



GBBC
Global Blockchain
Business Council

**ON THE CUSP OF
MASS-SCALE CONVERGENCE**

ANNUAL REPORT 2024

**GLOBAL BLOCKCHAIN
BUSINESS COUNCIL**

DC Location:

1629 K St. NW, Suite 300
Washington, DC 20006

Geneva Location:

Rue de Lyon 42B
1203 Geneva
Switzerland

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BOARD CHAIR UPDATE

DAVE TREAT

CHIEF TECHNOLOGY OFFICER, PEARSON

It is irrefutable to say that material global progress has been made to advance the role of blockchain and digital assets shaping the future of our economies and societies everywhere around us. In last year's Annual Report, I also emphasized the **combinatorial power of AI, Blockchain, and Extended Reality** as the most impactful aspect of emerging innovations.

It gives me confidence and joy to see how global leaders are resonating with the topics of focus that GBBC has been driving conversations on for the last several years. For example, over the course of 2024, I had the pleasure of attending the Innovation Summit organized by the Bank for International Settlements (BIS), where all talk tracks with the world's Central Banks recognized the importance of innovating responsibly for the future. In the spirit of the World Economic Forum's theme for the Annual Meeting in Davos at the start of 2025, the "Collaboration for the Intelligent Age" is fundamental.

This is why I highlight the value of the work GBBC has done on education, partnerships, and standards, since its initial launch in 2017 at an intimate Davos gathering, showing unwavering resilience through the challenges that followed, and undoubtedly building momentum until the place we are in today: where the tide is turning, and the doors are flinging open for emerging technologies to underpin virtually all our industries and activities.

With blockchain technology, the world is being transformed by the power of digital trust, allowing stakeholders globally to access the same data, ensuring its security and protection, and verify its provenance. This digital trust, when paired with AI and the convergence of emerging technologies, further multiplies the opportunities ahead. In this context, we are continuing our unwavering commitment to the future of **tokenized identity, money, and objects**.

I have seen incredible progress around digital wallet infrastructure and what it can unlock, with fascinating projects globally starting to apply it.

In the European Union, this is a focus area of member states selecting digital wallet infrastructure with the Electronic Identification, Authentication, and Trust Services (eIDAS) regulation, which intends to foster the safety, speed, and efficiency of electronic exchanges. The formation of the Global Acceptance Network (GAN) also calls for the need to break data silos, where the need for decentralized digital trust, as a public utility, becomes front and center.

Many of these developments highlight the importance of schema creation for the acceptance of credentials. With widespread access to data, our world today has become increasingly about lifelong learning, and the broad scope of learning opportunities becomes truly global when it comes to digital infrastructure and trust. As the fields of education and workforce in particular become transformed by technology, proving credentials in the digital world becomes core. How do we best prove what we know, and use that proof to get to our next job and stage of life? Digital wallet infrastructure and agentic AI systems can perform a wide range of valuable tasks for individuals, reducing the barriers of opportunity and improving access to global networks of exchange.

With the fast pace of technological change, it is difficult to make specific predictions. Yet I continue to support our unwavering commitment to advance the future of blockchain technology, and not overlook the power of convergence of emerging technologies to maximize the outcomes of innovative solutions. We must also continue our focus toward responsible innovation to ensure resiliency, regulatory compliance, and reliability which ultimately make these developments sustainable for the long term. Finally, I reiterate my gratefulness for GBBC's support, as well as my true excitement for what will come in 2025, which has already started with much optimism.



CEO UPDATE

SANDRA RO

CHIEF EXECUTIVE OFFICER, **GBBC**

As Global Blockchain Business Council enters its 8th year since its launch, we look forward to celebrating this milestone alongside GBBC members, ambassadors, supporters and friends in snowy Davos, Switzerland.

Looking back to 2024, and previous years, I am continually amazed by our members and stakeholders across the globe: how they are building the infrastructure, applications and tools as THE emerging technology pioneers. I want to express my gratefulness for all these initiatives among our community this year by highlighting:

GBBC IN 2024

- ✓ **APAC:** Increase GBBC footprint and resources to APAC region to better support members in this critical region during APAC friendly time zones
- ✓ **MEA:** Expand our network and deepen our ties in Africa, Middle East and Central Asia
- ✓ **Europe:** Focus on EU regulatory implementation and education phase of the Markets in Crypto-Assets Regulation (MiCA), Digital Operational Resilience Act (DORA), etc.
- ✓ **LATAM:** Develop partnerships and engagements across all major countries / jurisdictions
- ✓ **USA:** Build up our resources and capabilities across the USA, including U.S. states
- ✓ **Thought Leadership:** Deepen our work across convergence of AI (needs blockchain), digital identity, DeFi, taxonomy, and infrastructure, just to name a few – check out GSMI 5.0
- ✓ **Appointments and regulatory collaborations:** Our extensive reach to regulators, government agencies, and central bankers continues to grow and deepen; we are grateful to work with the governments of USA, select U.S. states, Japan, and others with official appointments to committees and projects
- ✓ **Standards:** We have started laying down the infrastructure to support global, crossover web2 into web3 industry convenings on scaling, interoperability, and frameworks from native token disclosures to web3 infrastructure risks and controls...work continues into 2025

This annual report, *'On the Cusp of Mass-Scale Convergence,'* delineates some of the best real world use cases of members who are focused on building, scaling, and collaborating as emerging technologies reshape our lives – both personally and professionally.

In our previous annual report for 2023, we highlighted living in a period of 'perma-crisis' permeating throughout society - be it geopolitical, climate-related, economic, or technological – in a world, filled with seemingly constant division and strife. GBBC firmly believes that our community of changemakers will stand up and push back, remain steady and firm in resolve, and advance no matter what the challenges and uncertainty to create human-centric opportunities, solve real world problems, and support a more positive, equitable society.

GBBC is grateful to each one of our members and supporters who help us continue our mission to educate, convene public-private partnerships and discourse, as well as promote and harmonize standards (industry, regulatory and technical).

And in this moment, and every day, I am grateful to my incredible GBBC colleagues. The GBBC team is 100% remote, distributed around the world, and some of us have not met each other in person yet! Nonetheless, we share a powerful common mission to collaborate and support our awe-inspiring community to great achievements.

**TRUST.
INTEGRITY.
RELIABILITY.
RESILIENCE.**

2025 LOOK AHEAD

Provide opportunities for members to showcase their work around the world

USA

- Increase scope of existing initiatives
- Regular events and private convenings in D.C.
- Increased engagement with individual states via our network of partner organizations, universities, and members

EMEA / UK

- Continue and deepen public – private sector engagements and convenings

APAC

- Return to Australia and continue to expand footprint and network

AFRICA

- Support Growth Markets Regulatory Council (GMRC) and develop strengthened network of regulators

EXISTING INITIATIVES

- Maintain and nurture major GBBC initiatives like GSMI, IWA, BITA, etc.

NEW INITIATIVES

- Create and develop Capital Markets Standards for Digital Assets, Web3 infrastructure, Digital Money, and other groups as relevant

Together, in 2025, and as I say in many previous years:

May we continue to be the standard bearers, and may we continue to spearhead the change needed to create more secure, equitable, and functional societies around the globe, now more than ever.

#STRONGERTOGETHER

BOARD OF DIRECTORS

Board Chair



DAVE TREAT

CTO, PEARSON



YUVAL ROOZ

CO-FOUNDER &
CEO, DIGITAL ASSET



STACI WARDEN

CEO, ALGORAND
FOUNDATION



JOHN LEE

GLOBAL MANAGING
DIRECTOR, ACCENTURE



JOHN DEVADOSS

CO-FOUNDER & CEO,
PROVIDENTIA
CAPITAL



DR. RETO LUTHIGER

PARTNER, MLL LEGAL



JEFF BANDMAN

FORMER DIRECTOR,
LABCFTC



DIMITRIOS PSARRAKIS

CO-FOUNDER, VALUEVERSE;
FORMER FINANCIAL
TECHNOLOGY, DIGITAL
TRANSFORMATION, AND
INNOVATION STRATEGY
SPECIALIST, EUROPEAN
PARLIAMENT



TANVI SINGH

FOUNDER, NIRMATA-
AI VENTURES



EMEA UPDATE

EMMA JOYCE

SENIOR MANAGING DIRECTOR, FINANCIAL SERVICES AND HEAD OF EMEA, **GBBC**

2024 was a busy year for the Digital Assets and Blockchain industries in EMEA, with regulation taking a front seat. We saw the EU's Markets in Crypto-Assets (MiCA) regulation come fully into force during the year, the UK's Financial Conduct Authority (FCA) announced a crypto regulation roadmap, and the UK Government outlined their approach to Tokenisation.

Blockchain and Digital Asset adoption continued in Africa largely driven by the region's tech-savvy and young population, with regulators taking note, and once again we saw an innovative and forward-thinking approach from Middle East regulators and policymakers.

At GBBC we grew our presence in the region, taking on a considerable number of new members from different areas including investment banking, financial services, digital assets, education and law. We also grew our team, adding Alfredo Oballos Diaz as EMEA Chief of Staff, Nilixa Devlukia as EMEA Policy Advisor, and Adrian Matak as EMEA Policy Analyst.

We engaged regularly with our members, as well as different governments and regulators throughout EMEA, often bringing them together in shared forums, such as our GBBC Blockchain Davos event in January, our European Parliament summit in February, our two London conferences, our Dublin event, and our smaller curated roundtables in Paris, Abu Dhabi and Zurich.

These gatherings were useful opportunities for both members and regulators to learn from each other and share experiences. We hear over and over again the need for collaboration.

Collaboration between different governments, different regulators, and different businesses. We worked with our members throughout the year to submit a number of different consultation responses, including the European Securities and Markets Authority (ESMA), Draft Guidelines on reverse solicitation under the Markets in Crypto Assets Regulation (MiCA), the Bank of England (BoE) and FCA joint consultation paper on the Digital Securities Sandbox, the UK Government call for evidence on Financial Services Growth and Competitiveness Strategy plus others.

As we step into 2025 with so many strong working relationships across various jurisdictional regulators and policy makers, we want to take the time to thank all the people who work so hard to advocate for the safe adoption of blockchain technology and digital assets. Thank you to all the members who share their expertise, join our working groups and participate in this wonderful community that we have.

2025 looks to be an exciting year as the industry continues to evolve globally, and we look forward to being part of that journey with our members.





APAC UPDATE

PHILIP GANT

DIRECTOR, APAC POLICY AND PARTNERSHIPS, GBBC



This was a transformative year in terms of GBBC's APAC engagement. With new APAC team members, including Emily Parker, our China and Japan Advisor, Rithy Pich, a senior securities regulator in Cambodia who spent the first half of the year with GBBC as an IFC Milken Capital Markets Scholar, and myself as Korea Policy Research Advisor and then Director of APAC Policy and Partnerships, we expanded our APAC programming, member service, and research significantly.

Our new APAC Monthly Meeting, which closed out the year in its seventh iteration, has brought together hundreds of our members in or in conversation with the region around the critical business, technological, and policy developments affecting the ecosystem, and spotlighted the work of 16 different members. We also ran dedicated APAC Town Halls and PTDL calls throughout the year.

With Sandra in the region for over a month and Emily and I splitting our time between Asia and New York, we were on the ground with members and governments in APAC for a significant portion of the year, attending and hosting over 30 events in countries across northeast and southeast Asia. Meanwhile, we continued to strengthen our relationships with key policymaking bodies through sustained engagements and even a special ministerial appointment.

We also built out our network of ambassadors with key leaders and superconnectors in key and emerging markets.

We are most proud of and most grateful for our expanded ability to serve you all as members and continue interconnecting and strengthening our community. To welcome your offices and colleagues in the region on hours that work. To assist you in your operations in APAC through introductions to others in the broader network, and with more complete research and policy consultation. To spotlight your work and facilitate increased collaboration.

Looking forward to next year, we will continue to expand our ability to serve you in the region by building out our paying and observing membership and programming. We will expand our research and partner network across our verticals to continue to leverage this community's expertise to outsize effect. We will bring in leading policymakers in the region's key and growth markets as participants, as well as an APAC co-chair of the Growth Markets Regulatory Council (GMRC). We will increase our engagement in Australia as a key market. And we will move to provide year-round on the ground coverage in the region.



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WORKING GROUPS

REPORTS

SPECIAL REPORT: [Learning Tokens with Hyperledger Foundation](#)



IWA: [Carbon Emissions Token \(CET\) Protocol - Version 1.0](#)



INTERNATIONAL JOURNAL OF BLOCKCHAIN LAW (IJBL):



- [Volume VIII](#)
- [Volume IX](#)
- [Volume X](#)

GLOBAL STANDARDS MAPPING INITIATIVE (GSMI) 5.0 UPDATE:



- [GSMI 5.0 Full Update](#)
- [India Country Spotlight](#)
- [AI & Blockchain Convergence](#)
- [Decentralized Finance \(DeFi\)](#)
- [Digital Identity](#)
- [Supply Chain](#)
- [Sustainability](#)
- [Technical Standards](#)

POLICY:



- [CFTC Digital Assets Taxonomy - Comparing the EU and US Approaches: Convergence or Divergence?](#)
- [Recommendations to the Commodity Futures Trading Commission Global Markets Advisory Committee](#)

MAPPINGS & INTERACTIVE TOOLS

1. [GSMI 5.0 Taxonomy – 391 Terms](#)
2. [GSMI 5.0 Technical Standards Listing – 63 bodies](#)
3. [Listing of 2000+ Stakeholders in the Blockchain and Digital Assets Landscape](#)
4. [Listing of 1500+ Accredited Blockchain Courses](#)
5. [GSMI 5.0 Interactive Map of Legal and Regulatory Developments](#)



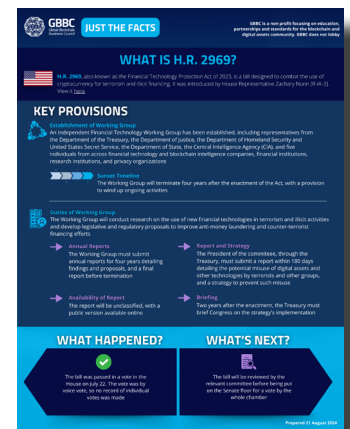
POLICY RESPONSES

1. [ESMA75-453128700-52 MiCA Consultation Paper](#)
2. [ESMA35-1872330276-1619 Consultation Paper](#)
3. [Bank of England and FCA Digital Securities Sandbox Consultation Paper](#)
4. [ESMA75-453128700-1002 Consultation Paper](#)
5. [Bank of England Approach to Innovation in Money Consultation Response](#)
6. [HM Treasury Financial Services Strategy Response](#)



VISUAL FACT CARDS

1. [What is FIT 21?](#)
2. [What is SAB 121?](#)
3. [The ‘Stable’ Divide: USA vs Europe Approach to Regulating Stablecoins](#)
4. [Global Layer One \(GL1\)](#)
5. [What is HR 2969?](#)
6. [Key European Entities](#)
7. [Part 1: What is U.S. Debt?](#)
8. [“Illicit Finance Risk Assessment of NFTs” U.S. Department of Treasury Report, May 2024](#)
9. [IWA’s Carbon Markets Overview, MRV & dMRV, and IWA’s dMRV](#)



WORKING GROUPS & MONTHLY MEETINGS



1. AI & Blockchain Convergence
2. Decentralized Finance (DeFi)
3. Digital Identity
4. Taxonomy
5. Technical Standards
6. Supply Chain
7. Sustainability



8. Voluntary Ecological Markets (VEM) Taskforce
9. Carbon Emissions Token (CET) Taskforce



10. U.S. Policy
11. Model Legislation for 2024
12. State Association Scale-Up

GLOBAL POLICY

13. UK Policy
14. EMEA Policy
15. APAC Monthly Meeting
16. Growth Markets Regulatory Council

MEDIA MOMENTS

GBBC Head of Research & Sustainability, Diana Barrero Zalles, presents recommendations and publication of the Digital Asset Classification Approach and Taxonomy to the U.S. CFTC, which was [approved](#)

GBBC [joined](#) Global Synchronizer Foundation, led by Digital Asset and Hyperledger Foundation

GBBC [joined](#) the UN Population Fund's Equity 2030 Alliance

Nasdaq [launched](#) Carbon Reporting using GBBC's InterWork Alliance (IWA)'s Standards

GBBC CEO Sandra Ro featured in ChosunBiz, "[The emergence of digital assets is just the first step in the proliferation of blockchain infrastructure](#)" with Kim Tae-ho

GBBC's CEO Sandra Ro [joined](#) Nasdaq TradeTalks with Global Markets Reporter Jill Malandrino at Chainlink's SmartCon 2024

GBBC is featured in "[Developing Capabilities for B2B Commerce on Public Decentralized Networks](#)" written by Mary Lacity and Daniel Conway (University of Arkansas) and Daniel E. O'Leary (USC Marshall School of Business)

GBBC [announced](#) partnership with Digital Pound Foundation

GBBC [announced](#) partnership with Digital Euro Association

GBBC collaborated with the Global Digital Asset and Cryptocurrency Association (Global DCA), The Digital Chamber, and The Proof of Stake Alliance to [launch Steering Committee](#) to propose disclosure guidelines for digital asset tokens offered in the U.S.

GBBC-USA, on behalf of GBBC's U.S. Blockchain Coalition (USBC), [filed Amicus Brief](#)

EVENTS IN 2024

In 2024, GBBC participated in:

161

EVENTS

IN MORE THAN

39

DIFFERENT JURISDICTIONS



In 2024, GBBC produced and co-produced:

62

GBBC HOSTED
EVENTS

23

WEBINARS

184

DISTINGUISHED
SPEAKERS

1200+

PARTICIPANTS

BLOCKCHAIN CENTRAL DAVOS

Thanks to the generous support of our sponsors, the premier in-person gathering of leaders across blockchain, digital assets, technology, and government took place right on the Promenade, unpacking the most pressing developments and challenges facing the ecosystem. The event featured 34 speakers with more than 470 attendees throughout the week

▶ Watch the Davos recordings [here](#)

▶ Watch the [Davos 2024 Sizzle Reel](#)

BLOCKCHAIN CENTRAL UNGA

Returning for in-person programming alongside the United Nations' (UN) 78th Annual General Assembly, more than 170 attendees gathered at the offices of the UN Joint Staff Pension Fund (UNJSPF) in New York City for conversations on accelerating progress towards the UN Sustainable Development Goals. The event's sessions were livestreamed, attracting more than 1K unique online viewers

▶ Watch the UNGA recordings [here](#)

▶ Watch the UNGA sizzle reel [here](#)

SUSTAINABILITY SUMMIT

GBBC co-hosted the Sustainability Summit: Technology, Equity, and Climate Solutions with Blockchain x Climate (BxC) and Microsoft. During the Sustainability Summit, we welcomed thought leaders across the sustainability space to map out innovative strategies, best practices, and collaborative efforts that leverage both traditional and blockchain technologies to address climate challenges, with more than 600 online viewers

▶ Watch the Sustainability Summit recordings [here](#)

▶ Watch the Sustainability Summit sizzle reel [here](#)

GBBC VIRTUAL CONVENINGS

This year, the GBBC community hosted 23 members-only virtual convenings, including 15 Virtual Members Forums (VMFs) and discussions across EMEA, APAC, and the Americas, with leaders in the digital assets space. GBBC also introduced two closed-door meetings for regulators, government agencies, central banks, and international standards organizations: Growth Markets Regulatory Monthly Council (GMRC) and Not All Blockchains Are the Same.



Catch up on the recordings from past VMFs, including the 2024 presentations [here](#)



GMRC is Co-Chaired by IFC-Milken Institute Capital Markets Scholars alumni Kefa Ngoiri of the Capital Markets Authority (CMA), Kenya and Ime Ekong of the Securities and Exchange Commission, Nigeria



This series is designed to cut through the hype and provide a clear understanding of various blockchain technologies, exploring their development, unique features, and compliance capabilities

2024 MEMBER-ONLY ROUNDTABLES

Throughout 2024, GBBC also convened members in closed-door discussions to address the most pressing issues and collaborate toward solutions including:

DINNER WITH SUPERINTENDENT HARRIS, NEW YORK STATE DEPARTMENT OF FINANCIAL SERVICES (NYDFS) NEW YORK, NY, USA

GBBC was thrilled to have Superintendent Adrienne A. Harris of the NYDFS and Cecilia Kushner, AICP from the New York City Economic Development Corporation (NYCEDC) join us for this open discussion with our members on February 26.

DC FINTECH WEEK WASHINGTON, DC, USA

On October 24, as part of DC Fintech Week, GBBC convened a closed-door roundtable titled "Mainstreaming Digital Assets Through Disclosures" in partnership with Ava Labs, Taxbit, the World Bank Group, and IDB Lab. This roundtable gathered experts to advance a collaborative strategy on disclosure standards that can support the mainstream adoption of digital assets.

CAPITAL MARKETS STANDARDS FOR DIGITAL ASSETS SUMMIT NEW YORK, NY, USA

On December 17, GBBC cohosted Capital Markets Standards for Digital Assets Summit with Oliver Wyman. This closed-door roundtable brought together experts across financial services – from traditional financial institutions to international organizations and startups – to discuss standards for a coordinated and harmonized adoption of DLT innovations. This conversation explored solutions to address key interoperability issues, capital requirements, and treatment of digital assets, among other topics.

Pictured Below: DC FinTech Week 2024



SINGAPORE FINTECH FESTIVAL (SFF) SINGAPORE

GBBC, a Community Partner for SFF, co-hosted a closed-door Global Regulatory Roundtable with Clifford Chance, fostering dialogue between regulators and industry leaders on innovation in digital finance. We are deeply grateful to Clifford Chance for their exceptional hospitality and collaboration.

ABU DHABI FINTECH WEEK ABU DHABI, UAE

Co-hosted with Clifford Chance, GBBC helped to organize a roundtable spotlighting Abu Dhabi's progressive regulatory environment, the city's appetite for calculated risks, but also the hurdles faced by small enterprises in the banking sphere.

A FEW PLACES YOU MAY HAVE SEEN US

Over the course of 2024, GBBC participated in many events and media appearances across Europe, Asia, Africa, and the Americas, as well as meetings with key regulators. Here are a couple of places where you might have seen us:



THE FUTURE OF DIGITAL FINANCE STRATEGY OF THE EU: A GLOBAL PERSPECTIVE

BRUSSELS, BELGIUM

On February 20, GBBC and MEP Ondřej Kovařík hosted, “The Future of the Digital Finance Strategy of the EU: A Global Perspective” at the European Parliament in Brussels, Belgium. A huge thank you to MEP Ondřej Kovařík and Renew Europe for the opportunity to convene thought leaders from across the globe at the European Parliament to unpack the future of digital finance. Watch the sessions [here](#).



MEETING WITH INDONESIA FINANCIAL SERVICES AUTHORITY

NEW YORK, NY, USA

GBBC’s team had the opportunity to meet with the Indonesia Financial Services Authority (Otoritas Jasa Keuangan (OJK)) to share the work being done by GBBC, including how blockchain technology can be leveraged for payments, digital identity, and more. Thank you to Jenny Eisenberg and the U.S. Department of State for hosting us, and to the OJK delegation for taking the time to meet with us.



WSIS+20 FORUM HIGH-LEVEL EVENT

GENEVA, SWITZERLAND

GBBC joined the WSIS+20 Forum High-Level Event, organized by International Telecommunication Union (ITU), UNESCO, UNDP, and UN Trade and Development (UNCTAD), and co-hosted by ITU and the Swiss Confederation, serves as a platform for multistakeholder discussions with the objective to take stock of the achievements, key trends, challenges, and opportunities since the Geneva Plan of Action in 2003. Learn more [here](#).



MEETING WITH KOREA FINANCIAL SERVICES COMMISSION (FSC)

SEOUL, SOUTH KOREA

GBBC met with the Korea Financial Services Commission (FSC), Virtual Asset Division, and members of the Digital Finance Policy Bureau team. A huge thank you to FSC regulators for their generous time as well as our industry colleagues who presented. We are grateful to the Hashed and Hashed Open Research teams for their help and support with connecting with these leaders in Korea.



MEETING OF THE DATF AT WEF HEADQUARTERS

GENEVA, SWITZERLAND

GBBC CEO Sandra Ro joined the Digital Asset Task Force (DATF) meeting, hosted at the headquarters of the World Economic Forum (WEF) in Geneva, Switzerland where she delved into, “Tackling the nexus: Preventing disasters in virtual assets and associated criminal networks.”



DIGITAL FINANCE IN AFRICA ROUNDTABLE

POINTE AUX PIMENTS, MAURITIUS

The Regional Centre of Excellence of the Financial Services Commission, Mauritius in collaboration with the Organisation for Economic Co-operation and Development (OECD), hosted a 2-day hybrid policy workshop on “Digital Finance in Africa” on June 20th and 21. GBBC CEO Sandra Ro joined the conversation on, “The limits of DeFi for financial inclusion.”

GLOBAL STANDARDS MAPPING INITIATIVE (GSMI) 5.0

Highlighting the importance of standards as one of GBBC's 3 pillars of focus, GBBC's Global Standards Mapping Initiative (GSMI) has released its 5th iteration in 2024, with GSMI 5.0. Standards point to common guidelines and agree upon rules and definitions, which not only ensure functionality of the technology, but also facilitate cooperation and interoperability, which are fundamental for achieving global scale. GSMI provides open-access resources across 6 key areas:

1. Legislation & Regulatory Developments
2. Taxonomy
3. Technical Standards
4. Blockchain & Digital Assets Landscape
5. Courses from Accredited Educational Institutions
6. In-Depth Reports & Visuals on Key Themes

**ACCESS GSMI 5.0
REPORTS & MAPPING**

GSMI IS THE MOST COMPREHENSIVE INDUSTRY-FOCUSED EFFORT TO MAP AND ANALYZE THE BLOCKCHAIN AND DIGITAL ASSETS SPACE, KEEPING THE INDUSTRY UP TO DATE SINCE 2020 ON THE MOST PRESSING GLOBAL THEMES. THIS INITIATIVE EXPANDS IN SCOPE AND IMPROVES USER-FRIENDLINESS EVERY SINGLE YEAR. IN 2024, GSMI PRODUCED THE FOLLOWING OUTPUTS:



Interactive Map of Regulatory Developments from 230 Jurisdictions & 6 International Bodies



Taxonomy & Definitions for 391 Key Terms



67 Technical Standards Bodies Advancing Blockchain Developments



Blockchain and Digital Assets Landscape with 2,000+ Stakeholders



Accredited Universities offering 1,500+ Courses & Professional Certifications



Country Spotlight on India

WITH IN-DEPTH REPORTS ON:

Supply Chain



Sustainability



AI Convergence



Digital Identity



DeFi



Collaborators from over 110 organizations came together across working groups to provide insight into the final resources and recommendations that GSMI published: tools for the blockchain and digital assets community to navigate the complexities of this global landscape.

GSMI reports and resources are crowd-sourced, open access, and intended to serve as a baseline for thoughtful and workable frameworks. This body of work 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.



GBBC GSMI 5.0

The value of our dedicated network of members, partners, and collaborators is manifested in the quality and breadth of the final content. These individuals, as well as the journey of active dialogue, debate, and reflection that it takes to collectively produce this body of work, are fundamental. GBBC continues to advance meaningful collaboration in support of responsible innovation to meet the world's most pressing challenges, and the attitude and effort that these contributors bring is the reason for the remarkable progression of GSMI with every launch.

GBBC is grateful for the collaboration of our valued partner programs who help make this body of work possible.

GSMI working group co-chairs, as industry leaders across our membership and community, set the stage and define priorities for each of the outputs produced by their respective groups.

AI CONVERGENCE CO-CHAIRS			DEFI CO-CHAIRS		
 JOHN DEVAOSS Board Director, GBBC; Founder, NeuralFabric	 TANVI SINGH Board Director, GBBC; Former Managing Director, Digital Assets, Data & AI, UBS; Venture Capital and Co-Founder	 JULIE STITZEL Senior Vice President, Policy, Digital Currency Group	 JOE CUTLER Partner, Perkins Coie	 LEE SCHNEIDER General Counsel, Ava Labs	 YVETTE VALDEZ Partner, Latham & Watkins LLP
DIGITAL IDENTITY CO-CHAIRS		SUPPLY CHAIN CO-CHAIRS		SUSTAINABILITY CO-CHAIR	
 SANKARSHAN MUKHOPADHYAY VP, Customer Experience, Dhway	 MICHAEL WAGNER Partner, Oliver Wyman	 DALE CHRYSTIE Chairman, BITA Standards Council; Business Fellow and Blockchain Strategist, Fedex	 GREG BROWN Vice President – Technology Strategy and R&D, UPS	 JONATHAN RACKOFF VP, Head of Global Policy, The HBAR Foundation	
TAXONOMY			TECHNICAL STANDARDS CO-CHAIRS		
			 DAN CONWAY Teaching Professor, Associate Director of the Blockchain Center of Excellence, University of Arkansas	 NEIL WASSERMAN Adjunct Professor in Computer Science, The George Washington University	

GBBC is also grateful for our GSMI Partner Programs: the Milken Institute, through whom we work with the support of experienced Milken Scholars, and selected global universities, through whom we work with the support of excellent students as GSMI Fellows.

IFC-MILKEN SCHOLARS		GSMI 5.0 FELLOWS	
 SHERECE NEAL Investment and Reserve Management Officer III, Central Bank of Belize	 RITHY PICH Head of CIS & Derivatives Business Supervision Division, Securities and Exchange Regulator of Cambodia (SERC)	 ADRIAN MATAK London School of Economics and Political Science	 NAMRRITHA SENTHILKUMAR The George Washington University
			

We look forward to a wonderful year ahead, as the foundations have been set to continue the wonderful work that GSMI offers for our valued community.

INTERNATIONAL JOURNAL OF BLOCKCHAIN LAW (IJBL)

Since 2021, GBBC has been releasing the International Journal of Blockchain Law (IJBL), an open access online journal written and edited by lawyers, that is designed to help business and non-legal communities better understand the world of blockchain and digital assets.

The International Journal of Blockchain Law (IJBL) marked a milestone year in 2024, publishing its 8th, 9th, and landmark 10th anniversary editions. Under the continued leadership of Editor-in-Chief Dr. Matthias Artzt, the journal expanded its global reach, featuring 16 articles from contributors covering over 15 jurisdictions spanning Asia, Europe, Africa, and the Americas.

A particular highlight was the journal's continued series on regulatory sandboxes, building upon previous coverage of the MAS Fintech Sandbox and examining innovative frameworks from Thailand's Enhanced Regulatory Sandbox to Hong Kong's Project Ensemble and the European Commission's pan-European Blockchain Sandbox initiative.

The year saw significant coverage of emerging regulatory developments, including Brazil's DREX CBDC implementation, Türkiye's and South Korea's new crypto asset laws, and the global Crypto Asset Reporting Framework (CARF).

IJBL deepened its commitment to examining blockchain regulation in emerging markets, featuring analyses of Kenya's carbon emissions trading, Malaysia's Initial Exchange Offering (IEO) framework, and Cyprus's emergence as a key player in the European blockchain landscape. Practical legal challenges received thorough attention, with articles addressing crypto bankruptcy proceedings, taxation, cross-border market access frameworks, token taxonomy, and NFT commodity classification under CFTC rules.

The journal also enhanced its accessibility through a new content tracking system, allowing readers to easily search articles by jurisdiction, topic, and author. Three successful webinars complemented the written content, notably featuring detailed discussions on the coexistence of CBDCs and stablecoins, and the tokenization of assets and funds. With the addition of Nina Moffatt to the editorial board and contributions from 49 different experts, the IJBL continued to serve as a vital resource for understanding the evolving landscape of blockchain law and regulation worldwide.

Learn more about IJBL [here](#).



INTERNATIONAL JOURNAL OF BLOCKCHAIN LAW (IJBL)

“The year 2024 was remarkably successful for the IJBL as we significantly expanded our global presence with a strong emphasis on both the APAC and Americas regions. We have curated a rich collection of highly insightful articles from a variety of esteemed authors. Notably, some of these contributors are representatives of regulatory bodies, aligning perfectly with IJBL’s mission: to offer a platform for legal professionals and gather diverse perspectives on blockchain law and crypto-asset regulation worldwide. A standout feature of the IJBL is that each edition included links to recorded panel discussions on pressing topics in blockchain law.”

Dr. Matthias Artzt, IJBL Editor-in-Chief

EDITORS

MEET THE EDITORS



**EDITOR-IN-CHIEF
DR. MATTHIAS ARTZT**
SENIOR LEGAL COUNSEL; CO-EDITOR
AND CO-AUTHOR OF ‘HANDBOOK OF
BLOCKCHAIN LAW’
DEUTSCHE BANK AG



LOCKNIE HSU
PROFESSOR
SINGAPORE MANAGEMENT
UNIVERSITY



ELÇIN KARATAY
MANAGING PARTNER
SOLAK & PARTNERS



NINA MOFFATT
PARTNER, CORPORATE
DEVELOPMENT
PAUL HASTINGS



STEPHEN PALLEY
PARTNER
BROWN RUDNICK



THIAGO LUÍS SOMBRA
PARTNER
MATTOS FILHO



JAKE VAN DER LAAN
CO-AUTHOR,
‘HANDBOOK OF BLOCKCHAIN LAW’
BARRISTER AND SOLICITOR
NEW BRUNSWICK, CANADA



GARY D. WEINGARDEN
PRIVACY OFFICER AND DIRECTOR
OF IT SECURITY COMPLIANCE
TUFTS UNIVERSITY

INTERWORK ALLIANCE (IWA)



InterWork Alliance (IWA), an initiative of GBBC, empowers organizations to adopt and use token-powered services in their day-to-day operations, across use cases and networks, bringing inclusivity and interoperability to globally distributed applications. Founded in 2020, and merged in 2021 with GBBC, the leading global industry association for the blockchain ecosystem, IWA is a key rallying point for organizations to collaborate on market-driven tokenization standards, guidance, and taxonomy to transform digital interchanges of value.

Throughout 2024, IWA has continued its efforts to drive tokenization standards forward through the further developments of the Token Taxonomy Framework (TTF), a common language framework for defining the structure of tokens and how they operate in their ecosystem. Following feedback from the community, IWA has also begun to produce educational content around tokenization, TTF, and sustainability use cases that IWA working groups have provided guidance for. This effort seeks to make TTF and IWA's guidance more accessible and digestible for a broader audience.

IWA maintains a GitHub repository for TTF and a Token Designer Tool to make TTF more accessible to organizations across a variety of industries and use cases. By providing a common language for both business- and technology-oriented individuals to discuss tokenization, IWA seeks to promote interoperability by providing standardized definitions for token structures and guidance on how those tokens should be used. Learn more about IWA here.

2024 HIGHLIGHTS & MILESTONES

- 1 IWA's Carbon Emissions Token (CET) Taskforce published the Carbon Emission Token Protocol – Version 1.0.** This document defines, and provides guidance for, the tokenization of emissions. The goal of this effort is to advance and strengthen emissions reporting through technical guidance, specifications, and best practices for tokenized carbon emissions and related data structures.
- 2 IWA's Voluntary Ecological Markets (VEM) Taskforce has continued to iterate on the Digital Measurement, Reporting, and Verification (dMRV) Framework following the publication of Version 2.0 last year, taking feedback from the community through individual outreach and a broader dMRV survey.** The dMRV Framework aims to define the terminology, roles, process, generic evidence packaging, and attestation that dMRV solutions should follow to originate carbon credits and other next generation digital assets. IWA is currently working on revisions to the dMRV Framework to address feedback received from implementers and other stakeholders.
- 3 IWA's VEM Taskforce has also begun working on a series of educational content pieces to make the guidance and standards more accessible, while showcasing the value of common standards and tokenization.** To start, the group recently published infographics covering carbon markets, MRV, and dMRV to level-set with the community on definitions, key entities, and processes as well as to discuss the benefits that dMRV and tokenization can bring. More educational content is in progress, and the VEM Taskforce looks forward to continuing this effort in 2025.
- 4 During Climate Week in New York City, GBBC hosted the Sustainability Summit to bring together stakeholders focused on various use cases under the umbrella of sustainability.** As part of this event, GBBC curated a panel titled "Navigating the Complexities of the Voluntary Carbon Market: Nature-Based Solutions and dMRV" in which panelists discussed, among other topics, the importance of standards and the IWA's dMRV Framework.
- 5 Both GBBC member companies and non-member companies are continuing to implement IWA specifications in their operations and contributing back their findings and experience, allowing IWA standards and guidance to continue to evolve to meet the needs of various stakeholders.**

WORKSTREAMS

- **Voluntary Ecological Markets (VEM) Taskforce** - Focused on the development of standards for the creation of digital assets that represent the environmental benefits of voluntary ecological markets.
- **Carbon Emissions Token (CET) Taskforce** - Working toward establishing standards for tokenization, contractual extensions, workflows, and analytics for GHG/ carbon emissions.

CHAIRING ORGANIZATIONS



LOOKING AHEAD TO 2025, IWA WILL:

- Continue to push for education and broader awareness around TTF and the use cases covered by the taskforces.
- Explore new use cases for TTF in the areas of Supply Chain, Financial Services, and more; if you are interested in getting involved, please contact Jackson.Ross@gbbccouncil.org.
- Work to upgrade the Token Designer Tool to make it more accessible and expand its capabilities.
- Continue to drive adoption of TTF and IWA standards through GBBC channels while leveraging our members and their networks.

PUBLICATIONS



Carbon Markets Overview

What are carbon markets?
"Carbon pricing mechanisms enabling governments and non-state actors to trade greenhouse gas emission credits" - 1
2 Types of Markets:

- Compliance Markets**
 - Participation required by regulation
 - Carbon credits are issued by a central authority and sold as allowances to emit
 - If emitters use fewer credits than purchased, they can sell the excess
 - The number of credits decreases yearly, reducing the emissions cap (known as "Cap & Trade")
- Voluntary Markets**
 - Participation driven by non-regulatory reasons, like achieving net-zero goals
 - Credits are project-based, granted for activities that reduce, avoid, or remove carbon
 - Credits can be sold and retired by buyers to offset emissions

It is anticipated that these markets will converge, with a mix of allowance and project based credits being utilized by organizations.

What is a carbon credit?
An amount of CO2 or CO2 equivalent (CO2e) which represents either the reduction, removal, or avoidance of greenhouse gas (GHG) emissions based on proven activities by a project.
Can be bought and sold by organizations for use in the offsetting of emissions or to meet climate-related goals.

What is carbon offsetting?
The process or action by which an entity reduces its overall carbon emissions profile through the purchase and retirement of carbon credits. These credits are matched to an equivalent amount of carbon emissions from the organization to lower its overall emissions profile.

Key Entities

- Validation/Verification Bodies (VVBs)**
Contracted to conduct third-party assessments of environmental claims, based on a standard, to ensure that the protocols and methodologies were followed and that the evidence supports the claims.
Historically hired by project developers to provide a service and are authorized by the appropriate standards body (e.g., Verra, Gold Standard). VVBs do not carry legal liability for their assessments; that falls to project developers. Efforts are ongoing to establish legal frameworks around voluntary markets.
- Quality Standards**
Puts forth the requirements for the measurement of outcomes, based on approved methodologies or protocols, that result in high-quality credits being issued.
A Quality Standard can encompass a Standard Protocol or Methodology, a crediting program, measurement tools, and certification requirements for a VVB.
- Project Developer**
The entity which manages environmental projects, records environmental impacts, and reports those impacts to verifiers to facilitate the issuance of credits.
- Certification Standards Bodies**
Creates and certifies science-based standards, e.g., protocols and methodologies, for measuring environmental impacts and benefits. This may be an industry consortium, academic partnership, or a single organization.

1 Carbon Markets 101: Compliance & Voluntary | 2 Quality Measurement, Reporting & Verification (MRV) Framework - Version 1.0 | GBBC InterWork Alliance

ABOUT THE INTERWORK ALLIANCE'S TOKEN TAXONOMY FRAMEWORK (TTF)

The InterWork Alliance (IWA), an initiative of Global Blockchain Business Council (GBBC), seeks to **empower organizations to adopt token-powered services** in their operations, promoting **interoperability** through standards and guidance for tokenization use cases. Created by Accenture, Digital Asset, Microsoft, and others, the IWA was initially formed under the Enterprise Ethereum Alliance (EEA) before spinning out to maintain platform neutrality. Learn more about the IWA [here](#).

IWA developed the Token Taxonomy Framework (TTF), a **common-language, open-source framework** used to define tokens, their data, and their behaviors. TTF is **implementation-neutral**, accommodates a range of use cases, and can have additional terms added as new topics are explored. Learn more about the TTF [here](#).

TTF STRUCTURE
THE TTF DEFINES TOKENS USING THE FOLLOWING ARTIFACTS:

- TOKEN BASES**: the fundamental type of token being used (e.g., Fractional Fungible)
- BEHAVIORS**: actions that the token can exhibit (e.g., Transferable, Divisible)
- PROPERTY SETS**: data that the token contains (e.g., SKUs, Date Ranges)

These artifacts are **combined** to create a Token Formula, outlining the structure of a token. The TTF can also **expand** to include new artifacts and support new use cases. The **modular** nature of the TTF allows for the **reuse** of artifacts between use cases.

An example token definition for a Document is shown to the right. It is made up of a Singleton Token Base, five Behaviors, and one Property Set. The shorthand Token Formula is included below the image. This was generated using the Token Designer Tool, a sandbox environment to create tokens.

BENEFITS OF THE TTF

- Allows for the definition of tokens using plain language and terminology
- Enables business and technical stakeholders to collaborate on token structures
- Can serve as an educational/workshop tool to discuss tokenization among stakeholders
- Compatibility and modularity enable the reuse of artifacts using open-source code
- Promotes interoperability by establishing common terminology and definitions

RESOURCES

- [InterWork Alliance Page](#)
- [Token Economy Framework Page](#)
- [TTF Github Repository](#)
- [Token Designer Tool](#)

OUTPUT

The TTF has been used by IWA working groups to define tokens and provide guidance for Voluntary Carbon Markets, Carbon Emissions Tokenization, and Digital Measurement, Reporting, and Verification (DMRV).

Additionally, the TTF is being leveraged by use cases focusing on supply chain, education, financial services, and more through GBBC initiatives and beyond.

Examples of MRV Reporting Data Tables using the TTF

*Recently renamed as Hedera Foundation

POST-TRADE DISTRIBUTED LEDGER GROUP (PTDL)

GBBC's Post Trade Distributed Ledger (PTDL) Group serves as the rallying point for prominent financial institutions and market infrastructure players whose shared vision for distributed ledger technologies has brought them together.

The PTDL Group has been active since 2015 and came under the GBBC umbrella in 2018. The Group meets monthly (virtually) to discuss distributed ledger technology applications, regulatory developments in financial services globally, and specific topics or issues affecting the blockchain and digital assets ecosystem.

PTDL Group meetings are closed-door and only open to regulated financial institutions, government entities, academic institutions, and law firms from the GBBC membership.

2024 PTDL LEADERSHIP COMMITTEE



EMMA JOYCE
SENIOR MANAGING DIRECTOR,
GBBC FINANCIAL SERVICES &
HEAD OF EMEA GBBC



HANNAH MEAKIN
PARTNER,
NORTON ROSE FULBRIGHT



RICHARD SHADE
CHIEF OPERATING OFFICER,
ARCHAX



ANDRE PORTILHO
HEAD OF DIGITAL ASSETS,
BTG PACTUAL



GERARD SMITH
HEAD OF POST TRADE
PRODUCT STRATEGY, NASDAQ



MATTHEW SHEPHERD
VP STRATEGY, RESEARCH,
& DEVELOPMENT,
WELLS FARGO

THANK YOU TO 2024 PTDL PRESENTERS

- Abu Dhabi Global Market (ADGM)
- Archax
- Ava Labs
- BTG Pactual
- Bae, Kim & Lee LLC
- Banco Central do Brasil
- Bank of Thailand
- Cambridge Centre for Alternative Finance
- Copper
- EU Commission (DG FISMA)
- DLA Piper
- The Depository Trust & Clearing Corporation (DTCC)
- Digital Asset
- Digital Token Identifier Foundation (DTIF)
- European Central Bank (ECB)
- Indonesia Financial Services Authority (OJK)
- International Securities Services Association (ISSA)
- Japan Ministry of Economy, Trade and Industry (METI)
- Korea Financial Services Commission
- Labuan Financial Services Authority (LFSA - Malaysia)
- Mayer Brown
- Monetary Authority of Singapore (MAS)
- Nasdaq
- Norton Rose Fulbright
- Polymesh Association
- R3
- Taxbit
- VerifyVASP

U.S. BLOCKCHAIN COALITION (USBC)

GBBC  USA



GBBC
U.S. Blockchain Coalition

USBC champions unified policy for emerging technology innovation. It is a unique national organization with a multi-state focused approach, leveraging hyperlocal relationships across 50 states USBC's grassroots network drives community building and education at the state level through alignment on public policy and real-world use cases.

State level policy in the US is of particular importance given the country's federal and state-level dynamics. USBC seeks consistent policies at the state level through alignment on public policy and legislative priorities. Led by state-level representatives, USBC highlights and catalogs use cases, provides accessible education to policymakers, and builds relationships with regulatory bodies and agencies to meaningfully grow the impact of this emerging technology across the country.

PRIORITIES:



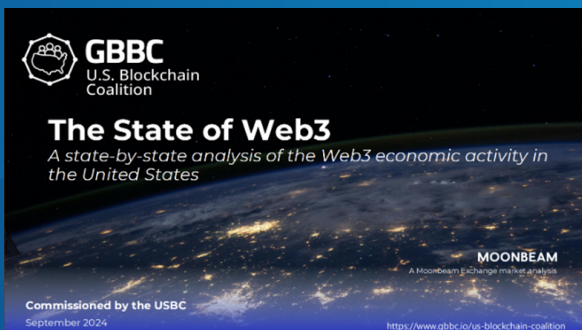
Building Strong Communities
Forging public-private partnerships



Data-Informed Research
Highlighting, creating and sharing reports, data, and use cases

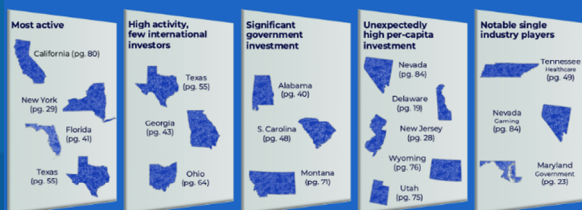


Empowering Stakeholders
Providing accessible educational resources for state association leaders and individuals



These state-level initiatives have been fundamental for the acceptance of the 2022 amendments to the US Uniform Commercial Code (UCC), which create a new UCC Article 12 on Controllable Electronic Records, update Article 9 to allow for perfection of security interests in digital assets, and update rules for electronic negotiable instruments. UCC 2022 Amendments, developed by the Uniform Law Commission (ULC), clarify the existing commercial law governing the transfer of property rights for digital assets. These amendments also introduce new rules for mixed transactions that involve both goods and services, while also updating terminology to recognize electronic signatures and documents. As of today, 25 states and the District of Columbia have adopted UCC amendments.

Our analysis reveals several outliers in the Web3 space.



These standout states are examined in further detail in their respective regions for job activity & federal funding.

This report demonstrates the economic impact of digital innovation across the U.S., on a state-by-state level. This report focuses on industry, regulation, and key metrics on Web3 developments that are particular to each state.

In addition, USBC has published the updated annual State of Web3 Report, providing an assessment of economic activity, impact, and innovation potential of Web3 technology across all 50 states, in addition to the District of Columbia and Puerto Rico.

THE LATEST STATE OF WEB3 REPORT CAN BE FOUND [HERE](#).

BITA STANDARDS COUNCIL (BITA)



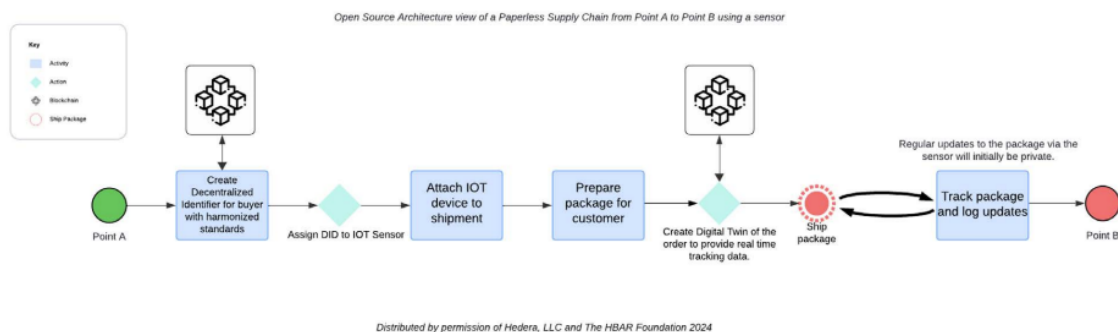
GBBC
BITA Standards Council

Originally established in 2017 as the Blockchain in Transport Alliance, BITA Standards Council (BITA) is now a GBBC initiative **focused on the creation of open-source and royalty-free data standards in the global transportation and commerce (supply chain) space.** BITA's Leadership Team is made up of GBBC members from FedEx, UPS, and Delta Air Lines.

BITA's leadership has taken part, for the second year, in co-chairing the supply chain working group of the Global Standards Mapping Initiative. The final report published in 2024 was a continuation of the foundations built the year prior, establishing the role of blockchain and emerging technologies as fundamental for the future of global supply chains.

This year's working group went in-depth on the role of standards and mapping out the current global landscape of standards for global supply chains. The report delineates the basic essential data elements for the global movement of goods, identifying those global standards bodies that cover those topics so as to point out areas of commonality and facilitate any attempts to harmonize standards. The report also assessed international standards development organizations, categorizing them based on their purpose, industry of focus, and importantly, whether they offer open-source vs. fee-based access to standards, and whether their model is tied to a document or digital-based standards format.

The key takeaways from this assessment highlight the need for further engagement across stakeholders to further harmonize and ultimately achieve a paperless supply chain – the reference architecture of which is delineated below. This requires a network effect and continued collaboration. Only a small subset of the entities reviewed have truly open standards that are also digital-based, that is, fit for the digital world. Therefore, a 'crawl, walk, run' progression is proposed for key areas including physical movement, the use of sensors, privacy, and identity.



Finally, representatives from the BITA leadership propose a call to action for stakeholders in the supply chain space to work for the future of global transportation and commerce. There is a collective responsibility requiring a global coalition that can:

- Facilitate the transition to a harmonized global system that can link different platforms
- Engage across standards entities for dialogue on harmonization
- Engage with tech communities to support alignment with standards
- Identify gaps, pain points, and ways to facilitate new model alignment
- Establish a clear scope for these efforts to keep the momentum forward

By doing so, we will accelerate the creation of a truly global supply chain that is faster, more resilient, and equitable, capable of meeting the demands of the 21st-century economy, and beyond. Much of it is built on open and interoperable standards for the digital economy, and BITA will continue to take steps to implement this vision. [ACCESS THE REPORT HERE.](#)

SUSTAINABILITY

GBBC greatly values the importance of sustainability across the work of all members. This entails both innovators across industries adopting blockchain technology to advance their respective sustainability goals, as well as the blockchains themselves taking measures to make their operations more sustainable. GBBC has defined members' priorities in sustainability with focus on energy, energy transition, commodities, biodiversity, climate finance, and social impact.

With respect to advancing sustainable practices across GBBC's membership base, the 3 pillars of GBBC's approach are:

1. Tokenization (e.g., carbon markets)
2. Transparent data
3. Inclusion of the interests of stakeholders in the Global South

SUSTAINABILITY SUMMIT

In September 2024, GBBC co-hosted the Sustainability Summit alongside Microsoft and Blockchain x Climate (BxC), as part of the UN General Assembly (UNGA), UN Foundation Global Goals partner and NY Climate Week events. This event also formed part of the New York Climate Week agenda.

The Sustainability Summit brought together traditional and Web3 companies to highlight the crucial role of digital innovation in achieving climate-related Sustainable Development Goals (SDGs). Conversations explored SDG 5 (Gender Equality), SDG 7 (Affordable and Clean Energy), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water), and SDG 15 (Life on Land), as thought leaders in the sustainability space mapped out innovative strategies, best practices, and collaborative efforts that leverage both traditional and blockchain technologies to address climate challenges. By fostering dialogue between diverse industries, we aim to create actionable pathways for a more sustainable future.

BLOCKCHAIN X CLIMATE LEADERSHIP NETWORK (BXC)

BxC is an activist-to-industry network of global stakeholders working Global Climate Solutions powered by Web3. Objectives include defining and authoring principles that govern climate-related blockchain efforts, developing shared understanding and narratives across sectors, and designing tangible and meaningful cross-chain and cross-industry climate initiatives and projects.

BxC therefore hopes to address the limited action and siloed efforts that have been observed in much of the climate industry, while improving avenues to transition between Web2 and Web3, ultimately to present a consolidated perspective that can foster collaboration to drive innovation and solutions for a sustainable future.

During 2024, BxC has highlighted the work of key players and innovators through industry convenings and research efforts. In addition, BxC is exploring steps to connect web3 native ecological credits to large global corporates.

FOOD FOR CRISIS, A WEB3 INITIATIVE

GBBC GIVING AND THE WORLD FOOD PROGRAMME'S (WFP) INNOVATION ACCELERATOR HAVE PARTNERED TO LAUNCH THE 'FOOD FOR CRISIS' INITIATIVE, TO RAISE FUNDS IN FIAT, CRYPTO, OR BENEFITS IN KIND, TO PILOT BLOCKCHAIN-BASED SOLUTIONS TO IMPROVE HUMANITARIAN AID ADDRESSING GLOBAL HUNGER, AND EVENTUALLY SUPPORT LOCAL INNOVATION ENDEAVORS.

FOOD FOR CRISIS

A Web3 Initiative



WFP is an early adopter of web3 solutions for humanitarian aid to address United Nations Sustainable Development Goal 2: Zero Hunger. GBBC has a deep network and expertise in the web3 space. Together, we have discovered many synergies to produce a tool that, in the future, can be useful across various facets of economic development endeavors and beyond.

Food for Crisis aims to help narrow the humanitarian funding gap and optimize the delivery of critical assistance. With a moonshot target of \$1 billion in raised funds if pilots prove successful, 2024 has seen progress in terms of raising initial funds, and starting operations for pilots utilizing different web3 tools. We have taken fundamental steps to set us in the right direction toward our ultimate goal: a blockchain-agnostic infrastructure to trace funds from donor to beneficiary, ensuring efficiency and transparency of humanitarian aid.

This will provide real-time visibility into fund flows, while protecting privacy, and providing agency for donors to better view the impact of their contributions. A major differentiating factor is the ability to trace both crypto and non-crypto funds, which would be represented as digital twins on a blockchain for the purpose of tracing all forms of fund flows. Food for Crisis aims to integrate with local payment systems on the ground (e.g., traditional bank transfers, e-vouchers, and mobile money). We have explored solutions with decentralized storage, stablecoins, and different blockchain platforms, and we have refined and executed toward an initial Proof-of-Concept and a series of pilots that will continue into 2025.

Food for Crisis is a response to the urgent challenge of a global hunger crisis. We are facing a food logistics problem more than a food shortage problem, and web3 tools can help tackle this food crisis. Across the world, 783 million people – roughly one in ten of the global population – are chronically hungry, unsure of where their next meal will come from. All the while, WFP estimates that more than 345 million people in the 79 countries where it operates faced high levels of food insecurity by 2023. This is an increase of almost 200 million since early 2020 (pre-COVID-19 pandemic levels). Ongoing conflicts, economic shocks, and climate extremes would only worsen the level of food insecurity.

You can become a part of this journey. If collaborating with Food for Crisis resonates with you, let's connect! Please email us at food@gbbccouncil.org

GBBC AMBASSADORS

SINCE ITS INCEPTION, GBBC HAS RELIED ON ITS GLOBAL AMBASSADOR NETWORK TO EXPAND OUR GLOBAL COMMUNITY, PRESENCE, AND IMPACT.

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AMBASSADORS

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JURISDICTIONS
& DISCIPLINES

We are grateful for the 2024 cohort of GBBC Ambassadors, who expanded our reach and engaged new jurisdictions including Andorra, Benin, Convergence AI, Cyber Law Enforcement, Czech Republic, Decentralized Systems, El Salvador, Qatar, Supply Chains, and Tech for Impact.

With an immense community that continues to grow at a rapid pace, we have refreshed our network of GBBC Ambassadors to streamline the program, ensuring an engaged cohort for the year ahead.

To start 2025, GBBC appointed 49 new ambassadors and added 9 new jurisdictions: Bhutan, Cambodia, Energy Infrastructure, Government Affairs, Latin America (LatAm), Malaysia, Malta, Standards, and Trading and Markets. The 2025 GBBC Ambassador cohort encompasses 283 ambassadors and 124 jurisdictions & disciplines.

Blockchain technology's development and progress is rooted in mass, global collaboration. Our cohort of Ambassadors for 2025, which is announced during GBBC's Blockchain Central Davos in January, exemplifies the global community required to develop the next multi-trillion-dollar industry and build more secure, equitable, and functional societies during this watershed moment in history when technology is transforming all areas of human activity. GBBC is honored and humbled to work with such a diverse group of luminaries.

Read the full list of ambassadors [here](#).

OUR MEMBERS' WORK

CASE STUDY

LANDMARK YEAR FOR THE CANTON NETWORK

Digital Asset

As we reflect on 2024, it's been an exciting year full of significant milestones for the Canton Network. Canton not only established itself as the leading network for institutional-grade blockchain applications but also set the stage for even greater innovations to come in 2025. With landmark achievements such as the launch of MainNet, the formation of the Global Synchronizer Foundation (GSF), industry-first pilots, and real-world deployments, Canton has proven its ability to deliver a network that is converging traditional finance (TradFi) and crypto ecosystems.

The launch of the Canton Network MainNet in June 2024 marked a pivotal moment for financial services infrastructure. Designed to meet the stringent connectivity and control requirements of financial institutions, the MainNet enables the secure transaction of real-world assets without compromising privacy or regulatory compliance. This breakthrough empowered institutions to issue, trade, and manage tokenized assets confidently, unlocking new opportunities for efficiency and liquidity. This infrastructure backbone connects surging demand in crypto capital markets to the unmatched access to the breadth and depth of the TradFi token asset pools and market practices on-chain.

The establishment of the Foundation, managed by Linux Decentralized Trust, brought transparent governance and organizational neutrality to the adoption and evolution of the Global Synchronizer public infrastructure. Founding members of the GSF include: 7RIDGE, Bitwave, Broadridge, Calastone, Cumberland SV, Digital Asset, EquiLend, Euroclear, Global Blockchain Business Council, IntellectEU, Kaleido, LendOS, Liberty City Ventures, MPCH, Obsidian Systems, SBI Digital Asset Holdings, Taurus, and Tradeweb. The Global Synchronizer enabled two first-of-its-kind [Pilot](#) programs in 2024, over 45 institutions, to demonstrate hundreds of interoperable transactions across more than 20 applications in the Canton Network pilots with the DTCC, Euroclear, and the World Gold Council.

The implications for collateral mobility are significant. Today, only 10-20% of the \$230 trillion in global investable assets are usable as collateral due to operational and regulatory constraints. Canton's privacy-preserving infrastructure allows institutions to tokenize and mobilize these assets without exposing sensitive data, unlocking trillions in untapped capital. This capability transforms not only capital efficiency but also risk management and liquidity generation.

"We are pleased to support the formation of the Global Synchronizer Foundation," said **Daniela Barbosa, General Manager, Blockchain and Identity, at the Linux Foundation**. "By providing a means to improve Global Synchronizer's interoperability through open collaboration, we believe the Linux Foundation can help improve its utility for all community participants."

Today, Canton stands as the largest ecosystem for real-world assets. With adoption accelerating, the ecosystem has over 100 participants and processes over 3.6 trillion in token securities issued and processed on Canton. Additionally, 2024 saw an acceleration in digital bonds issued on Canton Network, with 5 issuances on 3 separate platforms totaling more than USD 1.1 billion. [Since 2022, Canton-connected platforms have been responsible for 57.5% \(over USD 4.6 billion\) of the USD 8 billion of digital bonds issued during the last five years.](#)

All of this has set the stage for 2025 to be the watershed moment for the era of tokenized finance. Canton has garnered significant interest from both traditional financial institutions and institutional crypto firms for one very simple reason: privacy.

THE PRIVACY IMPERATIVE IN TOKENIZED FINANCE

Privacy has traditionally been one of the largest barriers to institutional participation in blockchain-based finance. Public, permissionless networks risk exposing sensitive trading data, posing risks to proprietary strategies, and creating potential compliance issues. The Canton Network was designed to overcome these challenges. By enabling configurable transaction privacy, Canton ensures that institutions retain control over what information is shared and with whom, aligning with their operational, regulatory, and strategic requirements.

As **Yuval Rooz, Co-Founder and CEO of Digital Asset**, notes, “Privacy is the unlock for institutional liquidity. The ability to move diverse forms of collateral, both in and out of exchanges, with full confidentiality is reshaping the institutional landscape.”

CRYPTO MARKETS AND DRIVING INNOVATION

At the same time, crypto innovation is fueling a new paradigm where money moves as freely as information on the Internet, unbound by outdated operations and cutoff times. Legacy technology and processes are no match for the efficiency and transparency of tokenized assets. Everyone—investors, institutions, governments—is chasing utility, liquidity, and opportunity. Collaborations are underway to create cutting-edge collateral and margin management solutions that connect to the new forms of cash and stablecoins on-chain. The configurable privacy of Canton is the lynchpin to making 24/7 markets a reality in 2025.

Canton

UTILITY IS AROUND THE CORNER

As markets evolve, the demand for greater asset utility, risk management, and unbound market access continues to grow. Market makers, custodians, and trading platforms are increasingly seeking solutions that offer financing opportunities, and secondary markets, all of which drive further demand and attract liquidity.

The institutional crypto derivatives market offers a case in point. Canton allows participants to move real-world assets with complete confidentiality, protecting sensitive trading strategies and preventing market visibility. This capability has become a key differentiator in the fast-evolving crypto derivatives market, where data permissioning is critical for growth and innovation.

“This year will also be an inflection point in the progress of digital asset regulation. At a granular level, key bills such as the FIT 21 Act and stablecoin legislation are likely to pass. We can expect progress on a bill that has flown under the radar thus far but is equally critical, the Tokenization Report Act. This will be important in shaping the dialogue around real-world asset tokenization among banking regulators who will be more amenable to exploring the benefits that tokenization can bring to the financial system,” said **Manoj Ramia, General Counsel at Digital Asset.**

“At a big-picture level, we will see the narrative shift from the stale crypto vs. blockchain dichotomy towards a more holistic and productive conversation on digital assets and the modernization of financial infrastructure.”

THE PATH FORWARD: SCALING IN 2025 AND BEYOND

Looking ahead, 2025 promises to be a defining year for the Canton Network and the broader tokenized finance ecosystem. Canton is enabling adoption across both primary and secondary markets, with the rapid expansion of participants, assets, and service providers forming new markets that will be the flywheels of the digital economy.

CASE STUDY

UNJSPF DIGITAL IDENTITY SOLUTION



UNJSPF
United Nations Joint
Staff Pension Fund

The United Nations Joint Staff Pension Fund (UNJSPF) was established in 1948, by a resolution of the General Assembly, to provide retirement, death, disability, and related benefits for staff upon cessation of their services with the United Nations, as well as the other organizations admitted to membership in the Fund.

TODAY THE UNJSPF COUNTS 25 MEMBER ORGANIZATIONS AND SERVES OVER 250,000 PEOPLE, INCLUDING PARTICIPANTS, RETIREES, AND BENEFICIARIES.

Every year, UNJSPF retirees and beneficiaries need to prove that they are still alive, sending to the Pension Fund a proof-of-life in order to receive their benefits. Historically, this process has been conducted through the use of a paper form called "Certificate of Entitlement (CE)."

Since 2021, the UNJSPF has introduced a significant innovation: the "Digital Certificate of Entitlement (DCE)", a digital identity solution to support its retirees and beneficiaries' proof-of-life. This digital solution facilitates a process that normally involves mailing 86,000 proof-of-life documents for a handwritten signature (which is often required to make a document legally binding and prove its authenticity).

With the DCE, the UNJSPF introduced a new process that involved users downloading the application to prove identity, existence, transaction, location using blockchain-based technology, biometrics, AI and geo-location. Among the benefits of the solution are:

- **Convenience:** the annual CE process can be completed from the comfort of home without mailing any documents.
- **Optionality:** beneficiaries can still receive and return paper CEs if preferred.
- **Reversibility:** it is possible to switch between digital and paper CE at any time.
- **Security:** features are in place to protect personal information, ensuring that data remains safe even if the phone is compromised.
- **Environmental friendliness:** it helps reduce paper use.
- **Health and safety:** it avoids trips to the post office, especially important for elderly individuals.

The DCE won the United Nations Secretary-General award for innovation and sustainability (2022), and the Government Blockchain Association's Social Impact Award (2023). The Digital CE solution has been certified in accordance with international cybersecurity standards, and it will continue to be assessed on an annual basis.

This is in addition to the statutory internal and external audits conducted on the Fund's operations. An additional feature is being planned for beneficiaries living in various geographical areas, including some with connectivity issues: a kiosk mode, allowing the submission of Digital CEs from kiosks at various duty stations.

Regular outreach and support are provided by a dedicated team in the Fund for those beneficiaries who wish to enroll or have questions about the application. *For more information, visit the [UNJSPF website here](#).*

CASE STUDY HIERO - THE FOUNDATION OF THE FUTURE



In September 2024, Hedera became the first public distributed ledger to contribute its entire codebase - including the highly scalable hashgraph consensus algorithm, core services, and essential development tools - to an independent foundation: the Linux Foundation Decentralized Trust (LF Decentralized Trust), with Hedera also joining as a founding Premier Member of the newly formed organization.

This unprecedented move establishes a vendor-neutral, fully auditable codebase that will aim to serve as a robust, open-source foundation for enterprise-grade decentralized applications. Under the stewardship of the Linux Foundation - which has an unparalleled track record in managing open-source infrastructure - Hiero will serve to foster a rich ecosystem of developers, innovators, and enterprises working collaboratively to advance innovation within the realm of decentralized solutions.

While the LF Decentralized Trust will oversee Hiero's codebase development and management, the operational governance of the Hedera network remains with the Hedera Council. This strategic arrangement ensures that the network maintains its security and decentralization while leveraging the extensive resources and collaborative framework of the LF Decentralized Trust.

The Hiero project represents a comprehensive open-source foundation for building decentralized applications and services. At its core and as a reflection of Hedera itself, Hiero embodies a number of fundamental characteristics that distinguish it in the blockchain landscape:

- Fair ordering of transactions
- Rapid transaction settlement
- Enterprise-grade network security
- Robust decentralization
- Leaderless consensus

This open-source contribution is more than a milestone—it redefines how enterprise blockchain infrastructure is built, secured, and scaled. By placing its core technology under the stewardship of the LF Decentralized Trust, Hedera is setting new standards where cooperation beats competition, and openness fosters trust—driving innovation while ensuring the decentralized economy stays transparent, secure, and accessible to all.





HEDERA'S GOVERNANCE CONTINUES TO STRENGTHEN AND EXPAND

The Hedera Council continues to expand its diverse, globally representative membership with the addition of three prominent organizations in 2024: BitGo, Mondelēz International, and the Nairobi Securities Exchange (NSE). Each new member brings unique expertise and perspective to the Council's governance model, strengthening its position as one of the world's most diverse decentralized governance structures.

BitGo, which joined in February 2024, brings extensive expertise in institutional-grade digital asset security and custody. As a pioneer in multi-signature wallet technology and regulated custody solutions, BitGo adds crucial experience in secure digital asset management and institutional blockchain adoption. The company currently secures approximately 20% of all on-chain Bitcoin transactions by value and serves over 1,500 institutional clients across 50 countries.

Mondelēz International - the multinational consumer-packaged goods giant - behind such household names as Oreo and Toblerone - also joined the Hedera Council in February, bringing significant enterprise expertise and insights to the ecosystem. Their involvement highlights the growing importance of distributed ledger technologies in global supply chains and consumer goods. The company is already exploring innovative use cases, including a partnership with Hedera ecosystem project SKUx to redefine traditional consumer payment methods.

The Nairobi Securities Exchange's admission marks a significant step in expanding the Council's knowledge in capital markets infrastructure and geographic diversity. As Kenya's principal securities exchange, NSE brings invaluable experience and aptitude for emerging markets and the tokenization of traditional financial assets - demonstrating Hedera's commitment to fostering financial innovation across global markets.

These strategic additions reinforce the Council's governance model, which ensures:

- Equal voting rights among all members
- Diverse industry representation
- Geographic distribution spanning major economic regions
- Balance of established enterprises and innovative technology leaders

Hedera's robust governance framework continues to set the network apart within the web3 space, where decentralization often comes at the cost of stability and predictability. By combining the oversight of globally established organizations with term limits and balanced voting rights, Hedera has created a governance model that delivers robust decentralization, unprecedented transparency, and trusted decision-making. This unique approach provides the stability and accountability that enterprises require, while maintaining the innovative and open spirit of Web3, making Hedera uniquely positioned to bridge the gap between legacy systems and the emerging digital, decentralized economy.

CASE STUDY BIODIVERSITY CREDITS: HARNESSING BLOCKCHAIN FOR ENVIRONMENTAL STEWARDSHIP IN THE AMAZON



REGEN
NETWORK

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, 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. We are excited to share the limited supply of prefinance credits sold out and the official Biocultural Jaguar Credits will be available for purchase Q2 2025.

This initiative is strengthened through deep partnerships with organizations such as Fundación Pachamama, Stoknes Futures and the Amazon Sacred Headwaters Alliance. After a successful launch of the pilot, IDB Labs 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.

Looking forward, Regen Network 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 provision the rest of society with clean air, water, and a depth of biological and cultural diversity earth needs for a resilient future.

CASE STUDY

PUBLIC PRIVATE

COLLABORATION TO ADVANCE

RESPONSIBLE INNOVATION WITH

THE U.S. COMMODITY FUTURES

TRADING COMMISSION (CFTC)

This case study highlights how collaboration between public and private entities can advance major work for blockchain and digital assets. GBBC co-chairs the Digital Asset Taxonomy and Digital Asset Infrastructure Working Groups under Global Markets Advisory Committee (GMAC) - Digital Asset Market Subcommittee (DAMS) of the U.S. Commodity Futures Trading Commission (CFTC). In this role, GBBC has collaborated closely with DAMS Co-Chairs from BNY Mellon and Franklin Templeton, convening key stakeholders including large global banks, crypto native firms, international organizations, and regulatory entities, to reach consensus and agreement on themes that are critical for the scaling of blockchain and digital assets. Over the course of 2024, DAMS has approved major advancements in taxonomy and tokenized collateral, and it will continue to build on these and other key workstreams in 2025.

TAXONOMY

GBBC, alongside co-chairing organization GFMA, presented the recommendations and publication of the Digital Asset Classification Approach and Taxonomy, put forth by the Digital Asset Markets Subcommittee (DAMS) working group on taxonomy, during the Global Markets Advisory Committee (GMAC) Meeting at the CFTC on March 6.

This taxonomy was passed by majority vote and adopted. It reflects the consensus of key stakeholders who came together over several months to agree upon digital asset categories and definitions. According to the recommendation, "A clear, consensus-driven approach to classifying assets and the functions they serve underpins robust markets and effective regulation... This Approach aims to set out consistent language for participants in the digital asset ecosystem to promote innovation, identify and address risk considerations, and enable effective regulatory understanding." The taxonomy, by identifying major categories of digital assets and specific instruments they entail, is intended to facilitate a use case-driven approach. It provides insight on the features of digital assets, introduces a framework to categorize them, and provides baseline definitions under each category for relevant assets and instruments. The framework is aimed to assist policymakers and market participants to engage effectively and to work collaboratively as digital asset markets continue to innovate.



INFRASTRUCTURE

GBBC, alongside DAMS leadership and co-chairs, has developed and published a functionality survey for web3 blockchains and distributed ledger technology (DLT) protocols to provide insights. We directly reached out to 80+ blockchains and DLTs over a 6-month period. The data collected will play a pivotal role to delineate and distinguish the diverse infrastructure and features constituting the digital asset ecosystem. The purpose is to support a better understanding of various blockchain networks. It is part of an effort to harmonize best practices and standards to scale these technologies, from Layer 1 (L1) protocols, to hybrid blockchains and private DLTs.

Insights from those who complete the survey, and additional feedback following the survey, have been collected and analyzed, with a focus on infrastructure attributes, interoperability considerations, risks and mitigants, and finally definitions and taxonomy. In the future, the data collected can be helpful for continued regulatory engagement and may contribute to craft recommendations for a regulatory framework for Digital Asset Infrastructure.

TOKENIZED COLLATERAL

DAMS has unanimously approved and advanced recommendations for the use of non-cash collateral using distributed ledger technology. The Digital Asset Markets Subcommittee Recommendations to Expand Use of Non-Cash Collateral through Use of Distributed Ledger Technology mark a significant milestone for capital markets. CFTC Commissioner Pham stated that “All over the world, there have been successful and proven commercial use cases for tokenization of assets, such as digital government bond issuances in Europe and Asia, over \$1.5 trillion notional volume in institutional repo and payments transactions on enterprise blockchain platforms, and more efficient collateral and treasury management.”

With US regulatory clarity regarding tokenized non-cash collateral, initial steps can be taken to pursue opportunities in US derivatives markets, while ensuring the same guardrails and market integrity measures remain in place. The recommendations provide a framework for market participants to apply existing policies, procedures, practices, and processes toward the application of DLT as non-cash collateral, in a manner that remains consistent with existing margin requirements.



INNOVATING TRADITIONAL FINANCE AND INDUSTRY

NORTON ROSE FULBRIGHT- TOKENIZATION: INSIGHTS, CHALLENGES AND OPPORTUNITIES

NORTON ROSE FULBRIGHT

In today's rapidly evolving financial landscape, tokenization is emerging as a transformative force, offering innovative ways to digitize and trade assets (or asset value) on a global scale. By representing real-world assets - such as real estate or commodities - as digital tokens on a blockchain, tokenization can help to unlock liquidity as collateral, enhance peer-to-peer transacting and foster transparency. As more industries explore the potential of tokenization, it is becoming a hot topic for businesses, stakeholders and regulators alike.

What are the key legal and regulatory considerations?

While the benefits of tokenization can be compelling, navigating the legal and regulatory landscape presents significant challenges. Novel issues raised by the decentralized nature of blockchain technology need to be reconciled with the requirements of existing regulatory frameworks, raising questions about regulatory compliance and stakeholder protection.

The legal landscape around tokenization is as dynamic as the technology itself, and regulators around the world are grappling with how to classify and regulate these digital assets (approaches can vary from country to country).

What are the key tokenization “hot topics” in the industry at the moment?

To address such concerns for the industry, we have launched a tokenization knowledge product - [Understanding tokenization: Insights, challenges and opportunities](#) - a series featuring videos, podcasts, webinars and articles to assist businesses to deal with the evolving legal requirements, regulatory environment and opportunities relating to tokenization in a way that addresses both commercial and legal imperatives. In developing our advisory capacity for our clients in relation to tokenization globally, we have given much thought to what

the key tokenization “hot topics” in the industry are at the moment. Set out below is our current take on that (we have launched podcasts dealing with each of the following):

- *How is tokenization impacting liquidity and collateral management?:* How will tokenization impact liquidity and collateral management, including in relation to trades, collateral and sales, as well as in relation to pledges and other routes for taking security?
- *Asset-backed tokens: how will asset-backed tokens be used in relation to real-world assets?* What are the use cases and legal considerations involved in tokenizing tangible assets and what considerations should issuers and other stakeholders bear in mind (including securities and commodities regulation)?
- *Securities law issues in tokenization projects:* When is a token a regulated instrument and what does that mean for issuing, trading or providing client services in relation to it and can you market them freely? How are the regulators around the world approaching tokenisation of different assets?
- *Capital markets and tokenization: what is a digital bond?* How do you address smart contract requirements and legal formalities in relation to them? And what issues does a tokenized government bond use case raise?
- *The transformative impact of tokenization on insolvency and bankruptcy proceedings:* Traditionally, bankruptcy is a slow process for creditors, but today, tokenized assets are transforming recovery timelines in the U.S. and elsewhere. Recent U.S. Chapter 11 cases are using tokenized assets to accelerate distributions. What is the potential for digitizing and trading claims on secondary markets - will they enable faster, more flexible recovery options for creditors?
- *Fund tokenization:* Will tokenization revolutionize the future of funds?

How to navigate global financial services regulation

In addition to the issues mentioned above - and of fundamental importance - is the impact of global financial services regulation on tokenization more generally. To address this complex issue, we assembled our lawyers from Asia, Dubai, Europe, London and the U.S. in a webinar to explore the key regulatory developments, issues and considerations in the context of real-world case studies.

Finally, we have given thought to whether tokenization will mean that the “retailization” of private funds is inevitable, publishing thought leadership on this.

The podcasts, webinar and other thought leadership mentioned above are all being published on our hub (the content is ungated), [Understanding tokenization: Insights, challenges and opportunities](#).

DIGITAL ASSETS GOING MAINSTREAM



Why Now?

The digital assets ecosystem has evolved significantly in recent years, fuelled by growing institutional interest, technological advancements, regulatory developments, and a shifting global economic narrative.

- **Regulatory Clarity:** Regulators globally are refining and introducing frameworks that reflect a growing global commitment to establish robust oversight and promote sustainable development in digital asset markets. For instance, Europe's Markets in Crypto-Assets (MiCA) regulation provides clearer guidelines for issuers and service providers, while the Trump administration is signalling openness to more flexible crypto-related policies. At the same time, crypto-friendly jurisdictions, such as Hong Kong and Singapore, continue to foster environments supportive of emerging blockchain technologies.

- **Institutional Momentum:** The adoption of digital assets is accelerating, driven by increasing confidence in the technology and growing demand from both retail and institutional segments seeking diversification to emerging asset classes.

Many firms are now going beyond traditional product lines to explore tokenized offerings, ranging from equities and bonds to money market funds, reflecting digital assets' emergence as a strategic priority. This shift underscores the industry's move toward

integrating blockchain-based solutions, highlighting the continued evolution of financial services to meet a new era of finance.

- **Product Expansion and Commercial Viability:** New digital asset services are rapidly expanding as institutions collaborate with crypto-native enterprises and regulators to build robust, compliant, and scalable platforms. These partnerships fuel innovations in areas such as custody, tokenization, and integrated settlement solutions, demonstrating the growing commercial appeal of blockchain-based models. Recent successes of regulated exchanges and stablecoin-enabled payment systems reinforce the viability of these offerings, positioning the industry for broader market participation and continued growth.

- **Market Resilience and Innovation:** Advancements in Layer-2 and Layer-3 scaling solutions and cross-chain interoperability are enabling faster, cheaper transactions and creating bridges between ecosystems to enhance liquidity. This has led to increased adoption of public blockchain networks as developers build on more mature infrastructure. The competitive entry of players into the ecosystem signifies confidence in the robustness of the current market structure.

Opportunities

The digital asset ecosystem continues to present substantial opportunities for institutions as market dynamics evolve. As regulatory frameworks mature and retail and institutional demand for digital asset exposure increases, the potential to design innovative offerings and enhance infrastructure has never been greater. The following are six models for financial institutions to participate in the crypto market.

Category	Overview	Oliver Wyman Experience
Custody and wallets: Offer licensed and regulated custodial services	Financial institutions are providing secure custody solutions to address the safekeeping of digital assets. As regulatory clarity improves, these services are expanding to include integrated offerings that combine custody with other financial services, enhancing client value propositions.	Designed and built new digital assets custody for Global Systemically Important Bank (G-SIB)
Trading venues: Provide institutional-grade trading and settlement platforms	Institutional-grade trading platforms offering liquidity, fiat settlement, and compliance features are under development. These platforms aim to establish trusted ecosystems for market participants, enabling secure and efficient trading of digital assets.	Designed, built and launched a greenfield “first-in-the-region” digital asset exchange for leading market infrastructure firm
Wealth and Fund Management: Offer digital asset exposure through wealth and fund management products to clients	The creation of structured investment products, such as crypto ETFs and tokenized funds, offers investors exposure to digital assets through regulated vehicles. These products cater to rising client demand and contribute to portfolio diversification.	Identified suitable opportunities and supported launch of a trading and wealth management business for a global investment bank
Prime Brokerage Services: Set up prime brokerage desk service and provide access to crypto markets for institutional traders	As institutional interest grows, so does the need for solutions encompassing financing, execution, and custody. Building comprehensive prime brokerage offerings requires a solid infrastructure and rigorous risk management to serve sophisticated investors effectively.	Designed roadmap for building out a vertically integrated digital asset prime brokerage offering service for a leading bank
Payment and Settlement: Provide safer and faster payment and settlement systems to banks, institutions, and merchants	Digital money, such as stablecoins and CBDCs, present opportunities to improve payment systems across both regional and cross-border realms. Adopting these solutions can streamline payment and settlement processes, resulting in faster, more efficient, and cost-effective operations for both consumers and businesses.	Supporting the European Central Bank in designing and launching the Digital Euro
Innovative Financial Offerings: Develop and offer new financial offerings combining financial contracts and engineering with digital instruments	Institutions can develop new financial products by blending technical features enabled by digital assets with innovation in financial engineering. For instance, tokenization facilitates the creation of new instruments with fractional ownership and programmable contracts.	Developed an end-to-end strategy to tokenize global supply of a prominent commodity

Risks

As institutions broaden their digital asset activities, they face a complex risk landscape that blends established risks with emerging technology-related challenges. Adequately addressing these risks is crucial to developing sustainable and trusted digital asset services that can withstand market volatility and regulatory pressures.

- **Compliance Challenges:** The pseudonymous nature of digital assets, particularly across permissionless systems, complicates Anti-Money Laundering (AML) and Know Your Customer (KYC) efforts. Effective controls are essential to mitigate risks linked to illicit activities.
- **Technological Risks:** Rapid evolution of blockchain protocols introduces security and operational uncertainties. Financial institutions must invest in robust technological solutions and remain cautious in blockchain adoption to safeguard against vulnerabilities.
- **Regulatory Uncertainty:** Despite progress, the regulatory environment for digital assets remains fragmented across jurisdictions. Global institutions need adaptive strategies to navigate varying regulations and ensure compliance, which is critical for ongoing operations.

- **Market Volatility:** Digital assets frequently experience pronounced price fluctuations, posing risks to investment portfolios and financial stability. Effective risk management practices are necessary to protect against adverse outcomes.

The Path Ahead

The integration of digital assets into the financial system brings both opportunities and challenges. Financial institutions are at a crossroads where they can embrace innovation through collaboration or risk obsolescence. Success in this rapidly evolving landscape requires:

- **Regulatory Engagement:** Active participation in shaping and adhering to regulatory frameworks fosters industry standards and upholds market integrity.
- **Strategic Partnerships:** Collaborations with technology firms and other stakeholders enable the co-development of scalable, compliant solutions that address market needs.
- **Technological Investment:** Investing in advanced infrastructure, covering custody, trading, and settlement, ensures security and efficiency.

VISION FOR THE FUTURE OF GLOBAL SUPPLY CHAIN



As noted in the latest GBBC Global Standards Mapping Initiative report on supply chains, which FedEx co-chaired, our focus for the future of global supply chains is from the International Space Station, e.g., from space. At this level, there are no companies, industries, or borders, and data knows no geographic borders. And yet, our standards entities have been built for centuries around just these items. The future of global supply chains is from this view, which will require harmonized, interoperable, and open standards, and will be a global digital ecosystem that seamlessly and instantly moves trillions of data elements around the world daily. The challenge? How do we get key stakeholders up to this level, so we can either:

- 1) Closely and quickly work to align the existing international standards entities currently each focused in their own lane, or,
- 2) Create a new, digital, trusted, end-to-end and future-proof ecosystem.

We must simplify the processes of shipping, tracking, delivering, and returning goods, and we need to make it easy to use for all stakeholders and make financial sense. Today's systems, that are the best we have developed so far, result in capital locked up, pollution, waste, delays, and vast resources that are often utilized inefficiently. They simply weren't designed at the truly global (ISS) level. This journey starts with harmonization and interoperability, which leads us to 'open' data standards, and which then leads us to 'digital' (including blockchain and Web3). All of those processes are connected by centuries of network effects of trade, industrialization, and globalization that predict the inevitability of this outcome.

Standards Landscape

In the process from buying to shipping to payment for any item, there are vast amounts of documentation exchanged. Standards are meant to facilitate global commerce through harmonization of processes. There are over four hundred major standards organizations worldwide, when combining international (about 10-20), regional (about 10-15), national (about 160 – many are National Representative bodies of International Groups), and industry specific (several hundred). Just from the international standards entities, we have approximately 60,000 published standards .

It is important to note, we are not lacking in published standards. We are lacking in harmonized, interoperable, and open standards with a truly global, particularly a global commerce, focus. We are also lacking in the language, or data-organization that can harmonize standards.

Call to Action: A Unified Vision for Global Supply Chain Standards

As we stand at the threshold of a new era in global commerce, the challenges, and opportunities before us are immense. From the vantage point of the International Space Station, Earth appears as a singular, interconnected system, underscoring the need for unity and collaboration in shaping the future of our global supply chains. The transition from fragmented, localized or industry-level standards to a future of harmonized, interoperable, and open systems is not just an economic imperative but a call to action for international standards entities and stakeholders worldwide.

For over a century, current day standards organizations have been foundational in facilitating trade and innovation. However, in the digital-first era, the traditional, siloed approaches must give way to a new paradigm of global collaboration, a pro-competitive 'coopetition' approach. No single entity can address the complexities of the evolving supply chain alone. We must break free from sector-specific approaches and work together to create open, digital definitions and standards that transcend industries and borders, fostering interoperability and supporting the digital identity of goods and services.



Through this process, we must normalize how we consume data so that we can develop, build, and support a global supply chain (including reverse logistics for returns) that is less impacted by hurdles or challenges that we face today. This is a collective responsibility that requires a global coalition. Initiatives that will help advance this goal include:

- Facilitating the transition toward a harmonized global system that can better link different platforms
- Promoting engagement across standards entities in a forum that supports dialogue on harmonization, and with tech communities to support alignment with standards
- Identifying gaps, pain points, and ways to facilitate new model alignment
- The clear establishment of scope for these efforts so that 'scope creep' doesn't stall or stop critical progress for success

The time is now for international standards development organizations and all other stakeholders to align in a concentrated push toward the development of these harmonized and interoperable standards. By doing so, we will accelerate the creation of a truly global supply chain that is faster, more resilient, and equitable, capable of meeting the demands of the 21st-century economy, and beyond. Inspired by the global view from space, we must build a future where the movement of goods and services is seamless, sustainable, and powered by open, collaborative standards. With that focus from the ISS view, let us begin the work together to build the harmonized, interoperable, and open standards and infrastructure that will power the commerce of the future and benefit all stakeholders.

DRIVING INNOVATION AND BUILDING SOLUTIONS WITH BLOCKCHAIN



In October 2024, Citi announced that Citi® Token Services for Cash has moved from a pilot program to a live commercial solution, facilitating multimillion dollar transactions for institutional clients. This marks a significant milestone in Citi's journey to deliver real-time, always-on, next generation transaction banking services to some of its largest global clients. Citi Token Services for Cash provides clients with 24/7, always-on cross-border liquidity and payments between participating Citi branches.

Clients are not required to hold or manage any tokens to access the services. The solution was initially live between Citi's branches in Singapore and New York, and as of December 2024, we are delighted to announce that London is now part of this 24/7 live network.

In addition, Citi Token Services for Trade also marked a historic milestone by facilitating pilot transactions in collaboration with shipping companies and shipping agents within a major canal ecosystem. By replacing transactions such as guarantees and letters of credit with smart contracts backed by tokenized cash, Citi Token Services for Trade is designed to bring trade finance into an increasingly real-time world. The completely digital process could enable 24/7 settlements, when predetermined criteria are met, between Citi clients and their counterparties to automatically execute and provide provisional payments.

"The continued progress of Citi Token Services is a key component of Citi's pursuit of real-time, always-on services for its institutional clients. By using distributed ledger technology (DLT) and smart contracts, Citi has created a patented programmable payment and liquidity platform, which will reduce costs and streamline processes," said Ryan Rugg, Head of Digital Assets, Treasury and Trade Solutions, Citi.

Citi Token Services is powered by the Citi Integrated Digital Assets Platform (CIDAP) and was developed by the Citi Innovation Labs, Digital Assets teams and the Distributed Ledger Technology Center of Excellence. CIDAP is designed to facilitate a variety of digital asset use cases in a secure and cohesive manner while uniquely covering a broad spectrum of functionality. Its key components include tokenization, digital assets custody, comprehensive platform management services, and user-friendly interfaces. By potentially enabling connectivity to both our internal blockchain network as well as external blockchain networks and third-party systems, the platform may potentially provide versatile capabilities to our clients and access to multiple digital networks as they emerge.

DIGITAL FINANCE DRIVEN BY DIGITAL ASSET SECURITIES



The world of finance is going digital, driven by the growth of digital asset securities. Market participants are witnessing a surge in innovation, with established financial market infrastructures playing a crucial role to support the industry transition.

Digitising the core: D7 Digital

In this context, Clearstream has developed its digital post-trade platform D7, in collaboration with Google Cloud. D7 is a scalable and digital system looking to handle digital security issuance and lifecycle processing for Germany, Luxembourg and the international market. D7 leads the industry in terms of transactions and value issued in euros in the digital securities space. It has already reached key milestones, having issued 550,000 digital securities, worth more than €20 billion.

Tokenising securities: D7 DLT

The digital proposition of D7 is complemented by a Distributed Ledger Technology (DLT)-based architecture to enable seamless tokenisation of securities. Launched as part of the ECB trials in 2024, D7 DLT demonstrated its ability to issue securities on a blockchain, handling both securities and central bank digital currency (wCBDC), with a vision to scale these capabilities further.

The European Central Bank (ECB) trials on wholesale central bank digital currency (wCBDC) is a major catalyst for accelerating securities tokenisation. In our role as DLT market operator, we provided seamless processing of digital assets and high-quality cash on-chain. Our participation in the different payment solutions offered in the context of the ECB trials underscores our commitment to driving this evolution.

Driving market coordination towards industry standardisation

The rise of DLT presents opportunities and challenges. For widespread adoption in the financial industry, coordinated efforts are needed. Major hurdles include the lack of standards in the blockchain ecosystem, interoperability issues and mobility of asset tokens. Together with the Depository Trust and Clearing Corporation (DTCC) and Euroclear, we published a blueprint for an industry-wide digital asset ecosystem. The proposed whitepaper outlines six key principles - the "Digital Asset Securities Control Principles" (DASCP) - to guide successful tokenisation adoption in the financial industry with the aim to deliver market participants greater options, flexibility, speed, transparency and efficiencies to the market.

ENABLING PRIVACY AND IDENTITY FOR TOKENIZATION

kinexys by J.P.Morgan

Kinexys (formerly known as Onyx) by J.P. Morgan is the firm's blockchain business unit. Rebranded in November 2024, the name Kinexys is inspired by the words "kinetic" and "connection" and reflects the way we move money, assets and financial information with speed, ease and efficiency, and our ongoing commitment to connecting the global financial services landscape.

Kinexys Digital Assets is the firm's digital assets platform that enables cross-asset settlement use-cases using tokenization. Having processed over \$1.7T in transaction volume to date, Kinexys Digital Assets has a strong track record of delivering real-world utility. Clients already use our platform to conduct repos with tokenized US Treasuries, post collateral margin with tokenized money market fund units, and issue/transact in/settle tokenized bonds whilst seeing benefits in transaction precision, transparency, efficiency and control.

In November 2024, through Project EPIC, Kinexys by J.P. Morgan demonstrated how financial institutions can maintain on-chain transaction privacy while enabling reusable identity credentials for potentially streamlined compliance checks. Our technical proof-of-concept implemented three key capabilities: confidential transaction execution, privacy-preserving identity verification, and composability for secondary markets, while preserving the efficiency benefits of blockchain technology.

Existing market challenges

- Financial institutions need to protect trading strategies and client relationships
- Identity verification processes create operational overhead and friction
- Blockchain's inherent transparency makes sensitive transaction details vulnerable to exposure
- Manual reconciliation required across fragmented identity systems



Project EPIC proposed solutions

- Transaction privacy through zero-knowledge proofs and homomorphic encryption
- Reusable privacy-preserving identity credentials for compliance checks
- Integration with existing workflows through privacy-preserving frameworks

We believe that tokenization and blockchain technology have the potential to unlock a \$400 billion revenue opportunity in alternative investment funds. To achieve this vision, several key factors are essential, with institutional-grade privacy and identity solutions being critical to unlock scale. Our work on Project EPIC builds on our previous initiatives, such as Project Guardian in 2023, where Kinexys collaborated with Apollo, WisdomTree, and other partners to demonstrate automated portfolio rebalancing across multiple tokenized funds. These experiments showcase the value we can unlock for clients in an ideal state by utilizing tokenization in funds.

By leveraging core capabilities on the Kinexys Digital Assets platform, we continue to progressively deliver benefits of tokenization across different use-cases. Building on our already live applications, our immediate focus is to parlay these benefits to the investment funds ecosystem through solutions aimed at enhancing fund distribution and lifecycle operations. [Contact](#) the Kinexys team to learn more.

ON THE MARGINS: CFTC'S DIGITAL ASSET MARKETS SUBCOMMITTEE RECOMMENDS EXPANDED USE OF NON-CASH COLLATERAL THROUGH BLOCKCHAIN TECHNOLOGY

LATHAM & WATKINS LLP

On November 21, 2024, the Digital Asset Markets Subcommittee (the Subcommittee) of the Commodity Futures Trading Commission's (CFTC) Global Markets Advisory Committee (GMAC) issued a [report](#) (the Report) that recommended expanding the use of non-cash collateral in derivatives markets through distributed ledger technology (DLT).

In the Report, the Subcommittee identifies several ways in which using DLT may mitigate or avoid the challenges that have historically constrained the use of non-cash collateral in derivatives markets, such as improved transfer timing and avoiding other inefficiencies of existing market and technology infrastructure.

Although various non-cash assets are already eligible

collateral under the CEA and CFTC Rules, the Report notes that operational challenges have traditionally constrained their posting as regulatory margin, adversely affecting market efficiency.

For example, the Report notes that certain forms of eligible collateral, such as shares in money market mutual funds, typically do not allow for secondary transfers and thus must be sold and converted to cash for posting. In addition, the infrastructure used for holding and transferring various non-cash collateral is typically not available on a 24/7/365 basis. Moreover, transfers of non-cash collateral frequently require the sequential involvement of multiple intermediaries. These complexities make it difficult for parties to meet deadlines for posting of collateral, which at most is next day and in the cleared context can be same-day or intra-day.

Because of these inefficiencies, market participants often default to cash to satisfy margin requirements while maintaining liquidity reserves in non-cash assets that must be liquidated to cash as needed to satisfy margin requirements. This practice entails a number of undesirable implications, including potentially contributing to volatility in times of market stress due to the need to offload assets in a fire-sale to obtain cash.

As the Report notes, market participants have begun to use DLT in connection with various forms of "real world" assets, including certain debt securities and gold. Doing so can help reduce or eliminate the challenges described above by improving the transferability and useability of assets already eligible to serve as regulatory margin. Because DLT is available 24/7/365 and allows for the pledge or transfer of eligible assets on a direct, peer-to-peer basis, use of DLT promises to allow higher efficiency of transfer, reduced intermediation, and a broader available pool of assets for use as collateral without the need to convert into cash.

The Report makes three recommendations for how participants in CFTC-regulated derivatives markets could leverage DLT for holding and transferring non-cash collateral in a responsible and compliant manner:

1. When DLT infrastructure is used as an internal books and recordkeeping tool, a registrant should be able to rely on its existing policies, procedures, practices, and processes to assess information security and other relevant operational risks.
2. When a registrant looks to accept eligible non-cash collateral in a tokenized form, it should be able to satisfy relevant requirements by applying its existing policies, procedures, and practices to assess and mitigate the risks relating to (i) legal enforceability; (ii) segregation and custody arrangements; (iii) credit and custodial risk; and (iv) operational risk.

3. No new rules or guidance should be necessary to permit DLT usage for holding and transferring non-cash collateral because (i) DLT does not affect the character of the underlying asset, and (ii) registrants already have extensive policies, procedures, practices, and processes to address the use of new technologies and infrastructures.

While the Report does not have any independent legal effect and is not binding on the CFTC or the CFTC staff, it represents a significant first step towards realizing the potential opportunities and efficiencies of DLT-based collateral in CFTC-regulated derivatives markets.

STATE LAW CONSIDERATIONS IN THE NEW CRYPTO WORLD ORDER

MAYER | BROWN

The recent U.S. presidential election, coupled with the prospect of a crypto-friendly president and Congress, has sparked growing enthusiasm across the crypto sector. However, while regulatory reform at the federal level has been the focus of most of the crypto sector's attention, most financial services activity in the United States is also regulated at the state level. State laws and regulators play a crucial role in nearly all crypto activities, including cryptocurrencies, tokenization of traditional assets (stablecoins and other "real world" assets, or "RWAs"), and the broader use of blockchain technology in financial services.

Many crypto ventures and businesses developing digital asset products and services must still navigate the state rules that apply to all financial services businesses (such as money transmitters), in addition to crypto-specific doctrines—such as the BitLicense in New York. These obligations exist regardless of federal supervision. Additionally, state regulators, particularly in large financial markets like New York and California, may pursue independent agendas that don't align with federal policy, potentially intensifying oversight in response to federal deregulatory trends.

State-level legal uncertainties, such as property ownership of digital assets and liability for decentralized autonomous organizations (DAOs), also persist. The 2022 amendments to the Uniform Commercial Code added Article 12, which is designed to provide consistent legal treatment for digital assets and blockchain records by, for instance, establishing definitions and rules around "control" of electronic records (i.e., cryptographic keys) and "transfer" of interests. However, adoption of Article 12 remains incomplete across states.

Meanwhile, despite DAO-specific laws being passed in states such as Wyoming and Delaware—or some DAOs incorporating offshore—most DAOs have declined to create formal legal entities. Courts have found unincorporated DAOs to be general partnerships under state law, exposing members to potential liabilities.

As state and federal regulatory developments continue on separate tracks, companies must navigate the evolving landscape, ensuring compliance with both state laws and any new federal frameworks. This dual focus is essential for success in the digital asset sector.

MLL LEGAL AG: PIONEERING BLOCKCHAIN AND RWA TOKENIZATION SOLUTIONS



As a leading Swiss law firm with around 160 lawyers and a strong international focus, MLL Legal AG is at the forefront of supporting innovative DLT projects. Our expertise in financial market regulations, blockchain, fintech and AI, combined with our strategic location in Switzerland and our full-service offering, positions us uniquely to offer comprehensive legal and regulatory support for cutting-edge blockchain initiatives, such as:

Supporting Layer 1 Blockchain Protocols

At MLL Legal AG, we provide robust legal support for Layer 1 blockchain protocols domiciled or planning to domicile in Switzerland. These protocols often operate through association or foundation non-profit structures (including Decentralized Autonomous Organizations (DAO)) combined with for-profit corporation or LLC-structures, in particular providing IT-services. Our services encompass corporate housekeeping, contractual work, financial regulatory advice, intellectual property (IP) management, and tax advisory, ensuring that these blockchain entities are compliant with Swiss regulations and optimized for the growth of their respective ecosystem. Switzerland's stable legal, economic, and political environment, along with its strong infrastructure, makes it an ideal hub for blockchain innovation.

International Tokenization Structures

One of our standout offerings is our expertise in international tokenization structures (including tokenization of real-world assets), exemplified by our work with Backed Finance.

This project involves the issuance of tokenized securities backed by Swiss collateral structure, leveraging Switzerland's long-standing reputation in wealth and asset management. Such initiative is designed to provide a secure and reliable RWA tokenization platform, benefiting from Switzerland's robust legal framework, as well as political and financial stability.

Our role as lead counsel includes the structuring of tokenization projects in cross-border setups, ensuring in particular compliance with financial market and tax regulations, as well as corporate requirements, and providing ongoing legal support to navigate the complexities of international setups in coordination with local advisors.

Future Steps

Looking ahead, MLL Legal AG is committed to furthering the adoption of blockchain technology and tokenization in the financial sector. We aim to expand our services to support more innovative projects, fostering a regulatory environment that encourages growth while ensuring investor protection. Our goal is to continue being a trusted partner for our clients, helping them achieve their strategic objectives in a rapidly evolving digital landscape.

STABLECOINS RISING AS THE KILLER APP OF DIGITAL FINANCE



Stablecoins have emerged as the first true “killer app” in digital finance, transforming how businesses manage financial operations. For treasurers and CEOs, they can optimize cross-border payments, enhance liquidity management, and reduce inefficiencies in traditional systems.

Designed to maintain a stable value, with the majority pegged to fiat currencies like the U.S. dollar, Stablecoins combine the stability of traditional finance with blockchain's speed and transparency. Their appeal lies in their potential to streamline complex, multi-currency operations.

Stablecoins allow for near-instant, low-cost cross-border transactions, bypassing traditional intermediaries.

This capability accelerates payments, enhances cash flow management, and minimizes transaction fees—critical for multinational corporations operating globally.

Stablecoins facilitate access to underserved markets by overcoming limitations of traditional banking infrastructure. For businesses, this means greater opportunities in emerging markets, enabling payments and operations where financial barriers previously existed.

DeFi platforms offer treasurers opportunities to optimize returns on corporate funds. By using stablecoins, companies can access innovative yield-generating products while maintaining liquidity, reshaping traditional investment strategies.

Adopting stablecoins isn't without obstacles. Regulatory compliance remains a priority, requiring engagement with evolving standards. Treasurers must evaluate the transparency of issuers, ensuring reserves are adequately backed. Integration into existing systems demands collaboration with fintech partners to overcome technical barriers.

For treasurers and CEOs, stablecoins represent a strategic shift rather than a mere technological advancement. Piloting use cases such as cross-border payments can help companies assess their value while managing risks like cybersecurity and counterparty exposure.

By embracing stablecoins, forward-thinking companies position themselves as leaders in digital finance. This “killer app” of blockchain technology is not just a tool for efficiency—it's a cornerstone for future-ready financial strategies in a rapidly evolving landscape.

Read the full report, [“Stablecoins: The First Killer App”](#).

PARAVELA: THE SECURE SUPPLY CHAIN



Ensuring product integrity within today's global supply chains is an increasingly complex challenge. The electronics manufacturing industry, in particular, faces significant issues related to counterfeiting, regulatory compliance, and sustainability.

Traditional manufacturing execution systems are primarily designed to manage and monitor activities within a facility, but they lack the functionality to provide external traceability—such as tracking supplier data or post-production distribution processes.

To address these challenges, the IPC-1782 traceability standard was introduced as a critical component of the IPC Factory of the Future ecosystem, aimed at combating counterfeiting, improving regulatory compliance, and promoting sustainability practices.

Building on the IPC-1782 standard and leveraging its blockchain-backed provenance platform, Paravela has developed a comprehensive provenance domain—The Secure Supply Chain. This solution enables end-to-end traceability for electronic products, capturing data about their materials, components, assembly, packaging, ownership, location, and more throughout their lifecycle—both within and beyond the factory.

Key features of the solution include:

- **Unified Traceability:** Integrates external supply chain provenance with internal manufacturing traceability, delivering a single source of truth accessible to all participating organizations.
- **Open Standards:** Incorporates the W3C PROV family of specifications and all event types specified in the IPC-1782 standard, while also aligning with NIST’s Supply Chain Traceability: Manufacturing Meta-Framework.
- **Decentralized Collaboration:** Utilizes blockchain technology to ensure secure data sharing across supply chain participants and their systems, eliminating the need for complex integrations or reliance on third-party intermediaries.

What Sets It Apart?

The novelty of this approach lies in the seamless integration of blockchain technology with a common provenance domain language grounded in industry standards. This enables a comprehensive traceability solution that tackles the long-standing challenge of ensuring product integrity across the entire supply chain—from materials and components to assemblies and finished goods, and beyond.

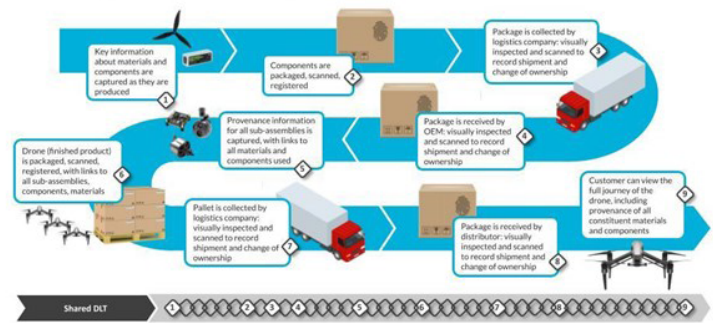
Benefits

This solution opens new avenues for supply chain management within the electronics manufacturing industry by:

- Enhancing regulatory compliance
- Preventing counterfeiting more effectively
- Increasing supply chain resilience
- Enabling verifiable circular economy and sustainability practices

Paravela’s Secure Supply Chain lays a solid foundation for a transparent, collaborative, and sustainable future in global electronics manufacturing, with applicability across other use cases and industries.

The Origin & Life Journey of a Drone



SUPPLY CHAIN RESILIENCE



The Provenance Chain Network™ (PCN) is a trust and transparency company solution shaping the future of supply chain ecosystems. We help government and industry answer some very basic questions about the products they buy, consume, and use:

- What is it?
- Where is it from?
- How was it made?
- Who made it?

This process involves identifying and managing Verifiable Credentials (VCs) for the critical components of supply chains, and delivers resilience. The PCN facilitates the digitization, creation, and secure sharing of these credentials, using a standardized framework known as the Commercial Trust Protocol (CTP).

VCs of People – Workforce Development

For industries seeking skilled workers, the CTP allows for the establishment of standardized credentials tailored to specific roles. Candidates can present evidence of their qualifications and claims, which are verified by authorized entities. Once validated, these credentials are owned by the individual, enabling them to securely share their qualifications with employers, immigration officials, or other parties at their discretion.

VCs of Places – Critical Infrastructure

For ecosystems needing to verify facility viability and safety, the CTP allows for the establishment of standardized credentials tailored to specific circumstances. Advanced manufacturing centers can present evidence of their qualifications, certifications, and compliance with industry standards, which are then verified by authorized entities. Once validated, these credentials are owned by the facility, enabling them to securely share their qualifications with potential partners, regulators, or other stakeholders at their discretion.

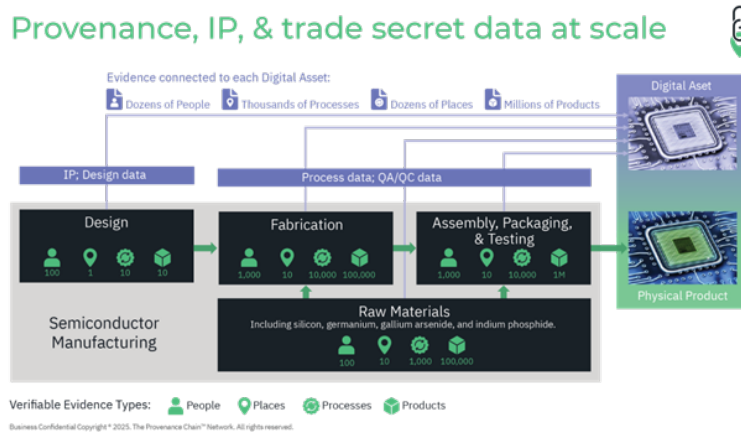
VCs of Products – PINs connected to physical twins

For supply chains, the CTP verifies the credentials of products by creating a Provenance Identification Number (PIN) for each Data Asset and connects the PIN to its physical twin. Each component in the supply chain receives its own PIN, which serves as a searchable PCN address. As products move through the supply chain, PINs accumulate non-hallucinogenic data, including production events, evaluations, and commerce transactions. This creates a detailed, verifiable record of the product’s journey, enabling stakeholders to access critical information while maintaining data ownership and security through selective disclosure.

VCs of Processes – IP protection & Smart NDAs

For domains needing to protect intellectual property, the CTP verifies the credentials of patents, copyright, trademarks, trade secrets, and industrial designs. For semiconductor recipes, this digital asset would include detailed process information about the manufacturing steps, quality control measures, and specific parameters required for production.

As the recipe is implemented, associated data like wafer designs, batch information, and evaluation results are linked to the process creating a unique digital fingerprint of the implementation of that process. The CTP’s selective disclosure engine provides for secure sharing of process details with authorized parties, such as inspectors or evaluators, without compromising proprietary information, and Smart NDAs ensure legal compliance with any interacting party. This approach ensures that the semiconductor recipe’s integrity is maintained throughout the manufacturing process, while also providing a traceable token to facilitate licensing and track usage.



TOWARD A NEW GENERATION OF BUSINESS MODELS

RAISING THE STANDARD FOR STABLECOINS: RIPPLE USD LAUNCHES GLOBALLY WITH UNMATCHED UTILITY, EXPERIENCE, AND COMPLIANCE



Ripple, the leading provider of digital asset infrastructure for financial institutions, has made Ripple USD (RLUSD) available on global exchanges starting December 17, 2024. RLUSD is an enterprise-grade, [USD-denominated stablecoin](#) created with trust, utility, and compliance at its core, backed by Ripple's years of experience working with crypto and the existing financial system.

RLUSD will be initially available on Uphold, Bitso, MoonPay, Archax, and CoinMENA, with additional listings on platforms such as Bullish, Bitstamp, Mercado Bitcoin, Independent Reserve, Zero Hash and others expected in the coming weeks. Each RLUSD token is fully backed by U.S. dollar deposits, U.S. government bonds, and cash equivalents—designed to ensure its stability, reliability, and liquidity. To maintain the highest standards of transparency, Ripple will publish monthly, third-party attestations of RLUSD's [reserve assets](#), conducted by an independent auditing firm.

A Growing Ecosystem Supporting Global Adoption

Key RLUSD partners include leading global exchanges, market makers, and payment providers, which will drive adoption and usage across the Americas, Asia-Pacific, UK, and Middle East regions. RLUSD is ideal for financial use cases and allows institutions to:

- Facilitate instant settlement of [cross-border payments](#).
- Access liquidity for remittance and treasury operations.
- Seamlessly integrate with decentralized finance (DeFi) protocols.

- Reliably bridge between traditional fiat currencies and the crypto ecosystem, ensuring a seamless and efficient transition when entering (on-ramping) or exiting (off-ramping) the crypto space.
- Provide collateralization for trading [tokenized real-world assets](#) such as commodities, securities, and treasuries onchain.

Early next year, Ripple Payments will use RLUSD to facilitate global payments on behalf of its enterprise customers. Ripple Payments has served \$70 billion in payments volume and counting, and has near-global coverage with 90+ payout markets, which represent more than 90% coverage of the daily FX market.

RLUSD is available on both the XRP Ledger and Ethereum blockchains, offering flexibility and scalability for a broad range of financial use cases.

RLUSD sets the standard for stablecoins, combining innovative functionality with the regulatory rigor and credibility of an NYDFS-issued New York limited purpose trust company, further highlighting Ripple's leadership in fostering trust and transparency in digital assets.

REAL-WORLD ASSET TOKENIZATION COMING ALIVE



2024 was the year we saw tokenized RWAs come alive. Largely driven by high interest rates and the success of stablecoins, investment managers and issuers have been tokenising money market funds (MMF), treasuries, or similar, to create a new breed of yield-bearing instruments.

These have captured attention due to their combination of transferability and yield. Historically, those in the regulated space thought that digitalisation would first be used to bring liquidity and fractionalisation to less liquid instruments, but we've actually seen the largest impact at the liquid end of the spectrum.

Archax now has over 100 funds available for tokenisation, from issuers like abrdn, Blackrock, Fidelity International, LGIM and State Street, with the most interest being in the daily funds for treasury management. These funds, when tokenised, become easier to transfer and therefore create greater utility than their traditional predecessors. Whilst initial use cases have been limited to treasury, we are starting to see increased interest in borrowing/lending and collateral management. A lot of asset managers are realising that their money market funds can be yield bearing, transferable and used for payment and collateral purposes, and banks are exploring if accepting these as collateral would be as efficient as traditional instruments.

At the same time, the interaction between tokenised offerings and stablecoins has created a great opportunity for 24/7 liquidity. If you are in a traditional money market fund on a Saturday afternoon and want to buy bitcoin, you will have to wait for Monday, redeem from your manager and use the proceeds to buy BTC. In the new world, you will be able to send your tokenised MMF as eligible collateral straight to a stablecoin issuer in exchange for stablecoins which you can immediately use to purchase your BTC on Saturday.

Looking forward into 2025, we expect to see a lot of innovation in real-time subscriptions and redemptions combined with an increased usage of these instruments as collateral in real-world transactions.

RECORDING GLOBAL CRYPTO ADOPTION TRENDS



The [2024 Geography of Crypto Report](#) by Chainalysis highlights a remarkable surge in global crypto adoption, with activity levels surpassing those of the 2021 bull market. This growth spans all income brackets, shaped by economic needs, evolving regulations, and institutional interest.

Key trends

In prior years, growth in crypto adoption was driven primarily in low-to-middle income countries. In 2024, however, crypto activity increased across countries of all income brackets. The launch of the Bitcoin ETF at the start of 2024 in the US triggered an increase in BTC activity across all regions, with strong YoY growth in institutional-sized transfers and in regions with higher-income countries, such as North America and Western Europe. The Central & Southern Asia and Oceania region dominates the 2024 Index, with seven of the top 20 countries located in this area.

Stablecoins and DeFi

Stablecoins are supporting real-world use cases in low and lower-middle income countries, in regions such as sub-Saharan Africa and Latin America. There is likely a mixture of motives behind the growing adoption of stablecoins in emerging markets. For example, USD stablecoins can offer, in jurisdictions with high local currency inflation rates, some degree of persistent purchasing power. They are also useful as a short-term store of value, meaning their price will not move significant amounts, unlike other crypto-assets such as Bitcoin. Additionally, transacting via stablecoins is fast, cost-efficient, and useful for merchants due to their price stability, which is why we see growing use by merchant services. DeFi activity also increased significantly in sub-Saharan Africa, Latin America, and Eastern Europe, which likely drove an increase in altcoin activity in these regions.

Policy and regulatory impetus

The evolving regulatory landscape is also shaping the global crypto market. In many regions, regulatory clarity is fostering a more responsible ecosystem, encouraging innovation while instilling confidence among users. This balanced approach is vital as the industry grapples with challenges such as crypto crime and market manipulation, necessitating a shift from reactive to proactive safeguards. A more efficient and strategic application of on-chain data and analytics will enhance the security and resilience of crypto ecosystems.

INTRODUCING METAMASK CARD: SIMPLIFYING CRYPTO PAYMENTS IN EVERYDAY LIFE



At Consensys, we are committed to building products that make web3 accessible to everyone. MetaMask, Mastercard, and Baanx (Crypto Life) have launched [MetaMask Card](#), letting users make everyday purchases with your crypto anywhere Mastercard is accepted.

MetaMask Card functions like a crypto debit card, so users can spend directly from their MetaMask wallet.

Solving the challenge of real-world crypto payments

In the past, off-ramping crypto to cash was clunky, and required many steps. This tedious process hindered mainstream adoption of crypto as a practical, real-world payment method. MetaMask Card removes the need to transfer your funds to a centralized exchange or a bank in order to spend your crypto. This not only paves the way for increased adoption; it also aligns with the MetaMask vision of empowering people with self-custody. Most traditional crypto cards operate similarly to prepaid cards, where users need to transfer funds to a third party before spending them. MetaMask Card is different, because it functions like a debit card. This means users can directly use the crypto in their MetaMask wallet for everyday purchases, and maintain control over their assets until the exact moment of payment.

How it works

Users can easily sign up for the MetaMask Card via the MetaMask portfolio. Once activated, the card allows them to pay directly from their wallet's balances, with real-time conversion at the point of sale. MetaMask Card utilizes Mastercard's global merchant network, combined with the security of MetaMask and the efficiency of Linea secured by the Ethereum network. This enables a swift, cost-effective, and secure experience for online and in person purchases.

Looking ahead

Already available in the EU, UK, Switzerland, Brazil, Mexico, and Colombia, the MetaMask Card pilot is rolling out globally over the coming months. Users can join [our waitlist](#) to stay in the loop, and find out when the MetaMask Card will be available where they are.



COMPUTATIONAL LAW AND REGULATION TO ADVANCE FINANCIAL SERVICES



Droit is a technology firm at the forefront of computational law and regulation within financial services. Founded in 2012 as a response to the wave of regulation following the 2008 financial crisis, including Dodd-Frank and MiFID, Droit brings complete transparency in decision-making to comply with key regulatory requirements. Droit's patented Adept platform provides traditional buy- and sell-side financial institutions with solutions for pre- and post-trade controls, evaluating the permissibility of transactions, compliant regulatory reporting, and more.

The Droit Adept platform generates decisions directly from digitized rules, regulations, and internal policies, visually represented in intuitive logic diagrams with a traceable pathway through to the source text. Its unique ability to codify complex regulatory requirements into intelligent, actionable decisions enables financial institutions to respond efficiently to their regulatory obligations in a completely auditable manner. The application of blockchain technology to real world assets and to trading and settlement constructs brings new efficiencies to investors and market participants.

Most recently, Droit announced the launch of its Exchange Traded Derivatives (ETD) Reporting product—designed to enhance regulatory transparency and ensure compliance with global reporting requirements for listed derivatives. Recent scrutiny of position-based reporting obligations to clearing agencies and exchanges has increased pressure on clearing firms to upgrade their reporting infrastructure. Droit's ETD Reporting delivers a comprehensive quality assurance platform to provide a consistent approach to regulatory compliance.

With complete insight into each decision made and the ability to trace the logic through to the underlying source text, the product ensures clarity and accuracy in complex regulatory interpretations. Clearing firms want stricter controls which ensure completeness and accuracy akin to OTC transaction reporting standards. ETD Reporting from Droit provides precise identification and management of reporting obligations for seamless quality assurance of reports pre- or post-submission. Initially focusing on high-risk clearing, collateral, and margin reports, the ETD Reporting product is set to expand beyond futures and options to support a broader range of listed instruments.

As the exchange-traded digital assets sector grows, so will the need for accurate and auditable compliance with diverse regulatory reporting demands.

SMART DATA FOR SMART CONTRACTS



In 2024, the tokenization of financial products emerged as a key highlight in the crypto space, experiencing significant growth. This shift allows traditional assets to be represented on the blockchain, offering benefits such as increased liquidity, fractional ownership, and automated transactions. As both institutional tokenization and decentralized finance (DeFi) protocols gain traction, the need for reliable, on-chain data delivery has become crucial.

Kaiko, with a decade of experience in data provision and trusted by institutions worldwide, has launched its on-chain delivery service to meet this demand. This service provides high-quality, real-time data directly on the blockchain, catering to both traditional financial institutions exploring tokenization and DeFi protocols.

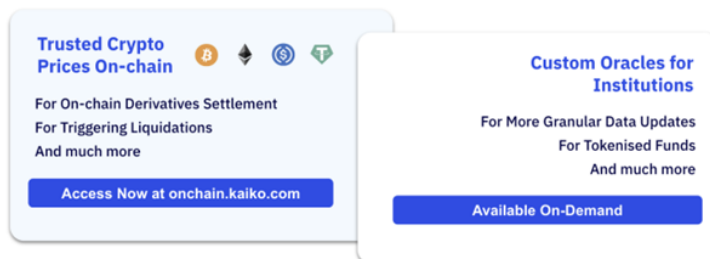
For instance, accurate indices and fair crypto asset prices are essential for on-chain derivatives settlement and calculating a fund's Net Asset Value (NAV). Tokenization brings numerous advantages, including reducing intermediaries and enhancing market efficiency. However, these benefits can only be fully realized if the underlying data is accurate, reliable, and delivered on-chain. Kaiko's service addresses this need, supporting the growth and success of both tokenized financial products and DeFi Applications.

Kaiko's on-chain delivery service operates through two main offerings. The standard platform, available at onchain.kaiko.com, offers free access to on-chain delivery of prices for the largest cryptocurrencies, which can be directly integrated into smart contracts. This mainly targets DeFi protocols seeking a standard but high-quality and quick integration. For more specific needs, Kaiko's enterprise solution works with clients to build dedicated on-chain data pipelines, tailored to their smart contract requirements. This enables the delivery of any data type on-chain, not just the largest cryptocurrencies' USD prices.

Our inverted data infrastructure gathers and disseminates both on-chain and off-chain data across platforms, ensuring market data remains a cornerstone of both institutional

tokenization efforts and decentralized finance. This infrastructure supports the seamless triggering of execution and settlement on-chain in an automated and disintermediated manner.

Kaiko's on-chain delivery service makes high-quality data accessible on the blockchain and drives the future of both institutional tokenization and decentralized finance. By supporting these developments, Kaiko is at the forefront of this financial evolution, enabling a more efficient and transparent financial ecosystem.



OPPORTUNITIES WITH PAYPAL'S PYUSD



In 2023, PayPal unveiled PayPal USD (PYUSD) – a fully backed, regulated stablecoin issued by Paxos and developed for commerce and payments. PYUSD fuels the company's mission of revolutionizing commerce globally by helping move commerce from online to onchain efficiently and cost-effectively.

2024 was a landmark year for PayPal as the company enabled new use cases for cryptocurrency to revolutionize commerce. On its own platform in the United States, PayPal enabled business accounts to buy, sell, hold and transfer cryptocurrency – no longer limiting the capability to consumer accounts.

With regard to PYUSD, the stablecoin is now available on a second blockchain (Solana), available through more than 25 partners to increase adoption for both consumers and institutions, has been used by PayPal Ventures to fund portfolio companies, and pay invoices by PayPal to some of its vendors. It continues to experience growth that significantly outpaces the market.

Finally, PayPal now allows Xoom consumers in the United States to fund international transfers with PYUSD while also allowing its business partners to settle using PYUSD – eliminating challenges that exist in the current financial system.

Beyond commercial aspects, PayPal has also researched ways to enable more sustainable bitcoin mining by using renewable energy and providing incentives to miners who do so. All of this supports PayPal's mission to revolutionize commerce globally – utilizing the speed and cost efficiencies of cryptocurrency and the blockchain fueled by PayPal's commerce and payments expertise.

POWERING REGULATORY-COMPLIANT REAL WORLD ASSET TOKENIZATION

POLYMESH

Tokenized RWAs require infrastructure that prioritizes meeting complex regulatory requirements around converting and transferring ownership rights to assets.

Most blockchains, built to be multi-purpose, cannot provide the tools to manage compliance while simplifying workflows. As a result, less than 1/8th of Boston Consulting Group's estimated \$16T in tokenized assets by 2030 are onchain in the year 2025.

Narrowing this gap is Polymesh, the institutional-grade purpose-built permissioned blockchain specifically for real world assets. Polymesh's partnership with South Korean licensed digital asset custodian BDACS Inc. demonstrates how purpose-built technology can establish the foundation for regulatory-compliant RWAs.

Proposed as a potential RWA technology model for BDAN (Busan Digital Asset Nexus), Polymesh is helping shape the future of regulated digital assets trading. The partnership with BDACS focuses on developing technical infrastructure that enables the listing, trading, and custody of tokenized RWA products while maintaining high regulatory standards and technological excellence.

Distinguishing Polymesh is its native-first approach to capital markets requirements, particularly governance and compliance. Rather than forcing participants to seek out complex third-party solutions, the platform provides built-in functionality for identity verification, regulatory compliance, and settlement finality. This architecture significantly reduces operational complexity while enhancing security and trust in tokenized assets.

The Polymesh-BDACS collaboration supports promising RWA projects through standardized, transparent workflows that simplify implementation while facilitating regulatory compliance. By incorporating compliance at the protocol level, the platform enables institutions to tokenize and trade various assets – from real estate to commodities – with confidence in their regulatory adherence.

Looking ahead, this partnership establishes a model for regulated digital assets markets globally. As traditional financial markets increasingly embrace digital assets, Polymesh's collaboration with BDACS demonstrates how purpose-built infrastructure can bridge the gap between conventional finance and blockchain technology, while maintaining regulatory compliance.

The success of this initiative extends beyond Busan. It provides a blueprint for other jurisdictions seeking to develop compliant real world assets markets, showing how technological innovation can coexist with regulatory requirements. This approach could accelerate the adoption of digital assets in traditional finance while ensuring market integrity and investor protection.

TAXBIT: SIMPLIFYING FINANCIAL COMPLIANCE FOR DIGITAL ASSETS



Taxbit is the global leader in tax information reporting and accounting software for digital assets, empowering organizations to operate seamlessly across jurisdictions. As the only end-to-end solution effectively uniting accounting and information reporting, Taxbit serves prominent crypto-asset exchanges, payment processors, Fortune 500 companies, and government authorities worldwide. In the past year alone, Taxbit issued millions of tax forms and processed hundreds of millions of transactions—representing billions in asset value—through its innovative platform.

Key Features:

- **Automated Information Reporting:** Taxbit automates the creation of tax forms like 1099-DA (U.S.), DAC8 (EU), and other Crypto Asset Reporting Framework (CARF)-compliant regimes, eliminating manual errors and enabling scalability across diverse reporting requirements.

- **Real-Time Insights:** A centralized dashboard offers intuitive, real-time analytics, enabling organizations to track reporting statuses, review transaction histories, and manage compliance risks.
- **Seamless Integration:** Taxbit's API-first architecture integrates effortlessly with existing systems, supported by developer-friendly SDKs and scalable workflows.
- **Government Collaboration:** A thought leader in the digital asset space, Taxbit actively partners with governments and regulatory bodies to shape tax compliance standards. Through initiatives like the OECD's CARF framework and other public-private discussions, Taxbit ensures its solutions remain at the forefront of regulatory developments.
- **Public Sector Solutions:** For governments, Taxbit provides cutting-edge tools to support data ingestion, effective bulk-data assessments, as well as individual criminal and civil investigations. More specifically, Taxbit's platform aggregates and analyzes data from different sources (e.g., reporting, information requests, subpoena, etc.), links taxpayer activity across multiple platforms, **seamlessly merges on- and off-chain data**, and identifies potential non-compliance for further investigation.

Trusted by enterprises and public sector agencies alike, Taxbit consolidates tax reporting and accounting into a unified, automated platform. By streamlining compliance processes, reducing operational costs, and enabling powerful but easy-to-use end-user experiences, Taxbit empowers organizations to navigate the fast-evolving regulatory space with confidence.

UNLOCKING DIGITAL ASSET POTENTIAL WITH ZODIA CUSTODY SAAS



As financial institutions increasingly explore the potential of digital assets, secure, scalable, and compliant custody solutions are critical. Zodia Custody's Software-as-a-Service (SaaS) offering is specifically designed to address these challenges, empowering institutions to confidently offer digital asset services like custody while maintaining brand integrity and regulatory alignment.

Bridging the gap

For Tier-1 financial institutions and enterprises, building proprietary custody infrastructure is costly and complex, while outsourcing can limit customisation. Zodia Custody's turnkey SaaS platform fills this gap, allowing clients to integrate advanced custody solutions seamlessly into their operations without compromising on brand identity or service offerings. Zodia Custody's model supports clients throughout their digital asset journey, from discovery and proof of concept (PoC) to full implementation and scaling, meeting their needs at every stage. In addition to foundational custody, Zodia Custody's SaaS model includes deployment management, secure integrations, and ongoing operational support. This enables enterprises to scale efficiently while addressing the complex challenges that are specific to their operations.

Compliance at the core

A key strength of Zodia Custody's SaaS platform lies in its commitment to regulatory compliance. Built to meet UK FCA standards and the EU's Markets in Crypto-Assets Regulation (MiCAR), the platform ensures compliance across global jurisdictions. This provides clients with the confidence to operate securely and adapt to evolving regulatory landscapes.

A future-ready solution

Digital assets are redefining financial services. Zodia Custody's SaaS offering equips firms with the infrastructure to innovate securely, unlocking new opportunities while mitigating risks.

As the digital asset industry evolves, Zodia Custody remains a trusted partner, delivering solutions that evolve with the market to allow institutions to lead with confidence in a dynamic and regulated environment.

REVOLUTIONIZING CAPITAL EFFICIENCY THROUGH PORTFOLIO MARGINING WITH SECURITIES, CRYPTO SPOT AND CRYPTO DERIVATIVES TRADING, ALL IN ONE PLATFORM



AsiaNext, a joint venture between SBI Digital Asset Holdings and SIX Digital Exchange (SDX), as an institution-only digital asset exchange, designed a collateralisation and portfolio margining platform - the AsiaNext orchestration layer ("AXOL"). An industry-leading solution, AXOL offers an efficient and user-friendly trading experience by streamlining cash and collateral

management workflows. Combined with the inaugural listing of a USD-denominated money market fund (MMF) on AsiaNext, it enhances capital efficiency for their members while supporting the optimisation of their complex trading strategies.

AXOL seamlessly integrates AsiaNext's three trading venues (and its multiple products): Crypto Derivatives, Securities, and Crypto Spot. By allowing members to pledge various eligible collateral types across its venues, AXOL optimises capital utilisation, reduces trading costs, and enables advanced portfolio management. The MMF listing provides members with a yield-generating investment option for resting cash balances. AsiaNext is actively expanding its fund offerings and collaborating with partners like Valour and SovFi to further enhance its securities exchange. Upon successful approval of its pending application to the Monetary Authority of Singapore for a crypto spot trading licence, members can also benefit from basis trading between their spot and derivatives positions, further enhancing capital efficiency and unlocking new trading opportunities.

As a young exchange that began in 2022, AsiaNext has achieved ground-breaking milestones in 2024:

Product Launches:

- Calendar futures
- Perpetual futures
- Asia-Next Securities Exchange go-live
- Listing of its first USD-denominated money market fund
- AXOL (AsiaNext Orchestration Layer)

Strategic Partnerships:

- Collaboration with [SIX](#) to create crypto reference and real-time indices
- Hidden Road partnership
- MOU signed for cross exchange collaboration with Malaysian digital exchange [KLDX](#)
- MOU signed with [Valour](#) to expand access to European crypto ETFs to Asia
- Circle Account set up for delivery of USDC

Industry Recognition:

- Nominated for "Best Exchange - Innovation" at Hedgeweek Global Digital Assets Awards 2024

BLOCKCHAIN-BASED SOLUTIONS FOR CENTRAL BANK DIGITAL CURRENCIES AND FINANCIAL SERVICES



[Soramitsu](#) (soramitsu.co.jp) is an award-winning global fintech company developing blockchain-based digital asset management, identity, and financial infrastructure solutions. With extensive experience in creating central bank digital currency (CBDC) systems, secure payment platforms, identity verification solutions, and multi-currency settlement systems, Soramitsu leverages blockchain technology to address societal challenges and drive innovation. Our flagship system, the Bakong CBDC in Cambodia, has more than 10 million registered users and processes more than \$300 million in transaction volume daily.

As part of our ongoing work with governments, Soramitsu is developing two major Hyperledger Iroha 2-enabled platforms: the *Palau Invest* retail savings bonds platform and the SORA v3 Hub Chain, the latest evolution of our innovative economic system supporting CBDCs. These initiatives underscore Soramitsu's commitment to advancing financial inclusion and infrastructure development.

Palau Invest: Transforming Sovereign Bond Issuance

Soramitsu partnered with the government of Palau and the Ministry of Economy Trade and Industry of Japan to develop Palau Invest, a blockchain-based savings bonds platform built on the SORA v3 Hub Chain, which leverages Hyperledger Iroha 2 technology. Addressing the absence of a domestic bond market, Palau Invest offers citizens a secure way to invest, while enabling the government to raise funds for vital infrastructure projects.

This public, permissioned blockchain system ensures transparency, security, and accessibility in bond issuance. A user-friendly mobile app allows citizens to purchase savings bonds for initiatives like housing and road construction, reflecting Palau's commitment to economic growth. With the first bond issuance slated for 2025, Palau Invest heralds the nation's step into an era of digitally enhanced finance.

SORA v3: An Inclusive Economic Evolution

Soramitsu is partnering with the SORA community to develop the SORA v3 Hub Chain—a decentralized public blockchain network built on Hyperledger Iroha 2 technology—to bridge the gap between public blockchains and central bank assets. SORA v3 will deliver a significant upgrade to the SORA network, providing central banks that lack the resources to run private networks with a forward-thinking avenue to implement their own digital currencies.

Notable initiatives include the CBDC Proof of Concept (PoC) in Papua New Guinea and the [Bokolo Cash PoC in the Solomon Islands](#). The project is currently under active development, with exciting updates slated for 2025.

Innovating the Future

Taken together, these initiatives showcase Soramitsu's commitment to employing blockchain for real-world impact. By addressing critical payment and investment challenges, Soramitsu empowers both governments and citizens. Through these transformative projects, we reaffirm our standing as a pioneer in harnessing blockchain's potential to advance financial inclusion and sustainable development worldwide.

Email us at info@soramitsu.co.jp, or use the contact form at soramitsu.co.jp to explore how we can innovate together!



677 FINANCIAL GROUP BRINGS COUNTERPARTY-CENTRIC PROPRIETARY LIQUIDITY PROVISION AND RISK MANAGEMENT TECHNIQUES FROM TRADFI TO DIGITAL ASSET MARKETS



OTC Liquidity Provision (Spot, Options, Forwards and Contractual Market Making)

We offer global principal-based liquidity in spot, options, and forwards cryptocurrency markets to the most sophisticated institutional counterparties in the industry. Our team is comprised of intellectually cutting-edge professionals with decades of experience. We are experts at risk management who put counterparty confidentiality, pricing and service

first, so we are trusted to consistently manage large-scale flows. Our unique mix of sales, trading, and middle office specialists enables us to provide the best counterparty experience in the industry.

We enter into specialized liquidity provision agreements for nascent tokens and protocols, actively partnering with management as a resource to evolve use cases and enable growth in underlying businesses. We advise and assist management teams on market related topics such as exchange listings and negotiations, treasury management and funding.

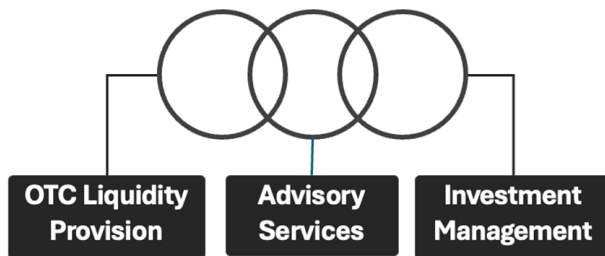
Investment Management

Our market position and experience provide us a unique vantage point to investment opportunities in digital asset markets. We invest proprietary and third-party capital to take advantage of these opportunities. Given that many of our potential investors have investable assets in token form, we advise them on optimal ways to source the USD denominated funds necessary to invest in our Investment Management Strategies.

Business Model

Our hybrid business model combines sophisticated algorithmic trading with a principal-based Global Macro style that focuses on complex portfolio risk management and internalization. This model is ideal as the crypto markets evolve in maturity, size, and complexity of offerings.

677 Financial Group



ELLIPTIC AND MOODY'S REDEFINE VASP RISK MANAGEMENT

ELLIPTIC

Elliptic and Moody's have revolutionized virtual asset service provider (VASP) screening by seamlessly integrating on-chain blockchain data with traditional off-chain data sources. This groundbreaking solution addresses the complex challenges financial institutions, crypto businesses, and governments face in anti-money laundering (AML) efforts.

At the core of this innovative offering is a sophisticated risk engine that leverages Elliptic's real-time on-chain data to categorize digital asset transactions' exposure to illicit activities. This data is then integrated with Moody's extensive off-chain data, providing a comprehensive overview of a VASP's risk profile. The solution is underpinned by Elliptic's proprietary Holistic technology, which simultaneously assesses VASP risk across multiple blockchains.

This integrated approach is a game-changer for banks and financial institutions, enabling them to bridge the gap between traditional financial services and digital asset compliance. By offering a unified view of risk, the solution empowers these organizations to understand their business partners and associated risks more thoroughly, which is crucial as the regulatory landscape continues to evolve.

On-chain data includes transaction details, wallet addresses, and smart contract interactions directly recorded on the blockchain. For example, this could include the number of tokens transferred between addresses or the execution of decentralized finance (DeFi) protocols.

On the other hand, off-chain data includes traditional sources of information such as financial records, regulatory databases, and know-your-customer (KYC) submissions. This data is typically stored outside the blockchain and includes elements such as company registration details, ownership structures, negative news, and compliance history.

This collaborative effort sets a new global benchmark for managing AML compliance between fiat and cryptocurrency by combining Elliptic's best-in-class on-chain risk analytics with Moody's market-leading off-chain analytics. As the digital asset ecosystem grows and matures, this solution represents a significant step forward in enhancing transparency, security, and regulatory compliance in the crypto space.

REDEFINING LOAN MARKETS AND SECURITIZATION WITH TOKENIZATION

ioBuilders

2024 has been a pivotal year for ioBuilders' Syndicated Loans Platform, created in partnership with two financial industry leaders. This innovative platform harnesses DLT to address key inefficiencies in syndicated loans, including fragmented data, manual processes, lack of transparency and limited liquidity.

The platform's evolution reflects an ambition to revolutionize loan liquidity management by providing a fully digital syndicated loan solution. It enables the on-chain tokenization of newly originated syndicated loans, as well as the tokenization of existing loans held on balance sheets that were initially structured off-chain. Furthermore, it provides the tools to efficiently offload these tokenized assets, facilitating their removal from balance sheets and enhancing capital optimization.

The journey began with the implementation of **front-book tokenization**, where newly originated loans are represented on-chain after the contractual phase. By leveraging smart contracts, the platform automates lifecycle management, ensuring seamless interaction between stakeholders, reducing administrative overhead, and significantly improving execution times. This phase has transformed the syndicated loan origination process, enabling a more transparent and efficient system for both borrowers and lenders.

Building on this foundation, ioBuilders introduced **back-book tokenization**. This innovation allows financial institutions to tokenize existing off-chain loans, bringing legacy portfolios into the digital ecosystem, which bridges the gap between traditional systems and modern digital infrastructure, simplifying the transition to a fully digitized future. The platform's latest evolution focuses on **securitization**, enabling financial institutions to issue tokenized securities representing entire loan portfolios. These tokenized assets offer options for on-chain or off-chain lifecycle management, providing institutions with the ability to optimize risk allocation and unlock new liquidity opportunities. By transforming portfolios into tokenized securities, the platform creates transparency and flexibility while addressing the complexities of managing large-scale financial assets.

With each phase of development, ioBuilders' Syndicated Loans Platform has advanced the financial industry toward a fully tokenized ecosystem.

By integrating real-time synchronization, automated workflows, the platform not only modernizes loan management but also sets a new standard for efficiency, transparency, and innovation. As ioBuilders continues to enhance its platform, it reaffirms its role as a leader in the digital transformation of financial markets.

BUILDING TRUST AND SIMPLIFYING COMPLIANCE IN THE CRYPTO ECOSYSTEM: HOW NOTABENE HELPS



Notabene is the crypto industry's leading compliance platform, helping companies navigate complex regulatory requirements such as the EU's Transfer of Funds Regulation (TFR) and global Travel Rule standards. As the regulatory landscape evolves, "check-the-box" compliance is no longer sufficient. Businesses must adopt comprehensive solutions that ensure not only adherence but also operational efficiency and trust.

The TFR mandates rigorous obligations for Crypto Asset Service Providers (CASPs), including the collection, transmission, and verification of originator and beneficiary information for all crypto-asset transfers.

Non-compliance can result in significant financial penalties, loss of licenses, reputational harm, and disrupted business relationships. Notabene equips CASPs with tools to address these challenges head-on, ensuring full compliance while reducing operational friction.

At the core of our offering is **SafeTransact**, a platform that empowers companies to stay compliant at every stage of the transaction lifecycle. With advanced **pre-transaction decision-making** capabilities, Notabene allows businesses to identify and prevent high-risk activities before they occur. Key features include:

- **Expanded Self-Hosted Wallet (SHW) Capabilities:** Notabene simplifies compliance for transactions involving self-hosted wallets by providing robust verification and monitoring tools to meet TFR's stringent requirements.
- **Handling Missing or Incomplete Information:** We offer solutions that flag incomplete transaction data and enable CASPs to fulfill their reporting obligations while maintaining operational continuity.
- **Counterparty Due Diligence and Sanction Screening:** Notabene's tools ensure that all

counterparties are vetted against global sanctions lists, mitigating risks of transacting with non-compliant entities.

- **Global Compliance Network:** Trusted by over 200 companies, Notabene connects CASPs to the largest VASP network, facilitating seamless data exchange and interoperability.

Beyond technical capabilities, our platform is designed with SOC-2 certification, ISO27001 compliance, and a strong focus on privacy and user experience. These foundational principles not only ensure security but also position CASPs to thrive in a highly regulated market.

By adopting Notabene, companies can move beyond minimal compliance and embrace a proactive, transparent approach to regulatory adherence. Whether it's managing missing information, mitigating counterparty risks, or ensuring compliance with the TFR, Notabene delivers the tools and expertise to navigate today's regulatory challenges with confidence.

Connect with us to build trust and compliance into every transaction: notabene.id

DRIVING INNOVATION IN INSURANCE TOKENIZATION: RETHINK LEDGERS' TRANSFORMATIVE COLLABORATION WITH OUR INSURTECH PARTNER



2024 marked a pivotal year for Rethink Ledgers as we partnered with a leading Insurtech platform to redefine the intersection of blockchain technology and whole life insurance. Our consulting engagement brought forth groundbreaking advancements in Real World Asset (RWA) tokenization, unlocking new possibilities for the financial services industry and setting the stage for a future of seamless digital finance.

AI-Powered Insights for Smarter Financial Contracts

A highlight of our work was the deployment of advanced *AI Agent workflows integrated with Blockchain Technology* to interpret and analyze the intricate terms and financial conditions of whole life insurance contracts. This innovative approach significantly improved the understanding of contract structures, enabling precise mapping of obligations and intrinsic value within a blockchain-based framework.

The result was a faster, more reliable system to support tokenization, enhancing transparency and trust.

Expanding the RWA Tokenization Frontier

Together with our Insurtech partner, we successfully streamlined the RWA tokenization process, integrating *a new category of RWA contracts*—whole life insurance—into the blockchain ecosystem. By tokenizing these contracts, we not only modernized a traditionally static financial product but also broadened the scope of RWAs, opening doors to a previously untapped asset class. This achievement positions our partnership as a leader in innovating the way real-world assets are represented in decentralized finance.

Unlocking Value for Policyholders

One of the most transformative outcomes of this engagement was the ability to *unlock intrinsic value* for whole life insurance contract holders. By tokenizing their policies, policyholders gained a way to access the underlying value of their contracts, providing greater financial flexibility and liquidity. This new capability represents a meaningful shift in how individuals can benefit from their long-term financial products.

Looking Ahead: Accelerating Blockchain-Based Finance in 2025

While 2024 demonstrated the real-world applicability of RWA tokenization, 2025 promises to *accelerate adoption and efficiency*. Leveraging the advancements in AI-driven workflows and benefitting from an increasingly favorable regulatory environment, Rethink Ledgers and our partners are poised to further streamline operations and drive modernization of financial products on blockchain rails.

ADDRESSING THE CROSS ON- AND OFF-CHAIN RISK MONITORING CHALLENGE



In 2024, many in the crypto industry came to realize what's always been clear to us at Solidus: The future of finance isn't on-chain — it's a blend of on- and off-chain networks. While blockchain provides invaluable transparency, 90% of digital asset activity (mostly trading) happens off-chain on platforms like Binance or Coinbase. Monitoring risks and fighting crime in this space requires tracking both on- and off-chain data throughout a digital asset's lifecycle, as [highlighted in a 2023 study](#) by the Japan Financial Services Authority. (See Figure 1)

This hybrid model extends beyond crypto. BlackRock's Larry Fink predicts "every stock, every bond...on one general ledger," making cross on- and off-chain monitoring indispensable for financial institutions and regulators alike. Solidus Labs, as the category-definer in crypto-native market surveillance, built its technology from the ground-up to address this challenge. Our solutions unify on- and off-chain private and public data across trading, transactions, KYC, AML, market sentiment, and more, creating a comprehensive market integrity hub.

This approach is critical for detecting digital asset market abuse, which often spans both on- and off-chain activity. (See Figure 2)

Take insider trading, for example. Research from Solidus shows that crypto tokens' dual trading environments contribute to insider trading in 56% of listing announcements. Insider trading is still a major issue in traditional markets despite being illegal and intense enforcement efforts. In crypto, however, insider trading is further complicated as it almost always involves both on-chain and off-chain elements.

Solidus' tailored solution, developed alongside regulators, screens DEX trades against CEX listings to automatically detect insider trading with precision.

This ability to identify insider trading in ways that have long eluded traditional markets holds enormous promise for law enforcement as more financial activity transitions to blockchain. (See Figure 3)

Decentralization isn't binary; it's a spectrum. Blockchain won't replace off-chain finance but rather expand it, offering new ways to manage assets. In a decade, you might access your blockchain wallet through a bank or your bank account via a blockchain protocol. Ensuring safety and integrity as assets flow seamlessly between on- and off-chain environments is the key to this financial evolution.

Figure 2: Illustration, Solidus' cross on- and off-chain data unification approach

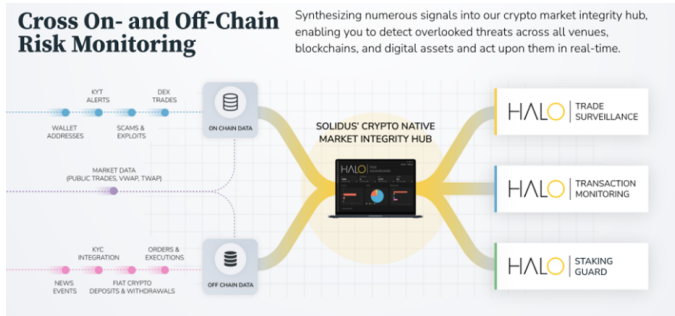


Figure 1: Excerpt from JFSA cross on- and off-chain study published on July 2023

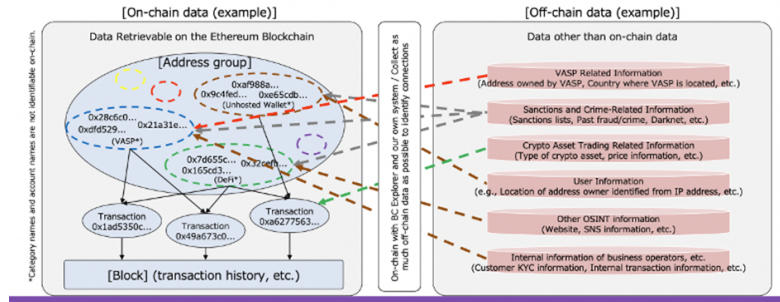
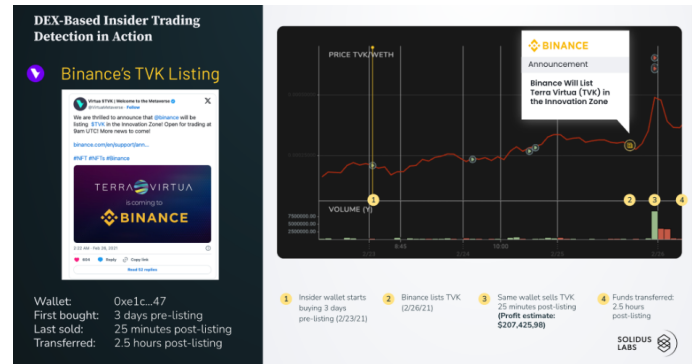


Figure 3: Crypto insider trading can only be comprehensively detected by simultaneously monitoring on and off-chain activity



COMBATING CRIME IN THE DIGITAL ASSET ECOSYSTEM



In the rapidly evolving world of digital assets, fraud, hacks, and scams pose significant challenges. Token Recovery stands at the forefront of combating these threats, providing end-to-end solutions for investigating and recovering lost or stolen assets. We are a team of blockchain investigators, former law enforcement and legal professionals with deep understanding of blockchain technology and digital assets. By combining advanced blockchain analytics, legal enforcement, and close collaboration with industry partners, we assist victims to reclaim what's actually theirs.

Drawing on years of expertise, we utilize advanced investigative techniques, such as:

- Digital Asset Tracing across blockchain networks to uncover the flow of funds, identify involved parties, and gather actionable evidence
- Destination of Funds Reports, pinpointing the likely recipients of suspicious funds, providing insights

critical for asset recovery or legal action

- Source of Funds Reports, distinguishing legitimate sources from illicit activities to assess transaction histories and risk levels
- Wallet Monitoring, to provide timely insights and collaborate with law enforcement to freeze assets
- Expert Witness Services for legal proceedings through expert testimony
- OSINT (Open-Source Intelligence) Analyses to link individuals or entities involved in crypto fraud

Beyond investigative efforts, we coordinate with law enforcement, legal teams, and asset service providers across jurisdictions to support broader efforts in holding perpetrators accountable.

One of our recent initiatives is our partnership with CYBERA_, a leading provider of scam prevention and response solutions. Token Recovery contributes critical intelligence by identifying scam wallet addresses, which CYBERA_ integrates into global monitoring systems. This integration allows near real-time alerts across the ecosystem, creating a robust response network to combat fraudulent activities. Victims experience a faster path to recovery, and exchanges and virtual asset service providers (VASPs) can better fulfill their responsibilities in safeguarding customer funds.

As the adoption of digital assets continues to grow, Token Recovery remains committed to fostering a safer and more transparent crypto ecosystem. Our partnerships, expertise, and dedication to our mission position us as a trusted ally in the fight against financial crime in the blockchain space.

Learn more about our recovery services at <https://tokenrecovery.com/>

BUILDING A COMPLIANT AND RESPONSIBLE WEB3.0 ECOSYSTEM

VerifyVASP

2024 saw the acceleration of Virtual Asset Service Provider (VASP) licensing around the world in a quest to build a compliant and responsible Web 3.0 ecosystem with broadened regulatory requirements, against a backdrop of increased adoption and expansion.

Correspondingly, VerifyVASP reached significant milestones, demonstrating that the Financial Action Task Force's (FATF) R16 on requirements for funds transfer transparency, or "travel rule", can be achieved at scale. Surpassing 10 million verifications worth over US\$300bn earlier in the year, VerifyVASP maintained an industry-leading success rate of around 90% successful verifications, in an immediate and secure manner. Our network also saw an increase in VASPs spanning more than 25 jurisdictions despite widespread market consolidation.

We remain active in multiple public-private partnerships with regulators and law enforcement agencies, continue to run travel rule working groups in several continents and encourage regulatory engagement around the world, responding to consultations and providing thought leadership in public and private sector meetings and forums.

Looking ahead, we anticipate further expansion of Travel Rule adoption as VASPs look to start implementing compliant flows and early adopter jurisdictions begin to reap the benefits of successful travel rule implementation as was intended by regulation.

VerifyVASP's product roadmap will include innovative enhancements to our existing suite of industry proven tools to build an inclusive technology stack that extends beyond Travel Rule compliance.

We will provide opportunities for public and private sector collaboration in the combat against illicit blockchain activity, at times occurring beyond the scope of sanctions programs. We will also be welcoming several new partnerships that will benefit our members and look forward to contributing to the excellent work that Global Blockchain Business Council has undertaken to advance the industry.

DIGITAL TRANSFORMATION IN THE GLOBAL SOUTH



IMPERA STRATEGY

The global south is more directly impacted by the power of blockchain and cryptocurrency than the more established digital markets in the global north. We see this with the exceptional adoption rate of stablecoins and crypto, as a result of the more fractured banking, financial and currency infrastructure in those countries.

As governments in the global south increase national crypto adoption with new regulation and fintech platforms integrating crypto with traditional banking, the team at Impera Strategy has played a key role in the establishment of these systems.

In El Salvador, we saw the financial inclusion rate in the country double within 6 months of the launch of Chivo, the national Bitcoin wallet. In Colombia, the country's largest bank also created a digital currency wallet, leveraging stablecoins to allow people access in and out of crypto to the traditional banking system with Colombian pesos.

Digital wallets like these allow users to hold both fiat and crypto currency, exchange between them, and in doing so open the world of finance beyond borders and individual currency risk.

Now focused in Bolivia, the poorest country in Latin America, we are establishing crypto systems to allow the local currency (Boliviano) to be traded with crypto, opening access to the global financial market. Partnering with local banks, funds, chambers, and government bodies has positioned us once again as partners in the development of a national cryptocurrency infrastructure. As Latin America evolves, we look to partnerships in Africa (notably Rwanda & Ethiopia) as additional frontiers for opening and unifying the world of finance through digital currency.

REDUCING FRICTIONS AND OPENING BOND MARKETS TO A BROADER INVESTOR BASE WITH ON CHAIN BOND ISSUANCE



A global leader in the institutional trading of digital assets, B2C2 provides deep, reliable prices across all market conditions. B2C2 is committed to driving progress in blockchain based finance and delivering trusted solutions to its clients.

In November 2024, B2C2 and PV01, a pioneer in digital debt capital markets, announced the breakthrough issuance of B2C2's first on-chain corporate bond. This world-first bond was represented by a transferable bearer token on the Ethereum blockchain and governed by English law. Denominated in the USDC stablecoin, its entire lifecycle—issuance, trading, and redemption—takes place on-chain.

The partnership with PV01 marks a significant milestone in the evolution of debt capital markets, showcasing how blockchain technology can streamline bond issuance while reducing reliance on intermediaries and lowering costs. This paves the way for traditional companies to issue debt on-chain in turn.

For crypto-native firms like B2C2, the ability to issue bonds directly on-chain offers a new, scalable way to diversify funding sources with greater speed, transparency, and control. Unlike traditional bonds, PV01's on-chain bonds are designed to be more efficient, transferable, and accessible to a broader range of investors—from large institutions to smaller players. The significant advantages of on-chain bond issuance include:

Efficiency

- Automates core processes such as underwriting, clearing, and settlement, reducing time-to-market.
- Minimises the need for intermediaries, significantly lowering costs for issuers.

Transparency

- Ensures all parties have real-time access to the same immutable data, improving trust and reducing disputes.

- Provides a clear audit trail, enhancing visibility across the bond lifecycle.

Accessibility

- Enables fractional ownership, making bonds more tradable and opening markets to new types of investors.
- Increases liquidity by reducing friction in secondary market transfers.

Security and Compliance

- Cryptographic security ensures data integrity and protects against unauthorized access.
- Smart contracts can incorporate rules to enforce compliance with regulations, such as Know Your Customer (KYC) and Anti-Money Laundering (AML).

As financial markets grow more familiar with digital assets, on-chain bonds are poised to become a cornerstone of future bond markets, enabling secure, efficient, and global debt financing on a scale previously unimaginable.

For more information on B2C2, please visit www.b2c2.com or our [LinkedIn page](#).

SUSTAINABILITY: CLIMATE ACTION, SOCIAL RESPONSIBILITY, AND INCLUSION

A BALANCE SHEET FOR OUR PLANET: INTEGRATING HEDERA GUARDIAN AND XBRL FOR TRANSPARENT CARBON ACCOUNTING



THE HBAR FOUNDATION

The current landscape of sustainability reporting is fragmented, lacking the necessary consistency and transparency for effective climate action. To address this, the Hedera Guardian, in collaboration with the [Capitals Coalition's Digital Sustainability Disclosures \(DSD\) Project](#), is growing the scope of "The Balance Sheet of Our Planet on a Public Ledger" This initiative aims to create a **comprehensive, open-source system** for tracking natural capital, carbon assets, and liabilities.

This system leverages the Hedera Network's [hashgraph consensus algorithm](#) which provides a fast, secure and energy-efficient platform. The Hedera Guardian Framework automates Measurement, Reporting, and Verification (MRV) processes, ensuring data is securely recorded, immutable, and auditable. This framework enables users to tokenize carbon and other environmental liabilities, creating a transparent and verifiable record of sustainability efforts. Meanwhile, immutable on-chain record keeping creates a transparent and verifiable history, from transactions to project-level roles and actors.

Key to this approach is the integration of [XBRL \(eXtensible Business Reporting Language\)](#), which provides a standardized, machine-readable format for sustainability data. By mapping and embedding the XBRL taxonomies into the Guardian and enabling the credible data from the Hedera Guardian Framework into XBRL taxonomies, the initiative ensures compatibility with global standards like the [European Sustainability Reporting Standards \(ESRS\)](#) and the [GHG Protocol](#). This enables seamless integration with financial reporting, facilitating comparability, analysis, and trust among stakeholders.

This integration of digital technology and standardized reporting is essential for creating a trusted and auditable system for environmental accountability. The Hedera Guardian makes it possible, building on the [IWA Carbon Emissions Token Protocol v1](#), to achieve real-time tracking of carbon emissions across operations, energy use, and organizations' value chains including Scope 1, 2, and 3 emissions. This approach helps companies, regulators and investors track, verify and validate sustainability data, enabling better decision-making and driving progress towards a sustainable future.

BLOCKCHAIN AND DIGITAL ASSETS AT MICROSOFT



Microsoft

Microsoft has been at the forefront of technological innovation for decades, and its involvement in blockchain technology is no exception. From early experiments to robust enterprise solutions, Microsoft has consistently pushed the boundaries of what blockchain can achieve. This summary highlights Microsoft's journey in blockchain, tokenization, tokens, and cryptocurrency, showcasing their significant contributions and future prospects.

Early Involvement in Blockchain

Microsoft's journey into blockchain began with exploratory projects and strategic partnerships aimed at understanding and leveraging this emerging technology. Early milestones included providing developers with the tools needed to build and deploy blockchain applications. In particular a Visual Studio Code plug-in enabled development of Solidity for Ethereum smart contracts.

In the early days of picks and shovels and education of enterprises in distributed systems development, one of Microsoft's blockchain offerings was the Azure Blockchain Service, which simplified the formation, management, and governance of consortium blockchain networks on Quorum, a sister of Hyperledger Besu.

This service has enabled numerous enterprises to adopt blockchain technology for POCs and pilots, leading to increased knowledge of development best practices at a time when the market was very early and disorganized.

Brazil CBDC and Digital Currency Initiatives

Microsoft Brazil, being resident in the regulatory-friendly environment, has embarked on a multi-year effort with the Central Bank of Brazil on Drex as they chart their course on CBDCs, Digital IDs, and digital assets. This project focuses on enhancing cross-border trade using blockchain technology. More recent developments have seen the program focus on privacy layers, digital ID, and oracles.

- [Drex pilot](#)
- [Drex pilot Phase 2](#)
- [Microsoft selected to join Phase 2 of Drex](#)

Recent Developments in Traceability

Internally, Microsoft has used blockchain technology in a number of businesses over the past years including Xbox and its gaming supply chain and Cloud Hardware Supply Chain. The Cloud Hardware Supply Chain work has won a Gartner Award and an [Alexander Hamilton Award](#) for its transformation to reduce counterparty risk moving to just-in-time payments through traditional methods triggered by the detailed data from the state changes in blockchain smart contracts.

Microsoft is currently continuing to drive industry standards in the decentralized identity area, and in particular as it relates to supply chain entities and their transactions in large trusted supply chains.

Microsoft Research

Multiple impactful areas of blockchain-adjacent tech reside in our research teams. One is a special projects area led by Glen Weyl, and the other is zero knowledge protocol work that is well respected in the web3 community:

Glen Weyl's research is some of the foundation work behind Quadratic Funding and Voting, Soulbound Tokens, and Gov4Git, a governance protocol over GitHub code repos: <https://www.microsoft.com/en-us/research/group/plural-technology-collaboratory/>

Srinath Setty's [research](#) is fundamental on optimizations for zero knowledge and is widely adopted by startups in the next wave of web3 zero knowledge innovation. Some well known contributions are Nova, HyperNova, Lasso, Jolt, and Spartan.

Future Prospects and Innovations

Microsoft is always looking to learn from partners and the fast pace of innovative ecosystems such as blockchain, cryptocurrency, and AI. With a regulatory friendly environment being promised in the US, we hope to see more activities among our fortune 500 customers that will drive the need for more services.

NASDAQ'S DIGITAL ASSETS AND CARBON MARKETS SOLUTIONS



As digital assets and carbon markets mature, organizations looking to capitalize on growth opportunities in these areas will require agile technology designed to scale.

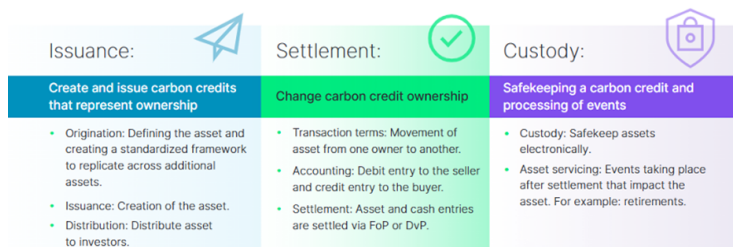
Nasdaq's Digital Assets and Carbon Markets solutions are designed to address the evolving needs of modern marketplaces by providing institutional-grade security, performance, accessibility, and scalability. These offerings aim to solve critical challenges in digital assets and carbon markets, such as ensuring transparency, trust, and liquidity by providing digital assets infrastructure that supports high-volume trading while maintaining reliability and scalability. This is crucial for market participants who require a secure and efficient platform to engage in digital asset transactions. For carbon markets, Nasdaq's technology facilitates better transparency and liquidity, addressing the need for reliable carbon registries and exchanges that can handle the complexities of carbon credit trading.

The Digital Assets platform provides a SaaS-deployed infrastructure that supports exchanges, marketplaces, and registries and is particularly beneficial for the carbon markets use case, where it enhances transparency and certainty through advanced tracking and monitoring capabilities. The tailored technology for carbon registries provides a single service for secure, scalable and efficient issuance, settlement, custody and retirement of carbon credits.

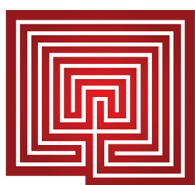
Nasdaq's approach to carbon management leverages smart contracts, giving carbon registry operators full auditability, while reducing manual processing and complexity, improving access and driving growth across the emerging carbon ecosystem. By leveraging smart contracts, carbon market operators and registries can easily create and distribute standardized credits with a full audit trail throughout the entire lifecycle.

Clients also benefit from the optionality to operate the platform on a central database or a private-permissioned network, enabling flexibility as the carbon market grows.

By leveraging Nasdaq's core competencies of operating and modernizing critical financial infrastructure, Nasdaq's solutions for digital assets enable both market infrastructure operators and market participants alike to engage in digital assets with institutional-grade performance, accessibility and scalability.



NIGERIA AT THE FOREFRONT OF DIGITAL ASSET INNOVATION



Charles Winnsboro
AFRICA. UNCHAINED

As the world's second-largest market for cryptocurrency adoption, Nigeria is at a pivotal moment. The country faces the challenge of balancing robust regulation with fostering innovation in Bitcoin and digital assets. The Nigerian Securities and Exchange Commission (SEC) recently amended its rules on digital assets, introducing clarity but also raising concerns about barriers to entry due to stringent compliance requirements.

Bitcoin has emerged as more than a speculative asset in Nigeria—it is a vital tool for combating inflation, facilitating cross-border payments, and promoting financial inclusion. Key opportunities for Bitcoin adoption include reducing remittance fees, integrating Bitcoin into payment systems for Nigeria's growing remote workforce, and monetizing flared natural gas for Bitcoin mining.

To realize these benefits, Nigeria must pioneer a regulatory framework that aligns with its unique economic and social context. Emerging technologies like zero-knowledge proofs (ZKPs) and decentralized identifiers (DIDs) can enable privacy-preserving compliance, addressing data security concerns while ensuring transparency and trust.

We emphasize the need for Nigeria to avoid replicating Western regulatory models and instead adopt tailored solutions. Recommendations include establishing regulatory sandboxes to test innovative products, implementing tiered compliance for startups, and incentivizing projects that promote financial inclusion through digital assets.

Looking ahead to 2025, Nigeria has an unparalleled opportunity to lead Africa's Bitcoin revolution. By embracing smart regulation that prioritizes privacy, innovation, and inclusion, the country can unlock the full potential of Bitcoin and digital assets, strengthening its economy and securing a leadership role in the global digital landscape. The path forward requires collaboration between regulators and innovators, with the ultimate goal of empowering financial freedom for all Nigerians.

This vision for Bitcoin adoption could serve as a blueprint for other nations navigating the intersection of digital assets and regulation.

ADVANCING EQUITABLE CORPORATE CLIMATE ACTION



The Problem

The global community is urgently seeking innovative solutions to combat climate change. While carbon and other nature markets have emerged as a promising pathway to promote sustainable development and reduce greenhouse gas emissions, they require stricter integrity principles and safeguards to ensure fair and genuine impact.

How it Works

Nature Wired connects businesses with verified, high-impact nature-based projects to offset their carbon footprint and support ecosystems and communities worldwide. Our Credit Harbor marketplace offers projects such as reforestation, biodiversity conservation, mangrove restoration, and water security, empowering companies to achieve sustainability goals while fostering ecological integrity and social benefits. As a member of the GBBC InterWork Alliance's (IWA) Voluntary Carbon Market Taskforce and the United Nations 2030 Alliance, Nature Wired prioritizes transparency, equity, and innovation. While our marketplace is in its early stages, we are actively piloting projects, collaborating with project developers, and engaging with corporate buyers to refine our platform. Guided by IWA's dMRV Framework, we are building a strong foundation to adopt advanced tools for digital monitoring, reporting, and verification (dMRV).

By fostering connections between corporate sustainability efforts and verified high-integrity projects, Nature Wired strives to scale climate solutions that align with the United Nations Sustainable Development Goals (SDGs) and trusted industry standards, while supporting our Equity 2030 Alliance goals to promote fairness and inclusion.

- For more information, [click here](#).
- [Follow us](#) on LinkedIn.
- [Contact us](#).

TOWARD A MORE ACCOUNTABLE AND EFFICIENT CARBON ECONOMY



Rearden Digital is acting as a product designer and developer for Blockchain for Energy (B4E), disrupting the energy sector's emissions measurement and verification approach through its B4ECarbon solution. This initiative leverages distributed ledger technology to enhance transparency, accuracy, and trust in the carbon emissions data reported by energy companies.

The core of this effort is facilitated by dMRV (digital Measurement, Reporting, and Verification) technology. The platform integrates advanced IoT sensors, distributed ledger technology (DLT), and tokenization to create a seamless and tamper-proof system for tracking carbon emissions and removals. By aligning with the InterWork Alliance (IWA) frameworks, B4ECarbon ensures that carbon emissions tokens, such as CETs (Carbon Emissions Tokens), CRUs (Carbon Removal Units), and RECs (Renewable Energy Certificates), meet rigorous industry specifications for interoperability and auditability.

The initiative also addresses a critical challenge in the energy sector—verifying the accuracy of emissions data. B4ECarbon incorporates cryptographically secure verified credentials for key data inputs, such as sensor calibration certificates, maintenance records, and replacement documentation. These credentials are linked to digital assets, creating an immutable audit trail that enhances data integrity and supports compliance with regulatory and voluntary carbon markets.

Rearden Digital's work with B4E further emphasizes the role of tokenization in driving value for stakeholders. By standardizing and digitizing emissions data, the platform unlocks new monetization opportunities for carbon credits and facilitates their integration into global carbon trading platforms. Additionally, the blockchain-based system mitigates risks of fraud and reversal through its robust verification mechanisms.

Ultimately, this initiative aims to set a new benchmark for the energy sector by combining cutting-edge blockchain innovation with practical, industry-aligned solutions. Rearden Digital and Blockchain for Energy are advancing the digitalization of carbon accounting and creating a scalable framework that can be expanded across the energy sector to enhance their sustainability credentials. Through B4Carbon, they are paving the way for a more accountable and efficient carbon economy.

ADVANCING BLOCKCHAIN INFRASTRUCTURE FOR THE FUTURE

ALEO LAUNCHES MAINNET TO BRING PRIVACY TO WEB3

Aleo

Aleo, a layer-one blockchain that combines general-purpose programmability with the power of zero-knowledge proofs (ZKPs), announced their mainnet launch in September 2024. The network enables the next generation of decentralized apps that provide data confidentiality to users and scale to enterprises.

Using ZKPs, programs built on the Aleo Network can prove a statement is true without revealing the information itself. Unlike other ZK solutions, Aleo is ZK by design, with a zkVM fully integrated into every transaction on top of a vertically-integrated platform created to preserve programmability, security, and permissionlessness.

Network activity surges post-mainnet with 10.8m transactions

Since mainnet, **10.8m** transactions have been completed on the network, at an average rate of 86,000 transactions/day. Users have created **1.8m** total wallets, and an average of **15,400 individuals** use the network every day.

More than **350 privacy-preserving dApps** have been built on the Aleo Network, helping builders protect users' personal information while ensuring regulatory compliance. From privacy-preserving wallets to identity solutions like zPass, users now have the unparalleled ability to protect their data while interacting online. Aleo is the https for blockchain and will be able to open up commerce, payments, and other use cases for institutions and developers.

Building the next generation of private applications

Aleo empowers developers to build truly secure applications and products that address real-world problems like:

Secure Identity Verification

Robust digital identity solutions remain an unsolved problem. Aleo-powered solutions like zPass and Bandio allow individuals to make attestations about their identity, such as their nationality or age, without leaking other information and without relying on a centralized server.

Scalable, Compliant Payments

Stablecoins are finding increasing product-market fit in crypto. But to truly replace existing payments infrastructure, stablecoin transactions must protect institutional and personal financial information. Aleo's privacy-preserving smart contract infrastructure enables this while ensuring compliance. We see this as an important step to bring cross-border business payments (e.g., merchants, governments, donations, etc.) on chain.

Trust-Minimized Oracle Infrastructure

Recent innovations in zero-knowledge cryptography such as zkTLS are all about bridging real world data on-chain, while using zero-knowledge cryptography to ensure that happens in a trust-minimized way.

Hidden Information Games

While traditional blockchain games enable ownership of in-game items and interoperability as unique mechanics, the transparency of networks like Ethereum means that applications like poker or Battleship aren't possible. This is because those games rely on the mechanic of hidden information. But Aleo's model of public and private state makes hidden-information games possible, as demonstrated by Puzzle, a mobile and extension wallet to play zkGames and earn rewards.

A collaborative approach to governance

The Aleo Network is fully community driven, with a variety of organizations and individuals contributing to its success. Anyone can submit an [Aleo Request for Comment \(ARC\)](#) to suggest changes to the Network. We embrace a collaborative approach to governance, and encourage contributions that drive innovation.

To learn more about Aleo, visit <https://aleo.org/>

SCALING INNOVATION: HOW AVA LABS IS DRIVING THE AVALANCHE BLOCKCHAIN ECOSYSTEM FORWARD

Ava Labs.

Ava Labs is a leading blockchain technology company dedicated to empowering organizations that build scalable decentralized applications (dApps) and custom Layer 1 (L1) blockchains on the [Avalanche network](#).

In late 2024, Avalanche's largest network upgrade went live, creating an enhanced environment for developers and builders to launch their own L1 on Avalanche with ease and with fewer economic barriers. The global campaign dubbed [Avalanche9000](#), contained a number of vital technical updates including the [Etna Upgrade](#) and other [community proposals](#), driving excitement throughout the Avalanche community as it was announced at the Avalanche Summit LATAM in Buenos Aires, Argentina.

Avalanche9000 makes launching L1s more economically feasible, reducing deployment costs by 99.9%, simplifies customization and maintenance, and allows builders to go to market quickly. Additionally, developers may benefit from Interchain Messaging ([ICM](#)), sharing in collective interoperability to build network effects throughout the Avalanche ecosystem.

In tandem with Avalanche9000, Ava Labs also supported the Avalanche Foundation's launch of [Retro9000](#), an up to \$40 million retroactive grant program to reward developers building L1 blockchains and critical developer tooling. Retro9000 submissions are ranked on a public leaderboard, driven by community votes informing retroactive grant allocations, encouraging developers to build publicly, earn community support, and test and ship projects to get rewarded.

As Avalanche9000 lowers the barrier to entry and unlocks purpose-driven blockchains at scale, over 500 L1s are already being developed on testnet and mainnet, with a frenzy of network activity driving momentum. These new L1s span community-run gaming, payment solutions for small businesses, and institutional research with continued expansion into new verticals.

With proven utility, heavily-transacted mainstream Avalanche L1s such as [DeFi Kingdoms](#), [Dexalot](#), [Off The Grid](#), [Lamina1](#), [Pulsar](#), [SK Planet](#) and [StraitsX](#) deliver impact at scale.

Ava Labs will continue to advance the Avalanche [ecosystem](#), positioning the platform as the preferred blockchain for innovators and builders across diverse industries worldwide.

BRINGING THE GLOBAL FINANCIAL SYSTEM ONCHAIN



Chainlink Labs

2024 marked a turning point in the adoption of onchain finance for traditional markets, with [Chainlink](#) enabling financial institutions to develop customized, compliant, and future-proof blockchain applications and tokenized assets. Below is a list of major use cases Chainlink enabled last year to help bring the global financial system onchain.

Transforming asset servicing with AI, oracles, and blockchains

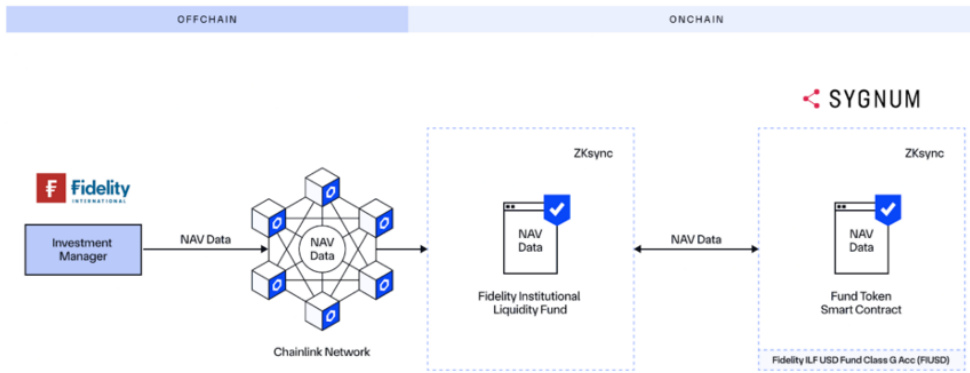
Chainlink, Euroclear, Swift, UBS, Franklin Templeton, Wellington Management, CACEIS, Vontobel, and Sygnum Bank [successfully demonstrated](#) how large language models (LLMs) can be used in combination with Chainlink for near real-time data distribution of corporate actions events across various blockchain networks. According to [Forbes](#), this could solve a 3.1 trillion dollar unstructured data problem for global markets. Phase 2 is expected to begin this year.

Delivering key fund data onchain

Fidelity International and Sygnum [partnered with Chainlink](#) to bring NAV data onchain for Fidelity International's \$6.9 billion Institutional Liquidity Fund. In this landmark production use case for tokenized assets, Chainlink helps provide transparency and accessibility around key asset data for the fund.

Bridging tokenized assets with existing payment systems

Swift, UBS Asset Management, and Chainlink [successfully settled](#) tokenized fund subscriptions and redemptions using the Swift network. This initiative enables digital asset transactions to settle offchain in fiat, using an established payment system that's already widely adopted by more than 11,500 financial institutions, across over 200 countries and



territories.

“Our work with UBS Asset Management and Chainlink in MAS’ Project Guardian leverages the global Swift network to bridge digital assets with established systems.”—Jonathan Ehrenfeld, Head of Strategy at Swift

Unlocking automated fund administration and transfer agency

SBI Digital Markets, UBS Asset Management, and Chainlink successfully showcased how tokenization, smart contracts, and Chainlink infrastructure can [automate the fund management process](#) for traditional fund administrators and transfer agents. This unlocks a fundamental shift in how the industry’s \$132 trillion global assets under management can begin to operate using blockchains.

DECENTRALIZING STORAGE TO PRESERVE HUMANITY’S INFORMATION



Filecoin is the world’s largest decentralized storage network. Filecoin Foundation’s mission is to preserve humanity’s most important information, as well as to facilitate the open source governance of the Filecoin network, fund research and development projects for decentralized technologies, and support the growth of the Filecoin ecosystem and community.

Filecoin Foundatin’s vision is to create a world in which Filecoin and related decentralized technologies preserve and protect our world’s history, empower users, and embed core civil liberties and human rights — such as free speech and privacy — into the fabric of the world’s technological infrastructure. We want to build a decentralized, efficient, and robust foundation for the future of the web.

Today’s internet is largely centralized, with control and distribution of information in the hands of a few powerful companies. Decentralized technologies like Filecoin let users harness the collective power of the web to store and share data. Filecoin’s open ecosystem of developers, storage providers, storage clients, and other builders fuels the world’s largest decentralized storage network. More than 8,800 organizations are building on Filecoin, and over 1,800 storage provider systems are committing storage capacity to the network.

As the AI industry rapidly expands, Filecoin’s decentralized storage network offers an open source alternative for data storage. An AI model’s accuracy and credibility are rooted in the integrity of the data that it’s built on. To promote a safe, transparent, and trustworthy environment for AI to flourish, it is critical to consider where those massive troves of data originate, how and where they are stored, who can access them for the long term, and how AI models leverage this data. The Filecoin network is uniquely positioned to address these challenges by enabling decentralization and transparency, creating an auditable and tamper-proof way for AI projects to

verify their models, datasets, and computations.

WEB3 TOOLS FOR EVERY BUSINESS



The barriers for SMBs to leverage tokenization and applied AI are many and complex to navigate, and most businesses are not prepared for the Web3 era. Many don't even know where or how to start using the Web3 technology to grow their brands and improve their current products and services.

W3 SaaS was designed to be Web3 Software-as-a-Service that offers businesses an easier way to launch tokenized use cases with vertical AI Agents integrated into a given Web3 application.

Similar to how Shopify offers a framework for launching ecommerce websites with tools built-in, and how Salesforce's SaaS helps streamline sales and marketing, W3 SaaS brings together all the key features of Web3 into a Techstack that can be White-Labeled for any industry vertical or use case.

W3 SaaS provides the Web3 infrastructure and tools that brands need for a unified system and makes it easier for them to leverage leading edge technology, and offer Web3 solutions to their customers.

W3 SaaS is focused on helping the underserved SMB market, comprising over 400 million businesses worldwide, and over 30 million businesses in the US alone. We focus on forward-thinking SMBs and startups who are eager to leverage tokenization and Web3 technologies but lack the in-house development expertise.

By offering a customizable, user-friendly platform, we empower SMBs and startups to compete with larger enterprises, tap into new revenue streams, and future-proof their operations. Our solution will resonate particularly with millennial and Gen Z-run businesses whose leadership may better understand the potential of Web3 and want a turnkey solution to implement it effectively and fast.

W3 SaaS is Blockchain/DLT agnostic, and can offer multi-chain solutions. It has built-in features like KYC, MPC, AI, and others that streamline the process of launching and maintaining a Web3 application. Learn more at w3saas.com.

SUPPORTING GROWTH FOR THE BLOCKCHAIN AND DIGITAL ASSETS INDUSTRY



BUEN CRYPTO CONSULTING

Buen Crypto Consulting is a professional services organisation dedicated to the Blockchain and Digital Assets industry, and currently operating in Europe, the Middle East and the United States. Founded in 2022 by a team of crypto native traders, our industry knowledge, global connectivity and insight drawn from across multiple sectors, allow us to create custom fit solutions for clients that meet their needs and achieve their goals.

Buen Crypto Consulting offers a range of advisory services, tailored for the fast growing and maturing crypto, blockchain, and digital assets markets. These include project management of authorisation requests, supervisory engagement, risk mitigation and multi-jurisdictional regulatory support including MiCA, FCA Authorisation and VARA Authorisations.

Buen Crypto supports many global digital asset exchanges, traditional finance organisations entering the digital asset industry and local governments to respond to regulatory changes, strengthen capital, transform, lend, and stimulate growth. Buen Crypto's hands-on approach and key relationships help organisations to build and create in-house to strengthen and better meet the needs of their customers while engendering confidence in shareholders and trust in regulators.

We are at the centre of the Digital Asset Exchange community working to ensure our clients meet their regulatory requirements, manage risk, and add value to their clients. And we enable our clients (Existing or New Market Entrants) to better operate in a volatile and rapidly changing market so they can improve on their investments.

We are driven through our unique industry sector specialisation allowing our professionals to deliver seamless, consistent, and high-quality services to our Blockchain and Digital Asset clients in EMEA and the USA.

FOLKS FINANCE: PIONEERING LIQUID STAKING



As the blockchain industry grows, staking platforms have become a core pillar of onchain finance. Folks Finance, the leading DeFi protocol on Algorand, is driving this innovation with **xALGO**, its advanced liquid staking solution that enhances accessibility, flexibility, and utility for ALGO stakers.

With Algorand transitioning to a Consensus-based validation system, staking has become central to both network security and rewards. Normally, 30,000 ALGO would be the minimum stake required, but Folks fixes this issue with xALGO, which removes the minimum staking requirements and provides tokenized liquidity for staked assets.

xALGO is a yield-bearing token that allows users to maintain liquidity while earning competitive APRs. This innovative approach enables users to participate across the Algorand DeFi ecosystem, leveraging xALGO as collateral for lending, borrowing, or engaging in advanced strategies to maximize returns.

Folks has taken steps toward decentralizing xALGO operations by open-sourcing its codebase and empowering trusted community participants to run nodes. Before open-sourcing, xALGO was publicly audited by the Algorand community via an Audit Competition on Immunefi.

xALGO will play a key role in Algorand's growth in 2025 and beyond. By democratizing access and expanding liquidity opportunities, xALGO empowers users to unlock the full potential of their ALGO holdings while shaping a more accessible, decentralized, and secure Algorand network. Learn more [here](#).

KINTSUGI TECHNOLOGIES: CHAMPIONING NATIONAL SOVEREIGNTY IN GLOBAL BLOCKCHAIN INFRASTRUCTURE



Kintsugi Technologies champions adoption of its focus on supporting hyperlocalized sovereignty-specific blockchain infrastructure through our pioneering Regional Embassy model. This was prominently showcased at our 2024 Blockchain Infrastructure Forum (BIF) in Hokkaido, Japan, which convened global leaders including Dan Albert (Executive Director, Solana Foundation), Naoki Tani (Managing Director, NTT Digital), Genki Oda (Managing Executive Officer, SBI and President, JVCEA), Angelina Kwan (former COO, BitMex), Sandra Ro (CEO, GBBC), and Jonathan Kim (Web3 Director, SKT), along with top validators from all around the world.

The forum underscored the core thesis of rapidly growing institutional and sovereign adoption of blockchain with emphasis on each country developing its own sovereign ecosystem of validators, infrastructure providers, and regulatory frameworks. This approach was evidenced by participation from the largest telecommunications companies of Japan (NTT) and Korea (SKT), demonstrating the growing institutional recognition that blockchain infrastructure is becoming as crucial as traditional telecom infrastructure.

Our Regional Embassy model supports this transition by:

- Establishing country-specific infrastructure hubs operated by local teams
- Providing institutional-grade validator and infrastructure services
- Facilitating regulatory compliance and institutional partnerships
- Developing local expertise in blockchain technologies

In 2024, we're focused on expanding our embassy network while maintaining our foundational principle that "Infrastructure must be sovereign, teams must be sovereign." This resonates strongly with institutional partners seeking compliant, locally-operated infrastructure solutions.

Our track record and past history includes managing over \$1 billion in staked assets across major networks, experience managing multi-billion dollar blockchain ecosystems, and developing institutional-grade infrastructure services. The success of BIF 2024, gathering leaders from major financial institutions, telecommunications companies, and regulatory bodies, demonstrates the growing institutional acceptance of our hyperlocalized approach to blockchain infrastructure.

Looking ahead, Kintsugi Technologies continues to bridge the gap between traditional institutions and blockchain infrastructure, ensuring each country can build and maintain sovereign infrastructure capabilities while participating in the global blockchain ecosystem.

Learn more: www.kintsugi.tech

AI & BLOCKCHAIN TO STREAMLINE BUSINESS PROCESSES



In today's interconnected world, organizations increasingly rely on third parties to complete business activities, making cross-organization processes the norm. However, these complex multi-party processes come with challenges such as security, data privacy, and system integration.

ULALO breaks down these technical barriers with a NoCode platform powered by AI and blockchain, enabling businesses of all sizes to streamline complex processes, improving efficiency, transparency, and collaboration.

ULALO addresses two key challenges: the lack of in-house expertise in blockchain development and the difficulty of integrating legacy systems with blockchain solutions. By eliminating these hurdles, ULALO makes blockchain accessible and practical for any organization, helping them thrive in today's fast-paced digital landscape.

In the pharmaceutical industry, maintaining the integrity of the cold chain remains a significant challenge. ULALO enhances supply chain management by leveraging blockchain to create a transparent, collaborative ecosystem for refrigerated product delivery.

Seamlessly integrating with legacy systems and IoT hubs, ULALO provides an end-to-end view of the supply chain, enabling businesses to prevent costly disruptions, resolve disputes efficiently, and achieve unparalleled operational visibility.

Through the power of AI and blockchain, ULALO empowers businesses across various sectors to optimize operations, foster collaboration, and gain a competitive edge in the digital era.

BRIDGING TRADITIONAL AND DIGITAL MARKETS: THE ROLE OF DTIS



The rise of digital assets is reshaping financial markets, presenting both opportunities and complexities. Distributed ledger technology (DLT) is being embraced by major institutions like the World Bank, European Investment Bank (EIB), and Hong Kong Government, which have issued digital bonds. Banks and market infrastructure providers are also using DLT to revolutionise the issuance, settlement, and trading of digital assets, aiming for greater efficiency and connectivity.

To fully unlock this potential, aligning traditional and digital markets through robust standards is critical. Globally recognised identifiers, like the International Securities Identification Number (ISIN), have long supported traditional finance. Digital Token Identifiers (DTIs) now complement ISINs by uniquely identifying digital assets on DLTs, fostering transparency and trust.

Regulatory bodies such as the European Securities and Markets Authority (ESMA) and the UK's Financial Conduct Authority (FCA) are leading the integration of DTIs into transparency frameworks. ESMA's MiFIR Review and the EU's Markets in Crypto-Assets (MiCA) regime have highlighted DTIs as essential tools for monitoring tokenised financial instruments and stablecoins. Similarly, the FCA sees DTIs as crucial for tracking tokenised securities across multiple blockchains.

The Association of National Numbering Agencies (ANNA) and the Digital Token Identifier Foundation (DTIF) are driving efforts to streamline market operations by mapping ISINs and DTIs. This integration enhances market transparency and simplifies processes like regulatory reporting, enabling straight-through processing (STP).

Applications include linking ISINs and DTIs for DLT-based securities, stablecoins, and crypto-derivatives.

Progress is underway. Over 80 DLT-based securities have been mapped, and XT ISINs now identify more than 200 stablecoins and crypto-assets. Collaboration with the Global Legal Entity Identifier Foundation (GLEIF) aims to further unify reference data across markets.

As digital assets evolve, cooperation among regulators, industry participants, and standards organisations will ensure the market remains transparent, innovative, and stable—bridging the gap between traditional and digital ecosystems.

GBBC is grateful for the extraordinary community that has contributed to the report this year.

Thank you for joining us as we continue to carry out our mission in 2025 to further responsible innovation and adoption of blockchain technology through a shared forum with regulators, business leaders, innovators, and lawmakers on the benefits and applications of this groundbreaking technology.

THANK YOU TO THE MEMBERS, REGULATORS, AND POLICYMAKERS WHO CONTRIBUTED TO OUR REPORT THIS YEAR:

677 Financial Group	Folks Finance	Polymesh
Aleo	Hedera Foundation	Rearden Digital Assets
Archax	Hedera Hashgraph	Regen Network
Ava Labs	Impera Strategy	Rethink Ledgers
B2C2	iobuilders	Ripple
Buen Crypto Consulting	Kaiko	SBI Digital Asset Holdings
Chainalysis	Kinexys by J.P. Morgan	Solidus Labs
Chainlink Labs	Kintsugi Technologies	Soramitsu
Charles Winnsboro Corporation	Latham & Watkins	Standard Chartered
Citi	Mayer Brown	Taxbit
Clearstream	Microsoft	The Provenance Chain™ Network (PCN)
Consensys	MLL Legal	Token Recovery
Digital Asset	Nasdaq	ULALO
DLxLaw	Nature Wired	UN Joint Staff Pension Fund
Droit Financial Technologies	Norton Rose Fulbright	VerifyVASP
Digital Token Identifier Foundation (DTIF)	Notabene	W3 SaaS
Elliptic	Oliver Wyman	Zodia Custody
FedEx	Paravela	
Filecoin Foundation	Paypal	

**THANK YOU TO OUR
ENTIRE GBBC COMMUNITY.
WE COULDN'T DO WHAT
WE DO WITHOUT YOU.**

GLOBAL BLOCKCHAIN BUSINESS COUNCIL

Geneva | Washington D.C. | New York | London



GBBC

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