fragmented across venues and networks. Liquidity is dispersed, secondary market activity is limited, and operational processes are often duplicated. The challenge is no longer the creation of digital assets, but enabling their efficient circulation within established financial systems.

360X APPROACH

360X has been developed to address this gap as regulated market infrastructure. Our focus is not on creating a parallel ecosystem, but on enabling tokenized and traditional instruments to be traded and settled within a framework that aligns with existing institutional workflows.

This positioning reflects a broader industry direction. Financial market infrastructures increasingly highlight that DLT and traditional systems will coexist, and that interoperability is required to achieve scale.

Without this, assets remain siloed, liquidity is fragmented, operational complexity increases, and the technologically superior instrument will be inferior due to scaling limitations. One of tokenization's biggest strengths is trustless settlement and the possibility of 24/7 liquidity.

Within this context, 360X follows a hybrid model, integrating execution, access, and settlement across both environments.

DESIGN PRINCIPLES

The design of 360X is guided by established market structure principles. Trading and settlement are deliberately separated. Execution takes place off-chain, ensuring performance, price formation, and confidentiality of trading intent. Settlement is flexible and can occur either through DLT or through traditional post-trade infrastructure, depending on the security, where it has been booked and the requirements of counterparties.

This separation reflects a practical allocation of where DLT provides value. Fully on-chain trading environments have demonstrated limitations in areas such as liquidity concentration and execution quality. By contrast, applying DLT at the settlement layer allows for improvements in finality, transparency, and programmability without compromising trading efficiencies built over years of iteration.

External Access is similarly designed around integration. Participants connect through established standards such as FIX and APIs, enabling them to access tokenized instruments using existing systems. This reduces onboarding complexity and allows distribution through familiar institutional channels.

MARKET CONTEXT

Current market dynamics reinforce the need for this approach. While issuance of tokenized assets has accelerated, secondary markets remain relatively shallow. Tokenized equities, for example, have seen immensely growing activity but continue to exhibit limited depth and higher volatility compared to underlying markets given their size and age.

This reflects a structural reality: liquidity does not arise solely from tokenization, but from integration into established trading, distribution, and settlement frameworks. Market infrastructure remains the determining factor.

CONCLUSION

The development of tokenized assets is moving beyond issuance toward market structure. The key requirement is to enable these instruments to trade, settle, and scale within the broader financial system.

This requires infrastructure that connects DLT-based assets with existing financial markets, rather than replacing them. 360X is positioned within this transition as a regulated venue focused on interoperability, operational continuity, and institutional adoption.

The objective is not to redefine market structure, but to support its evolution by integrating new asset classes into established frameworks in a way that maintains efficiency, liquidity, and trust.

#32: DFNS

CORE BANKING FOR DIGITAL ASSETS AS GOVERNED OPERATING SYSTEM FOR INSTITUTIONAL ON-CHAIN FINANCE

THE PROBLEM WITH "JUST ADDING WALLETS"

As banks and regulated financial institutions expand into digital assets, the challenge is not only how to safeguard keys or running nodes.

The harder problem is how to operate digital assets with the same discipline applied to fiat money: account structures, approvals, counterparty controls, transaction limits, reconciliation, segregation of duties, auditability, and more. In many institutions, these functions still rely on fragmented tooling, manual procedures, or wallet systems designed primarily for trading desks rather than bank operating models. This creates operational risk, slows implementation, and makes it difficult to scale from basic custody into broader services such as client transfers, treasury rebalancing, brokerage, staking, or tokenized asset servicing. The use case is therefore to establish a digital asset operating layer that functions as core banking infrastructure, not just as a wallet.

TURNING WALLETS INTO A CORE BANKING PLATFORM

Dfns provides a core banking layer for digital assets. It applies familiar banking control principles to blockchain-based assets by treating wallets, policies, workflows, and transactions as governed financial infrastructure rather than isolated crypto tools.

In practice, institutions can structure digital asset accounts by function, for example, cold treasury wallets, warm operational wallets, and client-segregated wallets. They can apply rules by account type, asset, amount, destination, or activity, and map approval logic to real institutional roles across treasury, operations, risk, and compliance. Whitelisted counterparties, transaction thresholds, policy checks, approvals, and audit trails become part of the operating model itself.

This approach also supports the daily mechanics of a regulated institution: opening new wallet structures, assigning entitlements, updating controls, onboarding new assets, replacing approval devices, and handling incidents while maintaining clear records of who did what, when, and under which authority.

Because the operating layer is programmable, it can integrate with internal banking systems, compliance tools, custody setups, exchanges, and reporting environments. The result is a practical bridge between blockchain infrastructure and bank operating standards. It helps institutions move beyond custody-only setups and build digital asset services on top of a control model that resembles core banking: structured accounts, governed operations, reconciled movements, and auditable decision-making.

Learn more: dfns.co

#33: DLX LAW & MAGIC NEWTON FOUNDATION

NEWTON PROTOCOL: AUTHORIZATION LAYER FOR ON-CHAIN FINANCE

On-chain finance is expanding rapidly across stablecoins, tokenized securities, and institutional DeFi, but the infrastructure for enforceable, auditable compliance at the transaction level does not yet exist in a credibly neutral form. Existing approaches fail in one of two ways: compliance controls live only in app front ends, where they can be bypassed by interacting directly with the underlying smart contract, or they rely on intermediaries whose decisions are opaque, unverifiable, and subject to single-point-of-failure risk.

Post-hoc monitoring generates alerts, not enforceable constraints. Frameworks like the GENIUS Act, HK Stablecoins Ordinance, MiCA, and FATF Travel Rule guidance increasingly expect demonstrable controls at the transaction level, not checkbox compliance at onboarding. The gap is architectural: no shared, verifiable, credibly neutral authorization layer exists to connect offchain compliance processes with on-chain execution across asset classes and chains.

NEWTON PROTOCOL: THE AUTHORIZATION LAYER FOR ON-CHAIN FINANCE

Newton Protocol provides a pre-settlement authorization layer that evaluates programmable compliance and risk policies before any on-chain execution.

Analogizing to traditional finance: card networks authorize payments before bank settlement, checking identity, fraud rules, and spend limits in real time. Newton does the same for on-chain transactions, producing cryptographically verifiable attestations.

HOW IT WORKS

Upon transaction submission, Newton's operator network independently evaluates the relevant policy against real-time offchain data inputs determined by an app's developer (e.g., sanctions feeds, KYC or credentials, jurisdiction checks, velocity limits, Travel Rule attribution, etc.). Operators reach a stake-weighted quorum and produce an aggregate cryptographic signature. The attestation is attached to the transaction and verified by the smart contract before execution.

Key Capabilities

- Composable, reusable policy modules for sanctions screening, investor eligibility, Travel Rule attribution, jurisdictional controls, and source-of-funds, configurable per asset class or jurisdiction without bespoke infrastructure
- ZK proofs allow selective disclosure of identity and accreditation data for policy evaluation without exposing PII
- Cross-chain enforcement from a single policy configuration across EVM-compatible and non-EVM chains
- An immutable on-chain audit trail of every policy evaluation accessible to regulators through appropriate legal process without publicly exposing data

REPRESENTATIVE USE CASES

Stablecoin issuers can embed transfer-level controls with verifiable receipts. Tokenized RWA platforms can enforce investor compliance and NAV integrity with runtime constraints that cannot be bypassed. Institutional DeFi participants can satisfy compliance obligations with an auditable trail. Newton does not custody assets, replace existing compliance stacks, or guarantee outcomes.

Learn more: newton.xyz

#34: EDGE & NODE

THE FIRST BLOCKCHAIN-NATIVE DATABASE FOR ENTERPRISE COMPLIANCE AND AUDITABILITY

Enterprises in regulated industries, financial services, capital markets, payments, and supply chains increasingly interact with blockchain networks as part of core operations. But raw on-chain data is distributed and impossible to query at scale using traditional databases. Existing tools cannot verify that data extracted from a blockchain actually matches what is on-chain and they cannot provide the lineage and audit trails required for regulatory reporting. Building custom infrastructure to solve this takes months and millions of dollars. As institutions adopt tokenized assets, stablecoins, and on-chain payments, the absence of enterprise-grade, verifiable blockchain data infrastructure creates a critical compliance gap, one that traditional databases were never built to address.

THE SOLUTION

Amp, built by Edge & Node, the founding team behind The Graph, is the first blockchain-native database purpose-built for enterprises. It converts raw on-chain data into verifiable, audit-ready datasets and APIs, delivered via on-premises, cloud, or hybrid deployments, with native connectors for the enterprise systems institutions already use.

Unlike traditional databases, Amp proves data integrity through blockchain-native primitives like inclusion proofs, providing full traceability from raw on-chain blocks to derived tables. Every dataset comes with complete data lineage, meeting the evidentiary standard required for compliance workflows, audit trails, and regulatory reporting. Amp integrates directly with existing enterprise infrastructure: BI tools (Power BI, Tableau), data warehouses (Snowflake, Postgres, Clickhouse), data lakes (Apache Iceberg, Delta Lake), and event buses (Kafka). It supports both real-time streaming with a 747-millisecond median data freshness and bulk historical delivery, at up to 4,397× the performance of traditional blockchain data methods, with 98% storage reduction compared to archive nodes.

Amp supports compliance use cases including sanctions screening, AML workflows, tokenized asset registries, and stablecoin treasury tracking, all backed by verified, auditable on-chain data. It supports private, on-premises deployment for regulated environments, with SOC 2 and ISO 27001 certification in progress. Amp represents a new category of data infrastructure, one that gives regulators and compliance teams the same confidence in on-chain data that they have in traditional financial records.

Learn more: edgeandnode.com

#35: FOLKS FINANCE

CROSS-CHAIN COLLATERALIZATION: BORROWING ACROSS BLOCKCHAINS WITHOUT BRIDGES

Decentralized lending protocols operate within the boundaries of a single blockchain. A user holding assets on one network cannot use them as collateral to borrow on another. The only available workarounds require "bridge" protocols, which transfer asset representations across chains through third-party custodians, introducing significant security exposure and historically resulting in substantial losses.

Beyond security, this produces structural inefficiency: capital held on one blockchain cannot participate in lending markets on another, forcing users to liquidate or migrate assets rather than leverage them in place. As DeFi expands across more networks, the inability to use assets cross-chain without trusted intermediaries limits both its utility and the ability of regulators to supervise leveraged positions spanning multiple ledgers.

THE SOLUTION

Folks Finance's protocol enables users to deposit collateral on one blockchain and open a borrowing position on a different network, without transferring assets or relying on bridge infrastructure. All position state (collateral balances, borrow amounts, interest accrual, and liquidation parameters) is maintained in a single location on-chain. Users interact from their preferred network, and their actions are relayed through secure cross-chain messaging protocols. When a user deposits collateral on one chain, the protocol registers the position and calculates borrowing capacity. The user can then draw liquidity on any other supported network. At no point does the collateral leave its native chain or pass through an intermediary custodian.

Because position state is recorded on a single ledger, there are no conflicting states between chains and no synchronization delays. Liquidation is coordinated from the same central point: when a position breaches its health threshold, enforcement is triggered and executed across the relevant chains atomically, without manual intervention. This architecture produces two concrete outcomes.

First, it eliminates bridge risk: assets remain on their native chain throughout the entire lifecycle of a lending position.

Second, it creates a single auditable source of truth for cross-chain exposure: every position, regardless of which chains the collateral and borrow legs reside on, is fully recorded in one place, making it possible for risk monitors and regulatory observers to assess leveraged cross-chain positions without relying on off-chain data or proprietary reporting systems.

Learn more: folks.finance

#36: HIFI

HIFI: PROGRAMMABLE STABLECOIN INFRASTRUCTURE FOR GLOBAL MONEY MOVEMENT

Cross-border money movement remains slow, fragmented, and expensive. A fintech building a remittance product today must stitch together separate providers for identity verification, fiat banking rails, stablecoin custody, blockchain settlement, and local-currency payout. Each layer presents its own integration, compliance regime, and failure modes.

The result is months of engineering work before a single dollar moves, and an ongoing operational burden of managing multiple vendor relationships across regions. This fragmentation hits hardest in corridors where demand is highest. Paying out to a mobile money wallet in Senegal, settling in Brazilian reais via PIX, and accepting US dollar deposits via RTP are three entirely different infrastructure problems and would typically require three separate providers. For businesses serving multiple regions simultaneously, the integration surface area compounds, compliance obligations multiply, and engineering teams spend more time maintaining payments.

THE SOLUTION

HIFI provides a single API layer that connects blockchain networks to banking and local payment rails. A developer building on HIFI can onramp from and offramp to over 150 countries all through one integration, with identity verification, stablecoin conversion, and compliance handled programmatically at every step.

The architecture treats each capability as a composable primitive. A developer creates a user, provisions a custodial wallet, runs programmatic KYC, and initiates a payout through the same API surface. The platform handles rail selection, stablecoin conversion, and settlement logic underneath.

What this means for developers:

1. **Rail breadth without integration sprawl.** HIFI connects to domestic US rails (ACH, wire, RTP), SWIFT, local instant-payment networks like PIX and SPEI, and mobile money. HIFI supports wallets across major blockchain networks and handles conversion between USDC, USDT, PYUSD, and USDG. Developers route value on-chain without managing separate integrations per network.
2. **Compliance embedded at the infrastructure layer.** KYC and KYB run through the API as part of user creation, not as a separate onboarding flow managed outside the platform. Transaction screening, approval workflows, and proof-of-payment generation are built into the transaction lifecycle. Developers never hand off compliance to a third party or manage a parallel process alongside their payment integration.
3. **Private settlement for institutional use cases.** Through HIFI's integration with the Canton Network, regulated institutions can settle stablecoin transactions with protocol-level privacy. Transaction details, balances, and contract state are visible only to authorized counterparties. HIFI enables teams to ship payment products without managing separate vendor relationships for identity, custody, conversion, and settlement, and without rebuilding that stack when they expand to a new corridor.

Learn more: hifi.com

#37: LF DECENTRALIZED TRUST

BESU FOR PUBLIC SECTOR TRUST INFRASTRUCTURE: ENABLING TRANSPARENT AND ACCOUNTABLE GOVERNMENT SERVICES

Public trust in government institutions has declined globally, limiting the effectiveness of public services and policy implementation. Citizens often lack visibility into how decisions are made, how data is handled, and how public resources are allocated. At the same time, governments must balance transparency with security, operate across multiple jurisdictions, and integrate new digital infrastructure with legacy systems. Traditional approaches to improving trust, such as policy reform and administrative oversight, are slow to implement and difficult to scale. Fragmented systems and inconsistent governance models further complicate cross-agency and cross-border collaboration. There is a need for infrastructure that can embed trust directly into public services through verifiable, transparent, and tamper-resistant processes while maintaining regulatory compliance and institutional control.

THE SOLUTION

Governments in regions including Europe and Latin America are adopting blockchain-based infrastructure to embed trust directly into public services. Initiatives such as the European Blockchain Services Infrastructure (EBSI), LACChain, and Rede Blockchain Brasil (RBB) provide shared, permissioned networks for cross-agency and cross-border collaboration.

These networks, using Besu, an open-source blockchain client under Linux Foundation Decentralized Trust, support use cases such as cross-border credential verification, public registries, and transparent allocation of public resources.

By recording transactions on a shared ledger, they provide an auditable, tamper-resistant record accessible to authorized stakeholders, improving accountability without exposing sensitive data.

Consensus mechanisms such as Proof of Authority (e.g., QBFT) enable controlled validation models suited for regulated environments, allowing governments to maintain oversight while ensuring system integrity. Governance models reflect institutional structures, with validator participation distributed across public agencies and private partners to ensure balanced decision-making and resilience.

Some networks operate without native tokens, using predictable cost models aligned with public sector requirements. Besu-based infrastructures support these implementations by enabling permissioned network design, integration with existing systems, and interoperability with emerging digital ecosystems. This allows gradual modernization without requiring full system replacement. By embedding transparency, immutability, and decentralized validation into public services, these implementations shift trust from institutional promises to verifiable systems, improving service delivery and rebuilding citizen trust.

#38: NASDAQ

CONNECTING NASDAQ CALYPSO TO THE CANTON NETWORK: A NEW STANDARD FOR CAPITAL EFFICIENCY

Nasdaq has facilitated end-to-end margin and collateral workflows on the Canton Network, connecting the blockchain-based technology to Nasdaq Calypso.

Nasdaq Calypso is a leading technology platform used by financial institutions to seamlessly manage risk, margin, and collateral inventory in an integrated environment. Its technology is uniquely positioned to serve the evolving demands of both mainstream finance and emerging digital markets.

This use case was developed in partnership with QCP Capital, Primrose Capital Management, and Digital Asset, the creator of the Canton Network.

THE PROBLEM

Financial institutions seek to improve real-time risk management and mobilize collateral to optimize capital and liquidity deployment. A recent Nasdaq report found that 25% of collateral is currently tied up in corrective and non-interest-bearing measures, representing over $35 billion in excess or non-remunerated collateral.

THE SOLUTION

By automating margin and collateral processes on-chain, firms gain real-time efficiency and control while maintaining data confidentiality through configurable privacy settings. The integration of on-chain capabilities alongside existing institutional workflows enhances collateral mobility across all asset classes for institutional market participants to optimize the usage of capital.

Through the partnership on this use case, Nasdaq Calypso will expand its capabilities to support automated 24/7 margin and collateral management across a full spectrum of assets, including:

- Crypto derivatives
- Fixed income and repos
- Exchange-traded derivatives
- Over-the-counter derivatives
- Stablecoins
- Tokenized securities

The use case represents a proof point that leveraging blockchain-based technology for collateral management allows financial institutions to meet the demands for real-time capital efficiency in an always-on financial ecosystem. It enables financial institutions to allocate capital more efficiently by mobilizing and redeploying previously locked-up collateral across markets.

KEY OUTCOMES

- **Capital Efficiency:** Automated collateral management on-chain allows firms to amplify and expand capital markets activities with enhanced security, better pricing, and the ability to deploy capital 24/7 across both traditional and digital assets
- **Real-Time Risk Management:** Connecting the Canton Network to Nasdaq Calypso enables institutions to improve real-time risk management and mobilize collateral to optimize capital and liquidity deployment
- **Institutional-Grade Infrastructure:** The solution harmonizes mainstream and digital markets on a trusted, interoperable platform, advancing the next generation of digital asset infrastructure
- **Enhanced Trust:** Enhancing trust in the infrastructure and networks that underpin the digital asset ecosystem is critical to the long-term development of the tokenized asset class

#39: PROTOCOL LABS

FILECOIN & STARLING LAB: CRYPTOGRAPHIC AUTHENTICATION FOR DIGITAL TRUTH PRESERVATION

The rise of generative AI has intensified the spread of disinformation, deepfakes, and manipulated media, making it increasingly difficult to verify the authenticity of digital content. Journalists, human rights defenders, legal practitioners, and archivists face a core challenge: original capture metadata is routinely lost, attribution becomes unclear, and centralized hosting creates single points of failure through link rot or platform removal.

When digital content lacks verifiable provenance, institutions cannot reliably prove the authenticity and integrity of records—especially under conditions of conflict, political suppression, or legal scrutiny. Without a trustworthy chain of custody, evidence submitted to international courts, historical archives, and media organizations remains vulnerable to challenge or falsification.

The Starling Lab for Data Integrity, co-founded by the University of Southern California (USC) Shoah Foundation and Stanford University's Department of Electrical Engineering with support from the Filecoin Foundation for the Decentralized Web, addresses the digital provenance crisis through a three-step framework—Capture, Store, Verify—underpinned by an "Authenticity by Design" philosophy.

- **Capture**: At the moment of content creation, metadata—including timestamps, GPS coordinates, and device identifiers—is recorded. Creators retain control over what provenance data is disclosed, balancing transparency with security and privacy requirements. In Ukraine, prototype cameras were deployed that cryptographically sign images at the moment of capture
- **Store:** Assets and metadata are processed through Starling Lab's Integrity Pipeline—encrypted, attested via authsign certificates, and anchored to decentralized networks including InterPlanetary File System (IPFS) and the Filecoin network for long-term availability and redundancy
- **Verify:** Provenance is made auditable through expert attestations, C2PA-standard certificates, and content ID registration on decentralized systems—enabling journalists, courts, and the public to independently evaluate the trustworthiness of digital content

Deployed outcomes include: the first cryptographic submissions to the International Criminal Court via Project Dokaz; preservation of 56,000 genocide survivor testimonies from the USC Shoah Foundation; cryptographic 3D records for at-risk Armenian heritage sites; and an Emmy-nominated collaboration with Rolling Stone that helped reopen a decades-old war crimes case.

The Lab contributes to C2PA standards now adopted by major global manufacturers and has embedded a "Designing for Authenticity" curriculum into a full engineering course at Stanford University.

Learn more: starlinglab.org

#40: SEMILIQUID LABS, NOMINATED BY MCGUIREWOODS

PROGRAMMABLE CREDIT PROTOCOL

Every major crypto lending failure—Genesis, Celsius, BlockFi, Voyager—shared the same structural flaw: a single entity controlled custody, credit decisions, and enforcement, with no separation of roles. Borrowers surrendered collateral that was commingled, rehypothecated, or misappropriated. When markets declined, there was no independent enforcement—just discretionary decisions by the entity holding the assets.

Institutional secured lending against digital and tokenized assets inherits similar friction. Each loan requires bespoke bilateral agreements, manual lifetime value (LTV) monitoring, discretionary margin calls, and fragmented audit trails. This creates weeks of legal negotiation per deal, costs that scale linearly with volume, enforcement latency measured in hours or days, and no standardized framework regulators can examine consistently. Lending costs are inflated by structural inefficiency, counterparty risk is concentrated, and regulatory oversight is impaired by opacity.

THE SOLUTION

The Programmable Credit Protocol replaces discretionary collateral management with deterministic, rule-based enforcement for secured lending against digital and tokenized assets.

Three architectural principles distinguish this approach: First, collateral never moves. Assets remain locked at the borrower's qualified custodian through policy-level restrictions at the multi-party computing (MPC) / hardware security module (HSM) cryptographic infrastructure layer. No title transfer occurs during the loan. This eliminates commingling, rehypothecation, and concentration risk by design—not by compliance policy, but by architectural impossibility.

Second, enforcement is deterministic. After signing the platform terms, all parameters are known upfront: LTV thresholds, margin call triggers, grace periods, and enforcement actions. External price feeds are monitored continuously. When thresholds breach, margin calls fire automatically and enforcement instructions generate programmatically. No human discretion, no delays. Every lifecycle event is recorded immutably in a Programmable Credit Receipt.

Third, roles are structurally separated. The custodian holds assets but cannot move them without the protocol's instruction. The protocol generates instructions but cannot execute without the custodian. The lender provides capital but never possesses collateral. No single entity controls all functions. The protocol connects to institutional markets through FIX-based request-for-quote execution, accessible via any supported terminal (Bloomberg, Talos, etc.) enabling competitive pricing from multiple lenders rather than captive rates from a single counterparty. It operates on the Canton Network alongside DTCC, Broadridge, and others, supporting collateral from Bitcoin to tokenized securities tracked back to central securities depositories.

For regulators, every loan's parameters are defined before origination and every enforcement action is auditable—the most transparent secured lending structure in digital asset markets.

Learn more: pcp.co

#41: SWIFT

THE SWIFT LEDGER: ENABLING 24/7 CROSS-BORDER PAYMENTS

Cross-border payments today are supported by a resilient network of correspondent banking relationships and settlement infrastructures. However, these models were designed around operating hour constraints and bilateral coordination, which can limit real-time visibility between institutions during a transaction. As a result, banks often manage liquidity conservatively, pre-positioning funds across accounts and sequencing payments based on expected rather than confirmed counterparty actions. This can introduce delays in beneficiary crediting, increase reconciliation effort, and constrain the ability to deliver consistent, always-on cross-border payment experiences.

As demand grows for 24/7, real-time payments, there is an opportunity to enhance how institutions coordinate funding and settlement across both existing and digital infrastructures.

INTRODUCING THE SWIFT LEDGER

The Swift Ledger introduces a shared interbank state and execution environment that enables financial institutions to coordinate cross-border payments with greater certainty, without requiring a new settlement asset or central counterparty.

In this model, participating banks commit funds at the initiation of a transaction using tokenized representations of commercial bank money held on their own infrastructure. These commitments are cryptographically verifiable and reflected on a shared ledger as interbank obligations, creating a synchronized view of transaction state across participants.

This shared visibility allows banks to confirm that funds are committed before progressing a payment, reducing uncertainty around settlement and enabling earlier, more confident crediting of beneficiaries.

Instead of relying on pre-positioned liquidity buffers, institutions can make deterministic funding decisions at the point of transaction, reducing the need for defensive liquidity buffers by replacing probabilistic exposure with deterministic funding commitments. The ledger orchestrates the lifecycle of the payment including funding, authorization, and settlement triggering, while settlement itself continues to occur through external mechanisms such as RTGS systems or correspondent banks. This preserves current legal and regulatory frameworks while improving coordination between them.

As new forms of digital settlement assets become available (e.g., CBDCs), the ledger will adapt to support 24/7, programmatic settlement models. And beyond payments, this creates a foundation for more advanced use cases, including programmable payment flows, FX PvP, and DvP for securities. Rather than replacing existing infrastructure, the Swift Ledger extends it, introducing an orchestration layer that aligns institutions around a single, trusted view of transactions in progress, enabling more predictable, efficient, and scalable cross-border value transfer.

#42: UNICC & UNDP MALAWI

BLOCKCHAIN-ENABLED DIGITAL ID WALLET FOR TRUSTED PUBLIC SERVICE ACCESS IN MALAWI

Malawi has built a foundational national identification system, with more than 10 million citizens registered and smart ID cards issued. However, access to digital and in-person services still depends heavily on physical documents, card renewal, and fragmented sectoral platforms across areas such as traffic, health, financial services, and social protection. This creates friction for citizens, raises verification costs for service providers, and limits the ability of public and private systems to trust identity claims without repeatedly checking central databases. The challenge is to extend Malawi's national ID into a privacy-preserving, interoperable digital identity layer that citizens can use securely across services, while allowing government and authorized providers to verify credentials with confidence.

BUILDING A TRUSTED DIGITAL IDENTITY ECOSYSTEM

The United Nations Development Programme Malawi, in strategic partnership with the United Nations International Computing Center (UNICC), is developing and scaling a blockchain-enabled Digital ID solution that builds on Malawi's existing National Registration and Identification System. The solution uses decentralized identity and verifiable credentials to let citizens hold and present trusted digital credentials in a mobile wallet, while enabling public and private service providers to securely verify them.

The architecture includes a wallet app, a Digital ID Service, integration with the national registration system, and verification channels for third-party systems. Citizens can onboard using their physical ID card QR code and biometric liveness checks, then receive a Digital ID credential in their wallet. The wallet can also support additional credentials, such as driving licenses, birth certificates, pension certificates, and marriage certificates.

Blockchain is used as part of the trust layer. The Digital ID Service includes an ID Manager that handles credential offer, issuance, revocation, and verification flows through Hyperledger Aries Cloud Agent. Hyperledger Indy and blockchain nodes support the security, privacy and accountability of the solution, while an OpenID Connect bridge allows existing systems to verify credentials without needing to rebuild their platforms. Backend APIs manage issuance, revocation, and verification, enabling legacy government systems to integrate through standard interfaces.

The 2025 scaling phase adds a citizen-facing wallet, a verification app, e-KYC website integration, production-ready backend services, security hardening, and deployment planning for up to 10,000 external pilot users before broader public rollout. As the digital delivery partner, UNICC designs and implements the core technical architecture, oversees secure development and cybersecurity, and manages code transfer, while UNDP Malawi anchors the solution within the country's broader digital transformation agenda and coordinates with national counterparts. UNDP developers are included in the development process to support local capacity, sustainability, and eventual operational ownership.

#43: UZH BLOCKCHAIN CENTER & UNIVERSITY OF ZURICH

ONOCOY: AN ECONOMICALLY VIABLE SHARED INFRASTRUCTURE MODEL FOR HIGH-PRECISION GNSS

High-precision GNSS positioning at sub-centimeter level, as required for autonomous vehicles, precision agriculture, robotics, geodesy and tsunami early-warning, depends on dense Continuously Operating Reference Station (CORS) networks. Building these networks centrally demands prohibitive capex (hardware, sites, power) and ongoing opex (maintenance, bandwidth, upgrades), making global coverage economically unviable for any single entity.

The result: ~20 vertically integrated providers with proprietary protocols, high barriers to entry and pricing that confines services to niche, high-margin segments, redundant coverage in affluent regions, gaps across Africa, South America, and Asia, vendor lock-in, siloed data. In a €43B GNSS market (EUSPA 2022), mass adoption of high-precision positioning remains out of reach: no globally dense CORS network exists, and centralized models cannot produce one.

THE SOLUTION

Onocoy is an operational Decentralized Physical Infrastructure Network (DePIN) running on and generating revenue from Solana. It is hardware-agnostic and sells no equipment, turning reference data from any compliant CORS station into a shared global commons governed by the onocoy association, a Swiss non-profit.

The network is a three-sided market linking (i) reference-station operators (supply), (ii) a progressively decentralized digital cooperative coordinating and validating the network via incentives and shared governance (service), and (iii) data users, i.e., OEMs, correction-service providers, and integrators (demand).

Onocoy decouples the shared reference-station infrastructure from value-added correction services: the infrastructure becomes a cost-efficient commons, while existing providers extend their service businesses on top for network densification. Global capex is crowdsourced via a capped, deflationary ONO utility token on a four-year halving schedule.

Any individual, community or incumbent can deploy a station and earn rewards scaled by signal quality, availability, and coverage contribution. This rewarding signal facilitates the self-organization of dense, non-redundant coverage.

Opex falls through community co-ownership of hardware, sites, power, and bandwidth. Customers pay stable fiat prices by burning non-transferable data credits; rewards accrue to all stakeholders via on-chain mechanisms. Voting uses square-root voting, codified in the constitution; a multi-level stack detects spoofed or synthetic data.

The outcome is a censorship-resistant CORS commons lowering costs of high-precision GNSS for autonomous systems and humanitarian uses such as tsunami warning and climate monitoring. The instantiated system draws on and contributes to research conducted at the UZH Blockchain Center on value-sensitive design, tokenized incentives and decentralized governance; Center members are actively involved in the project's development and advisory.

Learn more: onocoy.com

SECTION IV

DIGITAL IDENTITY, INFRASTRUCTURE & WALLETS

A. DIGITAL IDENTITY

#44: DRUK HOLDINGS AND INVESTMENTS

BHUTAN'S NATIONAL DIGITAL IDENTITY

Currently, critical financial and governmental services rely on fragmented, paper-based, or centralized manual verification processes that are slow and prone to human error. This inefficiency creates significant "administrative friction," leading to high operational costs for institutions and preventing citizens in remote or international locations from accessing essential services in real-time.

To achieve a modern, "10X" digital economy, there is an urgent need for a decentralized, blockchain-based identity layer that ensures data sovereignty while enabling seamless, instant, and secure cross-border transactions.

THE SOLUTION

Bhutan National Digital Identity (NDI) provides a single digital identity for each Bhutanese citizen across all public services, allowing for single sign-on (SSO) and seamless integration of that identity across services, physical space, and time. Bhutan NDI leverages the safety and security of blockchain technology which puts the citizens, rather than the state, in control of their identity and their information.

Blockchain uses a decentralized, distributed ledger which means that the state lacks a complete account of an individual's identity or information. There is no centralized data store and hence no possibility of state control of citizens' information. Individuals have the right to control, store, and delete their data at will, enhancing the social contract between states and citizens and promoting trust and collaboration across society by empowering citizens to access public services and monitor and control their own data.

The self-sovereign identity framework, which blockchain makes possible, allows Bhutanese citizens to access all public services through their Bhutan NDI wallet, regardless of their location in the world.

This means that the Bhutanese diaspora will be able to more effectively come together, have their say, and connect with friends, family, and their fellow citizens more effectively wherever they are.

Perhaps most importantly, Bhutan NDI will enable those who have previously found it difficult to access public services to do so from anywhere they are. The 'unbanked' population, who have struggled with banking services, will be able to save, invest, and transfer money with unprecedented ease, opening up new and exciting opportunities for the Bhutanese economy.

'Digital guardianship' also means that Bhutan will be able to close the 'digital divide' between those who have access to online services and those who do not. Through the use of a printed biometric verification cryptograph, those with limited economic means, elderly, or otherwise unfamiliar with technology, will be brought into Bhutan's burgeoning digital society and increasingly digital economy.

Enhanced access to public services, opportunities for banking, and greater civil participation through ease of accessing government services promises to renew the vitality of Bhutan's civil society and make good on the promise of Gross National Happiness. All of this is an effort to promote inclusivity and accessibility, one of the core tenets of the government's approach to a digitally connected society.

Learn more: bhutanndi.com

#45: UNITED NATIONS JOINT STAFF PENSION FUND (UNJSPF)

UNJSPF DIGITAL CERTIFICATE OF ENTITLEMENT (DCE): A BLOCKCHAIN-BASED DIGITAL IDENTITY SOLUTION FOR PROOF-OF-LIFE VERIFICATION

The United Nations Joint Staff Pension Fund (UNJSPF) historically relied on a paper-based Certificate of Entitlement (CE) to verify the annual proof-of-life of more than 80,000 retirees and beneficiaries dispersed across 190+ countries. This process was slow, error-prone, and vulnerable to fraud, postal delays, and administrative bottlenecks. Pandemic-related disruptions exposed further fragilities, including suspended benefits due to undelivered mail and accessibility barriers for elderly or remote beneficiaries.

Additionally, signature verification challenges, identity fraud risks, and the need to confirm beneficiaries' residence for two-track pension calculations underscored the system's limitations. A resilient, secure, privacy-preserving, and globally scalable identity verification approach was urgently required.

THE SOLUTION

The UNJSPF Digital Certificate of Entitlement (DCE) is a blockchain-based digital identity and proof-of-life solution that replaces a 70-year-old paper process with a secure, automated, and globally interoperable system. Built on Hyperledger Indy and Aries, the DCE establishes a decentralized, tamper-resistant identity architecture based on Decentralized Identifiers (DIDs) and Verifiable Credentials (VCs). This approach enables beneficiaries to retain control over their identity data and to selectively disclose only the minimum information required for verification.

The solution integrates AI-powered biometric verification, liveness detection, and anti-deepfake mechanisms that are executed locally on beneficiaries' devices, ensuring that no biometric data is transmitted or centrally stored.

Blockchain infrastructure is used exclusively to record cryptographic proofs rather than personal data, delivering strong guarantees of privacy, auditability, and immutability. Geo-localization functionality further supports proof-of-location requirements in accordance with the Fund's regulatory framework.

Looking ahead, the DCE roadmap includes two major enhancements to further strengthen long-term resilience and trust. First, the UNJSPF permissioned blockchain will be cryptographically anchored to a public blockchain, providing an additional layer of transparency, integrity verification, and long-term auditability without exposing sensitive information. Second, the solution is planned to migrate toward a post-quantum-resistant cryptographic architecture, ensuring continued security and robustness against future quantum computing threats and aligning the platform with emerging international security standards.

Together, these capabilities position the UNJSPF DCE as a secure, privacy-preserving, and future-ready digital identity solution capable of supporting pension proof-of-life verification on a global scale.

Operationally, the DCE has transformed pension verification:

- Processing times and administrative burden have been dramatically reduced
- Overtime expenditures dropped by more than 75% since 2021
- Paper-based workflows declined by 40%, with over 43,000 beneficiaries adopting DCE—achieving a 99.96% retention rate
- Archiving costs decreased by over 95%
- Fraud vulnerabilities tied to signature manipulation and identity spoofing were substantially mitigated through biometric and blockchain-backed verification

The DCE also improves digital inclusion through offline-capable UN field-office kiosks for beneficiaries without smartphones or reliable connectivity.

Learn more: unjspf.org

SECTION IV

DIGITAL IDENTITY, INFRASTRUCTURE & WALLETS

B. FRAUD INTELLIGENCE

#46: SORAMITSU

CROSS SECTOR INTELLIGENCE LAYER FOR FRAUD INTELLIGENCE AND PREVENTION

Fraud Intelligence Limited is a UK incorporated Joint Venture between SORAMITSU and ORILLION.

Fraud Intelligence Limited believes that fraud cannot be solved by any one party alone; it requires the power of the community to unite and work towards a common goal built on a global solution approach.

THE SOLUTION

Fraud Intelligence Limited stands as the global leader and trusted authority in shared fraud intelligence. Backed by a powerful consortium of telecom operators and vendors, it is co-led by SORAMITSU and ORILLION, united by a shared mission to combat fraud effectively.

Fraud Intelligence Limited operates the Fraud Intelligence Blockchain (FIB), the telecom industry's first vendor—and consortium-agnostic platform for real-time, collaborative fraud intelligence sharing. Using distributed ledger technology, Fraud Intelligence Limited enables operators, vendors, and regulators to securely exchange and enrich data on fraudulent numbers, IPs, and devices—helping the industry close vulnerabilities, improve compliance, and protect customers.

Learn more: fraudintelligencelimited.com

SECTION IV

DIGITAL IDENTITY, INFRASTRUCTURE & WALLETS

C. RISK MITIGATION

#47: BLOCKMOSAIC LIMITED
SIXTHLOD LINE OF DEFENSE

Financial institutions frequently struggle to transition tokenized Real-World Asset (RWA) products from the conceptual phase to full production. This "0-to-1" hurdle is primarily caused by internal gaps in non-financial risk frameworks and operating models that are not yet equipped to handle the unique demands of digital asset ecosystems. Without a mature risk posture, institutions face significant execution risks and delayed launches as they attempt to build internal capabilities in real-time.

SIXTHLOD

SIXTHLOD (a solution by Blockmosaic Limited) acts as a specialized "6th Line of Defense," complementing an institution's existing internal risk structure. It provides modular, practitioner-led services designed to bolster ecosystem risk management without replacing internal audit or compliance functions. By offering a "quick-start" on-chain risk monitoring posture, SIXTHLOD enables institutions to launch securely while their long-term internal frameworks continue to mature.

Service Capabilities:

- **ADVISE:** High-level practitioner support to navigate complex regulatory, operational, and ecosystem decisions during high-stakes initiatives
- **ASSESS:** Independent non-financial risk assessments for new products and use-case extensions, aligned with industry-standard frameworks
- **ACTIVATE:** Rapid deployment of on-chain ecosystem monitoring tools to establish a credible Minimum Viable Risk (MVR) posture for immediate launch
- **EDUCATE:** Cross-functional executive workshops focused on the commercial viability and core risk requirements of tokenized asset ecosystems

IMPACT AND KEY BENEFITS

- **Reduced Execution Risk:** Early identification of operational and regulatory hurdles prevents costly pivots during production
- **Accelerated Time-to-Market:** The "Activate" module allows institutions to establish a credible risk posture fast enough to launch while remaining structured enough to scale
- **Ecosystem Integrity:** Provides an independent layer of verification that enhances trust for both internal stakeholders and external regulators
- **Organizational Alignment:** Bridges the knowledge gap between technical digital asset teams and traditional risk/compliance departments through targeted education

#48: METRIKA

OPERATIONALIZING RISK MITIGATION: REAL-TIME RISK MONITORING FOR PUBLIC BLOCKCHAIN INFRASTRUCTURE

As regulated financial institutions move tokenized financial infrastructure from experimentation into production, a critical gap has emerged between the pace of innovation and the maturity of risk and compliance systems designed to oversee it. Public permissionless blockchains introduce risk conditions that operate continuously at speeds that existing batch reporting, point-in-time controls testing, and manual review processes were not designed to handle. Validator concentration, consensus instability, smart contract vulnerabilities, and sanctions exposure can all affect settlement integrity and regulatory compliance in real time.

The Capital Markets Risk Mitigation Framework (RMF) provides structured guidance for identifying, assessing, and managing these risks. The operational challenge is translating that guidance into institutional practice without creating a silo outside existing enterprise risk infrastructure.

SOLUTION

Institutions operating tokenized financial infrastructure increasingly recognize that digital asset risk is a new expression of risks they already manage: operational, market, liquidity, technology, and counterparty. What is changing is the monitoring infrastructure required to oversee it. Blockchain-based systems operate 24/7.

In contrast to traditional batch reporting and daily reconciliations, these markets require continuous monitoring and automated alerting that integrates with existing enterprise Governance Risk and Compliance (GRC) workflows rather than operating as a parallel system.

Metrika's solution within the RMF addresses this by providing structured guidance across the digital asset risk lifecycle: network due diligence before deployment, continuous monitoring of consensus health and sanctions exposure after deployment, and automated responses when thresholds are breached.

For example, a financial institution issuing a tokenized money market fund on Ethereum looks to the RMF across sequential stages of deployment. Before issuance, it conducts network due diligence, generating audit-ready assessments of validator decentralization, consensus robustness, incident history, and protocol governance.

One approach is to draw on a purpose-built Key Risk Indicator (KRI) library that translates blockchain complexity into standardized, actionable risk intelligence. After issuance, the same indicators run continuously via API into existing GRC platforms. When a threshold is breached, automated alerts fire and escalation follows predefined protocols. Metrika has joined the RMF as a Risk Assessment Partner, committed to operationalizing this guidance across due diligence, monitoring, reporting, and mitigation, with coverage spanning blockchain networks, tokenized RWAs, and DeFi applications.

SECTION IV

DIGITAL IDENTITY, INFRASTRUCTURE & WALLETS

D. TAX

#49: TAXBIT

UNIFIED GLOBAL REPORTING FOR CRYPTO AND FINANCIAL INFORMATION REGIMES IN THE 21ST CENTURY

Financial information reporting in the 21st century is rapidly evolving due to emerging global and regional frameworks such as the OECD Crypto-Asset Reporting Framework (CARF), the EU's DAC8 directive, and proposed enhancements under CRS 2.0. These regimes significantly expand the scope of reportable assets and financial data beyond traditional banking assets to crypto-assets and other digital financial instruments.

A key challenge is overlapping and parallel reporting obligations, whereby the same individual or entity may fall within multiple regimes simultaneously across jurisdictions. This creates duplication risks, inconsistent definitions of reportable assets, and heightened compliance complexity. It also increases the need for consistent asset identification, valuation, and pricing methodologies across regimes to ensure holdings are tracked and reported on a coherent per-user basis over time despite differing local requirements.

THE SOLUTION

Taxbit addresses the complexity of modern financial information reporting by providing an end-to-end, cross-border platform purpose-built to support regimes such as OECD CARF, EU DAC8, CRS 2.0, and other evolving global reporting standards. The platform enables organizations to centralize, standardize, and automate the entire lifecycle of tax-relevant data—from transaction ingestion through classification, valuation, reconciliation, and regulatory reporting.

At the core of Taxbit's solution is a unified data model that normalizes disparate financial and crypto-asset data across jurisdictions and business lines.

This ensures consistent asset identification and valuation methodologies are applied globally, enabling firms to maintain coherent per-user reporting even where multiple overlapping regimes apply.

By standardizing pricing, cost basis, and valuation logic, Taxbit reduces inconsistencies that arise from fragmented local interpretations of reportable assets. Taxbit's rules engine and reporting framework map regulatory requirements across jurisdictions, enabling automated determination of reportable events and applicable filing obligations for each taxpayer or counterparty. This allows firms to manage overlapping obligations efficiently, eliminating duplication while ensuring compliance with multiple concurrent regimes.

The platform is designed to support a wide range of in-scope entities, including financial institutions, intermediaries, fintech platforms, and digital asset service providers operating across multiple jurisdictions. Through configurable workflows and jurisdiction-specific reporting outputs, Taxbit enables organizations to adapt to divergent local requirements without rebuilding internal systems for each regime.

By integrating data collection, tax lot tracking, valuation, and reporting into a single system, Taxbit reduces operational complexity and minimizes manual intervention. This end-to-end automation improves accuracy and ensures consistency.

Learn more: taxbit.com

SECTION V

ENTERTAINMENT & SPORTS

#50: ASIA FINTECH ALLIANCE (AFA) & TAIWAN FINTECH ASSOCIATION (TFTA)

POINTS-TO-CRYPTO: TAIWAN'S WORLD-FIRST RETAIL-TO-WEB3 ECOSYSTEM FOR FINANCIAL INCLUSION

Global retail generates massive loyalty rewards, but a significant portion remains "stranded capital." In Taiwan—which has the world's second-highest convenience store density—the leader, FamilyMart, issued 48.5 billion points in 2022, yet 40% remained idle, representing a liability for brands and lost value for consumers. Simultaneously, everyday users face high barriers to Web3. There is a critical missing bridge between traditional rewards and digital assets.

BitoPro, in strategic partnership with FamilyMart (20M digital members), bridged this gap by launching a seamless "Points-to-Crypto" solution. This world-first model allows users to convert daily retail points into digital assets with zero financial friction and zero extra transaction fees.

The 'Points-to-Crypto' service is available on the Taiwan FamilyMart App and the BitoPro Exchange, which allows customers to convert their FamilyMart loyalty points, called FamiPoints, into digital currencies like USDC. Customers can indicate the amount of FamiPoints they would like to convert to their desired digital currency on the Taiwan FamilyMart App, and include their BitoPro account details to receive them.

Converting FamiPoints into USDC prevents a loss of value in loyalty points over time and incurs zero transaction fees, democratizing access to cryptocurrencies.

Learn more: circle.com and asiafintechalliance.com

#51: AVA LABS
TOKEN-GATED LOYALTY CONTENT AND EXPERIENCES

Traditional streaming models and social media algorithms have commodified music, leaving artists with fractional payouts and no direct way to identify or reward their most loyal supporters. This fragmentation forces creators to rely on third-party gatekeepers who control audience data, making it nearly impossible to build a sustainable, independent business around a core community.

EVEN is designed from the ground up to give artists more ownership, more access, and more revenue. Creators can release music directly to their fans before it hits streaming platforms, set pricing for each drop, and create exclusive digital access experiences. Artists gain access to dashboards with detailed fan analytics and insights, helping them build stronger, more sustainable businesses around their work. For fans, EVEN offers a way to directly support the artists they love, and unlock exclusive content in return.

The difference between EVEN and traditional streaming platforms isn't just philosophical, it's financial. A single track streamed one million times (which requires, on average, 200K+ fans) on Spotify typically generates around $3,500 for an independent artist. That same track, sold directly to just 500 fans at $20 per drop on EVEN, would generate $10,000—more than double the revenue, from just a fraction of the audience. By shifting focus from mass algorithmic distribution to community-powered ownership, EVEN helps artists earn more while staying closer to their fans.

EVEN uses Avalanche to create verifiable proof of ownership and enables token-gated content and experiences for fans. In 2025, EVEN rolled out its Avalanche-powered platform, with new music drops, artist campaigns, and exclusive fan features built into the L1.

Learn more: avax.network

SECTION VI

FINANCE

#52: ARCHAX

ARCHAX GOVY: TOKENIZED US TREASURY BILLS WITH DIRECT OWNERSHIP, EMBEDDED SETTLEMENT AND 24/7 REDEMPTION RIGHTS

Institutional investors and digital asset participants holding stablecoins face a persistent inefficiency: idle liquidity earns no yield while awaiting deployment, yet converting into short-duration government instruments requires navigating multiple intermediaries, manual rollovers at maturity, and custody arrangements that sit outside digital asset workflows.

Traditional T-Bill access involves operational burden—investors must monitor maturity dates, actively reinvest proceeds, and manage custody through separate infrastructure. For on-chain participants, this friction is compounded by the absence of a regulated, legally enforceable mechanism to hold sovereign debt instruments directly within a blockchain-native portfolio. The result is a structural gap: capital that could be earning risk-free sovereign yield instead sits idle or in unregulated yield products, while regulated pathways into government securities remain inaccessible to many institutional digital asset participants.

INTRODUCING GOVY

GOVY is a security token that confers a direct, legally enforceable entitlement to a continuously rolling short-dated US Treasury Bill. Rather than wrapping T-Bills in a fund structure, GOVY establishes a 1:1 entitlement chain: each token maps to a tokenized Treasury holding, with legal title held in an insolvency-remote nominee vehicle under UK trust law. The GOVY token is your T-Bill plus the instruction to roll it.

How it Works: An investor sends eligible stablecoins to the GOVY smart contract and receives GOVY tokens into their allow-listed wallet. As each T-Bill matures, it is automatically replaced with the next equivalent instrument—eliminating the need to actively manage rollovers.

At any point, the investor may redeem for stablecoins or take physical delivery of their underlying T-Bill. The entitlement chain is transparent and on-chain:

- GOVY tokens
- tokenized T-Bill instruments
- underlying UST CUSIPs/ISINs held 1:1 in a regulated custodian

The product operates across Ethereum, Hedera, and Stellar, with transferability restricted to allow-listed wallets.

Operational and Structural Benefits: Because GOVY embeds custody, settlement, and delivery rights directly into the token, investors access sovereign yield without fund management layers or maturity management overhead. Fireblocks custody is integrated by default, providing asset segregation and institutional-grade security. Multi-currency issuance—USD, GBP, and EUR—supports treasury management across jurisdictions.

As a direct, legally enforceable claim to the underlying T-Bills rather than a claim on a fund or SPV, GOVY may be considered eligible for high-quality liquid assets (HQLA) purposes.

Regulatory Framework: The infrastructure is operated by an FCA-authorized custodian covering traditional and tokenized securities. Legal enforceability is grounded in UK trust law, providing institutional participants with a regulated on-chain exposure to sovereign debt.

Learn more: govy.finance

#53: ARCHIP BY MAERKI BAUMANN PRIVATE BANK

REGULATED BANKING INFRASTRUCTURE FOR DIGITAL ASSET HOLDERS

A growing segment of tech entrepreneurs holds significant wealth in digital assets, token allocations, and equity in early stage ventures. When these individuals approach traditional banks for standard services such as a mortgage, a credit line, or the ability to move capital between digital holdings and fiat accounts, they encounter structural barriers. Their assets are typically not recognized as collateral.

Onboarding processes are designed around conventional asset profiles and often require documentation that does not apply to their situation. The result is limited access to credit, no efficient pathway from digital holdings to operational liquidity, and a fragmented experience across multiple providers. This is not an edge case. As digital asset wealth grows, the mismatch between how that wealth is held and how banking infrastructure evaluates it affects an increasing number of clients.

This use case describes how a Swiss regulated private bank has structured its services to address four specific gaps that arise when tech entrepreneurs with digital asset holdings seek access to standard banking and investment services.

1. **Specialist Advisory:** Rather than routing clients through generalist relationship managers, the bank assigns advisors with substantive knowledge of digital assets, token structures, staking mechanisms, and the associated compliance requirements. This allows the client's portfolio to be assessed as it actually exists, including asset types that most banking professionals are not trained to evaluate.
2. **Regulated On and Off Ramps:** Within a single banking relationship, clients can convert digital asset positions into fiat currency for operational purposes such as payroll or business expenses, without routing through external service providers. The same mechanism operates in reverse: fiat liquidity can be allocated into regulated investment instruments such as equities, bonds, gold, or structured products through the bank's existing infrastructure. All conversions occur under Swiss regulatory oversight, ensuring traceability and compliance within one framework.
3. **Lending vs. Digital Assets:** Clients holding token positions or staked assets can use those holdings as collateral to access credit lines, without liquidating the underlying position. This allows them to fund property purchases, investments, or operational needs using value already present in their portfolio. Collateral assessments draw on the same specialist knowledge applied in the advisory relationship.
4. **Unified Account Structure:** Fiat accounts and regulated digital asset custody are held within the same banking relationship. This reduces fragmentation across providers and enables integrated execution, accounting, and reporting.
5. **Structural Relevance:** The approach illustrates how an existing regulated institution can extend its infrastructure for blockchain wealth.

Learn more: archip.ch

#54: BTG PACTUAL

INSTITUTIONAL TREASURY MANAGEMENT WITH STABLECOINS

Global and multinational corporations face complexities in managing cash efficiently across multiple countries and time zones. Traditional financial systems operate within specific hours, which can limit the speed of settlement and real-time visibility into cash positions. These constraints can affect liquidity management, increase operational costs, and slow down the ability to respond promptly to financial needs and market opportunities. Additionally, managing cross-border payments involves navigating currency fluctuations and varying regulatory environments, which can add layers of complexity to institutional treasury operations.

THE SOLUTION

BTG Pactual's Stablecoin-Integrated Treasury Solution enhances institutional treasury management by integrating stablecoins as a complementary tool within the existing financial ecosystem. Leveraging blockchain technology, stablecoins enable near-instant settlement and 24/7 transactional capabilities, delivering continuous liquidity and improved cash flow visibility globally.

Working alongside BTG Pactual's traditional banking infrastructure, this approach facilitates seamless cross-border transfers with reduced friction and operational costs, while ensuring regulatory compliance. Treasury teams gain enhanced control over liquidity, enabling efficient resource allocation and improved risk management. The solution integrates with current treasury systems, representing an evolutionary step in cash management rather than replacement. Immediate blockchain settlement reduces settlement risk and enhances forecasting accuracy, empowering corporates to optimize working capital and respond swiftly to dynamic market conditions. This collaborative innovation between stablecoins and traditional finance paves the way for a more agile, transparent, and efficient treasury function in a globalized economy.

Learn more: btgpactual.us

#55: CALASTONE

TOKENIZED FUND DISTRIBUTION: BRIDGING TRADITIONAL ASSET MANAGEMENT AND DECENTRALIZED FINANCE

BACKGROUND

Traditional fund distribution models were not built to operate across digital, always-on financial networks. As blockchain-based markets mature, a growing range of participants—including DeFi corporate treasurers, stablecoin issuers and digitally native investors—require access to regulated, yield-generating instruments that can operate natively on-chain.

In practice, this demand is not being met. DeFi treasuries often rely on off-chain solutions such as bank deposits or traditional funds, limiting transparency, liquidity, and settlement efficiency, while investors operating within blockchain ecosystems face barriers accessing traditional assets through these channels.

For asset managers, reaching these new sources of capital is constrained by operational complexity, legacy infrastructure, and a lack of interoperable distribution models. This creates a structural disconnect between traditional finance and emerging digital markets, restricting access, liquidity, and innovation across both ecosystems. Solutions developed on large-scale fund networks, such as Calastone, are beginning to address this disconnect.

HOW IT WORKS

Tokenized fund distribution provides a practical bridge between traditional asset management and blockchain-based distribution channels by enabling new or existing funds to be issued and distributed as blockchain-based tokens without altering their underlying structure, administration, or servicing.

In this model, fund units are represented as digital tokens on public or permissioned blockchain networks. Digital investors and distributors can initiate orders for these tokenized funds either on-chain, via smart contracts, or via existing channels. In either case, orders are routed through the Calastone network—the largest global fund connectivity network, linking thousands of funds and market participants—for processing using established operational workflows. Once transactions are confirmed, a tight integration with asset managers and their transfer agents means that tokens are dynamically minted as fund units are created (or burned as units are redeemed) and delivered directly to investor wallet addresses. This approach preserves the governance, controls, and reliability of traditional fund operations while enabling seamless interaction with blockchain-native networks.

Importantly, tokens are issued directly from the underlying fund and its transfer agent, ensuring a transparent, one-to-one representation of fund units on-chain, rather than relying on intermediary or synthetic token structures.

By extending distribution into blockchain environments, this model enables asset managers to access new pools of capital that are not reachable through traditional channels. These include DeFi platforms seeking on-chain instruments for treasury and liquidity management, stablecoin issuers requiring access to money market funds, and digitally native investors who want access to traditional assets through blockchain infrastructure. Calastone research indicates strong demand for such instruments, particularly tokenized money market funds, as tools for managing on-chain portfolios more efficiently.

Crucially, this approach avoids the need for large-scale transformation of existing infrastructure. Asset managers can leverage current systems, service providers, and operational processes, allowing them to extend distribution into blockchain networks quickly and cost-effectively.

The result is a more efficient and inclusive distribution model that reduces operational friction, supports automated processing and settlement, and enables interoperability across traditional and digital financial networks. As adoption grows and regulatory frameworks evolve, tokenized distribution offers a scalable pathway for integrating established financial products into the next generation of global capital markets, while supporting the evolution of asset management and transfer agency processes into on-chain environments.

#56: CARDANO FOUNDATION

REEVE: TAMPER-EVIDENT AUDIT ATTESTATIONS FOR REGULATED FINANCIAL REPORTING

Regulators, auditors, and organizational counterparties rely on financial evidence dispersed across ERP systems, accounting tools, spreadsheets, and third-party reports. Even where governance controls are strong, it can be difficult to independently prove that a published financial statement, audit opinion, or approved dataset has not been altered after issuance. Cross-entity verification often requires repeated document exchanges, manual reconciliation, and reliance on intermediaries to confirm version history and approval status.

In multi-entity groups and cross-border environments, this can create delays in assurance, increase audit costs, and heighten the risk of disputes about what was approved, when it was approved, and by whom. The result is slower reporting and supervision cycles, reduced stakeholder confidence, and avoidable integrity risk when timely, verifiable evidence is needed.

THE SOLUTION

Reeve enables a workflow in which organizations retain sensitive financial data within their existing accounting and ERP systems, while generating secure, verifiable digital evidence of approved financial statements and audit attestations. Only this evidence and minimal metadata are anchored on the Cardano blockchain as time-stamped, tamper-evident records, without publishing confidential financial data. The anchored record can represent a final signed statement, an auditor-issued attestation, or an approved extract used in a reporting pack. Because the record is time-stamped and tamper-evident, it provides an evidence trail that supports integrity checks across parties without requiring access to the underlying financial data.

If a correction or restatement is issued, it is anchored as a new record, preserving version history rather than overwriting prior disclosures, but this does not, in itself, validate the accuracy of the underlying figures.

In a 2024–2025 implementation, the Cardano Foundation integrated Reeve into its ERP system and collaborated with Grant Thornton Switzerland/Liechtenstein to issue an on-chain audit attestation. The external auditor issued its opinion in accordance with standard audit processes and digitally signed the audit attestation. A corresponding cryptographic record of the signed audited financial statements was then anchored on the Cardano blockchain. This created an independently verifiable evidence trail.

Supervisors, auditors, and stakeholders can verify that a specific attestation existed at a given time and has not been altered since then, without accessing the underlying financial records. This approach complements existing audit and reporting standards by strengthening integrity, reducing re-verification and reconciliation effort across parties, and supporting more frequent, supervision-oriented transparency while preserving confidentiality and established operating models.

Learn more: cardanofoundation.org

#57: CLEARSTREAM

ON-CHAIN DISTRIBUTION OF TOKENIZED SECURITIES

Traditional infrastructures for issuing, distributing, and servicing securities have supported well-functioning financial markets for decades and continue to develop. Building on this strong foundation, new digital technologies can further enhance access, extend trading possibilities, and enable features such as fractional ownership.

At the same time, new digital technologies (blockchain being a proven example) open up additional opportunities to bring real-world assets held in central securities depositories onto distributed ledgers. An increasingly important element is interoperability between traditional financial markets (TradFi) and Web3, connecting the CSD record (for example via Clearstream's D7 digital platform) with tokenization and servicing on chain.

This use case establishes an on-chain model in which Clearstream provides the regulated foundation for issuing, tokenizing, and servicing traditional securities on distributed ledger technology. Instruments are issued through Clearstream's D7 digital platform, forming the digital CSD record. The infrastructure then tokenizes these instruments on a permissioned blockchain, ensuring that the tokenized representation remains legally and operationally linked to the underlying security.

Once tokenized, off- and on-chain trading venues and distribution venues can list these instruments and make them accessible to investors, with the asset held in digital wallets. D7 maintains issuance control, records positions, and automates lifecycle events, such as corporate actions, directly on-chain. This extends established CSD functions into a digitally native environment while maintaining operational integrity and regulatory compliance.

A key component of the model is that benefits extend across stakeholders:

- Issuers gain increased flexibility, faster digital issuance, and broader market reach
- Trading venues can bring traditional securities on chain, increase potential trading volume, and introduce fractionalized or alternative investment products
- Retail and institutional investors can access traditional assets via a wallet, trade continuously, and benefit from fractional ownership and yield opportunities

Tokenization enables features that are difficult to achieve in traditional infrastructures, including fractional ownership, digitally native distribution, and potential 24/7 access. The model can be applied across multiple asset types (e.g., structured products, bonds, equities, ETFs, or money market funds). By serving as the trusted anchor for issuance, tokenization, and servicing, Clearstream creates a controlled, interoperable connection for real-world assets to be brought onto distributed ledgers and made available to both retail and institutional channels.

#58: DIGITAL ASSET

TOKENIZED DEPOSITS BRING BROAD UTILITY AND TRILLIONS IN LIQUIDITY TO CAPITAL MARKETS

A BETTER CASH OPTION FOR INSTITUTIONAL MARKETS

Programmable cash for payments and settlement is now in-flight. On-chain regulated cash unlocks balance sheets to improve financing, treasury and working capital. CBDCs and reserve-backed stablecoins face ongoing structural hurdles for use within capital markets. For true institutional flows and broad utility, banks need on-chain deposits to have the same mobility as stablecoins, plus control over access and privacy.

Tokenized deposits offer a viable, stable solution for banks and their clients to capture the opportunity of 24/7, atomic value transfer. Activating deposits on-chain with the required controls and configurable privacy unlocks: direct, regulated bank liabilities for institutional cross-border payment; cash management and trading; $18+Tn in cash, dwarfing stablecoins in scale and liquidity; mobility in programmable form, while remaining the bank's native liability, redeemable 1:1 and governed by the same legal framework.

OPTIMIZING BALANCE SHEETS WITH REGULATED CASH

On Canton Network, tokenized deposits (TDs) are issued with embedded identity, permissioning controls, and configurable privacy that unlocks cash-on-ledger, creating a trusted payment and settlement asset for capital markets, corporate banking, and treasury. Mirroring cash usage, TDs are interoperable across institutions, applications, and other forms of digital money. They can be swapped with other assets without sacrificing privacy, control, or finality - or introducing 'bridge' risk.

Canton provides the privacy, composability, and compliance controls for institutional finance to flow. This is why major firms have moved beyond their own networks to tokenize deposits on Canton.

J.P. Morgan is bringing its JPM Coin deposit token to Canton, Lloyds Bank is tokenizing GBP to finance out-of-hours repos, and LSEG's Digital Settlement House (DiSH) is adopting these technologies for its operations. TDs provide the cash leg for DvP/PvP in 24/7 financing flows, improve treasury liquidity and enable faster, cheaper interbank settlement–evidenced by recent trades on Canton:

- Weekend cross-border repo and collateral reuse transactions;
- Executed using TDs, stablecoins, and US$, Euro cash, and UK Gilts;
- Cross-currency settlement with bank deposits tokenized at LSEG DiSH

The result: collateral management at speed outside of market hours, with cross-border flows enabled by native connectivity and atomic settlement across systems.

Canton's smart contract composability allows apps to exchange assets with atomic guarantees, while preserving control and privacy. It provides a unified settlement layer and single source of truth for multi-app transactions, opening up greater asset utility. That's why DTCC chose Canton for the most liquid pool of high-quality assets–U.S. Treasuries.

As real-world assets (RWA)s, on-chain cash and DeFi liquidity pools converge, institutions and investors benefit from seamless transactions between bank accounts and wallets.

Learn more: canton.network

#59: EUROCLEAR

PYTHAGORE: MODERNIZING EUROPE'S NEU CP MARKET WITH DLT

Negotiable European Commercial Paper (NEU CP, former TCN) is Europe's leading euro-denominated short term debt market, with ~€300bn outstanding and a strong track record of standardized issuance, same day capability and settlement in central bank money via Euroclear. Despite a very efficient existing market infrastructure, end-to-end processing still relies on multiparty reconciliations, batch communications, and limited real-time transparency—constraining secondary market development and data availability.

At the same time, the ecosystem is ready for pragmatic modernization. Market participants (issuers, investors, dealers, custodians) are seeking faster cycles, improved data, broader investor reach, and interoperability with emerging digital cash and DLT rails—without fragmenting liquidity or disrupting proven workflows.

THE SOLUTION

Pythagore is a joint market initiative led by Euroclear with Banque de France to modernize the NEU CP market using tokenization and distributed ledger technology (DLT). The initiative is aligned with Pontes (ECB wholesale CBDC track) to enable atomic settlement in central bank money. Inaugural issuances are targeted for end 2026 and followed by ecosystem integration, automation, and a roadmap to migration.

HOW IT WORKS

Pythagore covers program creation, participant onboarding and wallet setup, ISIN allocation, primary issuance, and distribution, secondary market flows, coupon/redemption (where applicable) and reporting. Interoperability by design. The model enables:

- Interoperability between DFMI+ and legacy systems to avoid market fragmentation through eligibility of Digital assets on traditional systems
- Interoperability with Pontes for CBDC-based cash leg where applicable, enabling atomic DvP and real-time settlement finality on a cross-chain basis

GOVERNANCE & CRITICAL MASS

Pythagore is a market-built initiative with broad representation across issuers, investors, dealers, custodians, and IPAs. The onboarded issuers already represent ~50% of the NEU CP market in terms of outstanding amount.

BENEFITS TRANSACTION PROCESSING ACCELERATION & EFFICIENCY

- Optimization of flows to reach operational efficiency and reduced processing workload
- Real time visibility on positions, flows, and program/outstanding aggregation; improved access to ESG and market data
- Fostering attractiveness/competitiveness of the NEU CP market and developing a secondary market

LIQUIDITY & MARKET ACCESS

- Pythagore as a strategic segment to deploy the Eurosystem's wCBDC starting in 2026
- Preservation of ECB eligibility; fungibility & reversibility to prevent liquidity fragmentation during transition

INNOVATION RUNWAY

- 24/7 availability windows, cross border capabilities and automated servicing (issuers/investors); foundation for collateral use

Learn more: euroclear.com

#60: HASHGRAPH

SYNTHETIC POOLED SECURITY TOKENS

While individual asset tokenization has gained traction, the market lacked infrastructure to create tokenized structured products that bundle multiple underlying assets into diversified, institutional-grade investment vehicles.

THE SOLUTION

In 2025, Archax launched its Pool Token functionality on the Hedera Network. This new functionality facilitates on-chain, multi-asset portfolio or basket creation by putting a range of already tokenized assets into a new token. The range of underlying asset types can be wholly diverse too, from equity, debt, funds, and cryptocurrencies allowing diverse investment strategies to be expressed in a single transferable token.

The first Pool Token minted on Hedera holds equal parts of money market funds from four leading asset managers: Aberdeen, BlackRock, State Street, and Legal & General—effectively creating a natively digital 'fund of money market funds.' This marks a milestone in the digital transformation of financial markets, offering institutional investors unprecedented flexibility in portfolio build and management.

The technology applications extend beyond money market funds to any asset with constituent parts that can be composed together, separated, or further pooled including—funds of funds, ETPs, indices, and structured investment products. This composability allows for financial engineering previously impossible in traditional markets.

This new Pool Token functionality has several benefits:

- **Instant Fund Creation:** By minting a token, which holds a range of diverse underlying asset types, each of which could be individually accessed or utilised
- **Instant Transfers & Composability:** Entire portfolios can be migrated across platforms in seconds without complex paperwork or transfer agents, eliminating traditional friction
- **Pool tokens as collateral:** Archax's Nest network is specifically designed to support the use of regulated digital assets as collateral between institutional counterparties, so can facilitate the same with pool tokens. This also enables near-instant settlement - reducing market friction
- **Structured products:** Combining low risk instruments like treasuries or money market funds with higher risk instruments such as cryptocurrencies

Learn more: hashgraph.com

#61: HEDERA & REDSWAN DIGITAL REAL ESTATE

BRINGING INSTITUTIONAL REAL ESTATE ON-CHAIN WITH HEDERA

Traditional commercial real estate investing suffers from high minimum investment thresholds, limited liquidity, cross-border complexity, and opaque processes. These barriers exclude individual investors and slow capital formation, particularly for international participants and property owners seeking faster liquidity.

THE SOLUTION

RedSwan is transforming commercial real estate investment by tokenizing institutional-grade properties on the Hedera network, enabling compliant, fractional ownership at global scale.

By converting high-value real estate assets into digital securities, RedSwan lowers traditional minimum investment thresholds—from millions of dollars to as little as $1,000, opening access to a broader base of accredited investors.

Each token represents fractional ownership in underlying income-generating properties, providing built-in diversification across geographies and asset classes. Built on Hedera Token Service (HTS), RedSwan's platform embeds compliance directly into the asset layer, including KYC/AML controls and transfer restrictions aligned with securities regulations. This ensures that tokenized real estate offerings meet regulatory requirements while enabling efficient digital issuance, management, and distribution.

RedSwan also contributed to the development of Hedera Asset Tokenization Studio, helping establish enterprise-ready standards for compliant tokenized securities.

Hedera's high throughput, rapid finality, and low, predictable fees make fractional real estate investing economically viable, eliminating the friction and cost barriers that typically hinder secondary market activity. Tokenization enhances liquidity by enabling peer-to-peer transfers and secondary trading opportunities, reducing reliance on lengthy property sale cycles for investor exits.

Through this model, RedSwan has tokenized more than $5 billion in commercial real estate assets and built a global investor base spanning the U.S., Africa, and the GCC. The result is a scalable, enterprise-grade infrastructure that democratizes access to institutional real estate, accelerates capital formation for property owners, and increases transparency and efficiency across the $75 trillion global CRE market.

Learn more: hedera.com

#62: IOBUILDERS

REIMAGINING INVESTMENT FUNDS FOR THE DIGITAL ERA

OPERATIONAL CHALLENGES IN UCITS

Fund Servicing and Distribution Undertakings for Collective Investment in Transferable Securities (UCITS) are regulated investment funds widely used across Europe, designed to provide diversification, investor protection, and cross-border distribution.

Despite their success, UCITS fund operations rely on fragmented infrastructures involving multiple intermediaries, including fund managers, depositaries, and distributors. This structure introduces operational inefficiencies, limited transparency over fund ownership, and reliance on reconciliation across systems. Subscription and redemption processes are typically governed by cut-off times and batch-based Net Asset Value (NAV) calculations, constraining flexibility and delaying execution. Investor eligibility and compliance checks are managed off-chain, increasing operational complexity and the risk of inconsistencies. In addition, settlement processes are not atomic, exposing participants to counterparty and timing risks.

DLT-ENABLED FUND LIFECYCLE MANAGEMENT AND ATOMIC SETTLEMENT

This use case demonstrates how UCITS fund units can be represented and managed on distributed ledger technology to support the end-to-end fund lifecycle, involving tier-1 financial institutions across fund management, depositary, and distribution roles.

Using Asseto for Fund Issuers, fund units are issued and maintained on-chain, enabling a synchronized and continuously updated register of holders. This on-chain registry provides a real-time view of fund ownership, reducing reconciliation requirements and improving transparency across participants.

The solution supports fund unit issuance with configurable compliance rules and investor eligibility criteria enforced through on-chain whitelisting. Subscription and redemption windows are configurable, allowing alignment with existing operational frameworks while enabling increased flexibility.

Lifecycle events, including NAV publication and investor distributions, are executed through smart contracts, ensuring consistency, traceability, and auditability. Settlement is conducted on a Delivery-versus-Payment (DvP) basis using tokenized cash, enabling T+0 atomic transactions between fund units and payment instruments. This reduces settlement risk and enhances operational efficiency.

While focused on UCITS, this approach is applicable to a broad range of fund structures, including alternative funds and other collective investment vehicles, providing a foundation for more scalable, transparent, and efficient fund operations in digital environments.

Learn more: io.builders

#63: KAIKO

REGULATED DATA AS THE BACKBONE FOR BRINGING CAPITAL MARKETS ON-CHAIN

It is no longer a speculation or point of inception that digital assets are expanding through tokenization, and capital markets want to be the key participants in this opportunity. 2026 stands as an inflection point in this transition. But there's still one missing piece keeping capital markets from truly operating on-chain at scale. What is it that institutions today require to deploy markets fully on-chain, and what constrains them? The solution is simple yet rooted in systems that meet the standards of traditional financial markets.

Like any other market, it is accurate, granular, and institutional-grade data. Data is a key market infrastructure element that enables and motivates capital markets to scale on-chain. Why do institutions not trust decentralized oracle models? Because they were simply designed for crypto-native applications and lack the accountability and institutional controls required for large-scale financial contracts institutions demand in order to scale.

KAIKO'S ON-RAMP DATA SOLUTIONS

For over 10 years, Kaiko has been the independent, regulated data provider that institutions rely on in the digital assets markets. Our BMR-compliant rates already power the largest perpetual futures markets globally, but the opportunities ahead go beyond crypto.

Rather than retrofitting transparency onto existing on-chain oracle solutions, we built something different from the ground up—a licensed oracle system where every data point can be traced directly back to its source, where methodologies are documented and auditable, and where institutional compliance isn't an afterthought, but a foundational design principle.

This oracle from Kaiko is known as Data On-Ramp.

As traditional finance firms accelerate their adoption of distributed ledger technology (DLT), Kaiko's request-response oracle launched with both Kaiko Reference Rates and third-party data, including Bloomberg.

Covering a range of asset classes beyond crypto, the oracle provides the trusted data backbone that on-chain capital markets need to scale beyond proof of concept.

HOW KAIKO HELPS INSTITUTIONS MOVE ON-CHAIN

Kaiko and Kinetiq pioneered 24/7 global on-chain perpetual markets, powered by Kaiko's HIP-3 oracle infrastructure. Kinetiq's perpetual futures platform, Markets, leverages Kaiko's oracle infrastructure and regulated rates, enabling continuous 24/7 on-chain trading of global capital markets. Another example of Kaiko's institutional-centric data can be highlighted through our collaboration with Bloomberg. This collaboration uses Kaiko's Data On-Ramp service to securely write off-chain market data on-chain while maintaining IP ownership, licensing compliance, and auditability. Entitlement controls are designed to ensure only licensed participants can access Bloomberg data, consistent with traditional data licensing frameworks.

This speaks volumes about the trust and reliability institutions have in Kaiko's granular data to navigate on-chain finance.

#64: LABUAN IBFC

TOKENIZING SOVEREIGN-BACKED ISLAMIC SECURITIES AS A MEANS OF DEMOCRATIZING ACCESS TO INSTITUTIONAL SUKUK

Islamic finance is a USD 4.5 trillion global industry, yet its most critical institutional instruments remain locked behind high minimum investments, opaque OTC markets, and fragmented infrastructure.

Under Basel III frameworks, banks must hold High-Quality Liquid Assets (HQLA)—instruments readily convertible to cash during financial stress. For conventional banks, the solution is straightforward: US Treasury bills are highly liquid, easily accessible, and available in standardized denominations.

Islamic banks face a fundamentally different constraint. Interest-bearing instruments are impermissible under Shariah law due to the prohibition of riba (interest). Islamic financial institutions must satisfy identical regulatory capital requirements as conventional counterparts, but are excluded from the most common instruments used to meet them.

The International Islamic Liquidity Management Corporation (IILM) sukuk program was designed to address this gap. Established with the backing of eight central banks and the Islamic Development Bank, the IILM issues short-term Shariah-compliant securities carrying an S&P A-1 rating—the highest short-term issue rating available. In 2025, USD 3.8 billion in IILM sukuk traded on the secondary market.

Yet, despite their exceptional credit quality and regulatory utility, IILM sukuk have remained almost entirely inaccessible to smaller Islamic banks, non-bank financial institutions, and the broader Islamic investment community. Trading occurs over-the-counter between major institutions, with high minimum denominations and no transparent price discovery. The instruments designed to strengthen the Islamic financial system were, paradoxically, available only to those who needed them least.

SOLUTION

By tokenizing sovereign-backed sukuk issued by the IILM, Fusang, Asia's first regulated digital securities exchange operating in Labuan IBFC—Malaysia's international business and financial center—under the purview of the Labuan Financial Services Authority, created the world's first regulated digital securities platform for institutional Islamic instruments—reducing minimum investments from millions of dollars to just USD 100, while maintaining full regulatory compliance, Shariah certification, and institutional-grade credit quality.

Fusang developed a proprietary structure—the Fusang Depository Receipt (FDR)—to tokenize IILM sukuk as ERC-20-compliant digital securities. Each FDR is fully backed by the underlying sukuk, secured through independent third-party custodians, and redeemable for the original instrument. The structure preserves the credit quality and Shariah compliance of the underlying asset while fundamentally transforming its accessibility.

Key features of the tokenized IILM sukuk program include:

- USD 100 minimum investment—reducing the entry point from institutional-scale minimums to a level accessible to smaller banks, corporates, and qualified investors
- 1-month tenor—aligned with short-term liquidity management needs 24/7 trading—eliminating the constraints of traditional market hours and enabling global participation across time zones
- Shariah certification—independently certified by ZICO Shariah Advisory Services under AAOIFI standards
- ERC-20 compliance—leveraging blockchain infrastructure for transparent, immutable record-keeping and automated settlement

KEY OUTCOMES

Since launch, the program has demonstrated both market demand and operational resilience:

- 29 tokenized sukuk instruments issued
- USD 458 million in total issuance value
- 4.76% average profit rate
- IFN Most Innovative Deal 2023—awarded by Islamic Finance News
- Regulatory capital deployment—Fusang group companies have deployed tokenized sukuk as HQLA for their own regulatory capital requirements

The program has proven that tokenization can deliver institutional-grade financial instruments through digital infrastructure without compromising credit quality, regulatory compliance, or Shariah integrity.

Learn more: labuanibfc.com

#65: MOODY'S RATINGS

DIGITAL FINANCE LINKS DIVERSE MARKET SEGMENTS, RAISING EFFICIENCY AND RISKS

Convergence, meaning the breaking down of traditional boundaries in credit and finance as technology, capital, and risk increasingly intersect, is one of the most consequential forces redefining financial services today. What once operated in silos now interacts within a complex, interconnected financial ecosystem.

Consider banking, private credit, insurance and capital markets. These previously distinct sectors now overlap in significant ways: they lend to many of the same borrowers, rely on shared digital infrastructure—including cloud-based risk, data, and analytics platforms—and increasingly pursue similar investment strategies.

Private lenders compete with banks, insurers invest alongside asset managers, and public and private capital now fund many of the same assets. Markets are at an inflection point. Convergence is reshaping how the financial system grows, how risk propagates, and where opportunity emerges. Capital moves faster, innovation scales more quickly, and new sources of funding are opening growth across sectors.

However, greater interconnection also brings greater complexity. Shocks in one area can ripple and compound across the system—making it more important than ever to understand how these markets are linked.

At the heart of this transformation is digital infrastructure; the shared systems that allow financial markets to operate at scale, including cloud platforms, data centers, data networks, and blockchain-based technologies.

Take blockchain for example. It has the potential to become part of the core digital infrastructure underpinning financial markets.

Institutions are increasingly using it to coordinate activity, maintain secure records, and enable trusted information to move smoothly across counterparties. Building on this vision, Moody's Ratings has unveiled two industry-first initiatives that could redefine how risk is assessed and managed in the digital age.

BRINGING CREDIT INSIGHTS ON-CHAIN

For the first time in the history of credit markets, we have the capability to make independent credit analysis now available on-chain. Moody's Ratings has developed the Token Integration Engine™ (TIE), a network-agnostic integration layer that ingests analytical data and delivers credit ratings directly into digital market workflows. TIE is live on the Canton Network as an inaugural platform, where Moody's Ratings became the first credit rating agency to operate a node on an institutional grade blockchain built for global finance.

TIE serves as the foundational integration layer, utilizing its node infrastructure to enhance transparency and operational efficiency in the digital finance ecosystem. Participation will be issuer-led, supporting market alignment while preserving the integrity, control, and central role of Moody's Ratings across digitized global capital markets. As financial activity moves onto shared digital infrastructure, Moody's is moving with it; delivering insights where capital is increasingly being deployed and settled, not outside of them.

READY TO RATE STABLECOINS

As stablecoins move closer to the core of financial infrastructure, the demand for credible, independent credit insight is growing. Moody's Ratings took a major step forward, becoming the first credit rating agency with a defined analytical framework to assess stablecoins.

This dual capability matters. Analytical expertise without the ability to deliver ratings within modern digital systems leaves markets underserved. Technology without rigorous analysis offers little value.

Moody's Ratings brings both, delivering the market's first true credit ratings on stablecoins, grounded in credit fundamentals and designed to build clarity and confidence as the market and regulation evolve globally.

A key element of the methodology is an analysis of the credit quality of the pool of reserves backing a stablecoin. In this analysis, we evaluate each eligible type of asset in the pool individually and collectively.

Moody's Ratings addresses market value considerations by estimating the market value risk of each eligible reserve asset backing a stablecoin, depending on asset type and maturity. They also make analytical adjustments based on a stablecoin's operational risk, liquidity risk, technology risk and other considerations, as part of our analysis to arrive at the assigned rating.

#66: STARKWARE

STABLECOIN SETTLEMENT FOR CROSS-BORDER B2B PAYMENTS IN SUB-SAHARAN AFRICA

Cross-border B2B payments in Sub-Saharan Africa are expensive and slow. Fees average roughly 3% of transaction value, nearly double the 1.6% global average, and settlement through correspondent banking takes three to five business days. Instant payment systems are growing within individual countries (36 are live across the continent), but only a handful supported cross-border transactions by the end of 2025.

The economics are particularly punishing for payment companies trying to build new corridors. Traditional rails require pre-funding nostro and vostro accounts in every market they serve. Smaller corridors, where volume cannot justify the liquidity cost, often just do not get built. Starknet, a zero-knowledge rollup (ZK-rollup) that scales Ethereum, is the settlement platform for a growing number of payment companies working to fix this.

STARKNET AS SETTLEMENT LAYER

StarkWare, the company behind Starknet, works with multiple African payment teams to move their cross-border B2B flows on-chain. Stablecoin transfers settle on Starknet for less than a tenth of a cent per transaction, with throughput above 3,000 transfers per second and finality inherited from Ethereum. Beyond settlement, Starknet acts as a connectivity layer, helping payment teams find the ecosystem partners they need (on/off-ramps, stablecoin issuers, compliance providers) to stand up new corridors.

PRIVACY AND COMPLIANCE

Public blockchains make every transaction visible, which is a problem when businesses do not want competitors seeing their trade volumes or supplier terms. Permissioned networks solve the visibility problem but cut off access to on-chain liquidity. Starknet's ZK architecture offers a different model.

Transaction data is not publicly visible on-chain by default, but can be disclosed by companies to regulators or third-party auditors when needed. Starknet is the only live, permissionless blockchain with this level of built-in compliance infrastructure.

PARTNERS

As a prime example, Inflow Pay is one of the payment companies building on Starknet. They operate as a global payment processor with coverage across Africa, the Middle East, Asia, Europe, and the Americas, handling the kind of cross-border flows that benefit most from blockchain settlement. Inflow Pay reports economics 53% cheaper on average than competing processors, with near-instant settlement and self-custody infrastructure that keeps funds accessible 24/7. Looking ahead, StarkWare is focused on expanding the set of payment providers on the network. As stablecoin settlement matures from early-adopter technology into standard payments infrastructure, the requirements are clear: sub-cent transaction costs, built-in privacy, and regulatory compliance on a public chain.

Learn more: starkware.co and starknet.io

#67: TABIT INSURANCE

FROM IDLE BITCOIN TO PRODUCTIVE CAPITAL

Large holders of crypto (especially Bitcoin) often keep substantial balances idle in treasury or custody accounts. These positions are typically held for the long term, yet they generate no income while leaving holders exposed to price volatility and opportunity cost. Traditional crypto yield options, such as lending platforms and options strategies, introduce new risks. They can weaken in stressed markets, add counterparty and rehypothecation risks, and can be difficult to unwind during periods of high volatility.

At the same time, the global insurance and reinsurance sector needs fresh risk capital to support growing exposures from natural catastrophes, geopolitical instability, and emerging risks. Yet there is still no widely adopted, regulated mechanism that connects these two needs by allowing crypto holders to retain ownership, avoid rehypothecation, and earn income linked to real-world economic activity.

THE SOLUTION

Tabit Insurance was set up to solve this problem. Tabit dollarizes digital assets into regulated collateral and capital, unlocking reinsurance capacity for Web3 risks and allowing BTC holders to generate USD yield on otherwise idle tokens without selling, lending or rehypothecating their assets.

Instead of placing Bitcoin into yield products correlated with crypto markets, a holder allocates it to a regulated insurance vehicle that supports property and casualty portfolios, life insurance exposures, etc.—none of which are correlated to crypto or capital markets. The underlying exposures are driven by insurable losses, rather than crypto price movements, creating an income stream driven by factors largely distinct from Bitcoin's market cycles.

In practice, the Bitcoin remains on the balance sheet of the capital provider, subject to the legal and collateral requirements of the structure, and is used to support reinsurance obligations. The provider earns a share of premiums, and potentially underwriting profit, in dollars, while maintaining ownership and avoiding rehypothecation or leveraged financial engineering.

Risk is priced using actuarial models, regulatory requirements, and conservative stress scenarios, rather than short-term market sentiment or implied volatility in crypto options markets. For large crypto holders, whether corporates, funds, or high-net-worth individuals, this approach offers a way to convert idle holdings into productive capital in a mature, regulated sector. It demonstrates how blockchain-native assets can support one of the world's oldest financial systems—reinsurance—and opens a path for Bitcoin and other crypto assets to back real-world risk transfer while preserving long-term exposure to the underlying tokens.

SECTION VI

FINANCE

A. ILLICIT FINANCE

#68: CHAINALYSIS

PROACTIVE DETECTION AND DISRUPTION OF CRYPTO SCAMS USING BLOCKCHAIN INTELLIGENCE

Crypto scams are now industrialized. According to Chainalysis data, scammers stole around $17 billion in 2025 alone, driven in part by a roughly 1,400% year-over-year growth in impersonation scams that increasingly use AI-generated content and deepfakes to build credibility. Off-the-shelf phishing-as-a-service tools, scripted social-engineering playbooks, and bulk messaging infrastructure enable these operations to reach victims globally, long before any complaint is filed. Once funds are scammed from victims, money laundering networks rapidly fragment and move them through thousands of wallets. These scams bring heavy costs for banks, payment processors, and crypto exchanges—not just financially, but reputationally with customers and partner institutions. They also create significant operational strain, as handling victim complaints is resource-intensive, and controls that rely on reports or manual reviews are simply too slow to stop these complex, cross-border flows.

TOOLS TO COMBAT SCAM PAYMENTS

Chainalysis Alterya: Scam detection at inception. Chainalysis Alterya bridges crypto and fiat environments and leverages advanced AI to proactively detect and prevent complex fraudulent activities in real time. It provides risk scores to transactions and counterparties, identifying the signatures of impersonation scams, pig-butchering operations, and other industrial-scale fraud typologies.

Alterya's unique dataset creates a unified view of fraud activity, making it faster and easier to stop authorized push-payment scams. Alterya monitors nearly $70 billion in monthly transactions for over 500 million consumers across exchanges, fintechs, banks, and payment processors.

When transactions are flagged as confirmed or likely scam flows, platforms can halt payment transfers, apply step-up verification, or reroute cases for rapid review, preventing funds from reaching scammers and empowering organizations to implement real-time fraud prevention.

Chainalysis Data Solutions: Network-level disruption of laundering infrastructure. Even with improved prevention, some large-scale scams still send funds into money laundering networks. Data Solutions provides automated threat intelligence on these networks which public and private sector organizations can use to identify scam clusters linked to high-priority laundering services, target seizures, sanctions designations, or account freezes at key choke points, and share intelligence with partners and law enforcement.

Together, Alterya and Data Solutions support a proactive model for systematic prevention of scam payments and targeted disruption of laundering infrastructure at scale.

Learn more: chainalysis.com

#69: GLOBAL LEDGER

BLOCKCHAIN ANALYTICS FOR INVESTIGATING AND TRACING HACKS

More than USD 4 billion was lost to crypto hacks in 2025. In 2025, crypto security breaches reached a devastating peak with $4.04 billion stolen across 255 incidents: a 2.1x increase over 2024. In the second half of 2025, the speed of the first illicit fund movement doubled compared to the first half of the same year, with some fund transfers even occurring just two seconds after a breach.

Consequently, 76% of stolen funds are now moved before public disclosure occurs. While the industry narrowed the average disclosure gap from 23 hours to 11 hours, this remains insufficient against near-instant on-chain fund movements. Furthermore, the lifting of sanctions on Tornado Cash in March 2025 was followed by this platform's dominance in 74.3% of mixer uses in illicit activity, removing automatic compliance triggers at centralized exchanges.

Mixer usage increased sharply in H2 of 2025. Its share rose from 42.9% of cases in H1 to 74.3% in H2—a 31.4 percentage-point increase. After sanctions in March 2025, the mixer became more accessible again, which resulted in its wider use, including in laundering activity.
With only 6.52% of total losses returned to victims in 2025, the industry faces an environment where the speed of theft significantly outpaces existing recovery and compliance protocols, especially those designed for traditional finance.

THE SOLUTION

Global Ledger addresses this velocity gap by transforming blockchain analytics from a retrospective forensic tool into a proactive prevention engine. The solution centers on three core pillars: **AutoTrace**, **Behavioral Risk Scoring**, and **Court-Admissible Evidence**.

While attackers move funds in seconds, the subsequent laundering process, which in 2025 involved 99% of multi-hop transfers across wallet addresses (to create confusion and hinder traceability), is actually slowing down by 25%. Global Ledger's AutoTrace functionality leverages this window by automatically following "tainted" assets from the moment of an incident, across all fund transfers, and up until the final wallet destination where the fund are deposited. Instead of manual graph analysis, the system monitors thousands of hops in real-time, providing instant alerts via API, Slack, or Telegram the moment stolen funds interact with a known service or centralized exchange.

To combat the $1.97 billion in unspent stolen assets obtained by bad actors in 2025, the platform uses a Know Your Transaction (KYT) solution with a 500 millisecond processing speed. This allows exchanges to identify a high-risk "source of funds" as soon as a transaction hits the block, enabling them to freeze assets before they can be laundered through mixers. For cases involving Tornado Cash, Global Ledger provides heuristic demixing and cross-chain tracing to uncover hidden paths that standard explorers miss.

Finally, to improve the 2025 recovery rate, the Global Ledger solution generates court-ready integrity statements. These reports provide verifiable attribution and a documented chain of custody, transforming raw blockchain data into a legal narrative. This enables victims and law enforcement to quickly provide exchanges with the "verifiable proof" required to legally justify asset freezes, effectively targeting the $384M in potentially recoverable funds currently held in limbo.

Learn more: globalledger.io

#70: RECOVERIS

INCIDENT RESPONSE AND AFTERCARE PROTOCOL WHEN DIGITAL ASSETS BECOME COMPROMISED

As digital assets like stablecoins and tokenized instruments move into the financial mainstream, a critical gap has emerged: banks, VASPs, and Law Enforcement Agencies (LEAs) lack the specialized expertise to manage compromises effectively. While the value exchanged on-chain grows, traditional IR playbooks are failing against the speed of blockchain theft. Institutions face a "knowledge vacuum" regarding forensic tools and rapid triage, leaving support teams overwhelmed during the critical "Golden Hour" of an incident. This creates massive regulatory exposure; under frameworks like DORA, firms face heavy fines if they cannot demonstrate operational resilience and maximum effort in customer protection.

For jurisdictions, the inability to secure these assets undermines international competitiveness. Building these complex capabilities in-house is cost-prohibitive and distracts from core operations, creating an urgent need for an externalized, expert-led response and aftercare solution.

SOLUTION

The Incident Response and Aftercare (IRA) protocol provides a specialized, AI-augmented framework designed for banks, VASPs, and Law Enforcement Agencies (LEAs). Based on cross-sector experience, these elements are essential to scale operations and provide a response where time is of the essence to increase the likelihood of asset freezing and recovery.

HIGH-VELOCITY METHODOLOGY

The protocol operates as an integrated workflow designed to eliminate the human and technical bottlenecks that typically hinder recovery:

- **24/7 AI-Augmented Intake & Triage:** An intelligent system provides immediate, specialized data collection—it guides victims through essential evidence gathering and validates forensic markers instantly—this ensures that whether a report originates at a bank help desk or a police precinct, critical data is captured before the "Golden Hour" expires
- **Rapid Asset Tracing & Collaborative Blacklisting:** Once the trail is mapped, the protocol facilitates the immediate dissemination of forensic data to a global network of over 150 exchanges and industry consortia—this synchronized speed is the only effective defense against automated "chain-hopping" and the rapid cashing out of stolen funds
- **Standardized, Legally Actionable Reporting:** The protocol generates vendor-neutral forensic reports that meet international evidentiary standards—these provide LEAs with the precise technical data required for judicial intervention and ensure financial institutions meet DORA and MiCA-mandated incident reporting requirements

Learn more: recoveris.io

#71: TOKEN RECOVERY

INVESTIGATING AND RECOVERING STOLEN DIGITAL ASSETS

The rapid growth of digital assets has created new opportunities for financial innovation but has also enabled a rise in fraud, hacks, and misappropriation of funds. When digital assets are stolen, victims—including individuals, institutions, and businesses—often struggle to identify where the funds have moved or who controls them. Although blockchain transactions are publicly recorded, their interpretation requires specialized expertise. Stolen assets can be rapidly routed through multiple wallets, obfuscation protocols, bridged across different blockchain networks, and exchanges often spanning multiple jurisdictions.

As a result, law enforcement agencies, legal teams, and asset service providers may face challenges tracing transactions, attributing wallet activity to real-world actors, and producing evidence suitable for legal proceedings. These limitations can delay investigations and make recovery of stolen assets significantly more difficult.

RECOVERY OF $1.5 MILLION IN DIGITAL ASSETS WITHIN 18 DAYS

In one investigation, a digital asset trading firm discovered that approximately $1.5 million in stablecoins had been transferred from its accounts without authorization. Initially, the organization had limited visibility into how the assets were removed or where they had been sent. Blockchain forensic analysis, provided by Token Recovery, was used to reconstruct the movement of the funds across the public ledger. Investigators mapped the transaction flow and identified that the assets had been consolidated into a single wallet address rather than immediately dispersed across multiple services. This pattern indicated an opportunity for timely intervention. The investigation combined blockchain tracing techniques with off-chain intelligence sources, including internal transaction records and system activity data.

Through transaction graph analysis and wallet clustering methodologies, investigators were able to identify connections between wallet addresses and detect patterns associated with unauthorized access and asset misappropriation.

The findings enabled legal teams to pursue urgent legal measures, including asset-freezing actions and evidence preservation orders. These steps, supported by the forensic tracing analysis, allowed the affected organization to act before the funds could be further distributed across exchanges or additional blockchain networks. Coordinated action between investigators, legal counsel, and relevant service providers ultimately resulted in the return of the stolen assets to the organization within 18 days.

This case illustrates how blockchain transparency, combined with forensic analysis and legal coordination, can support timely investigations and improve recovery outcomes in cases involving digital asset fraud or unauthorized transfers.

Learn more: tokenrecovery.com

#72: VERIFYVASP

BUILDING A COMPLIANT AND RESPONSIBLE WEB3 ECOSYSTEM

FINANCE: COMPLIANCE

The Financial Action Task Force (FATF) Recommendation 16 (or "Travel Rule") seeks to prevent terrorists, perpetrators of money laundering and associated predicate offenses (e.g., fraud), and other criminals from having unfettered access to wire payments or value transfers to move their funds. For Virtual Assets, the rule requires Virtual Asset Service Providers (VASPs) to collect and transmit originator and beneficiary information **immediately** and **securely** with qualifying virtual asset transfers.

However, implementation has been slow and fragmented, leading to what is described as "the sunrise issue." This has led to illicit actors exploiting Virtual Assets as an instrument to perpetuate their operations.

Without a secure, effective, and decentralized protocol, firms face a choice between high operational friction, fragmented or non-compliance, or the loss of sensitive client data.

This creates a systemic barrier to institutional adoption and leaves the industry vulnerable to regulatory enforcement and sophisticated financial crime.

THE SOLUTION

VerifyVASP is an industry-proven decentralized messaging protocol for Travel Rule compliance, supported by regulated VASPs worldwide. It provides comprehensive Travel Rule solutions, including counterparty due diligence support, immediate and secure API-based messaging for counterparty and beneficiary verification, while ensuring personal data protection requirements.

Global licensing and registration of VASPs has accelerated as regulators work to build a compliant and responsible Web3 ecosystem, expanding AML/CFT and sanctions expectations in parallel with digital-asset adoption.

Against this backdrop, VerifyVASP has demonstrated that the FATF's Recommendation 16 ("Travel Rule") can be operationalized at scale and across borders. To date, VerifyVASP has successfully processed approximately 23 million Travel Rule transactions, representing more than US$500 billion in value, while maintaining an industry-leading verification-success rate in near-real time. Its network now connects VASPs and financial institutions across more than 30 jurisdictions.

This (FATF's) objectives-based model has resulted in the collation of high-quality verified data for both counterparty VASPs at a legal-entity and transactional level. When implemented optimally, this has resulted in near elimination of certain fraud typologies, e.g., impersonation scams, and in other cases has facilitated more effective asset tracing and recovery efforts.

Building on this data and our commitment to a whole-of-system approach to combating fraud, VerifyVASP has developed and offered a non-commercial AI-based solution that assists law enforcement in asset tracing, criminal investigations, and has received very positive feedback from initial pilot users.

VerifyVASP remains deeply engaged in public-private partnerships with regulators and law enforcement agencies, and continues to run Travel Rule working groups across several continents. The company actively participates in regulatory consultations and provides thought leadership in public and private forums to align technical implementation with evolving policy goals.

BENEFITS TO VASPS

VerifyVASP's objective-based approach to Travel Rule compliance is industry-proven and has been independently audited to align with FATF standards and industry frameworks such as SOC 2. By focusing on the underlying regulatory objective—ensuring that accurate originator and beneficiary information accompanies value transfers—it enables VASPs to implement compliant, risk-sensitive workflows rather than rigid, one-size-fits-all rules.

Learn more: verifyvasp.com

SECTION VI

FINANCE

B. STABLECOINS

#73: GK8 BY GALAXY

ALLUNITY'S EURAU EURO STABLECOIN POWERED BY GK8 INFRASTRUCTURE

Regulated financial institutions and corporates want to issue and use euro-denominated stablecoins, but they face strict requirements around security, operational control, and compliance. They must protect private keys against sophisticated cyberattacks, manage complex token lifecycles across multiple public blockchains, and align with evolving regulations such as MiCAR, often across several banking partners and jurisdictions. Traditional custody and payment infrastructures are not designed for always-on, on-chain settlements, while many crypto-native tools do not meet institutional standards for governance, auditability, and risk management. Institutions, therefore, need a secure tokenization and custody platform that can support fully reserved euro stablecoins end-to-end, from reserve funding and token issuance to ongoing operations and scale.

THE SOLUTION

GK8 by Galaxy provides the technological backbone that enables regulated euro-denominated stablecoins such as AllUnity's EURAU to be issued and operated securely at scale. GK8's Tokenization Wizard is an institutional-grade platform for tokenization and custody that supports the full lifecycle of digital assets across major public permissionless Layer 1 and Layer 2 blockchains. It provides a robust framework for securely digitizing real-world assets, configuring token parameters, and managing minting, burning, and governance within policy-driven workflows aligned with institutional and regulatory requirements.

The Tokenization Wizard is built on GK8's technological infrastructure for "everything-blockchain." At its core is the patented Impenetrable Vault, which stores digital assets with encrypted one-way communication and zero digital input, keeping signing devices isolated from the internet and minimizing the risk of cyberattacks and unauthorized access. On the online layer, GK8's unlimited MPC (uMPC) technology distributes signing power across multiple parties and devices, enhancing the security of digital-asset transactions and helping ensure that sensitive information remains protected even in the event of a breach.

In the AllUnity use case, this infrastructure underpins the issuance and management of a fully reserved, MiCAR-compliant euro stablecoin backed 1:1 by euro reserves held with European banks. GK8's platform enables AllUnity to operate EURAU across selected public blockchains, safeguard keys, and manage token operations while supporting secure on-chain settlements for institutional, corporate, and private users. The same model can be applied by other regulated issuers seeking to bring fully collateralized fiat-backed stablecoins and tokenized assets on-chain, demonstrating how GK8's Tokenization Wizard, Impenetrable Vault, and uMPC bridge traditional finance and the digital asset economy with security, scalability, and regulatory alignment.

Learn more: allunity.com

#74: NOTABENE

NOTABENE FLOW: INSTITUTIONAL-GRADE GLOBAL B2B STABLECOIN PAYMENT FLOWS

Cross-border business payments remain slow, costly, and operationally complex. Wire transfers can take 2–7 days and carry high fees that erode margins, with manual reconciliation adding further overhead. Stablecoins offer a compelling alternative with near-instant settlement, low cost, and programmable logic, but two structural barriers prevent institutional adoption.

The first is operational and compliance-related: every stablecoin payment requires the recipient's blockchain wallet address, but there is no standardized way to verify that an address belongs to the intended recipient or that a regulated institution stands behind it. The second is regulatory: because blockchain transactions are irreversible, there is no native mechanism for institutional accountability to attach to a payment before it settles. Without confirming who controls a receiving wallet and which regulated institution stands behind them, financial institutions cannot satisfy Travel Rule requirements—regulations that mandate the exchange of originator and beneficiary information for transfers above threshold amounts.

This authorization gap has prevented stablecoins from functioning as practical payment infrastructure for regulated institutions and the businesses they serve.

SOLUTION

Notabene Flow addresses both barriers through a pre-authorization layer that establishes institutional accountability on both sides of a payment before any funds move on-chain.

Using an innovative addressless payment link, a business initiates a payment using only the recipient's email address or business identifier—no wallet address is required.

The recipient opens a secure link, selects their preferred wallet or custodial account, and confirms. What happens next is made possible only through the power and size of the Notabene network, the largest network of regulated financial institutions in the world: the two counterparties behind each transaction are connected through the network, with the originating institution confirming that it stands behind the payer and the beneficiary institution confirming it stands behind the recipient. Travel Rule data is securely exchanged directly between counterparties, securely encrypted peer-to-peer. Only when pre-transaction conditions are met is the payment authorized to move and compliantly settle on-chain.

This means every payment carries a complete institutional accountability record before it is irreversible. The compliance layer is embedded in the authorization process, not bolted on after the fact.

The model supports three primary payment flows: pull payments (for B2B invoicing flows), recurring subscription-based or metered payments drawn on a scheduled basis, and basic push payments initiated directly by a payer.

For financial institutions, this architecture enables trusted and operationally efficient stablecoin payment products without building compliance infrastructure from scratch. For regulators, it provides a framework in which a licensed institution is accountable on each side of every transaction, mirroring the responsibility model of correspondent banking but applied to programmable settlement.

Learn more: notabene.id

SECTION VI

FINANCE

C. TOKENIZATION

#75: DTCC

DTCC APPCHAIN: TOKENIZED REAL-TIME COLLATERAL MANAGEMENT

Collateral management in financial markets remains fragmented, slow, and operationally complex. Institutions must move collateral across custodians, clearinghouses, and jurisdictions, often relying on batch-based processes and siloed systems. This creates delays in mobilizing collateral, limits intraday liquidity, and increases operational and counterparty risk. As markets become more volatile and margin requirements more dynamic, the inability to allocate and reallocate collateral in real time constrains capital efficiency. Existing infrastructure also lacks interoperability across tokenized and traditional assets, making it difficult to integrate emerging digital asset markets into established post-trade workflows. A more unified, programmable infrastructure is needed to enable real-time, cross-asset collateral mobility while maintaining regulatory controls and institutional trust.

THE SOLUTION

DTCC's AppChain is a blockchain-based platform for tokenized, real-time collateral management, built on Besu. It provides a shared, programmable infrastructure that enables financial institutions to represent, allocate, and mobilize collateral assets across participants with near real-time settlement. The platform tokenizes eligible collateral positions, allowing them to be transferred and pledged across counterparties on a permissioned network. Smart contract logic enforces eligibility rules, margin requirements, and settlement conditions, enabling automated and atomic collateral movements. This reduces reliance on manual processes and minimizes delays associated with traditional post-trade infrastructure.

AppChain integrates with existing DTCC services and institutional systems, supporting interoperability between traditional securities and tokenized assets. By operating as a shared ledger across participants, it provides a synchronized view of collateral positions, improving transparency while maintaining privacy through permissioned access controls.

The system supports intraday collateral mobility, enabling institutions to respond dynamically to margin calls and market conditions. This reduces the need for excess collateral buffers and improves capital efficiency.

At the same time, embedded controls ensure compliance with regulatory and risk management requirements. By introducing a programmable settlement layer for collateral, AppChain addresses key inefficiencies in post-trade processes and establishes a foundation for integrating tokenized assets into institutional financial infrastructure. It also provides a pathway for broader interoperability with digital asset ecosystems, including future integration with tokenized securities and central bank digital currency (CBDC) initiatives.

Learn more: dtcc.com

#76: EVERGON LABS

SOVEREIGN WHITELABEL TOKENIZATION MARKETPLACE WITH PROGRAMMABLE COMPLIANCE ACROSS THE ASSET LIFECYCLE

Financial institutions and asset issuers face significant barriers when bringing RWAs on-chain. Existing tokenization platforms are often closed ecosystems, creating vendor lock-in, limiting interoperability across markets and service providers, and restricting control over infrastructure and data. This raises data sovereignty concerns, particularly in regulated environments where institutions must retain control over sensitive financial and investor information.

Furthermore, building compliant end-to-end infrastructure in-house is complex, requiring capabilities across structuring, issuance, onboarding, distribution, trading, and lifecycle management. At the same time, compliance remains fragmented and reactive and is conducted off-chain after transactions occur, which increases regulatory risk and operational costs. As a result, institutions struggle to scale tokenized markets in a compliant, interoperable, and regulation-aligned manner.

THE SOLUTION

Evergon provides a solution that enables institutions to design, launch, and operate compliant tokenized asset markets across the full lifecycle of a financial product without relying on closed ecosystems. At its core, Evergon is a whitelabel and sovereign infrastructure, allowing institutions to deploy their own tokenization marketplace with full control over data, workflows, and user experience.

Unlike vertically integrated platforms, this model preserves data sovereignty and enables institutions to operate within their own internal framework, while remaining interoperable across service providers and blockchain networks.

The platform is built around end-to-end lifecycle management, supporting asset structuring, issuance, primary distribution, secondary transfers, and ongoing lifecycle events such as yield distribution, corporate actions, and redemptions. This ensures that tokenized assets are not treated as one-off issuances, but as fully managed financial products operating over time.

A key differentiator is programmable compliance embedded directly into transaction settlement. Compliance requirements, including identity verification, investor eligibility, jurisdictional restrictions, and transaction limits, are encoded into on-chain rules that must be fulfilled before any transaction can execute.

By integrating identity verification, risk scoring, transaction monitoring, and policy orchestration into a unified framework, Evergon ensures that compliance is consistently enforced across all lifecycle stages, from issuance through secondary market activity and redemption. By combining lifecycle infrastructure, sovereign deployment, and programmable compliance, Evergon enables financial institutions to build scalable, interoperable, and regulation-ready tokenized markets aligned with institutional-grade standards.

Learn more: evergonlabs.com

#77: HQLA[X]

REDEFINING COLLATERAL MOBILITY

Global banks and institutional market participants continue to face persistent inefficiencies in collateral management. Fragmented custody networks, imprecise settlement timing, and the need to maintain excess collateral buffers all constrain firms' ability to mobilise high-quality assets when and where they are needed.

The resulting "spaghetti mess" of cross-custodian securities movements consumes scarce intraday liquidity, increases operational and settlement risk, and drives significant cost. For Tier 1 institutions, these inefficiencies can amount to **€50–100m per year**. As collateral obligations expand across repo, securities lending, and margin, the impact directly erodes liquidity efficiency, risk management effectiveness, and profitability.

THE SOLUTION

HQLA[X] is a financial technology firm that leverages Distributed Ledger Technology to unlock efficiencies across the global securities finance and repo markets.

The platform enables banks and asset managers to achieve frictionless, precise, real-time collateral mobility without requiring the physical movement of securities between custodians or triparty agents. By decoupling ownership transfer from physical settlement, HQLA[X] eliminates unnecessary friction while preserving full control, legal certainty, and regulatory compliance.

HQLA[X] operates as a digital registry of collateral ownership, acting as a golden source of truth that allows firms to transfer collateral exactly when required, at a precisely defined moment in time, including outside traditional market cut-offs.

How It Works: Participants continue to hold securities at their preferred custodians or triparty agents and those assets are represented on the HQLA[X] platform at ISIN or basket level, with ownership recorded digitally on the ledger.

When a collateral obligation is agreed—whether for securities lending, margin, or repo—the corresponding ownership transfers are executed simultaneously on-ledger. No physical settlement movement occurs at the custodian or CSD layer, removing friction whilst maintaining legal certainty.

Core Use Cases:

- **DvD Securities Lending** facilitates the instantaneous exchange of ISINs versus triparty baskets for collateral upgrades or stock loan borrows
- **Margin Management** sees the delivery of non-cash collateral to meet OTC and CCP variation and initial margin requirements
- **DvP Repo** supports conditional settlement across two ledgers with collateral on the HQLA[X] platform and cash on an external cash ledger
- **DCR Longbox** results in the movement of assets into and between triparty agents without cross-custodian settlement
- **Canton interoperability** enables atomic settlement across native applications where collateral, cash, and contractual obligations settle, without sacrificing privacy, control, or regulatory boundaries

Real-World Impact: Clients experience faster, more resilient settlement of non-cash collateral, executed precisely when required and with zero credit exposure. This increases inventory optimisation opportunities while materially reducing intraday liquidity consumption, settlement fails, operational drag and excess HQLA[X] buffers.

Why It Matters: HQLA[X] is not about replacing market infrastructure—it enhances it. By redefining how collateral ownership is transferred, HQLA[X] delivers certainty, control, and capital efficiency through precise, real-time execution unconstrained by market cut-offs or settlement friction. In an environment where collateral is increasingly strategic, HQLA[X] provides a scalable, resilient foundation for future-proof collateral mobility built to work seamlessly within today's custodian and regulatory environments.

#78: PROJECT ACACIA

ADVANCING TOKENIZED WHOLESALE MARKETS IN AUSTRALIA

Project Acacia was a joint project between the Reserve Bank of Australia (RBA) and the Digital Finance Cooperative Research Centre (DFCRC) between November 2024 and May 2026. This joint initiative examined how innovations in digital money and settlement infrastructure could support the development of wholesale tokenised asset markets in Australia.

The project was led by the RBA and the DFCRC in collaboration with industry participants, with support from the Australian Securities and Investments Commission (ASIC), the Australian Prudential Regulation Authority (APRA), and the Australian Treasury.

Project Acacia identified the potential for asset tokenisation – alongside innovations in digital money and settlement infrastructure – to enhance the efficiency, functionality, and resilience of Australia's wholesale financial markets. The project also identified several challenges to scaling tokenised markets that warrant deeper analysis by regulators and industry.

As part of the project, industry participants developed and tested 20 wholesale tokenised asset market use cases spanning a range of asset classes. These use cases demonstrated potential benefits from tokenisation across the asset lifecycle from issuance and servicing to trading and settlement. The use cases also explored multiple methods for settling tokenised asset transactions using different forms of public and private digital money, including traditional RBA exchange settlement account (ESA) balances, a pilot wholesale central bank digital currency (wCBDC), tokenised commercial bank deposits and stablecoins.

The Project Acacia report, released in May 2026, outlined a new multi-stream program aimed at advancing responsible innovation in Australia's wholesale financial markets. The program will focus on overcoming long-standing coordination challenges, removing unnecessary barriers to the safe adoption of new technologies, and enabling industry participants to explore and scale innovative approaches to uplifting wholesale market functioning in a manner consistent with financial stability.

Key elements of the program, which will involve a range of stakeholders, include:

- Strengthened cooperation between industry and regulators
- Exploration of a new regulatory 'sandbox' for digital financial market infrastructure to provide industry with a more structured pathway from experimentation to commercialisation
- Consideration of the opportunities and challenges associated with government issuance of tokenised bonds
- Continued industry-led work on interoperable commercial bank deposit tokens
- RBA consultation with industry on opportunities to safely adapt its settlement infrastructure and ESA access arrangements, alongside continued exploration of wCBDC

The use cases explored within Project Acacia can be found at: rba.gov.au

SECTION VI

FINANCE

D. TRADING

#79: OKX

OKX & INTERCONTINENTAL EXCHANGE: TOKENIZED CAPITAL MARKETS AND 24/7 TRADING INFRASTRUCTURE

Today's global capital markets remain constrained by legacy infrastructure that limits accessibility, efficiency, and participation. Retail investors in Europe and emerging markets often face barriers to accessing U.S. equities and other financial instruments due to high minimum investment thresholds, fragmented intermediaries, and restricted market hours. At the same time, institutional participants operate within settlement cycles of T+1 or T+2, tying up capital and reducing liquidity across the system.

To address these challenges, OKX and Intercontinental Exchange (ICE), operator of the New York Stock Exchange and other global financial exchanges and clearing houses, have established a strategic partnership focused on modernizing capital markets through blockchain-based infrastructure. The initiative is currently in internal beta, with broader rollout planned across Q2 and Q3 2026.

This collaboration enables the development of tokenized representations of equities and other financial instruments, allowing assets to be fractionalized and accessed by a broader range of participants. By lowering minimum investment thresholds, the model expands access to global markets for retail and institutional users alike.

HOW IT WORKS

Through this partnership, traditional financial instruments are represented on blockchain-based infrastructure, enabling continuous trading across global markets. Tokenization enables fractional ownership, allowing investors to gain exposure to high-value assets without requiring full-unit purchases.

The system operates on a 24-hour basis, enabling participants across time zones to trade continuously rather than being restricted to traditional exchange hours. This model supports more efficient price discovery and improved market access.

Settlement is executed in real time or near real time, replacing traditional T+1 or T+2 cycles. This reduces counterparty risk and improves capital efficiency by freeing up liquidity that would otherwise be locked during settlement periods.

All transactions are recorded on-chain, providing enhanced transparency for market participants and regulators. This improves visibility into trading activity, reduces operational complexity, and supports more effective market oversight.

REAL-WORLD IMPACT

The initiative is currently in beta, with early deployment focused on enabling tokenized market access and testing real-time settlement capabilities across selected asset classes. As rollout progresses through 2026, the model supports broader participation in global capital markets by reducing friction associated with access, settlement, and cost.

For example, a retail investor in Southeast Asia or Latin America can gain fractional exposure to U.S.-listed equities without relying on multiple intermediaries or being constrained by local market infrastructure. At the same time, institutional participants benefit from improved capital efficiency through faster settlement and reduced collateral requirements.

By enabling continuous trading and unlocking liquidity tied up in traditional settlement processes, the model improves overall market efficiency and resilience.

A MORE ACCESSIBLE AND EFFICIENT MARKET STRUCTURE

This initiative demonstrates how blockchain technology is being applied to modernize global financial infrastructure.

By combining established exchange expertise with on-chain systems, it enables more accessible, transparent, and efficient capital markets.

The model supports the development of globally connected markets that operate continuously, reduce barriers to participation, and improve liquidity across asset classes. At the same time, it enhances transparency and supervisory visibility, aligning with regulatory objectives around market integrity and investor protection.

As deployment expands through 2026, this approach contributes to a broader shift toward digital, interoperable, and globally accessible financial markets—supporting the evolution of capital markets infrastructure for both retail and institutional participants.

SECTION VII

GOVERNMENT

#80: THE BANK OF CANADA

PROJECT SAMARA: A BOND ISSUANCE EXPERIMENT USING DISTRIBUTED LEDGER TECHNOLOGY

Traditional bond issuance and settlement processes often rely on fragmented systems, multiple intermediaries, and manual coordination across participants, creating operational inefficiencies, settlement delays, and counterparty risk. As capital markets continue to explore digital transformation, financial institutions and policymakers are seeking ways to evaluate whether distributed ledger technology (DLT) can improve the efficiency, transparency, and resilience of bond issuance and settlement workflows in a real-world environment.

THE SOLUTION

The Bank of Canada (BoC), RBC Capital Markets, RBC Investor Services, TD Bank Group (TD), and Export Development Canada (EDC) successfully completed Project Samara, a collaborative initiative to evaluate how tokenization and distributed ledger technology (DLT) can improve bond issuance and settlement in a real-world setting.

As a key milestone in the experiment, EDC issued in early March Canada's first tokenized bond using DLT, with payments settled in wholesale central bank deposits. The bond was sold and traded, and will continue to be managed throughout its lifecycle on the Samara Platform.

The Samara Platform was designed for the experiment to support end-to-end transactions throughout the bond's lifecycle—including cash and bond issuance, bidding, coupon payment, redemption, and secondary trading—on DLT infrastructure. Built on Hyperledger Fabric, the platform integrates separate bond and cash ledgers, enabling transactions to be settled instantly and atomically, directly on-chain.

Building on earlier experimental work from the series of Jasper projects, Samara tested the real-world feasibility and implications of a DLT-based platform for capital markets, using a real bond funded and traded with central bank money. The project was structured as a limited experiment, involving the issuance of a single security—a $100 million Canadian dollar–denominated bond with a maturity of less than 3 months—to a closed investor group.

The experiment revealed both the potential and the limitations of DLT in a real-world financial setting:

- **Efficiency gains:** across participants, both operational efficiency and data integrity were improved, and workflows were streamlined
- **Operational and governance complexity:** efficiency gains were partially offset by system complexity, liquidity costs, the need for new governance structures, and increased attention to coordination, reporting, and oversight
- **Risk management:** counterparty and settlement risk were reduced, but new operational risks related to technology, auditability and fallback mechanisms were introduced
- **Regulatory and legal considerations:** some centralized roles (such as a marketplace operator, custodian, and off-platform trade reporting) highlighted gaps between the current regulatory framework and DLT principles
- **Adoption barriers:** despite technical feasibility, broader adoption will likely be slow due to several factors, such as integration challenges and limited appetite for core infrastructure changes

Overall, Project Samara generated valuable insights into the practical application of DLT in capital markets. These insights provide a foundation for future work, and, while impacts in the short term are uncertain, the technology appears well-positioned to deliver efficiency and resilience benefits over the long term. Comprehensive findings of the project can be found in the Project Samara Research Paper.

Learn more: bankofcanada.ca

#81: BRAZIL'S MINISTRY OF WOMEN

PROTECTING SENSITIVE REPORTS OF GENDER-BASED VIOLENCE WITH SECURE, TAMPER-RESISTANT INFRASTRUCTURE

In Brazil, four women are murdered every day because of their gender. In 2025, the country recorded a record 1,518 victims, the highest number since femicide became a distinct crime under Brazilian law in 2015. Behind each statistic is a woman who might, at some point, have called for help.

Many did call. Ligue 180—Dial 180—is Brazil's national hotline for women experiencing violence. But the sheer scale of the operation creates risk. In 2024, the hotline handled over 750,000 interactions. With over 2,000 interactions per day flowing through multiple channels, including phone, WhatsApp, and email, and complaints routed to hundreds of organizations across Brazil's protection network, the system depends on humans using a patchwork of legacy databases.

Documents can be misfiled. Records can be lost in handoffs between agencies. Data can degrade as it moves through systems that were never designed to talk to each other. And, in systems handling evidence of serious crimes, there's an additional risk that records could be deliberately altered or suppressed. For women considering whether to proceed with a report, the system's integrity is as important as its existence.

Brazil's Ministry of Women, the federal agency that oversees Ligue 180 and coordinates the national protection network for women, looked to its technology partners to see if an enterprise technology—designed to make business transactions error and tamper-proof—could do the same for the records of women reporting crimes against them.

THE SOLUTION

BrBPO, in collaboration with Metasix, led a blockchain-based implementation to securely record and protect reports of violence against women, ensuring that submitted evidence cannot be altered or erased.

Hyperledger Fabric, an LF Decentralized Trust project, was chosen for its permissioned network model, which provided the controlled access and governance this system required. Its support for private data collections meant sensitive information could be shared only among authorized participants. Certificate-based access ensured that organizations could join the network only with verified digital credentials. And Hyperledger Fabric's support for smart contracts in JavaScript, Java, and Go gave the development team more flexibility with familiar languages.

Hyperledger Fabric's Zero Trust architecture assumes no one is automatically trusted: every connection is verified, every transaction is digitally signed, and every piece of code is scanned for vulnerabilities before deployment.

The governance model is straightforward: the Ministry of Women controls who gets in. New organizations must request authorization to join the network, and the Ministry defines the rules for onboarding, approving business logic, and validating transactions. The network includes both public- and private-sector organizations, each with a defined role in the Ligue 180 ecosystem.

The system currently sustains one to two million transactions per month, with performance tracked in real time using industry-standard monitoring tools and stress-tested with Hyperledger Caliper, a benchmarking tool that simulates high transaction volumes to verify the network can handle peak demand.

This expansion transforms Ligue 180 from a federal hotline into a connected national protection network, which is exactly the kind of scaling that blockchain was designed to support.

Learn more: gov.br

#82: QATAR FINANCIAL CENTRE (QFC)
TOKENIZING REAL-WORLD ASSETS VIA THE QFC DIGITAL ASSETS FRAMEWORK

Asset owners seeking to tokenize real estate, commodities, or debt instruments face significant legal uncertainty: without a formal framework governing how property rights convert to digital tokens, ownership claims are ambiguous, custody arrangements lack legal backing, and smart contracts cannot be reliably enforced. This leaves market participants unable to leverage digital infrastructure for asset tokenization while remaining compliant with international standards.

QFC'S DIGITAL ASSETS FRAMEWORK

The QFC Digital Assets Framework provides a comprehensive legal and regulatory regime to enable the secure tokenization of assets. Under the QFC Digital Asset Regulations, users can transform real or personal property rights into "Permitted Tokens."

1. The Tokenization Process

To generate a Permitted Token, an asset owner must engage a QFC-licensed Token Service Provider (TSP). The process involves:

- **Validation:** A licensed validator confirms the owner's rights to the underlying asset and issues a certificate of validation
- **Generation:** A token generator creates a digital representation of that right on a trusted infrastructure that complies with QFC technology guidelines

2. Legal Certainty and Asset Neutrality

The framework is asset-neutral, meaning it applies to both real rights (enforceable against any person) and personal rights (enforceable against a specific person or persons, such as contractual rights). It provides legal recognition of ownership, ensuring that the token holder possesses the legal rights to the underlying asset.

These tokens can be held or transferred outside the QFC if the external legal regime recognizes QFC law.

3. Categorization of Tokens

The framework distinguishes between different digital assets to ensure appropriate oversight:

- **Permitted Tokens:** General tokenized assets generated through a licensed TSP
- **Investment Tokens:** Tokens representing regulated financial products (e.g., shares, debt instruments, or insurance contracts). These are regulated by the QFCRA in the same manner as the underlying financial product
- **Excluded Tokens:** The framework prohibits activity related to tokens that do not represent property rights or act as substitutes for fiat currency (e.g., pure cryptocurrencies)

4. Token Services

The framework establishes a licensing regime for specific services, including custody (holding/controlling tokens), operating a token exchange (bringing buyers and sellers together), and transfer services. By utilizing licensed TSPs, organizations ensure their digital operations meet high operational and governance standards.

Learn more: qfc.qa

SECTION VII
GOVERNMENT
A. REGULATION

#83: CAPITIAL MARKETS AUTHORITY OF KENYA (CMA)

KENYA'S VASP ACT: A STATUTORY FRAMEWORK FOR LICENSING AND SUPERVISING VIRTUAL ASSET SERVICE PROVIDERS

Kenya has one of Africa's most active virtual asset ecosystems, yet until late 2025, no statutory framework governed the entities operating within it. The Central Bank of Kenya's 2015 Banking Circular had advised financial institutions to avoid virtual currencies, leaving exchanges, custodial wallet providers, payment processors, and token issuers operating in a legal vacuum. Consumers had no guaranteed recourse. Institutions had no clear licensing pathway. Regulators had no formal supervisory mandate.

This gap carried material risks: unlicensed intermediaries, inconsistent AML/CFT controls, and limited consumer protection, while also blocking Kenya's ability to attract legitimate institutional participants. The absence of a licensing regime meant no public register of compliant operators, no fit-and-proper requirements for management, and no standardized framework for virtual asset offerings or custody arrangements.

THE SOLUTION

Kenya's Virtual Asset Service Providers Act, 2025 (VASP Act), received presidential assent on 15 October 2025 and came into force on 4 November 2025. It establishes the first comprehensive statutory framework for licensing, supervising, and regulating virtual asset service providers operating in and from Kenya

The Act adopts a twin-peak regulatory architecture. The Central Bank of Kenya (CBK) assumes primary jurisdiction over custodial wallet providers, virtual asset payment processors, and stablecoin issuers—activities that functionally resemble payment systems or e-money.

The Capital Markets Authority (CMA) oversees virtual asset exchanges, digital asset brokers, investment advisors, fund managers, and tokenization platforms. This division ensures that sectoral expertise drives supervision across distinct activity types.

The licensing mechanism is activity-based. Entities must apply to the relevant authority, satisfy fit-and-proper requirements, and demonstrate operational competence across AML/CFT, KYC, data protection, cybersecurity, solvency, and reporting obligations. Both regulators are required to maintain and publish a public register of licensed VASPs, providing market participants and consumers with a verifiable record of compliant operators. Prohibited activities include mixer and tumbler services, as well as anonymity-enhancing services.

Existing virtual asset service providers have a one-year transition period from the commencement date to meet licensing requirements. Detailed Regulations are being developed by the National Treasury in consultation with the CBK and CMA; licensing will formally commence upon their publication.

The Act aligns Kenya with FATF standards and establishes enforceable consumer protections, including structured license surrender procedures that require client asset arrangements before a provider can exit the market. It creates the legal conditions under which institutional participants, including tokenization platforms and regulated stablecoin issuers, can operate with the certainty required for long-term investment.

SECTION VII

GOVERNMENT

B. U.S. STATES

#84: UNIFORM COMMERCIAL CODE (UCC) AMENDMENTS

BRINGING LEGAL CERTAINTY TO DIGITAL ASSET COLLATERAL THROUGH UCC AMENDMENTS

Before the 2022 Uniform Commercial Code amendments, U.S. commercial laws treated digital assets as vague, intangible property. This legal ambiguity created immense legal uncertainty for lenders and buyers of digital asset ownership to secure loans using cryptocurrency, or guarantee that a purchased token was free from prior claims. Any UCC amendments require state-level legislative changes and therefore, in the United States, all 50 states and the District of Columbia would need to pass these UCC Amendments or equivalents to provide legal certainty related to digital assets as recognized collateral under UCC and mitigate any "legal daylight risk" between physical collateral and/or digital versions of such collateral or assets.

THE SOLUTION

Significant UCC updates for blockchain and digital assets took place with a series of 2022 amendments, which introduced Article 12 and updated Article 9 to provide legal clarity for cryptocurrencies, NFTs, and other tokenized assets. The UCC is updated periodically to keep pace with legal and technological developments. The 2022 Amendments implement the following updates:

- Create new UCC Article 12 on Controllable Electronic Records
- Update Article 9 to allow for perfection of security interests in digital assets
- New rules for mixed transactions involving both goods and services
- Update rules for electronic negotiable instruments
- Updated terminology to account for electronic signatures and documents

These updates define a new class of intangible property called Controllable Electronic Records (CERs), which includes most digital assets (cryptocurrency, stablecoins). Moreover, the amendments provide a uniform method for creditors to secure digital assets as collateral by obtaining "control" over the digital key, treating it much like a tangible negotiable instrument.

Finally, Article 12 established clear priority rules, known as "Take Free" rules. A buyer who obtains "control" of a CER in good faith, for value, and without notice of property claims takes the asset "free and clear" of any previous claims.

These updates bridge the gap between traditional commercial law and distributed ledger technology. They provide the legal certainty and predictability needed to use digital assets in structured finance, lending, and corporate bankruptcy/restructuring.

For the past 3 years, the U.S. Blockchain Coalition (USBC), an initiative of Global Blockchain Business Council (GBBC) and its cohort of blockchain organizations across the states have been tracking and working on supporting efforts to pass UCC Amendments across the United States.

As of today, 35 U.S. states, as well as the District of Columbia, have enacted these amendments or equivalent legislation: Alabama, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Minnesota, Montana, Nebraska, New Hampshire, New Mexico, New York, Nevada, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, and Wyoming.

U.S. states with legislation currently in progress include: Alaska, Maryland, Massachusetts, Mississippi, Missouri, Ohio, South Carolina, Texas, and West Virginia.

Please reach out to usbc@gbbc.io to support states which have yet to pass legislation or are in progress.

#85: UTAH BLOCKCHAIN COALITION

INSTANT KYC WITH STATE-ENDORSED DIGITAL IDENTITY

Financial institutions exploring the use of digital assets as collateral face a critical identity assurance gap. In decentralized blockchain ecosystems, there is currently no reliable way to verify that the individual who completed Know Your Customer (KYC) identity verification is the same individual who actually controls the destination wallet receiving loan funds or holding pledged collateral.

KYC processes are typically performed outside the blockchain transaction itself, creating out-of-band identity verification that is not cryptographically bound to the wallet used in the transaction.

As a result, when funds are transferred to a wallet, there is significant risk that the wallet may not be controlled by the verified borrower, introducing fraud risk, misdirected funds, and challenges in enforcing loan collateralization. This problem highlights a broader tension within finance: traditional financial institutions require high-assurance identity verification.

THE SOLUTION

Utah's State-Endorsed Digital Identity (SEDI) approach provides a state-endorsed, decentralized identity framework that enables financial institutions to achieve strong identity assurance aligned with NIST SP 800-63 identity assurance levels, while preserving the decentralized architecture foundational to blockchain ecosystems.

SEDI achieves its privacy, security, and transparency capabilities through a hybrid ledger architecture, combining:

- Individually controlled private ledgers—held by the individual and containing their identity credentials and transaction authorizations
- Publicly viewable distributed ledgers (blockchain technology)—used to record verifiable protocol events, proofs, and transaction confirmations

This combination allows SEDI to maintain privacy through individual control, security through cryptographic validation, and transparency through publicly verifiable blockchain events, directly aligning with the foundational promises of blockchain technology: decentralization, privacy, and trust without centralized control.

#86: VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)

TRANSFORMING WATER MANAGEMENT

The Virginia Department of Environmental Quality (DEQ) has partnered with Water Ledger to release the first-of-its-kind digital compensatory mitigation and nutrient credit marketplace. The Stream, Wetland, and Nutrient (SWaN) credit trading platform increases transparency, making it easier for permittees to purchase credits and for bankers to sell them. SWaN was developed and will be operated by Water Ledger, which received funding from DEQ through a competitive process.

Wetlands protect water quality by serving as natural filters, capturing pollutants and reducing flooding. Under Virginia's "no net loss" policy for wetlands and streams, all new construction that removes a wetland or stream in the Commonwealth must replace it within the same watershed. This is often done through mitigation banks, which create new wetlands and restore streams, generating credits. DEQ's existing nutrient credit trading program, which offers regional solutions for storm-water quality requirements, will also be available on the platform. Purchasing credits from existing banks through SWaN provides immediate, established credits. Once banks are completed, they are placed into perpetual conservation and are unable to be developed in the future. This allows for a long-lasting environmental benefit for all who live in the watershed.

SWaN improves upon the current U.S. Army Corps of Engineers tracking system, which lists wetland, stream, and nutrient credit banks, but does not report pricing, serial codes for individual credits, or transactions, and may report delayed information about credit availability. SWaN provides real-time visibility into credit availability and pricing, and allows transactions to occur directly within the platform. This clarity helps reduce uncertainty in the mitigation and nutrient markets, supports more timely offset of environmental impacts, and encourages the use of already established banks rather than delayed alternatives.

The impact of a smoothly functioning marketplace has significant benefits, such as:

- More timely and ecologically successful offset of environmental impacts
- Less fluctuation in credit prices
- More public transparency in how credits are being provided

By offering a digital marketplace where credit offers can be browsed, compared, and purchased, SWaN will change the landscape of mitigation and nutrient banking to favor transparent transactions and demystify the common disconnect between buyers and sellers, while ensuring the longevity and future protection of Virginia's wetlands and streams. When environmental business becomes easier to conduct, the public reaps the benefits of a well-managed and cared for ecosystem.

Learn more: swan.waterledger.com

#87: WYOMING STABLE TOKEN COMMISSION

BUILDING THE FRONTIER: THE WYOMING STABLE TOKEN COMMISSION'S VISION FOR DIGITAL PAYMENTS

Consider a natural gas supply agreement between a Wyoming producer and a California utility. Gas enters the interstate pipeline system at the Opal Hub and flows west. Delivery is metered and confirmed. An invoice is issued. Payment then moves through the banking system: The utility's bank initiates a wire to the producer's bank, often routing through correspondent institutions. Each intermediary introduces delay, cost, and discretion, as any bank in the chain can hold the transfer for its own compliance review, at its own judgment, for as long as it sees fit. Wires typically cost $15–50 and settle in one to three business days, longer over weekends. For recurring contracts, this process repeats each billing cycle.

THE SOLUTION

With the Frontier Stable Token (FRNT)-the first fully-reserved, USD-backed, stable token issued by a public entity in the United States- the commercial relationship and physical delivery remain unchanged. Only the payment rail is replaced.

The California utility may acquire FRNT through a Licensed Service Provider, who is contracted with the Commission, and transfer FRNT Tokens directly to the Wyoming producer's wallet. Settlement occurs in seconds, at a network cost below one cent, with no correspondent banks, no weekend delays, and no discretionary holds on funds in transit.

The producer receives a dollar-equivalent instrument redeemable one-for-one and backed by state-held reserves, usable for redemption, vendor payments, or tax obligations back to Wyoming.

Alternatively, because the FRNT framework is designed for replication, a counterparty state could issue its own compatible token within the same infrastructure, enabling bilateral settlement between public issuers rather than through private banking networks. For commodities like coal, where producers typically wait 30 to 60 days to get paid, FRNT would compress that timeline with payment at delivery confirmation instead of weeks of carrying unpaid invoice.

Learn more: stabletoken.wyo.gov

SECTION VIII

HEALTHCARE & RESEARCH

#88: 6529

FREEDOM TO RESEARCH: BLOCKCHAIN COORDINATION FOR EARLY IMMUNOLOGY RESEARCH

Engineered immune cell therapies can be transformative, but one of the hardest challenges is controlling when and where they activate. If activation is too broad, healthy tissue can be harmed. Researchers are exploring two-signal or logic-gated designs that require multiple inputs before a therapeutic response occurs because they may reduce on-target/off-tumor toxicity. At the same time, early translational experiments often face a "valley of death" in attracting funding between a promising concept and the preclinical data needed to advance it; they are too applied for basic research and too early for traditional investors. The result is a financing gap around precisely the experiments that could de-risk safer therapies. Promising safety-focused ideas need fast seed funding, transparent support, and a credible way for a community to back high-conviction research.

THE SOLUTION

6529 addressed this gap through 6529 network community-curated/funded minting of an NFT, Meme Card #447, *Freedom to Research*, part of *The Memes by 6529*. The NFT is by 6529 network members boredsurgeon and G9ralt.

Its scientific thesis is that "Cell therapies need 2FA." Its purpose is to seed a pilot study on engineered immune cell therapies with built-in biological security, requiring two independent molecular signals before activation. In practice, blockchain turns that goal into a transparent funding mechanism: the research-linked collectible exists on-chain, can be collected globally, and carries public provenance from issuance through secondary-market activity.

This use case is not just "NFT art" in the abstract. It is blockchain-based coordination for early-stage biomedical research. A community can rally around a specific scientific objective, fund it through a digital asset with visible provenance, and keep that support legible over time.

This is especially valuable for pilot studies that need belief, speed, and aligned backers before conventional funding arrives. 6529 describes meme-card minting as a way to fund public goods across art, ideas, science, research, and technology, which makes this NFT meme card a direct example of that model in action.

Freedom to Research also serves a broader purpose. Bitcoin and Ethereum proved that open networks can coordinate rule-based outcomes such as valid transactions and code execution. 6529 is working to extend that model to judgment-based decisions on an open permissionless network: which public goods to fund, which experiments are worth backing. 6529's wider project is to build an open, permissionless network society that coordinates public and private activities across art, science, culture, and technology, using NFTs as the on-chain record of identity, and TDH (Total Days Held) as a measure of long-term alignment and reputation. In 6529's framing, the larger test is decentralized GDP (dGDP): real-world activity the network helps coordinate.

Freedom to Research is therefore both a live research-funding mechanism and an initial working example of a bigger thesis: blockchain can help permissionless communities make thoughtful human decisions, not just execute code.

Learn more: 6529.io

#89: YALE UNIVERSITY

BLOCKCHAIN FOR SECURE SHARING OF GENOMIC DATA

Genomic data is highly sensitive, containing personal health insights, ancestry information, and medically actionable traits that can expose individuals to discrimination and embarrassment. Traditionally, individuals who undergo genetic testing relinquish control over their data to commercial entities and centralized institutions—data that, once leaked, cannot be changed or revoked. Most blockchain solutions store genomic data off-chain and record only a reference on-chain, leaving the underlying data vulnerable to breach. Storing data directly on-chain is more secure but has been impractical due to the sheer size of raw genome files.

THE SOLUTION

Yale researchers, led by Mark Gerstein, have developed SAMchain, a blockchain-based system designed to give individuals control over their genomic data. Keeping data directly on-chain ensures integrity and auditability guarantees that off-chain storage cannot provide. SAMchain makes this feasible by recording only the differences between an individual's genome and a standard reference genome, significantly reducing storage requirements. Building on this, a partitioning framework further isolates the most individually unique genetic markers from common variants sufficient for most research analyses, concentrating what needs the strongest protection into a compact object suitable for direct on-chain storage.

Access to this data is governed by smart contracts running inside trusted execution environments (TEEs), ensuring sensitive operations remain private despite blockchain's inherently transparent nature. A patient can grant a clinician access through a single encrypted transaction, with no institutional middleman required. The access key is derived from the patient's own genomic data, serving as a biometric key that cannot be forgotten or stolen and can be regenerated from any biological sample.

Every access event is logged immutably on-chain, giving patients and regulators a verifiable record of who accessed their most sensitive genomic data and when.

SECTION IX

STANDARDS

#90: CAPITAL MARKETS RISK MITIGATION FRAMEWORK (RMF)

ADVANCING RISK MANAGEMENT FOR PUBLIC BLOCKCHAIN INFRASTRUCTURE

As financial institutions increasingly adopt blockchain infrastructure for capital markets applications, many existing enterprises risk frameworks are not equipped to address the unique non-financial risks introduced by public blockchains and layered blockchain architectures. These risks include protocol governance, smart contract vulnerabilities, operational resiliency challenges, cybersecurity concerns, financial crime exposure, and cross-layer dependencies between Layer 1 and Layer 2 systems.

THE SOLUTION

The Capital Markets Risk Mitigation Framework (RMF), facilitated by Global Blockchain Business Council (GBBC) and Oliver Wyman, alongside its core group of participants, made up of leading regulated financial institutions and blockchain infrastructure providers, was developed to help regulated entities identify, assess, and mitigate non-financial risks associated with public permissionless blockchain infrastructure. The framework categorizes risks into novel, adapted, and standard risk types, while outlining practical mitigation strategies for blockchain-enabled financial market infrastructure. The RMF integrates blockchain-specific risks into existing enterprise risk management structures using established operational risk methodologies and globally recognized standards and regulatory frameworks, including ORX, MiCA, DORA, NIST, and COSO.

The RMF targets three key objectives to advance public blockchain infrastructure adoption:

- Create a concise baseline standard for public blockchain risk management
- Support regulatory dialogue and harmonized policy development
- Address operational and regulatory barriers through practical mitigation strategies and controls

The RMF focuses on the incorporation of non-financial public blockchain-related risks into standard institutional risk taxonomies and risk management processes. It uses the ORX Reference Taxonomy as a foundational structure and adapts it to blockchain-specific scenarios and mitigants.

- **The framework assesses risks across categories including:** Technology risk, network risk, information security risk, financial crime risk, business continuity risk, third-party risk, legal risk, transaction and process execution, and data management
- **It distinguishes between:** Novel risks, which require new mitigation approaches, adapted risks, which require modification of existing controls, and standard risks, which can largely be addressed through conventional frameworks
- **The RMF covers two public blockchain architecture families:** Public permissionless and public permissioned Layer 1 blockchains, and Layer 2 systems that are anchored to a Layer 1 blockchain

L1 networks provide the base layer for consensus, shared data availability, and settlement. L2s operate as separate execution environments that process transactions outside the L1 and periodically anchor outcomes back to it, often relying on the L1 for settlement, recovery, or exit assurances.

The growing use of Layer 2 solutions adds further complexity by introducing additional operator dependencies, bridge risks, governance coordination challenges, and expanded attack surfaces. At the same time, institutions and regulators require clearer, standardized approaches for evaluating blockchain infrastructure within existing risk management and supervisory frameworks.

The RMF will continue to be developed in phases, progressively expanding its risk-based mitigation focus across asset classes, technical architectures, and use cases. The current expanded version already incorporates stakeholder feedback and extends the framework to Layer 2 systems, reflecting how modern architectures introduce additional control points and cross-layer dependencies.

The next stage of work is expected to include expansion to the digital payment instruments, digital assets securities, and crypto native tokens.

Central to this effort is continuing public-private collaboration and ongoing regulatory dialogue, so that the RMF remains aligned with evolving technology, market practice, and supervisory expectations.

Learn more: rmf.gbbc.io

#91: DIGITAL TOKEN IDENTIFIER FOUNDATION (DTIF)

NOT ALL TOKENIZED SECURITIES ARE EQUAL: HOW IDENTIFIERS BRING CLARITY TO THE MARKET

Tokenized securities are increasingly issued across multiple blockchains and legal structures, yet the market lacks a consistent way to clearly distinguish the different forms they take. Instruments that appear similar—such as tokenized shares, issuer-sponsored digital bonds, third-party issued depositary tokens, or tokenized money market fund interests—may represent fundamentally different legal rights, issuance models, and risk profiles.

Without standardized identification, market participants face difficulty understanding what a token represents, who the issuer is, and how it relates to any underlying traditional security. This lack of clarity complicates transparency, reporting, regulatory oversight, and interoperability across trading venues, custodians, and data providers.

As the tokenization of financial instruments grows, the inconsistent usage of globally recognized identifiers risks creating fragmented data, inconsistent classification, and reduced comparability across digital instruments.

Financial identifiers provide a practical framework to bring transparency and structure to tokenized markets. By applying globally recognised identification standards, market participants can differentiate tokenized instruments based on their economic function, issuance model, and relationship to underlying assets.

In this context, three identifiers play complementary roles:

- **International Securities Identification Numbers (ISINs)** identify the underlying traditional security or fund—this ensures continuity between traditional capital markets and tokenized representations of those instruments

- **Digital Token Identifiers (DTIs)** identify the token itself as a digital asset on distributed ledger infrastructure—DTIs provide a standardized way to reference tokenized instruments across blockchain networks, trading venues, and data systems
- **Legal Entity Identifiers (LEIs)** identify the organizations involved in issuance, custody, and distribution, enabling clear attribution of responsibility and improving transparency around market participants

Together, these identifiers allow market participants to distinguish between different tokenization models. For example, they help clarify whether a token represents:

- **An issuer-sponsored tokenized security –** directly issued by the original issuer on-chain, evidencing a direct record of ownership of the security
- **A synthetic tokenized security –** issued by a third party that provides synthetic exposure of an underlying security, but does not constitute a direct record of ownership
- **A custodial tokenized security –** such as a tokenized financial instrument, where the underlying is held in custody and the token represents a claim to that security

Using identifiers in combination creates a structured data layer that supports discovery, reporting, regulatory oversight, and interoperability between traditional and digital financial infrastructures.

EXAMPLE: ALPHABET TOKENIZED SHARES

Tokenized shares illustrate the importance of clear identification across layers of financial infrastructure. A share may already be identified through an ISIN, yet multiple digital tokens may exist that represent access to that same share. These shares may be issued directly by the issuer, custodian, exchange, or created by third parties that wrap shares into a tokenized instrument.

As tokenized securities evolve, this identification framework can help ensure that new digital asset instruments remain understandable, traceable, and comparable within global capital markets.
Alphabet (Google) shares are identified through ISIN US02079K3059, which has other ISO identifiers as part of the record:

- FISN: ALPHABET INC/SH CL A
- CFI: ESVUFR
- Issuer LEI: 5493006MHB84DD0ZWV18 (ALPHABET INC.)

SCENARIO 1: TRACKER CERTIFICATES ON CEXS (E.G. XSTOCKS AVAILABLE ON KRAKEN)

ISIN record CH1436219237 maintains the following through its record:

- FISN: BACKED ASSETS/STRUCT PERP GOOGL
- CFI: EYAYFS
- Issuer LEI: 984500001AB7C6C7F577 (BACKED ASSETS (JE) LIMITED)
- Underlying ISIN: US02079K3059
- DTI of implemented tokens:
    - JJM522Q10 (GOOGLx on TON)
    - QFZF322PK (GOOGLx on Solana)
    - SWLQL6GRF (GOOGLx on Ethereum)

SCENARIO 2: TRACKER CERTIFICATES ON DEFI PLATFORMS (E.G. BSTOCKS CREATED BY BACKED FINANCE)

ISIN record CH1173294351 maintains the following through its record:

- FISN: BACKED ASSETS/STRUCT PERP GOOGL
- CFI: EYAYFS
- Issuer LEI: 984500001AB7C6C7F577 (BACKED ASSETS (JE) LIMITED)
- Underlying ISIN: US02079K3059

- DTI of implemented tokens:
  - 3B9N4N24P (bGOOGL on Base)
  - 9DLKPBWVB (bGOOGL on Gnosis)
  - JTXLKDNBG (bGOOGL on Polygon)
  - M2GWFH76Q (bGOOGL on Binance)
  - PP92HN0P2 (bGOOGL on Arbitrum)
  - R6HQ968W1 (bGOOGL on Avalanche)
  - XJ1X6RKMF (bGOOGL on Fantom)
  - XXG4HWN90 (bGOOGL on Ethereum)

SCENARIO 3: SYNTHETIC TOKENIZED SHARES (E.G. STOCKS ON ROBINHOOD)

ISIN record XTG3MMXF50T5 maintains the following through its record:

- FISN: ALPHABET CLASS A/GOOGL
- CFI: TMXXXX
- Issuer LEI: 254900GTP4UXQO1UMI36 (Robinhood Europe, UAB)
- Underlying ISIN: US02079K3059
- DTI of implemented tokens:
  - 2KX5L24VP (GOOGL on Arbitrum)

In each scenario DTI records include the link to the ISIN, LEI, and technical implementations on the relevant blockchains.

This is not an exhaustive list, new scenarios will be added to the list as they appear (e.g. Nasdaq issuer-sponsored tokenized shares). Based on the information currently available, the ISIN assigned to these tokenized shares will remain the same as that of the underlying security: US02079K3059. Once tokenization is implemented, DTI records may be introduced to enable market participants to distinguish these tokens from those created under other scenarios.

#92: FINANCIAL INSTRUMENT GLOBAL IDENTIFIER (FIGI)

STANDARDIZED IDENTIFICATION FOR CRYPTO ASSETS: DTI & FIGI

Crypto asset markets lack consistent identifiers across platforms and trading venues. The same asset may be represented by different tickers, while identical tickers can refer to entirely different assets depending on the exchange or blockchain. This creates ambiguity in trade processing, reconciliation, and risk management.

Proprietary identifiers can introduce licensing constraints, and coverage gaps limit transparency across markets. Without a standardized framework, market participants face data fragmentation, increased operational risk, and challenges in achieving interoperability across systems.

FRAMEWORK FOR CRYPTO ASSET IDENTIFICATION

A complementary framework using the Digital Token Identifier (DTI) and Financial Instrument Global Identifier (FIGI) provides a standardized approach to identifying crypto assets across protocol and trading layers.

The DTI identifies the underlying asset at the protocol level based on its blockchain or smart contract address, ensuring a consistent reference point. It is established as the ISO 24165 standard, providing a globally recognized framework for crypto asset identification.

FIGI extends identification to the trading environment by assigning unique, persistent identifiers to financial instruments, including trading pairs (e.g., BTC/USD) and venue-specific instruments. This enables differentiation across exchanges, venues, and similar crypto trading platforms.

The Financial Instrument Global Identifier (FIGI), which is owned by the non-profit Object Management Group (OMG), operates as a Standards Development Organization under the Enterprise Data Management (EDM) Association.

It is available as a free, open standard for identifying financial instruments under the MIT open standard license. The FIGI standard is a metadata rich identification system that integrates with older, legacy symbologies to address data fragmentation and foster interoperability across capital markets through a single, consistent format for all global asset classes. FIGIs are issued by Certified Providers under the standard, currently Bloomberg and Kaiko as approved by OMG.

Together, these standards create a hierarchical mapping:

- DTI and FIGI: Asset level
- FIGI: Trading pair level
- FIGI: Instrument/exchange level

At the asset level, FIGI can align closely with DTI by providing a financial representation of the underlying crypto asset, while extending identification to trading pairs and venue-specific instruments.

Operational Impact: This framework improves data consistency, reduces reconciliation errors, and minimizes reliance on manual mapping. It enables more accurate aggregation of trading activity across exchanges, supporting price discovery and exposure tracking. Standardized identification also enhances transparency and supports more effective monitoring, reporting, and risk management across crypto asset markets.

Learn more: omg.org

#93: GLOBAL LEGAL ENTITY IDENTIFIER FOUNDATION (GLEIF)

BUILDING TRUST IN BLOCKCHAIN MARKETS: EMBEDDING VERIFIABLE IDENTITY FOR AUTOMATED COMPLIANCE

As digital asset markets scale, there is a need to answer fundamental questions to promote trust in blockchain transactions: Who is transacting? Who is authorized? Who issued the asset? Was that authority valid at the time of the transaction?

In traditional finance, regulated institutions provide this trust. Banks, custodians, and financial market infrastructures (FMIs) verify participants, conduct due diligence, and ensure transactions only occur between authorized entities. They also confirm the legitimacy and origin of financial instruments. But on many blockchain networks, wallet addresses can transact without disclosing the legal identity or regulatory status of their controllers. Although technically valid, these wallets lack legal transparency. Compliance often relies on static allowlists or platform-specific checks, which are difficult to maintain, fragmented across jurisdictions, and not easily scalable.

THE SOLUTION

To address this challenge, several pilots are exploring how verifiable credentials based on the Legal Entity Identifier (LEI) and its digital version, the verifiable LEI (vLEI), can enable institutional participation in blockchain transactions. The LEI is a 20-character code based on the global ISO 17442 standard, uniquely identifying legal entities. Organizations obtain a vLEI and undergo standard KYC or KYB procedures. A trusted authority, like an FMI, issues a verifiable credential confirming the organization's compliance status.

This credential is cryptographically linked to the blockchain wallet. Before a transaction, counterparties can verify the wallet belongs to a legally recognized organization and its compliance credentials are valid.

This approach is already being explored. A Chainlink–GLEIF report shows how vLEIs can enable interoperable, automated compliance. Other research by Key State Capital, the Cardano Foundation, and GLEIF shows how vLEIs can link smart contracts to real-world entities, improving trust and compliance. The same principle applies to digital assets. Token smart contracts can be linked to the issuing legal entity through a cryptographic attestation, allowing market participants to verify a token contract is tied to its declared issuer.

Pilots are testing transaction models where automated verification occurs before transfers to confirm both counterparties have valid credentials and the token is issued by an authenticated issuer. If so, the transaction can proceed. If not, the transfer fails. This means compliance is embedded directly into the transaction flow, rather than performed afterward through manual reconciliation. FMIs play a key role by issuing credentials after due diligence and enabling their discovery and validation across networks. By embedding verifiable identity and issuer provenance into wallets, smart contracts, and transaction workflows, blockchain-based financial systems can combine programmability with accountability.

Learn more: gleif.org

#94: GLOBAL STANDARDS MAPPING INITIATIVE (GSMI)

MAPPING GLOBAL STANDARDS FOR A MORE INTEROPERABLE DIGITAL ASSET ECOSYSTEM

The rapid global expansion of blockchain and digital assets has in many ways outpaced the development of unified frameworks, resulting in a fragmented global ecosystem. This fragmentation hinders interoperability, which is key to scalability, along with harmonized rules and common understandings. Currently, market participants face inconsistent requirements and regulations across hundreds of jurisdictions, as well as a lack of globally recognized standards, largely due to a lack of a broad ecosystem mapping that can connect all the industry initiatives toward harmonization. Moreover, standard-setting silos and a lack of shared taxonomy limit shared understandings on fundamental compliance, legal, and technical terms. Lack of harmonization ultimately increases risks and stalls mainstream adoption.

GSMI provides a level of transparency and alignment on global initiatives on blockchain and digital assets, with the objective of facilitating key stakeholders integrating blockchain technology into secure, resilient, and compliant global financial frameworks.

THE SOLUTION

Since its inception in 2020, the Global Standards Mapping Initiative (GSMI), led by Global Blockchain Business Council (GBBC), provides the most comprehensive effort to map and analyze the blockchain and digital assets ecosystem. It provides resources and recommendations for the blockchain and digital assets community to navigate the complexities of the global landscape across key themes in a rapidly evolving industry.

With yearly launches of crowdsourced and open access resources, GSMI has kept the industry up to date with a body of work that supports the advancement of common standards to enable adoption, incentivize continued innovation, and advance collaboration. GSMI content is referenced and utilized by corporations, regulators, government agencies, and academia globally, seeking a holistic view of critical topics for the blockchain and digital assets community.

Alongside global mapping, GSMI offers in-depth reports on the most pressing themes in the space. The in-depth reports have spanned crypto derivatives, digital identity, global taxation, green economy, policy, AI convergence, digital identity, supply chains, sustainability, decentralized finance (DeFi), privacy, digital money and payments, critical minerals, and tokenization. GSMI also includes a series of country spotlight on jurisdictions that are building momentum in the blockchain and digital assets space. This includes South Korea (2020-21), China (2022), Brazil (2023), and India (2024).

As of 2025, with GSMI's sixth iteration (GSMI 6.0), the open-source set of resources released covers more than 230 jurisdictions across an interactive regulatory landscape for blockchain and digital assets, documents more than 400 key terms and definitions in an industry taxonomy, tracks more than 100 technical standards bodies and their work shaping technical frameworks, maps out 2,000+ ecosystem stakeholders and their roles worldwide, and maps 130+ full academic programs alongside 1,500+ courses supporting the next generation of talent, in addition to in-depth reports on the latest themes in the space.

In 2026, GSMI is in its 7th iteration (GSMI 7.0), where the focus sharpens on what comes next with translating insights into alignment across markets, technologies, and policy.

Learn more: gbbc.io/gsmi

#95: INTERWORK ALLIANCE (IWA)

ENHANCING AUDITABLE SUSTAINABILITY DATA AND HIGH-INTEGRITY REPORTING FOR GLOBAL COMPLIANCE THROUGH DMRV V3.0

PROBLEM

There is rising demand for transparent, trustworthy, and scalable environmental markets and systems for processing environmental claims which streamline the process of environmental credit issuance by reducing the need for manual, often outdated, processes.

To meet this rising demand, the InterWork Alliance (IWA) and GBBC have collaborated with ecosystem members and stakeholders to refine definitions, address gaps, and deliver Version 3.0 of the Digital Measurement, Reporting & Verification (dMRV) Framework in 2026.

The dMRV Framework replaces often manual and lengthy processes with a standardized, tech-enabled approach for turning environmental impact into digital assets. It is built to support both nature-based and technology-based projects, while reflecting their very different data realities. The framework lays the foundation for turning environmental actions, like carbon removal or renewable energy generation, into digitally verifiable assets. It offers a standardized, yet flexible, approach that modernizes how projects are validated and verified.

HOW IT WORKS

- **Open Standards:** Shared roles, processes, and data structures allow all project types to issue credits that are consistent and comparable
- **Tokenized Trust:** Verification events and audit trails are cryptographically recorded and traceable
- **Modular by Design:** Each credit is backed by a Quality Standard (like a protocol or methodology) and tailored via MRV Extensions
- **Continuous Verification:** Especially important for technology-based projects, enabling faster and more reliable credit issuance

WHO IT IS FOR

- **Project Developers:** Can create digital, verifiable claims faster and more efficiently
- **Corporate Buyers:** Gain confidence in the credibility and traceability of the credits they purchase
- **Standards Bodies and Registries:** Can integrate existing methodologies into a digitized, future-proof system
- **Investors and Auditors:** Rely on data-backed claims and digital audit trails to reduce risk and improve transparency

Learn more: interworkalliance.github.io

#96: INTERWORK ALLIANCE (IWA)'S TOKEN TAXONOMY FRAMEWORK (TTF)

STANDARDIZING DIGITAL ASSETS USING THE TOKEN TAXONOMY FRAMEWORK (TTF)

PROBLEM

Tokens are disrupting global economics and radically change how commerce will be transacted. While various implementations exist today for tokens specific to numerous blockchain platforms, the industry lacks a venue for all participants to collaborate on a shared description and approach—resulting in a lack of interoperability, reuse, and common ground to address topics like regulatory issues. The InterWork Alliance (IWA) provides such a venue, developing a clear definition and scope of the token concept including use cases, taxonomy, terminology, and a specification neutral to the underlying technology.

The Token Taxonomy Framework bridges the gap between developers, line of business executives, and regulators, allowing them to work together to model existing, and define new, business models based on tokens.

SOLUTION

InterWork Alliance (IWA)'s Token Taxonomy Framework (TTF) provides a common language to define tokenization use cases and is implemented today in products and services utilizing tokenization.

Acting as the "building blocks" for the token economy, it allows users to "snap together" standardized, agreed-upon artifacts (including Base Types, Behaviors, and Property Sets) to create a Token Template. This template serves as a single source of truth for an asset's data fields (Property Sets) and functionality (Behaviors), independent of any specific ledger or code implementation.

Spanning across many solutions, the TTF has also been implemented as the foundational layer for the IWA's Digital Measurement, Reporting, and Verification (dMRV) Framework, providing Token Templates for the entities and data packages required for the creation, submission, validation, and verification of environmental claims.

Through the dMRV Framework, IWA has provided guidance on the implementation of dMRV systems that leverage blockchain and DLT, creating opportunities for increased transparency, efficiency, scalability, accuracy, and trust in the data underlying environmental claims and assets created using those claims.

By shifting the focus from "how" a token is coded to "what" it fundamentally does, TTF provides a common framework for multiple stakeholders to discuss the fundamental design of tokens for their specific use case and re-usable components for future use cases to use or modify to fit other domains and industries.

Learn more: gbbc.io

SECTION X

SUPPLY CHAINS

#97: DFM DATA CORP., INC.,
TRANSPORT UNIT IDENTIFIER (TUID): A CUSTOM ID FOR GLOBAL GOODS MOVEMENT

What's your reference number? Freight movements are coordinated across a fragmented network of independent platforms and organizations, each maintaining their own identifiers, workflows, and data models. This lack of a shared reference results in duplicated shipment records, inconsistent status updates, and limited interoperability between systems.

Participants often rely on manual reconciliation or intermediary communication to align shipment state, increasing operational friction and the risk of disputes. Additionally, verifying the legitimacy of entities and the authenticity of updates remains challenging when data is siloed. Without a common identifier that persists across systems and stakeholders, there is not a reliable way to maintain a consistent, end-to-end view of a transport unit as it moves through multiple hands, platforms, and geographies.

A COMMON REFERENCE ACROSS SYSTEMS

The **Transport Unit Identifier (TUID)**, **ISO 8000-119**, introduces a globally unique identifier assigned to a shipment when ready to ship. Rather than replacing existing systems, TUID acts as a shared reference layer that is adopted across digital freight platforms, enabling interconnectivity without requiring full system consolidation. The model is designed for incremental adoption, allowing both existing platforms and new participants.

Event Consistency Without Centralization: Shipment lifecycle updates are structured using standardized Goods Movement Process (GMP) statuses (e.g., Posted, Booked, En Route, Delivered), all defined in ASTM F3682. These updates can be recorded as verifiable events on a distributed ledger, ensuring that status changes are time-stamped, tamper-resistant, and auditable. This creates a consistent view of shipment progression across participants, even when updates originate from different systems.

Extending Across Organizational Boundaries: TUID supports scenarios where shipments change custody, are re-routed, are split and recombined. Linked and nested identifiers are generated to represent these transitions while preserving traceability. This allows segments of a shipment's journey to be independently managed while still being connected to the original transport unit.

Bridging Physical and Digital Workflows: QR codes associated with TUIDs enable access to shipment data at physical handoff points such as pickup, warehouse intake, and delivery.

Enabling Collaborative Networks: By introducing a neutral, standardized identifier, TUID enables multiple freight platforms and service providers to participate in a loosely coupled network. TUID allows participants to retain control over their systems while contributing to a consistent, verifiable data layer. This approach supports consortium-based collaboration, where interoperability and trust are achieved through shared standards rather than centralized control.

Learn more: tuid.dfmdata.com

#98: FUDAN UNIVERSITY, INTERNATIONAL SCHOOL OF FINANCE - FINTECH RESEARCH CENTER

ENSURING PRODUCT AUTHENTICITY THROUGH BLOCKCHAIN TECHNOLOGY: A CASE STUDY OF BLOCKCHAIN ADOPTION IN THE BEAUTY AND SKINCARE SECTOR

The beauty and skincare industry relies heavily on marketing claims that consumers cannot verify. Meanwhile, consumers increasingly demand transparency, sustainability, and authentic product efficacy—yet traditional verification methods such as third-party certification are costly, geographically constrained, and vulnerable to fraud.

Centralized data systems further compound opacity and tampering risks. External pressures, including rampant counterfeiting and heightened regulatory scrutiny, underscore the urgency. Our research confirms that over 97% of consumers consider product efficacy information important, while nearly 85% request more verification and view transparency as insufficient. Without a reliable mechanism to validate product provenance and claims, consumer trust remains fundamentally compromised.

NATURAL BEAUTY PILOT

This case study presents a blockchain-based provenance platform that addresses the trust deficit in the beauty and skincare industry. Using Natural Beauty as an exemplar, the solution implements a consortium blockchain where every participant—from raw material suppliers to regulators—shares an immutable, permissioned ledger. Each product receives a unique decentralized digital identity (DID), anchored to the blockchain, enabling a "one product, one code" framework.

Throughout the lifecycle—raw material sourcing, formula compounding, manufacturing, quality testing, packaging, warehousing, logistics, and sales—critical data are cryptographically signed and stored as verifiable credentials (VCs).

Consumers scan a QR code to instantly access full provenance, ingredient certifications, and test results, verifying authenticity and efficacy claims. Regulators gain real-time, penetrative oversight, while brands benefit from anti-counterfeiting protection, streamlined audits, and operational efficiency. By transforming unverifiable marketing narratives into provable, tamper-proof records, the platform builds consumer trust, strengthens brand integrity, and creates a competitive advantage in a market demanding transparency and sustainability.

#99: IOTA FOUNDATION

DIGITALIZING TRADE: HOW TLIP BRINGS TRUSTED, TRANSPARENT SUPPLY CHAINS TO EAST AFRICA

THE PROBLEM

Global trade, a $35 trillion market, still runs on paper. Customs declarations, certificates of origin, phytosanitary certificates, and bills of lading are exchanged manually across fragmented systems. The result: border delays, duplicated validation work, vulnerability to fraud, and near-zero supply chain visibility.

The cost falls on everyone, but unevenly. Exporters absorb high administrative burdens. Logistics providers cannot coordinate in real time. Government agencies re-verify documents already checked by others. Financial institutions, unable to accurately assess risk, pull back on trade finance, contributing to a global gap estimated in the trillions.

Developing economies bear the heaviest burden. For East African traders, documentation complexity alone can make exporting unviable, locking producers out of markets they could otherwise serve. What is needed is a neutral, interoperable digital infrastructure that all trade participants can trust and build upon.

THE SOLUTION

Trade and Logistics Information Pipeline (TLIP) is a deployment of TWIN (Trade Worldwide Information Network), an open-source network built on IOTA's distributed ledger technology. Initiated in 2020 by TradeMark Africa and the IOTA Foundation, with backing from the Kenyan government and funding partners in the Netherlands and UK, TLIP enables secure, auditable, standardized trade data exchange across East Africa's export corridors, reducing the administrative burden for the region's importers and exporters.

TLIP is integrated with authorities such as the Kenya Revenue Authority, the Kenyan Plant Health Inspectorate Services and the Kenya Trade Network Agency's Single Window System. Exporters receive essential permits immediately upon approval, consignment data can be easily stored, accessed, and used to generate reports with just a few clicks, and exporters can share consignment data with freight forwarders, consolidators, or buyers as well as customs authorities in the destination countries.

The underlying IOTA blockchain is low-cost and decentralized, removing single points of failure and letting any actor integrate without harmonizing software across the network. Its verifiable credential framework keeps data ownership with the participant: a Kenyan exporter issues a certificate that a Dutch port authority authenticates directly, with no intermediary required.

TLIP first proved itself in Kenya's flower export trade to the Netherlands, one of the region's most time-sensitive commodity flows. Document retrieval times for inspection dropped from 6-7 hours to 30 minutes, administrative workload fell 50-60%, and exporters saved around $400 per month in handling costs. Broader pilots brought customs clearance from weeks to days, with border processing up to 96% faster.

TLIP has since expanded to cover cargo status from Kenya Ports Authority (KPA), bringing all critical agencies into the network and addressing one of the costliest compliance burdens in East African agricultural trade.

Learn more: tlip.io

#100: THE PROVENANCE CHAIN NETWORK

APPLYING THE COMMERCIAL TRUST™ ARCHITECTURE TO A VALUE CHAIN

There is a semiconductor reliability and provenance gap.

RELIABILITY & AUTHENTICITY PASSPORTS FOR CRITICAL SEMICONDUCTORS

The Reliability & Authenticity Passport application establishes a fab-anchored certification model, turning semiconductor reliability and security into verifiable, portable attributes required for market access. Each device receives a cryptographically anchored identity during the manufacturing process continuously linked to lifecycle evidence, producing a Reliability & Authenticity Passport that OEMs, regulators, and analytics providers can query using verifiable data rather than paper certificates or excessive screening. The solution combines four elements in a repeatable "trust flywheel."

First, compliance checklists and certification criteria are digitized and published as machine-readable agreements that define what evidence fabs, OSATs, and suppliers must provide.

Second, metrology, test, and process data remain in decentralized storage under each participant's control, while AI agents evaluate that evidence against the checklists to find gaps, anomalies, and deterministic scores.

Third, human experts approve evaluations, which are then written to a permissioned distributed ledger as verifiable credentials bound to device identities, lots, and facilities, creating an immutable audit trail without exposing underlying IP.

Finally, downstream actors use these credentials to shorten OEM qualification timelines, improve maintenance targeting, enable oversight bodies to investigate incidents in days instead of months, and allow market participants to identify and differentiate trusted devices and suppliers.

This Commercial Trust™ Architecture—digitized rules, decentralized evidence storage, AI-based evaluation, and DLT-recorded credentials—defines a reference pattern that can be implemented by any combination of ecosystem participants and is foundational to future industry cooperatives or consortia operating shared services and governance.

Learn more: theprovenancechain.com

#101: TCS BLOCKCHAIN, INC.
ON-CHAIN INVOICE TRADE FINANCE

Freight invoice pay terms in the $3T+ North American transportation industry are 30-180 days. More than 95% of U.S. transportation companies are small businesses. In the trucking sector, more than 95% of companies have less than five (5) trucks. These carriers need funds immediately, forcing them to sign draconian contracts and sell invoices to predatory lenders ("factoring" firms) at outrageous capital costs. They typically pay 30% or greater annualized interest rates.

INTRODUCING TCS BLOCKCHAIN

TCS Blockchain, Inc. settled the world's first freight invoice on-chain in 2022, and now leads in the Industry niche. TCS supports truckers, freight brokers, and at-scale carriers. TCS also benefits consumers and households by disintermediating factoring incumbents and mitigating financial waste in supply chains that increase the cost of nearly all goods. TCS was invited to two private meetings with the White House in 2025 and invited to the U.S. Department of Commerce to discuss B2B digital asset payments in supply chains.

THE SOLUTION

In 2026, PayPal and Paxos announced partnerships to advance TCS digital asset solutions by integrating the PYUSD stablecoin into the TCS settlement stack.

TCS's approach provides the fastest and cheapest alternative to "factoring," utilizing digital assets on blockchain rails. TCS saves users 50-90% on average and reduces financial waste in supply chains for the benefit of small businesses, consumers, and households.

With PayPal and Paxos, TCS can offer savings on invoice settlement to carriers, as well as a leading fuel card option on the market. TCS Token—the utility token that facilitates cheaper and faster on-chain settlement—trades on the INX-Republic exchange.

Learn more: tcsblockchain.com

APPENDIX

GLOSSARY

Below is a selection of acronyms for organizations, regulatory developments, and common industry terms used throughout this use case handbook. While this list is not all-encompassing, we hope to provide a selection of basic terms that can make this space understandable to all audiences. **We have done our best to provide definitions, but this is not a comprehensive list. We have only focused on identifying the most relevant ones.**

- For a comprehensive list of industry terms and definitions, access GBBC's **Global Standards Mapping Initiative** taxonomy here.
- For educational infographics on key concepts, access GBBC resources here.

ORGANIZATIONS & REGULATIONS

Acronym	Term	Link
ABC	ALLCOT Blue Carbon (ABC) Mangrove Restoration Project - Senegal	https://registry.verra.org/app/projectDetail/VCS/4563
ABMI	Asian Bond Markets Initiative	https://asianbondsonline.adb.org/
ADB	Asian Development Bank	https://www.adb.org
ANNA	Association of National Numbering Agencies	https://anna-web.org
ASEAN	Association of Southeast Asian Nations	https://asean.org
ATS	Hedera Asset Tokenization Studio	https://hedera.com/asset-tokenization-studio
AXOL	AsiaNext orchestration layer	https://www.asianext.com/axol-mmf/
BDAN	Busan Digital Asset Nexus	https://www.businesskorea.co.kr/news/articleView.html?idxno=227972
BIF	Blockchain Infrastructure Forum	https://bif.institute
BIS	Bank for International Settlements	https://www.bis.org
CARF	Crypto-Asset Reporting Framework	https://www.oecd.org/en/publications/2024/10/crypto-asset-reporting-framework-xml-schema_d15d81d3.html

Acronym	Term	Link
CBAM	Carbon Border Adjustment Mechanism	https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en
CCBS	Climate, Community, and Biodiversity Standards	https://verra.org/programs/ccbs/
CFTC	Commodity Futures Trading Commission (US)	https://www.cftc.gov
CFTC - GMAC	Global Markets Advisory Committee (US CFTC)	https://www.cftc.gov/About/AdvisoryCommittees/GMAC
CFTC - GMAC - DAMS (or DAM)	Digital Asset Market Subcommittee (US CFTC)	https://www.cftc.gov/About/AdvisoryCommittees/GMAC
CMA Kenya	Capital Markets Authority of Kenya	https://www.cmarcp.or.ke/
CSIF	Cross-Border Settlement Infrastructure Forum	https://asianbondsonline.adb.org/csif-briefs.php
DAC8	Eighth Amendment to the Directive on Administrative Cooperation within the European Union	https://taxation-customs.ec.europa.eu/taxation/tax-transparency-cooperation/administrative-co-operation-and-mutual-assistance/directive-administrative-cooperation-dac/dac8_en
DASCP	Digital Asset Securities Control Principles	https://www.dtcc.com/-/media/DASCPWhitePaper.pdf
DCE	Digital Certificate of Entitlement	https://www.unjspf.org/for-clients/digital-certificate-of-entitlement/
DHI	Druk Holding & Investments	https://www.dhi.bt
DMV	Department of Motor Vehicles (for US State of California)	https://www.dmv.ca.gov/portal/
DSDC	Digital Securities Depositary Corporation	https://www.dsdc.net
DSS	Digital Securities Sandbox	https://www.bankofengland.co.uk/financial-stability/digital-securities-sandbox
DTCC	Depository Trust & Clearing Corporation	https://www.dtcc.com

Acronym	Term	Link
DTIF	Digital Token Identifier Foundation	https://dtif.org
ECB	European Central Bank	https://www.ecb.europa.eu/
EEA	Enterprise Ethereum Alliance	https://entethalliance.org
EIB	European Investment Bank	https://www.eib.org/
FATF	Financial Action Task Force	https://www.fatf-gafi.org/
FCA	Financial Conduct Authority (UK)	https://www.fca.org.uk
FF	Filecoin Foundation	https://fil.org
FINMA	Financial Market Supervisory Authority (Switzerland)	https://www.finma.ch/
FSB	Financial Stabiltiy Board	https://www.fsb.org
GAN	Global Acceptance Network	https://www.gan-global.org
GBBC	Global Blockchain Business Council	https://www.gbbc.io
GCN	Global Collateral Network	https://www.prnewswire.com/news-releases/digital-asset-and-euroclear-start-first-project-phase-to-increase-the-mobility-of-collateral-assets-through-the-canton-network-302384365.html
GENIUS Act	Guiding and Establishing National Innovation for U.S. Stablecoins Act	https://www.congress.gov/bill/119th-congress/senate-bill/394/text
GFMA	Global Financial Markets Association	https://www.gfma.org
GLEIF	Global Legal Entity Identifier Foundation	https://www.gleif.org
HCS	Hedera Consensus Service	https://hedera.com/consensus-service
HKMA	Hong Kong Monetary Authority	https://www.hkma.gov.hk
HKT	Hong Kong Telecom	https://www.hkt.com/
IBRD	International Bank for Reconstruction and Development	https://www.worldbank.org/en/who-we-are/ibrd
ICVCM	Integrity Council for the Voluntary Carbon Market	https://icvcm.org/
ICMA	International Capital Market Association	https://www.icmagroup.org/

Acronym	Term	Link
IDA	International Development Association	https://ida.worldbank.org/
IDB or IADB	Inter-American Development Bank	https://www.iadb.org/
IFAD	International Fund for Agricultural Development	https://www.ifad.org/
IFC	International Finance Corporation	https://www.ifc.org/
ISBE	Infraestructura de Servicios Blockchain de España	http://www.redisbe.com
ISSA	International Securities Services Association	https://issanet.org/
ISO	International Organization for Standardization	https://www.iso.org/
ISO/TC 307	International Organization for Standardization Technical Committee (Blockchain and distributed ledger technologies)	https://www.iso.org/committee/6266604.html
IWA	InterWork Alliance - GBBC	https://www.gbbc.io/interwork-alliance
JFSA	Financial Services Agency of Japan	https://www.fsa.go.jp/
LF	Linux Foundation	https://www.linuxfoundation.org
LFDT	Linux Foundation Decentralized Trust	https://www.lfdecentralizedtrust.org
LM	Lockheed Martin	https://www.lockheedmartin.com/
LSEG	London Stock Exchange	http://www.lseg.com
MCV	Mercy Corps Ventures	https://www.mercycorps.org/
MiCA or MiCAR	Markets in Crypto-Assets Regulation (EU)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32023R1114
MiFID	Markets in Financial Instruments Directive (EU)	https://eur-lex.europa.eu/eli/dir/2014/65/oj/eng
MR	Moody's Ratings	https://ratings.moodys.io
NARA	National Archives and Records Administration (US)	https://www.archives.gov

Acronym	Term	Link
NIST	National Institute of Standards and Technology	https://www.nist.gov
OECD	Organisation for Economic Co-operation and Development	https://www.oecd.org
PCN	Provenance Chain™ Network	https://www.theprovenancechain.com
QCB	Qatar Central Bank	https://www.qcb.gov.qa/
QFC	Qatar Financial Center	https://www.qfc.qa/
RBA	Reserve Bank of Australia	https://www.rba.gov.au/
SCBHK	Standard Chartered Bank Hong Kong	https://www.sc.com/hk/
SDGs	United Nations Sustainable Development Goals	https://sdgs.un.org/goals
TCS	TCS Blockchain, Inc.	https://www.tcsblockchain.com
TFR	Transfer of Funds Regulation (EU)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1113&qid=1704828669920
TTF	Token Taxonomy Framework - GBBC - IWA	https://www.gbbc.io/interwork-alliance/token-taxonomy-framework
TWIN	Trade Worldwide Information Network	https://www.twin.org/home
UN	United Nations	https://www.un.org/
UNDP	United Nations Development Programme	https://www.undp.org/
UNJSPF	United Nations Joint Staff Pension Fund	https://www.unjspf.org
USDA	U.S. Department of Agriculture	https://www.usda.gov
VCS	Verified Carbon Standard Program	https://verra.org/programs/verified-carbon-standard/
WFP	UN World Food Programme	https://www.wfp.org

TERMS

Acronym	Term	Definition
AI	Artificial Intelligence	Refers to the capability of a system to acquire, process, and apply knowledge to perform tasks that typically require human intelligence (ISO)
AML	Anti-money laundering	A set of policies and procedures designed to combat money laundering (FATF)
AMM	Automated Market Maker	Component of the decentralized finance (DeFi) ecosystem, enabling permissionless and automatic trading of digital assets (Coinbase)
API	Application Programming Interface	A set of functions and protocols that application software uses to invoke services and provide greater functionality to applications or to websites. (ISO)
BTC	Bitcoin (currency)	Bitcoin, launched in 2009, was the first decentralized convertible virtual currency, and the first cryptocurrency. (FATF)
CASP	Crypto-Asset Service Providers	A service provider that conducts a wide range of activities relating to crypto-assets, including but not limited to, admission to trading, trading (as agent or principal), operating a market, custody, and other activities such as services relating to lending/staking of crypto-assets and the promotion and distribution of crypto-assets on behalf of others. (IOSCO)
CBDC	Central Bank Digital Currency	Digital tokens representing a claim on a central bank for a fixed amount of central bank money denominated in a single currency; also, a liability of a central bank, with no credit or liquidity risk. It may or may not be programmable. (CFTC - GMAC)
CET	Carbon Emissions Tokens	A token representing a specified volume of metric tons of greenhouse gas emissions; distinguishes between the scope and category of emissions being reported. (GBBC - IWA)
CRS	Common Reporting Standard	The Standard calls on jurisdictions to obtain information from their financial institutions and automatically exchange that information with other jurisdictions on an annual basis. Since its adoption, the CRS has been widely implemented worldwide, enabling jurisdictions and financial institutions to enhance tax compliance and foster international tax co-operation. (OECD)
CSD	Central Securities Depository	Central securities depository: an entity that provides securities accounts, central safekeeping services and asset services, which may include the administration of corporate actions and redemptions, and plays an important role in helping to ensure the integrity of securities issues (that securities are not accidentally or fraudulently created or destroyed or their details changed). (BIS)
DAO	Decentralized Autonomous Organization	A DAO is a decentralized autonomous organization, a type of bottom-up entity structure with no central authority. (ISSA)
DAS	Digital asset securities	Securities that use distributed ledger technology to represent rights similar to traditional securities. They include: (1) native security tokens issued directly on a blockchain; (2) digital twins of existing securities (equity, debt, derivatives); (3) securities providing traditional rights (dividends, voting, interest). Cryptocurrencies, stablecoins, and CBDCs are excluded from this framework as "money or money-like digital assets." (DASCP Whitepaper)
dApp	Decentralized application	Application that runs on a decentralized system. (ISO)
DeFi	Decentralized Finance	"DeFi commonly refers to the provision of financial products, services, activities, and arrangements that use distributed ledger technology (DLT), including self-executing code referred to as smart contracts. DeFi aims to operate in a disintermediated and decentralized manner, eliminating some traditional financial intermediaries and centralized institutions, and enabling certain direct investment activities." (IOSCO)

Acronym	Term	Definition
DEX	Decentralized Exchange	A decentralized Exchange is a peer-to-peer marketplace of crypto trading. DEX utilize a particular blockchain to facilitate transfers and are considered a part of decentralized finance (DeFi) tools. (IOSCO)
DLT	Distributed Ledger Technology	DLT is a database construct that brings together existing approaches around distributed computing networks and data encryption. It enables a new way to record state updates and transactions of assets between participants on a network. (CFTC - GMAC)
dMRV	Digital Monitoring, Reporting, and Verification	Software solutions capable of automated data collection, processing, analysis, and generation of carbon credits, including validation and verification processes. (Verra)
DTI	Digital Token Identifier	A Digital Token Identifier (DTI) is a global identification system for digital tokens and is defined by the International Organisation for Standardization's ISO 24165 (DTIF)
EBSI	European Blockchain Services Infrastructure	Consists of a peer-to-peer network of interconnected nodes running a blockchain-based services infrastructure. Each member of the European Blockchain Partnership (EBP) – the 27 EU countries, Norway, Liechtenstein and the European Commission run at least one node. (European Commission)
ERC	Ethereum Request for Comment	ERCs (Ethereum Request for Comments) are technical documents used by smart contract developers at Ethereum. They define a set of rules required to implement tokens for the Ethereum ecosystem. (EthHub)
ETF	Exchange Traded Fund	ETFs are a type of exchange-traded investment product that must register with the SEC under the. (U.S. SEC)
ETH	Ether (coin)	"Ether" is the main internal crypto-fuel of Ethereum, and is used to pay transaction fees. (Ethereum Foundation)

Acronym	Term	Definition
EVM	Ethereum Virtual Machine	The Ethereum Virtual Machine (EVM) is a core piece of Ethereum that helps power the DLT and smart contracts. It is vital in assisting Ethereum to achieve user adoption and decentralization. (ISSA)
FIX	Financial Information eXchange	The language of the global financial markets used extensively by buy and sell-side firms, trading platforms and even regulators to communicate trade information. This non-proprietary, free and open standard is constantly being developed to support evolving business and regulatory needs, and is used by thousands of firms every day to complete millions of transactions. (FIX Trading)
FMI	Financial Market Infrastructure	A multilateral system among participating institutions, including the operator of the system, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions. (BIS)
GNSS	Global Navigation Satellite System	Refers to any satellite constellation that provides global positioning, navigation, and timing services. Several GNSS are currently available: Galileo (EU), GPS (USA), GLONASS (Russia), BeiDou (China). Using signals from space, each of these systems transmits ranging and timing data to GNSS-enabled receivers, which then use this data to determine location. (EU Space Agency)
HSM	Hardware Security Module	A physical computing device that provides tamper-evident and intrusion-resistant safeguarding and management of digital keys and other secrets, as well as crypto-processing. FIPS 140-2 specifies requirements for HSMs. (NIST)

Acronym	Term	Definition
IoT	Internet of Things	The network of devices that contain the hardware, software, firmware, and actuators which allow the devices to connect, interact, and freely exchange data and information. (NIST)
IPFS	InterPlanetary File System	IPFS is a set of building blocks for a better web. Open protocols to make your data smarter: content-addressed, verifiable, and unstoppable. (IPFS Docs)
ISIN	International Securities Identification Number	ISINs uniquely identify a security -- its structure is defined in ISO 6166. Securities for which ISINs are issued include bonds, commercial paper, equities and warrants. (ISIN Organization)
KYC	Know-your-customer	Acronym for 'know your customer'. A set of rules laid out by the government for companies to obtain a certain amount of information from their users/participants with the objective to prevent and detect financial crime and money laundering. (IOSCO)
L1	Layer 1 [blockchains]	Layer 1 smart contract platforms act as the primary settlement layer of a blockchain and decentralized application (dApp) ecosystem. Most on-chain transactions and smart contract activities take place on Layer 1. A decentralized network of validators processes transactions in blocks and are compensated for their services in the form of gas fees, paid for as a fee denominated in the protocol's token. These gas fees fluctuate relative to the computational demand that the transaction imposes on the network and reflect the overall network congestion at any given time. (CoinDesk)
LEI	Legal Entity Identifier	A 20-character, alpha-numeric code based on the ISO 17442 standard developed by the International Organization for Standardization (ISO). (GLEIF)
LLM	Large Language Model	Large language models (LLMs) are a category of foundation models trained on immense amounts of data making them capable of understanding and generating natural language and other types of content to perform a wide range of tasks. (Microsoft)

Acronym	Term	Definition
MDB	Multilateral Development Bank	MDBs provide financial and technical support to developing countries to help them strengthen economic management and reduce poverty. (US Department of Treasury)
MPC	Multi-Party Computation	A cryptographic technique that enables the output of a function to be computed while keeping the individual inputs, provided by a range of parties, secret. It is a valuable tool to improve privacy in situations where computations are outsourced, or where different distrusting stakeholders are required to cooperate, and no trusted party is available to execute the computation on behalf of the input providers. (ISO)
NFT	Non Fungible Token	A token that has unique characteristics which make it neither interchangeable nor divisible into smaller units. (ISSA)
OTC	Over the Counter	The trading of securities between two counter-parties executed outside of formal exchanges (Corporate Finance Institute)
POC (PoC)	Proof of Concept	A demonstration of a product, service or solution in a sales context. A POC should demonstrate that the product or concept will fulfill customer requirements while also providing a compelling business case for adoption. (Gartner)
QBFT	Quorum Byzantine Fault Tolerance	The recommended enterprise-grade consensus protocol for private networks. In QBFT networks, approved accounts, known as validators, validate transactions and blocks. Validators take turns to create the next block. Before inserting the block onto the chain, a super-majority (greater than or equal to 2/3) of validators must first sign the block. (Hyperledger Besu)
REC	Renewable Energy Certificates	Market-based instrument that represents the property rights to the environmental, social, and other non-power attributes of renewable electricity generation. (US Environmental Protection Agency)

Acronym	Term	Definition
REST API	Representational State Transfer Application Programming Interface	An application programming interface (API) that conforms to the design principles of the representational state transfer (REST) architectural style, a style used to connect distributed hypermedia systems. REST APIs are sometimes referred to as RESTful APIs or RESTful web APIs. (IBM)
RMF	Capital Markets Risk Mitigation Framework	An industry-led effort facilitated by GBBC and Oliver Wyman, which aims to provide a foundational step towards a global risk-based assessment and proposed mitigation path, enabling the safe, secure adoption of blockchains, in particular, public blockchains for regulated financial institutions. (GBBC)
RTGS	Real-Time Gross Settlement	Real-Time Gross Settlement - An infrastructure operated by us that holds accounts for banks, building societies and other institutions. The balances in these accounts can be used to move money in real time between these account holders. (Bank of England)
RTP	Real-Time Payments	RTP network is the market-leading real-time payments infrastructure used by financial institutions (FIs) to send and receive electronic payments in the U.S. securely, instantly, and at scale. With availability around the clock, including bank holidays, weekends and after hours, the RTP network provides a modern option for fast and precisely-timed money movement that supports retail, commercial, and treasury payments. (The Clearing House)
RWA	[Tokenized] real-world assets	Real-World Assets (RWAs) are tangible assets that exist outside the digital spectrum, which can be tokenized and brought into the blockchain ecosystem. (Coinbase)
SOC 2	System and Organization Controls 2	The most common Service Organization Control report, together with ISAE 3402 / SOC 1 reporting. There are two types of reports, a Type I report and a Type II report. A Type I report is a report on design and existence of controls. A Type II also focuses on the operating effectiveness of controls during a predefined period. (SOC 2)
SSI	Self-Sovereign Identity	An identity system architecture based on the core principle that identity owners have the right to permanently control one or more identifiers together with the usage of the associated identity data. (Sovrin Glossary)
TLIP	Trade and Logistics Information Pipeline	Leverages the Trade Worldwide Information Network 's open-source digital infrastructure to simplify trade and logistics processes through API integrations. It allows users to share and manage real-time trade data directly from the source, eliminating the need for paper-based workflows. (TLIP.io)
VASP	Virtual Asset Service Provider	"Virtual asset service provider means any natural or legal person who is not covered elsewhere under the Recommendations, and as a business conducts one or more of the following activities or operations for or on behalf of another natural or legal person: i. exchange between virtual assets and fiat currencies; ii. exchange between one or more forms of virtual assets; iii. transfer[1] of virtual assets; iv. safekeeping and/or administration of virtual assets or instruments enabling control over virtual assets; and v. participation in and provision of financial services related to an issuer's offer and/or sale of a virtual asset." (FATF)

Acronym	Term	Definition
VAT	Value Added Tax	VAT is a comprehensive, indirect consumption tax imposed by more than 170 countries on sales or exchanges and imports. (Bloomberg Tax)
VCM	Voluntary Carbon Market	A decentralized market where private actors voluntarily buy and sell carbon credits that represent removals or reductions of greenhouse gases (GHGs) in the atmosphere. (ICVCM)
vLEI	Verifiable Legal Entity Identifier	A digitally verifiable credential containing the LEI (Legal Entity Identifier). (GLEIF)
ZKP	Zero-Knowledge Proof	In cryptography, a zero knowledge proof enables one party to provide evidence that a transaction or event happened without revealing private details of that transaction or event. (ICMA)

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