GBBC  USA

The Trusted Resource:
People, Education, Access

GBBC BY THE NUMBERS

500+ Members with offices and HQs across nearly **400 cities** around the world

Our members include:

- **187** NON-PROFITS, ASSOCIATIONS, and SUPRANATIONALS
- **122** GOVERNMENT OFFICES and AGENCIES

A network of **251 Ambassadors** spanning **119 jurisdictions and disciplines**

GBBC USA

Digital Asset Payments + Supply Chains

On-chain solutions are eliminating the “silent VAT tax” in the $3T+ U.S. Transportation Industry

PROBLEM

The U.S. transportation Industry is valued at nearly $3T; the “truckload” sector is nearly 50% of the Industry; and 70% of all goods move on a truck

Industry standard shipper pay terms are 30-180 days after freight is delivered; freight invoice “factoring” adds a 20%+ APR cost for trucking and logistics firms

Factoring levies a “silent VAT tax” on carriers, consumers and households – typically $65,000 per truck, per year – increasing cost of goods and damaging the Administration’s “affordability” policies

*TCS settled the World’s first invoice on-chain in December 2022, announced the innovation, and was then de-banked via Operation Chokepoint 2.0

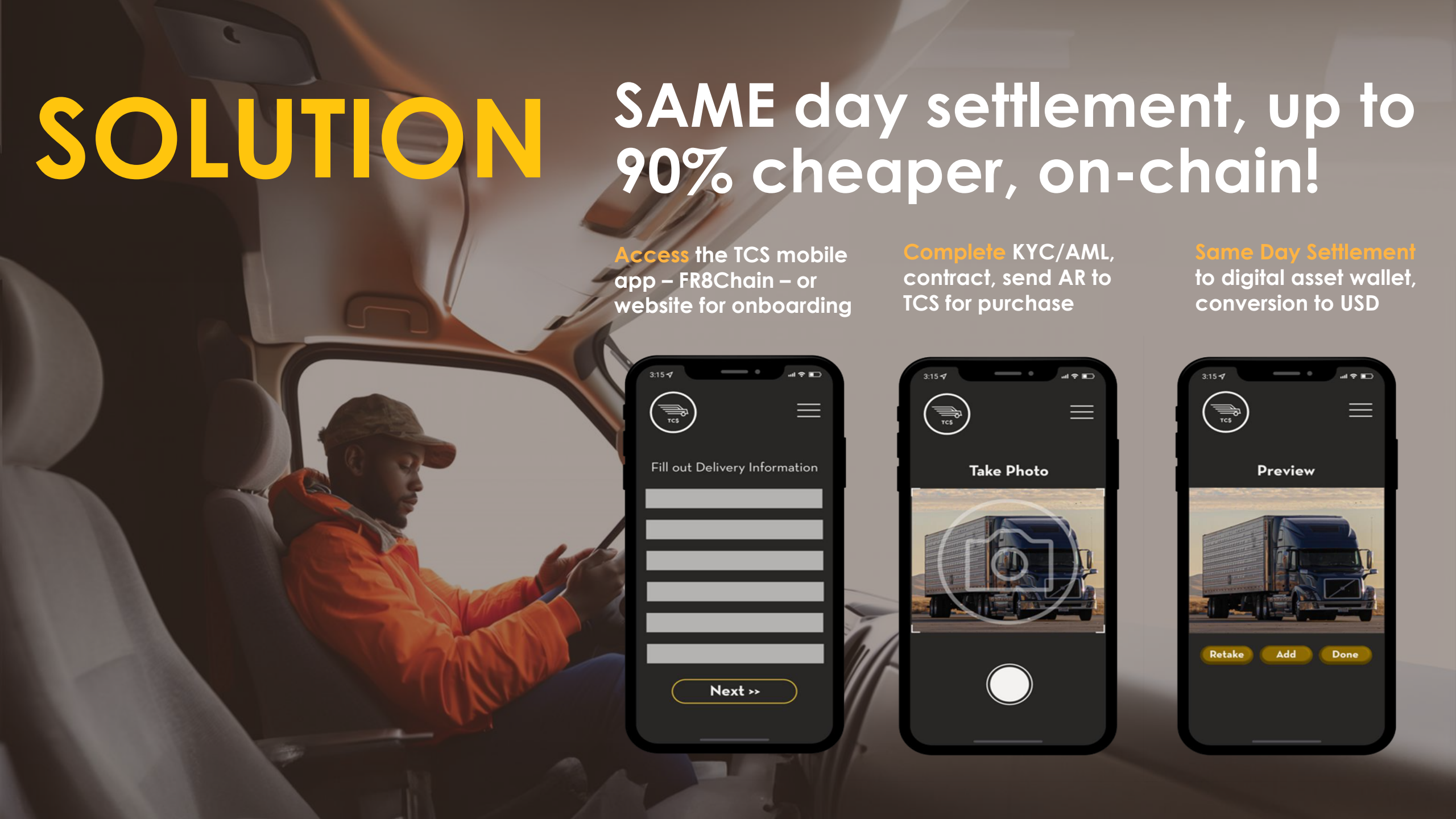
SOLUTION

SAME day settlement, up to 90% cheaper, on-chain!

Access the TCS mobile app – FR8Chain – or website for onboarding

Complete KYC/AML, contract, send AR to TCS for purchase

Same Day Settlement to digital asset wallet, conversion to USD



HOW IT WORKS!

1 Access the App

Users KYC/AML, sign Settlement Agreement, gain access to TCS platform and FR8Chain app

2 Freight Invoice Upload

Users submit freight invoices and related docs after delivery; TCS vets AR and makes buying decisions

3 Settlement

Users receive current USD value of freight invoice in TCST – less fees

TCS buys collection rights in AR, and collects USD from shippers via ACH

4 Exchange Processing

CEX receives sell orders for TCST from Users. Users convert from TCST to USD - or paired digital assets. Secondary market buyers purchase TCST when sold by Users (TCS buys outstanding TCST book balances with PYUSD, on terms)

5 Digital Asset Wallet

User has tokenized (unbanked) the value of its revenues into a CEX account. If the CEX supports the TCS Digital Asset Fuel Card (DAFC), Users can spend TCST and other digital assets directly at truck stops & retail locations. (1)

[1] CEX earns revenue on freight invoice settlement and DAFC volume ($315,000.00 per truck, per year, by industry averages).

A Ton of Demand

. . . and two (2) White House visits!

100+ Trucks Contracted

With no formal marketing campaign, TCS has contracted 100+ trucks & freight brokerages

---

$200M+

New freight AR contracted and onboarding to TCS in Q2 2026. This new volume will ramp AUM, ARR and Industry awareness

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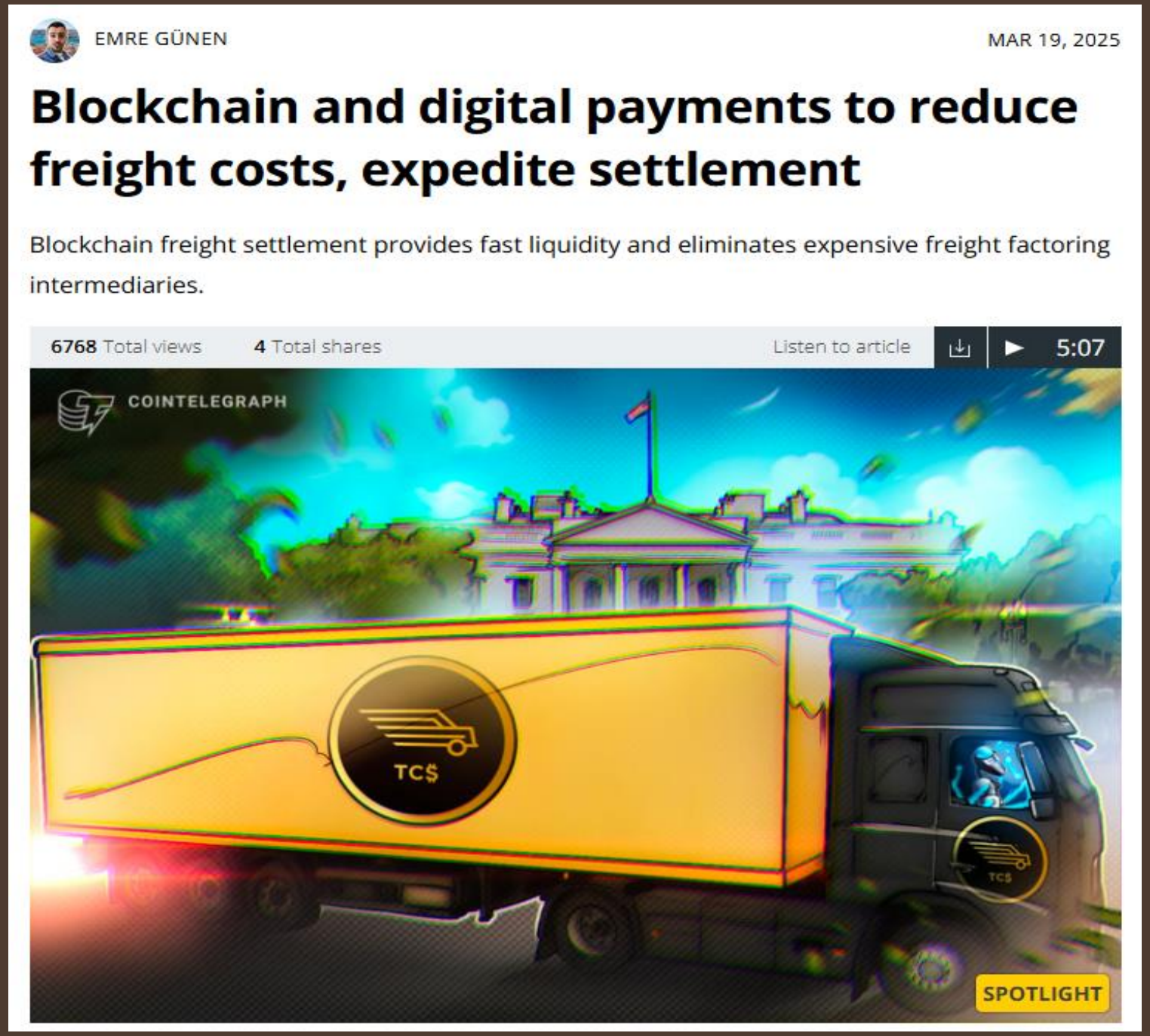
PayPal & Paxos Join TCS!

Q1-2026: PayPal and Paxos announced strategic partnerships to scale the TCS solution; and two (2) more strategic announcements are on deck.



Final Thoughts:

At current adoption rates, 50%+ of ALL B2B settlement is on-chain by 2030 (10 source citations)

Digital asset payments in supply chains are the catalyst to uniformity for blockchain-based freight documentation (BOL / POD) - carriers and shippers who settle on-chain, lower the adoption curve

“Double brokerage” is a $1B fraud problem in the U.S., and exists because 99% of freight AR settlement is on banking rails, with virtually no transparency and traceability (TCS has a 0% fraud rate)

GSA and FEMA both have “NO factoring” policies for routing-guide carriers; cheaper and faster payments lead to more solvent carriers, healthier supply chains, and greater food/CPG security

The White House and Commerce can accelerate awareness, and mitigate the “silent VAT tax”

The CLARITY ACT will lead to more on-chain solutions like TCS, strengthening the U.S. economy

TWIN

Decentralized Tech for Global Trade & Supply Chain ecosystems

US Dept of Commerce

19th March 2026

Contents

International trade is a lot of documents (PDFs)

4 billion trade documents circulate every day to track shipments.

Each trade on average requires up to 30 entities, 36 documents, and 240 copies per shipment.

Building the Digital Rails of Global Trade

The Problem

Red tape, higher costs, wasted resources.

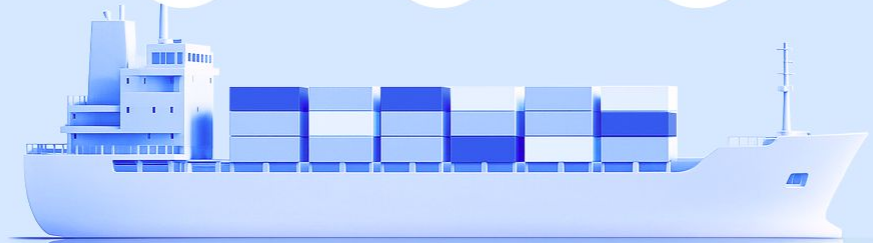
Paperwork
costly, insecure, and slow

Delays and errors
due to missing or incorrect documentation.

Lack of transparency
...where is my cargo?!

Cumbersome access
...to trade finance and payment

Trade Barriers



The Solution

Seamless, trusted global trade.

Digital Identity
verifiable participants

Data Sharing
decentralised, trusted, and verifiable.

Digital Data
...exchanged automatically.

Digital Transfer
...of assets and value.

Trade Facilitation

The Positive Outcome

- Reducing waiting time and delays
- Saving money/ lower cost
- Removing barriers
- All actors in the chain profiting
- Less resources spent

IOTA TWIN

Trade runs on trust. Let's make it verifiable.

Supply chain inefficiencies

1 4 billion paper documents daily

On average, a cross-border trade transaction requires 36 documents and 240 exchanged copies, with stakeholders including shippers, forwarders, customs agencies, banks, and insurers.

2 500% cost in trade transactions

Fragmented and analogue trade data and no single source of truth. Lack of digital trust inhibits digital automation and interoperability, slowing transaction processes.

3 $9 trillion in trade growth across G7

Paper-based processes prolong customs clearance, often leading to demurrage, lost or perishable goods, and missed economic opportunities.

4 Banks and traders lose $2.5 billion every year

... due to documentation fraud. In addition there is a $2.5T trade finance gap due to poor access and lack of digital trust.

TWIN SOLUTION

… a technology to digitalise trade

1. Supply Chain data

Documents & data exchange

Data sovereignty, integrity, structured data, granular permissioning, data standards (WCO, UNCEFACT, GS1), W3C compliant, “Reliable systems”, Digital Standards Initiative (ICC)

2. Identity

Organisation ID

DID-model, W3C compliant, profile, signatures, team permissions, verifiable credentials, aligned with national IDs and GLEIF

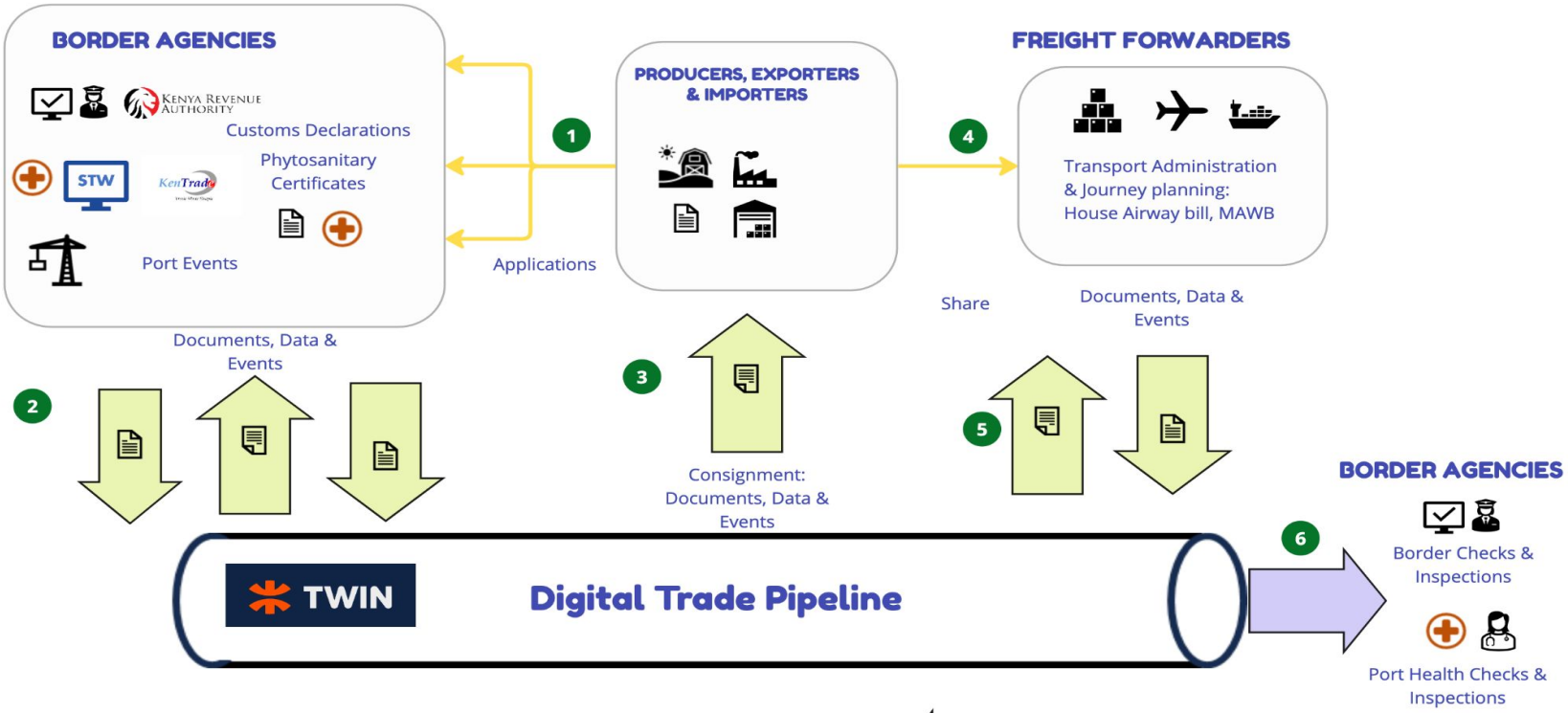
3. Value transfer

Payments & trade finance

MLETR-compliant documents, stablecoin, tokenized asset, receivables, invoices

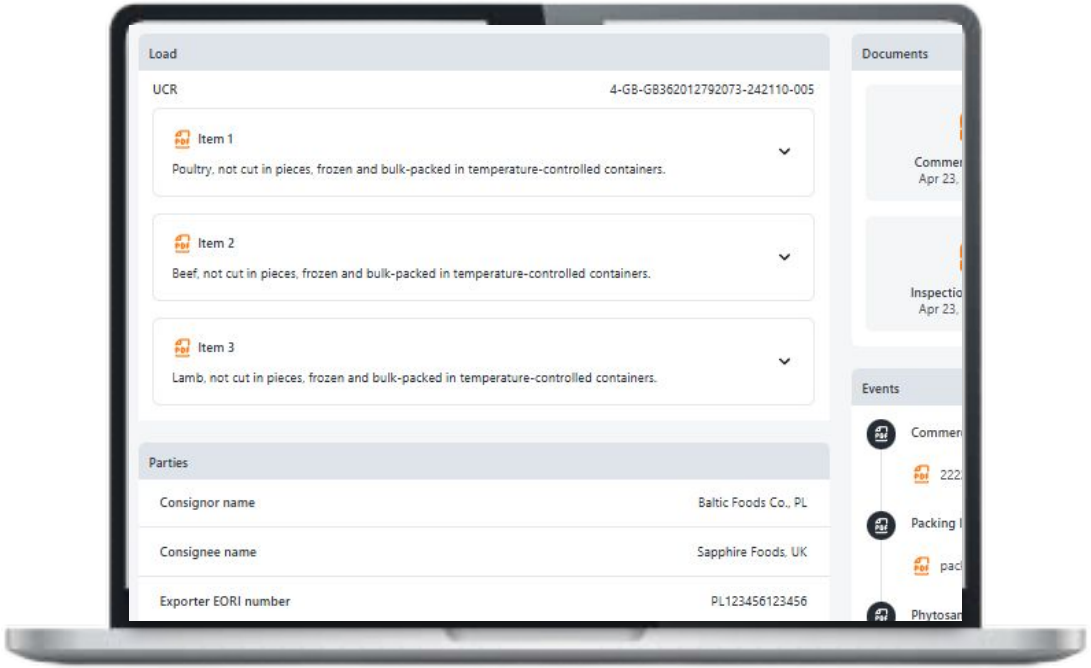
An overview of TWIN's role in Kenya

Example : Consignments of Coffee from Kenya to UK



Dashboard example

- **TWIN ID**
- **TWIN SUPPLY CHAIN VISIBILITY**
- **Own dashboards**



Implementations of TWIN

KENYA
Trade & Logistics Information Pipeline

Since 2020, TradeMark Africa and the IOTA Foundation have deployed TWIN technology in East Africa through TLIP, connecting Kenyan exporters, logistics firms, and government agencies. Integrated with the Kenya Revenue Authority, KenTrade, the Kenyan Single Window System, TLIP streamlines digital trade data exchange, ensuring secure and transparent access.

Powered by TWIN

Faster, Error-Free Trade

TWIN enables TLIP to accelerate cross-border goods movement and eliminate errors through touch-free document and data sharing.

Seamless Integration

Open, interoperable interfaces connect government agencies with private sector platforms for end-to-end trade digitalization.

Real-Time Access & Accuracy

Traders receive critical trade documents instantly, while authorities make informed decisions with consistent, reliable data.

Created in partnership with

Kenya Revenue Authority · KenTrade · KEPHIS · AFA · TradeMark Africa · IOTA

TWIN

UK Government × IOTA

Strengthening Collaboration on Digital Trade Transformation

TONY BLAIR INSTITUTE FOR GLOBAL CHANGE

In partnership with the World Economic Forum

IOTA

ADAPT Goals & Roadmap

+$70B
Extra Annual Trade
Doubling intra-African trade by 2035

3 DAYS
Border Clearance
Cut clearance times from 14 days to under 3

$23.6B
Annual Gains
Unlocking new value from faster, cheaper trade

>3%
Payment Fees
Cut cross-border fees from 6–9% to <3%

2025

2025–2026
Pilots in three countries, including Kenya and Ghana.

2026 onward
Expansion to additional member states, developing legal, technical, and governance frameworks.

2027–2035
Continental rollout across all 55 countries.

IOTA

A single public digital infrastructure for Africa.

TWIN Ecosystem

An expanding ecosystem powered by TWIN

Vietnam & Cambodia

SIgning a contract with TBI and Vietnam Ministry of Industry & Trade (MOIT) to pilot proof of origin in the garment industry (for US and EU export).
In workshops with Ministry of Trade in Cambodia for testing TWIN

Virtual Watch Tower

The Virtual Watch Tower is a community-driven network that connects individual monitoring hubs to enhance visibility across supply chains. It leverages TWIN's digital infrastructure to enable seamless data exchange, transparency, and collaboration in global trade.

MISSION & EU4Trade

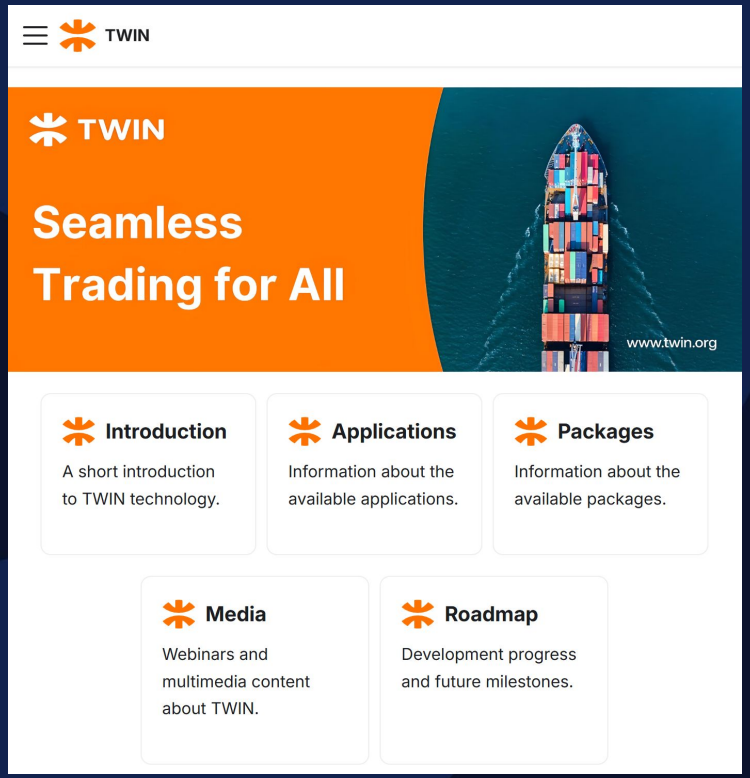
Member of 2 consortiums for EU Horizont Grants. MiSSION focusing on ports and aim to test TWIN in Port of Trieste with DFDS. EU4Trade has applied for testing a new digital infrastructure to provide advanced data to the eFTI model in the EU.

RESULD

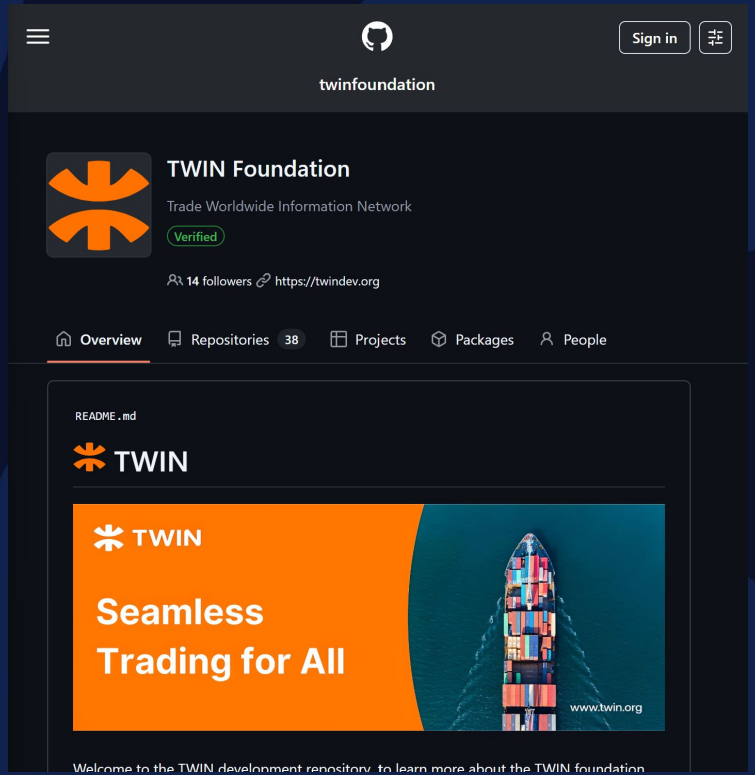
The Responsible Supply Chains and Logistics Due Diligence (RESULD) consortium digitizes plant-based products trade from Kenya to the Port of Rotterdam, using TWIN to enable collaboration across systems and establish an end-to-end data pipeline, ensuring traceability and trust.

Digital Public Infrastructure

TWIN - Open Source Resources



https://twindev.org/



https://github.com/twinfoundation

TWIN Foundation: The Board & partners

A not-for-profit foundation based in Geneva

TONY BLAIR INSTITUTE FOR GLOBAL CHANGE

Frank Matsaert

Board Member

As Senior Adviser & Global Lead for Trade and Infrastructure at the Tony Blair Institute for Global Change, Frank advises heads of state on trade and infrastructure globally. As TradeMark Africa's founding CEO, he was instrumental in delivering major trade projects

TRADE MARK AFRICA

Dave Beer

Board Member

Currently CEO of TradeMark Africa, Dave has 20+ years of senior international experience, previously advising UK executive directors at the World Bank and IMF on risk management, disaster financing, macroeconomics, and development programming.

IOTA FOUNDATION

Jens Lund-Nielsen

Board Member

Drawing on 25 years of experience in firms, consulting, and NGOs, Jens currently heads Global Trade & Supply Chains at IOTA Foundation. He co-founded the Global Alliance for Trade Facilitation and advises the EU and UK on trade, logistics, and blockchain.

CHARTERED INSTITUTE OF EXPORT & INTERNATIONAL TRADE

Marco Forgione

Board Member

Marco serves as Director General of The Chartered Institute of Export & International Trade, chairs the UK's E-Commerce Trade Commission, and advises the B20 Taskforce. He is a visiting professor at Aston University and a recognized media commentator.

WORLD ECONOMIC FORUM

Tim Stekkinger

Board Member

Tim leads the TradeTech Initiative, a partnership between the World Economic Forum and the UAE Government, promoting sustainable, efficient trade through technology. He has held leadership roles at DSV, Panalpina, and VineView.

GLOBAL ALLIANCE FOR TRADE FACILITATION

Philippe Isler

Observer

With over 25 years of experience, Philippe, Executive Director at the Global Alliance for Trade Facilitation, has led impactful trade facilitation initiatives, specializing in supply chain digitalization and public-private partnerships in developing countries.

Thank you!

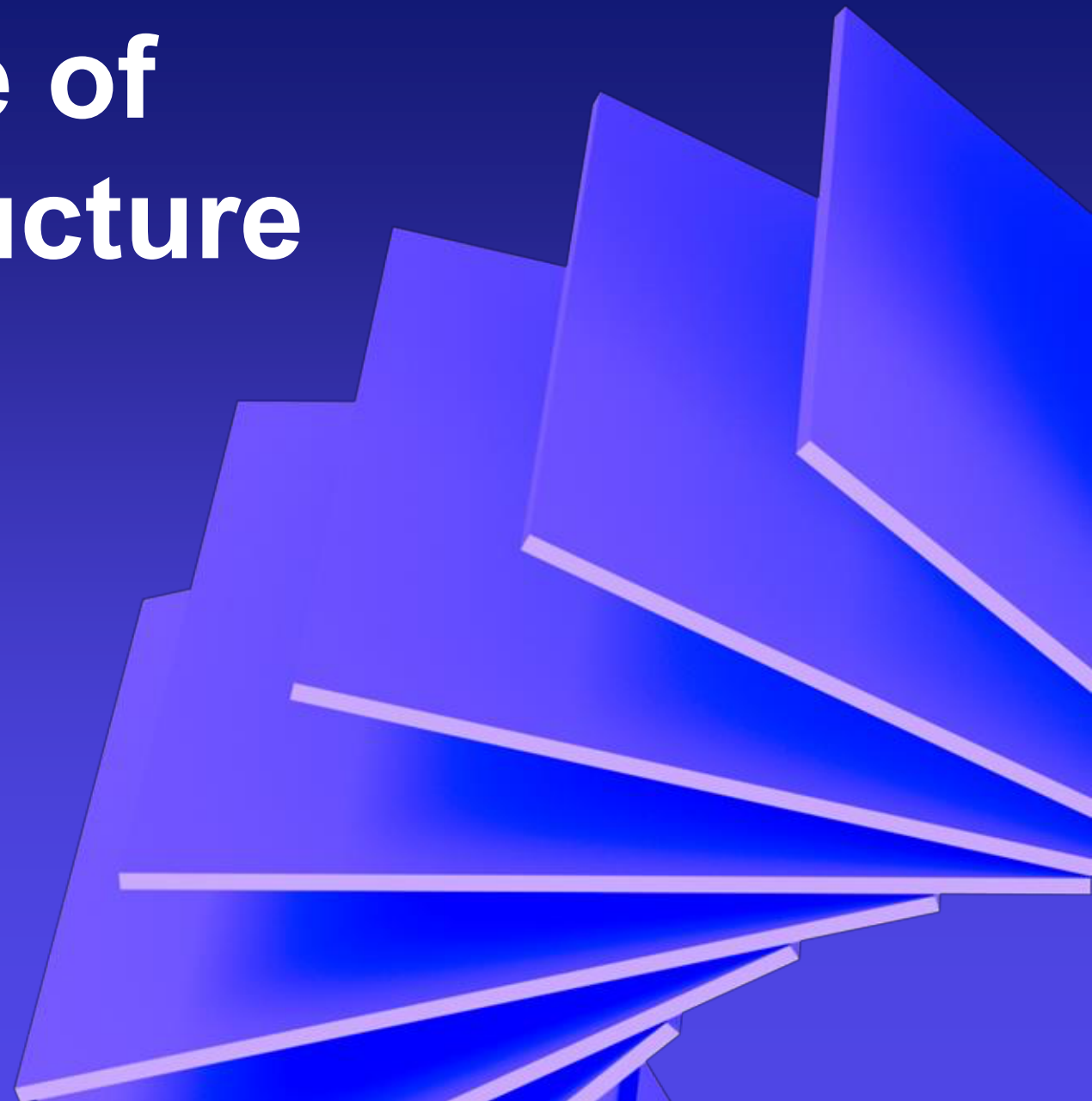
Hedera™

The Hybrid Future of Financial Infrastructure and Supply Chain

How the Hedera Network is working with global standards organizations and corporate governance in the real world

Kurt Bierbower- Chief Revenue Officer
Paul Rapino- SVP Hedera Council Partnerships

March 2026



Hedera: The trust layer of the Digital Economy built on a Public Network

- **The Hedera Council:** Up to 39 Forbes Global 2000 companies govern the Global DLT Network.
- **Fixed Low Costs**: Transaction fees are pegged to the USD ($0.0001), ensuring predictable costs regardless of HBAR price volatility.
- **High Performance**: Capable of processing **10,000+ transactions per second** with finality in seconds—essential for high-volume IoT sensor data.
- **Security & Fair Ordering**: Uses Asynchronous Byzantine Fault Tolerance (aBFT) to ensure transactions are logged fairly and cannot be reordered by malicious actors.
- **Enterprise Integration**: Designed for interoperability with existing ERP systems (SAP, Microsoft Dynamics) to act as a "sidecar" for verifiable data.

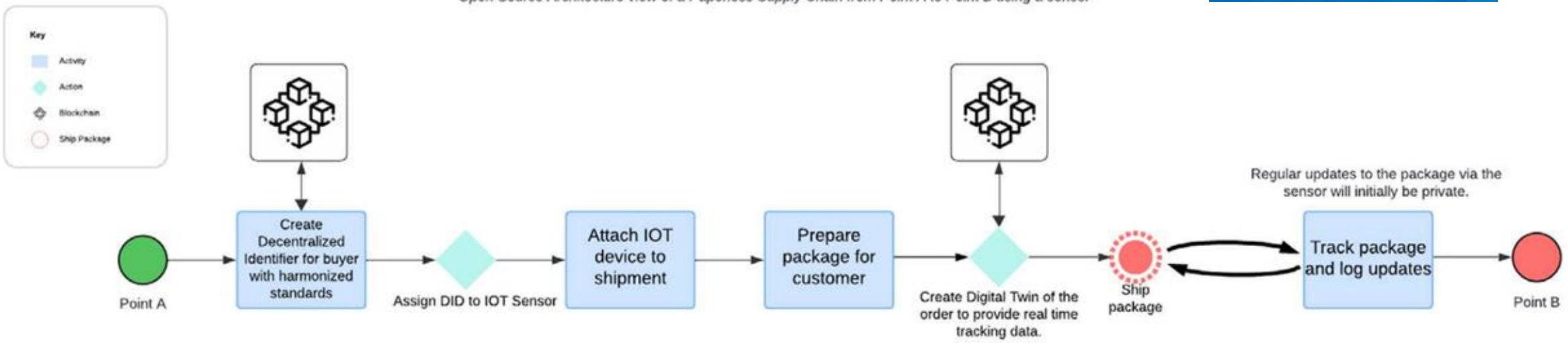
Hedera Council

aberdeen · Arrow · Australian Payments Plus · Avery Dennison · BitGo · Blockchain for Energy · Chainlink Labs · COFRA · Dell Technologies · Dentons · Deutsche Telekom · DLA Piper · EDF · Google · Hitachi · IBM · IIT Madras · LG · LSE · Magalu · Mondelēz International · NSE Nairobi Securities Exchange · Nomura · repsol · servicenow · Shinhan Bank · Standard Bank · Swirlds · Tata Communications · Ubisoft · wipro · zain · FedEx

Global Framework: Private/Public Networks

Harmonized, Interoperable, and Open Standards

Open Source Architecture view of a Paperless Supply Chain from Point A to Point B using a sensor



Distributed by permission of Hedera, LLC and The HBAR Foundation 2024

Source- https://www.gbbc.io/uploads/reports/gsmi50/Supply-Chain-Stand-Alone.pdf

Major Industry Use Cases run on Hedera-

- **AI and Blockchain Solutions**: **Hyundai Motor Company and Kia Corporation** have introduced an AI-enabled, blockchain-based Supplier CO2 Emission Monitoring System (SCEMS) to manage the carbon emissions of business partners, utilizing the energy efficient, highly scalable Hedera network.
- **Agriculture & Food**: **Fresh Supply Co (FSCO)** migrated from only a private Mastercard blockchain to the public Hedera network to enhance supply chain traceability and payments. By integrating Hedera Token Service and Consensus Service into its Continuity API, FSCO enables verified, real-time data sharing and connects to banking systems.
- **Energy Sector**: **Repsol**, a global energy company, has joined Hedera Council to accelerate the adoption of Web3 technologies in the energy sector, with a strong focus on Decentralized Digital Identity (DID) as a foundational element for trust, security, and efficiency in business interactions.

Key Takeaway-Global Standards and Governance are key to scale as we embrace the impact AI and Agentic Commerce will have on Supply Chains.

https://hedera.com/case-study/hyundai-kia/
FSCO Migrates from Private Mastercard Blockchain to Public Hedera Network - Cryptopolitan
Hedera Council Welcomes Global Energy Giant Repsol to Advance Web3 Adoption and Digital Identity Standards

Fortune 500 | AI

Accenture Building AI and Digital Trust for Enterprise Go to Market-

Accenture partnered with Hedera to create playbooks for the **business logic of AI at scale and implementation strategies** that make full use of the Hedera network's capabilities in the **public sector**, including Hedera Consensus Service, Hedera Token Service and Hashsphere (Hashgraph Private Network).

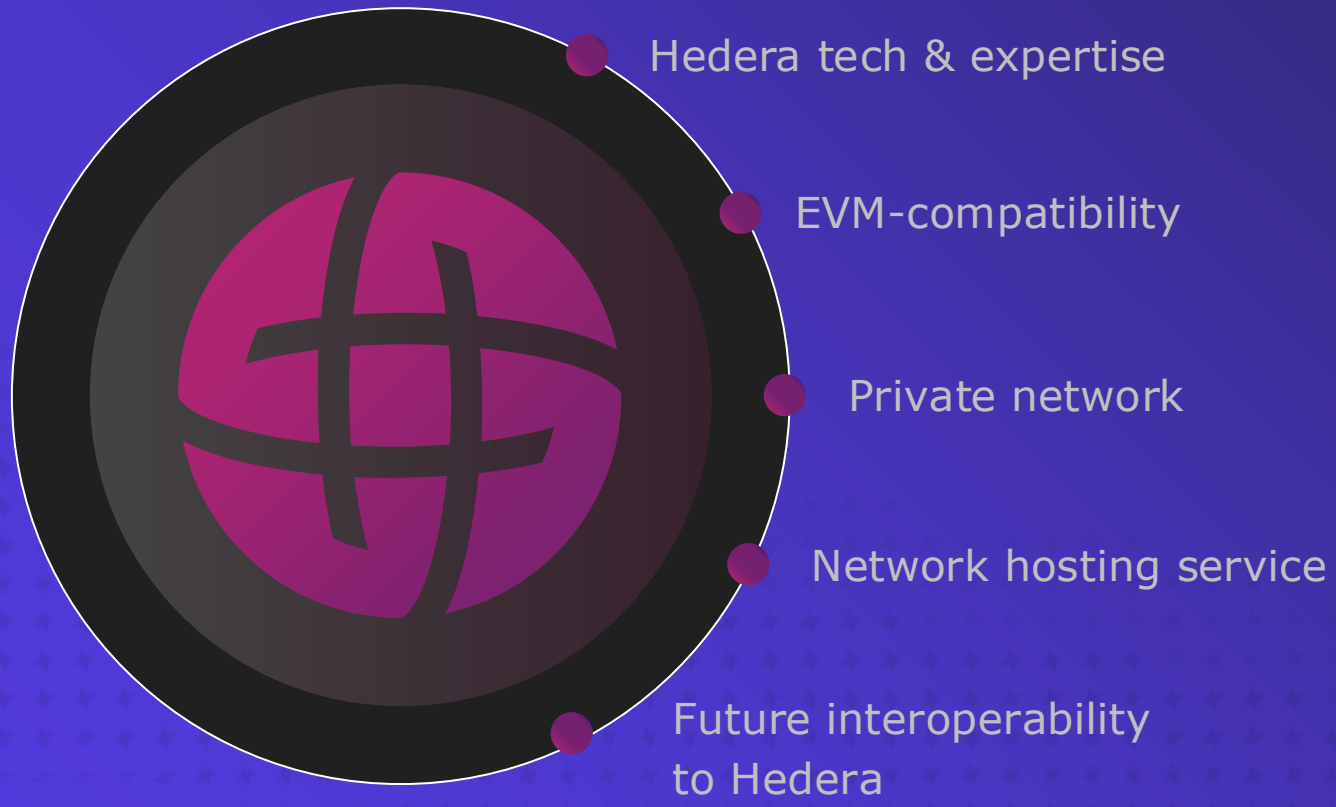
Together, these technologies provide an immutable record of **AI decisions and actions, helping to enable data integrity across autonomous systems in a supply chain.**

> The integration of these technologies positions the Hedera network as a crucial platform for AI. It will enable public service organizations to scale AI responsibly, leverage cryptographic solutions to reduce costs and bolster the security of deploying agentic solutions at an enterprise level.
>
> BRYAN RICH
> SENIOR MANAGING DIRECTOR AND GLOBAL AI LEAD FOR HEALTH< PUBLIC SECTOR AND DEFENSE, ACCENTURE

Key Takeaways- Agentic Commerce Enterprise Readiness is now part of the playbook. Finance and technology always find ways to meet.

Building a Public and Private network that scales

Introduced Hashphere in 2025



HashSphere

Uniquely designed to balance future interoperability with the privacy, security, and control needed to operate in today’s regulated markets.

Hedera™

Thank you

Hello future

Kurt Bierbower- Chief Revenue Officer
Kurt@Hashgraph.com

Paul Rapino- SVP Hedera Council Partnerships
Paul_Rapino@Hashgraph.com

PROVENANCE CHAIN™ NETWORK

The Trusted Microelectronics Clearinghouse

GBBC Use-Case: Reliability & Authenticity Passports for Critical Semiconductors

The PCN DLT/Blockchain Use-Case

Why	What	How
FRAGMENTED TRUST	**VERIFIABLE CREDENTIALS**	**PROTOCOL APPROACH**
TRUST in microelectronics is a GATE to market access, not just a quality metric	High-value device/lot given a Reliability & Authenticity Passport – a digital certificate	DLT + AI + Decentralized storage
Evidence of “who did what, when, where” is fragmented across many companies and systems	Cryptographic proofs replace raw data sharing	Companies keep detailed data (metrology, test, telemetry) in tools they already have
Costs skyrocket because no one can quickly verify what’s true	Reliability and security shift from hidden costs to verifiable assets	AI helps compare evidence against shared compliance checklists
		DLT used for what it’s best suited for – immutable transactions for AUDIT

The Commercial Trust™ Flywheel

The Define — Evaluate — Illuminate — Update cycle

Define REQUIREMENTS

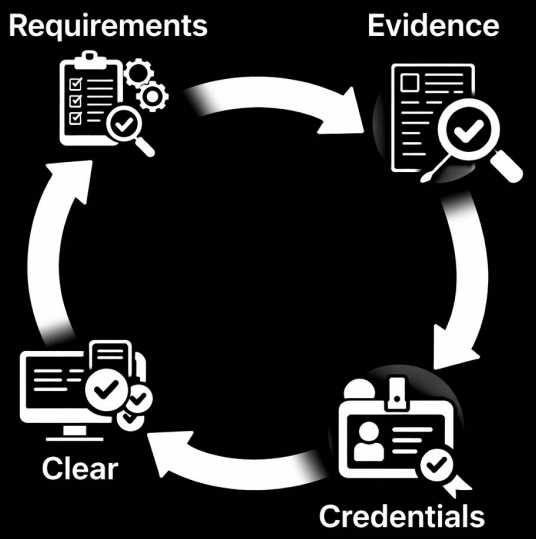
- Tokenizes rules
- Creates and versions requirements and compliance checklists
- Extends invitations from members to suppliers and sub-suppliers for collaboration

Maintains consistency across many participants and programs

Evaluate EVIDENCE

- Evaluates metrology, test data, process logs, telemetry, sourcing records, etc.
- Uses AI to compare evidence to checklists
- Flags gaps, inconsistencies, anomalies
- Becomes “digital fingerprint”

No centralized data storage — cryptographic references only as handshakes of the fingerprint



Update & CLEAR

- Executes payments, price premiums, access rights, and penalties automatically based on requirements
- Iterates process, steadily improving rules and models

Expands to new revenue streams and industry verticals

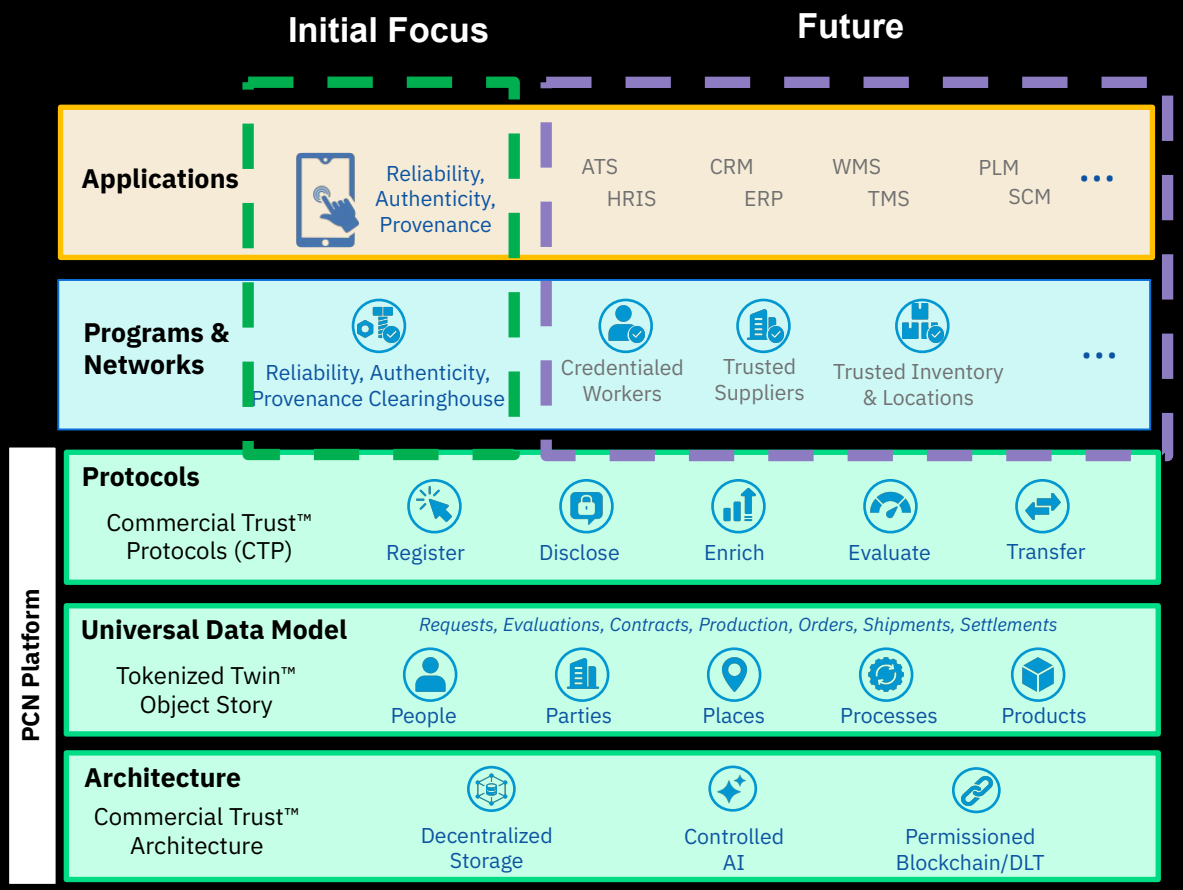
Illuminate CREDENTIALS

- Provides results and events immutably recorded on-ledger
- Issues “Verifiable Credential”
- Gives network members, oversight, officials, and authorities can see evaluation results
- Prevents raw data being exposed

Oversight bodies gain birds-eye view of real-time responses of trusted suppliers

Trusted Chips Clearinghouse: Framework for Trade

Technical

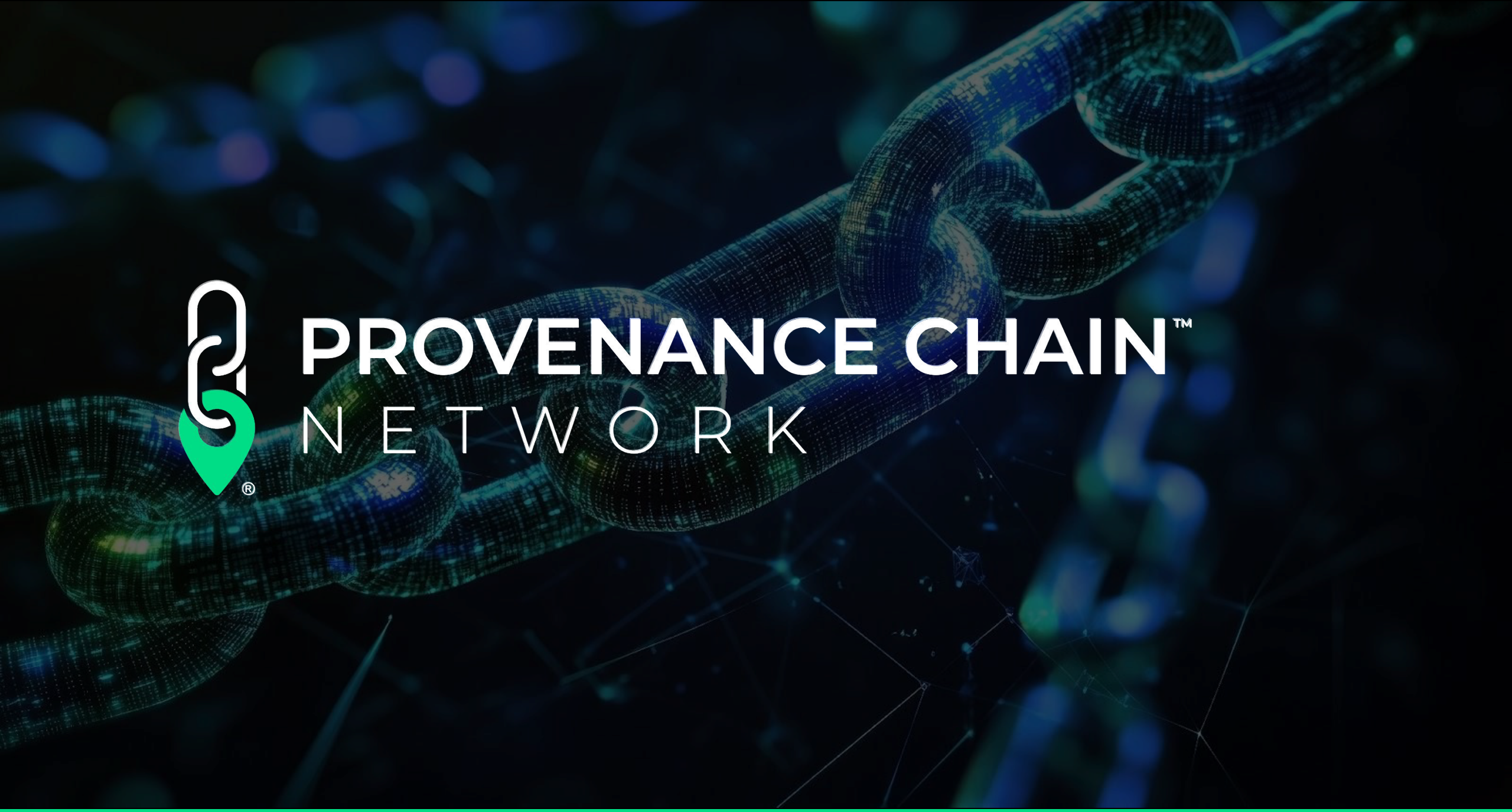


Governance

- Tokenized membership
- Non-Transferable
- Active Participation
- Patronage-based returns

Business

- Verifiable Credentials for healthcare workers
- Validation of critical infrastructure and military componentry
- Reliable and traceable semiconductors and microelectronics



GBBC
Global Blockchain Business Council

STANDALONE REPORT

GLOBAL STANDARDS MAPPING INITIATIVE 5.0
DECEMBER 2024

THE FUTURE OF GLOBAL SUPPLY CHAINS

GBBC GSMI 5.0

THE GLOBAL SUPPLY CHAIN OF 2035 AND BEYOND

To create a speculative outlook on what future supply chains might look like using current trajectories we need to consider multiple factors, including, history, network effects, current and emerging technologies, and economic, environmental, and social trends. This is a 'breakthrough thinking' exercise, which gets us to a point on the horizon (let's call it our 'True North'), rather than the outcome 'process improvement' would provide, based only on previous and current small iterative steps.

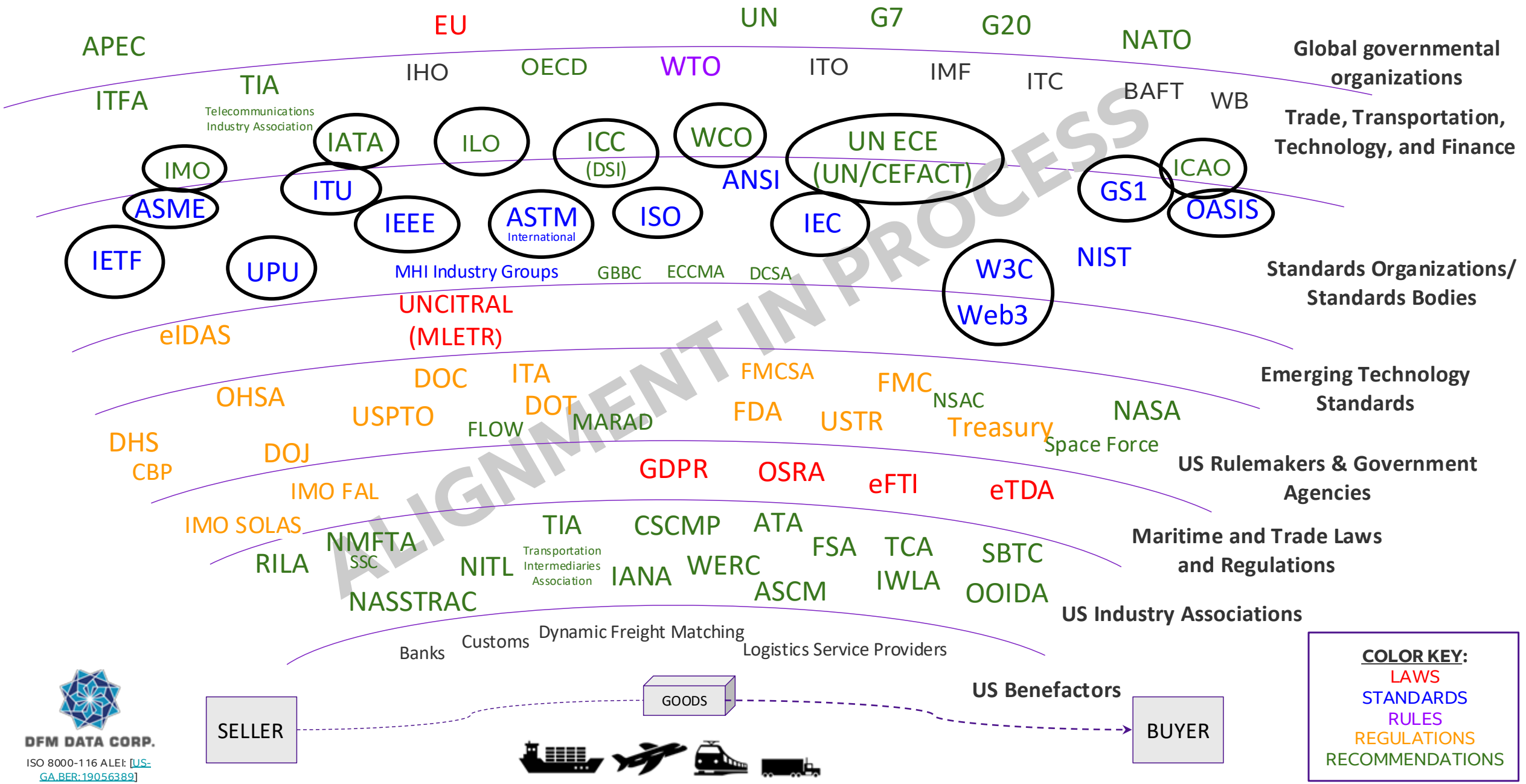
We start with the ISS view which, by then, includes harmonized, interoperable, open, and digital standards, and interoperable digital ecosystems will result in trusted data flowing freely across borders and industries. When, in combination with sensors (as applicable), we know where everything is, we won't need as much, which will impact inventories. And, in combination with 3D printing/additive manufacturing and predictive analytics around procurement, not only will we more efficiently fulfill orders, but those products will also be closer than ever to the receiver, reducing shipping times, in addition to the global efficiencies previously discussed for international movement.

Smart contracts, potentially with the use of AI agents, will securely automate transactions and ensure compliance with global standards instantly. In an underlying financial supply chain comprised of all transactions involved, payments can also be made more seamlessly, and both businesses and customers can benefit from advances in financial supply chain, based on the impact of automated payment flows instructed by smart contracts and related to supply-chain events.

Supply chains will be fully decentralized, powered by blockchain or similar technologies that ensure transparency, traceability, and trust without centralized intermediaries. Every transaction, from production to delivery, will be securely recorded, enabling real-time verification of every step in the supply chain. AI will drive decision-making across the supply chain, optimizing everything from procurement to logistics in real-time, and advancements in robotics and autonomous vehicles can further maximize efficiencies. Unlike what we experienced during the Covid pandemic; predictive analytics will anticipate disruptions before they occur.

Every participant and product in the supply chain will have a unique identity, which will ensure authenticity, reduce counterfeiting, and enhance consumer trust. Supply chains will also be designed to minimize environmental impact, with many operations achieving carbon-neutral (or even carbon-negative) status. We are already starting to see Digital Product Passports (DPP) that will track an item from cradle to grave and create a circular economy. Renewable energy, sustainable materials, and zero-waste processes will be standard. Also, the ethical treatment of workers and the responsible sourcing of materials will be non-negotiable. All of this will lead to consumers, empowered by

The Naturally Occurring Global Ecosystem That Needs a Hyperconnected Universal Framework of Things



DFM DATA CORP.

ISO 8000-116 ALEI: [US-GA.BER:19056389]

GBBC
Global Blockchain Business Council

STANDALONE REPORT

GLOBAL STANDARDS MAPPING INITIATIVE 5.0
DECEMBER 2024

THE FUTURE OF GLOBAL SUPPLY CHAINS

GBBC GSMI 5.0

THE GLOBAL SUPPLY CHAIN OF 2035 AND BEYOND

To create a speculative outlook on what future supply chains might look like using current trajectories we need to consider multiple factors, including, history, network effects, current and emerging technologies, and economic, environmental, and social trends. This is a 'breakthrough thinking' ex

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.

from cradle to grave and create a circular economy. Renewable energy, sustainable materials, and zero-waste processes will be standard. Also, the ethical treatment of workers and the responsible sourcing of materials will be non-negotiable. All of this will lead to consumers, empowered by

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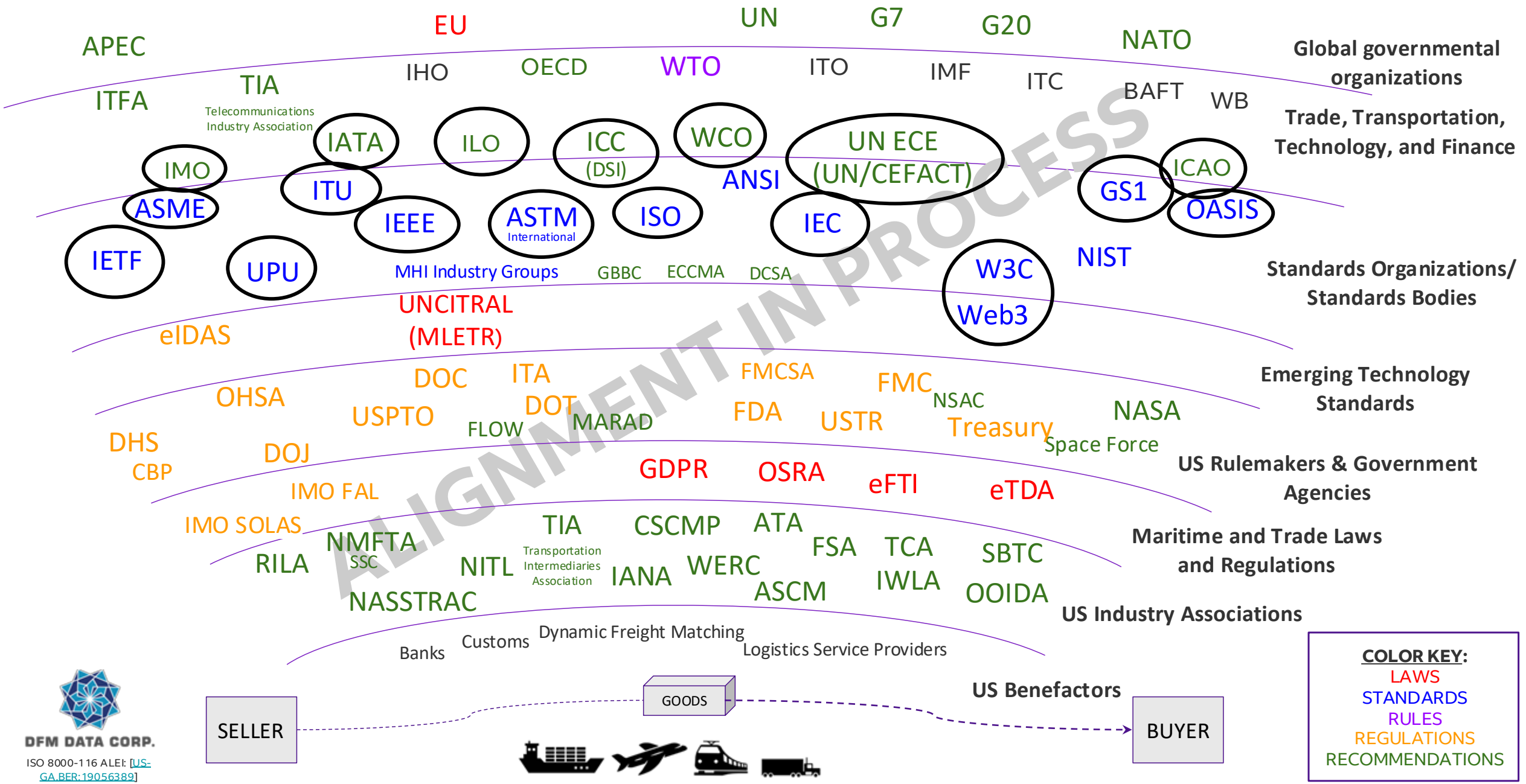

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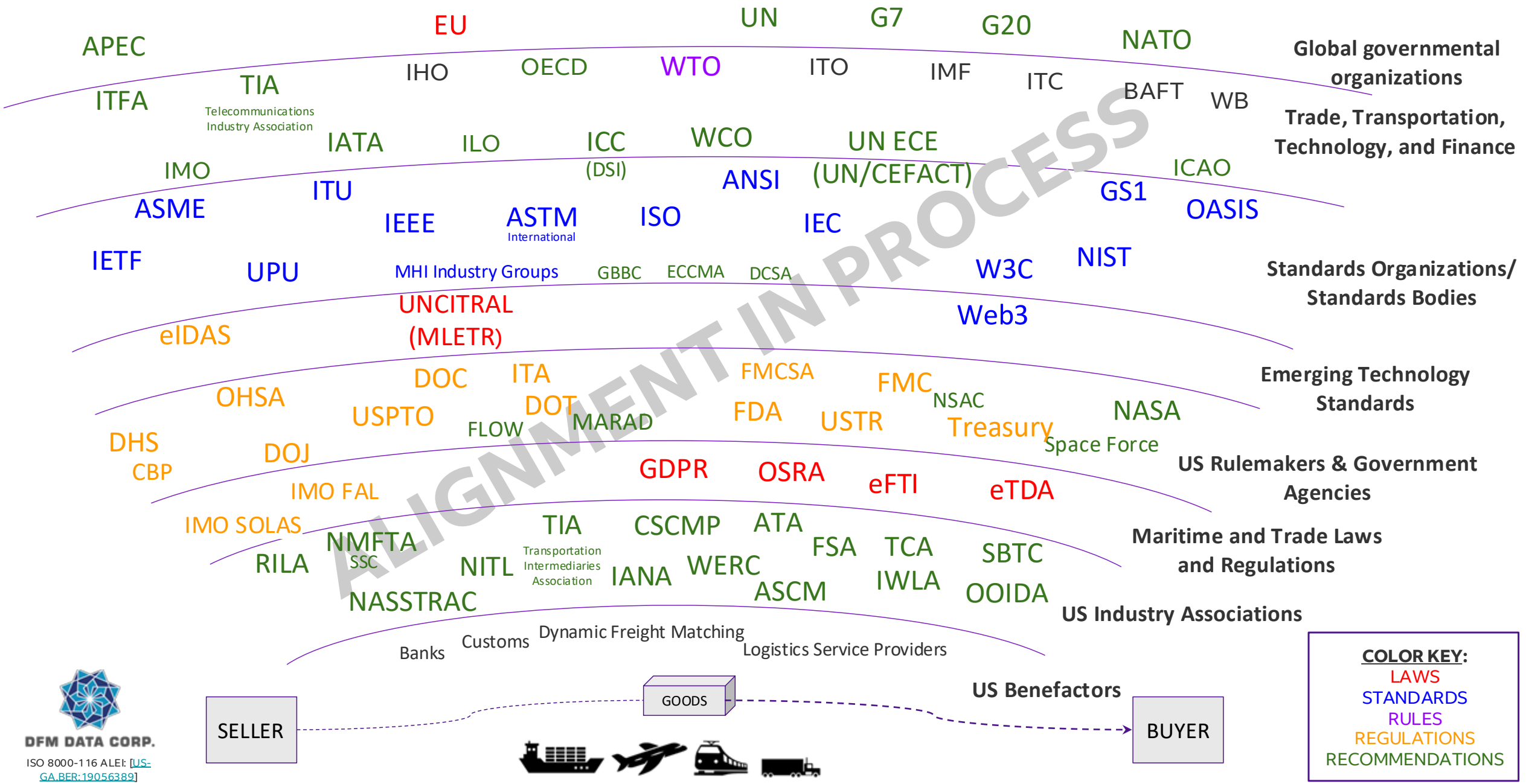


DFM DATA CORP.

ISO 8000-116 ALEI: [US-GA.BER:19056389]

COLOR KEY:
LAWS
STANDARDS
RULES
REGULATIONS
RECOMMENDATIONS

Goods Movement Process Standards

WORLD TRADE ORGANIZATION

Committee on Technical Barriers to Trade (TBT)

Principles for the Development of International Standards, Guides and Recommendations

1. Transparency
2. Openness
3. Impartiality and Consensus
4. Effectiveness and Relevance
5. Coherence
6. Development Dimension

ISO

- ISO **8000-119**:2026 Data quality — Application of ISO 8000-115 to transport unit identifiers
- ISO **8000-2**:2022 Data quality — Vocabulary
- ISO **8601-1**:2019 Date and time — Representations for information interchange — Basic rules
- ISO **8000-115**:2024 Data quality — Master data: Exchange of quality identifiers: Syntactic, semantic and resolution requirements
- ISO **8000-116**:2019 Data quality — Master data: Exchange of quality identifiers: Application of ISO 8000-115 to authoritative legal entity identifiers
- ISO **8000-118**:2025 Data quality — Application of ISO 8000-115 to natural location identifiers

GBBC Global Blockchain Business Council

ASTM INTERNATIONAL

ASTM **F3682**-25 Terminology for the Goods Movement Process (GMP)

ASTM **F3776**-25 Terminology relating to Supply Chain Stakeholders

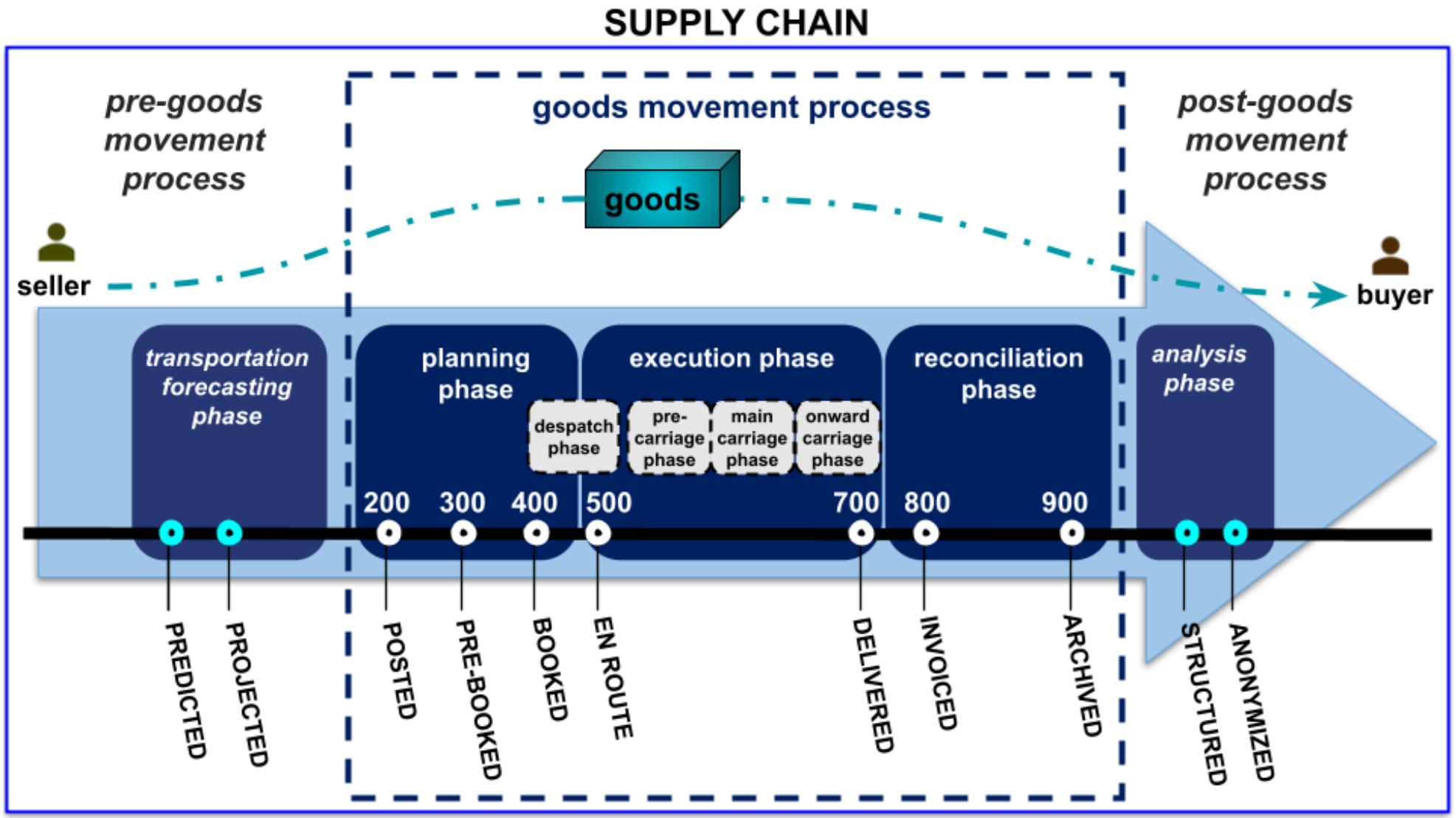
ASTM **F3787**-26 Terminology relating to Supply Chain Locations

ASTM **F3803**-26 Guide for Applying Goods Movement Process Codes in Common Approaches to Transport Management

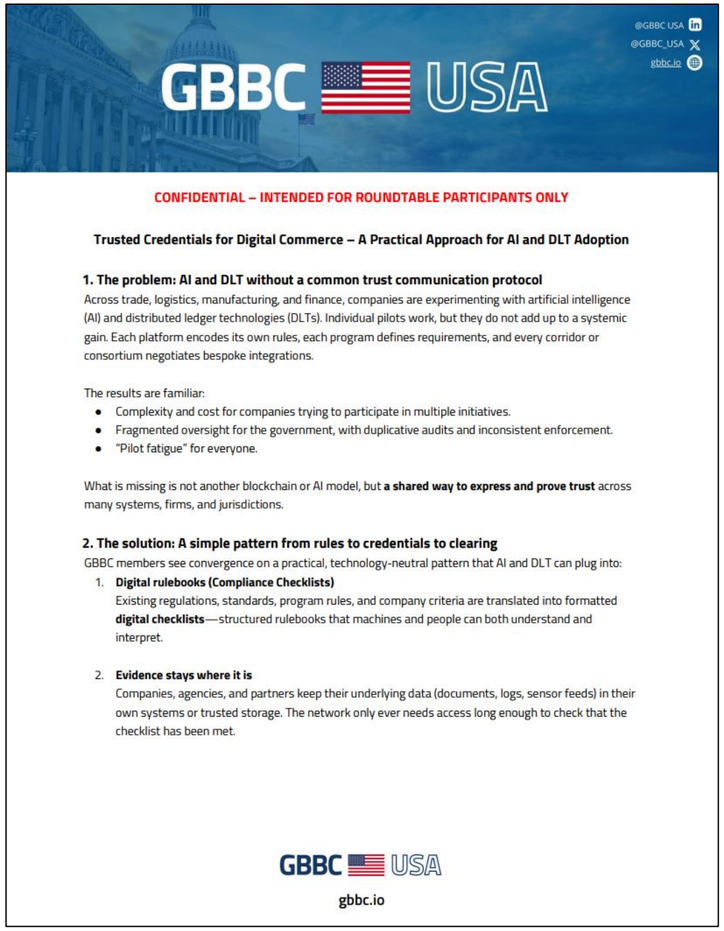
ASTM **F3804**-26 Practice for applying Goods Movement Process Codes as suffix to a Globally Unique Transport Unit Identifier

ASTM **D8558**-25 Standard Guide for Supply Chain Traceability, Authentication, Verification, Validation, and Oversight Using Emerging Technologies Including Blockchain

ASTM F3682 FIG. X2.2 The Supply Chain, Goods Movement Process, and Goods Movement Process Codes



Compliance Checklist



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Trusted Credentials for Digital Commerce – A Practical Approach for AI and DLT Adoption

1. The problem: AI and DLT without a common trust communication protocol

Across trade, logistics, manufacturing, and finance, companies are experimenting with artificial intelligence (AI) and distributed ledger technologies (DLTs). Individual pilots work, but they do not add up to a systemic gain. Each platform encodes its own rules, each program defines requirements, and every corridor or consortium negotiates bespoke integrations.

The results are familiar:

- Complexity and cost for companies trying to participate in multiple initiatives.
- Fragmented oversight for the government, with duplicative audits and inconsistent enforcement.
- "Pilot fatigue" for everyone.

What is missing is not another blockchain or AI model, but **a shared way to express and prove trust** across many systems, firms, and jurisdictions.

2. The solution: A simple pattern from rules to credentials to clearing

GBBC members see convergence on a practical, technology-neutral pattern that AI and DLT can plug into:

1. **Digital rulebooks (Compliance Checklists)**
   Existing regulations, standards, program rules, and company criteria are translated into formatted **digital checklists**—structured rulebooks that machines and people can both understand and interpret.

2. **Evidence stays where it is**
   Companies, agencies, and partners keep their underlying data (documents, logs, sensor feeds) in their own systems or trusted storage. The network only ever needs access long enough to check that the checklist has been met.

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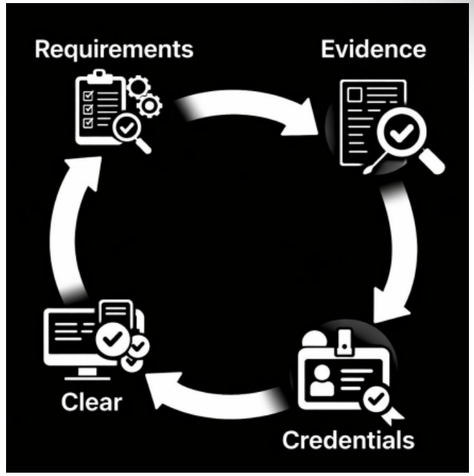

Access the Compliance Checklist Brief here.

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Thank you!

Contact jackson@gbbc.io for more information on GBBC and our supply chain efforts.

GBBC USA

ARCHIVE

Standards Development

Stages of Standard Development

- identification of a new need
- feasibility assessments
- outline / draft preparation

- proposal / drafting
- commenting and balloting
- review / approval
- publication
- maintenance

- outreach and education
- industry use and adoption of the standard

Standards Development Organizations

World Trade Organization Technical Barriers to Trade (TBT) Committee
Principles for the Development of International Standards, Guides and Recommendations:
Transparency, openness, impartiality and consensus, effectiveness and relevance, coherence, and development dimension

International Organization for Standardization

- Founded in **1947**
- **26225** International Standards and other deliverables
- **176** Members representing ISO in their country. *There is only one member per country.*
- **835** Technical committees and subcommittees

ISO/TC 184/SC 4 *Industrial data*
ISO/TC 184/SC 5 *Interoperability, integration, and architectures for enterprise systems and automation applications*

ASTM INTERNATIONAL
Helping our world work better for 125 years

ASTM International

- Established in **1898**
- **13,000+** Global ASTM Standards supporting quality, safety and performance
- **110+** Partner Countries, with **30,000+** Volunteer Technical Expert Members
- **147** Technical Committees and **2100+** Subcommittees

ASTM Committee F49 *Digital Information in the Supply Chain*

DFM DATA CORP.

Standards Development Process

- *Fast track: two years*

- *Fast track: six months*

Transport Unit Identifier and Goods Movement Process Codes

ISO.TUID:20260214T1620Z92S4FV5809NJH192QRFE581HZMH0CompanyX.PO:123456:200

ISO 8000-119										ASTM F3682
ISO.TUID	:	**20260214T1620Z**	**92S4FV5809NJH1**	**92QRFE581HZMH0**	**CompanyX.PO**	:	**123456**	:	**200**
ISO 8000-115-compliant prefix	SEPARATOR	ISO 8601-formatted **date and time** in Coordinated Universal Time (UTC)	ISO 8000-118 Natural Location Identifier (NLI) generated from a geographic point location representation of longitude, latitude, and floor number		ISO 8000-115 formatted purchase order			SEPARATOR	**Goods Movement Process Code**
			for **origin**	for **destination**	[prefix] transport unit originator **entity ID** . domain designation	SEPARATOR	Purchase Order **reference number**		
8 chars	1	14 characters	14 characters	14 characters	variable number of characters			1	3 chars

ASTM F3682: Goods Movement Process Codes (GMPC)

STATUS	GMPC
POSTED	200
PRE-BOOKED	300
BOOKED	400
EN ROUTE	500
DELIVERED	700
INVOICED	800
ARCHIVED	900

ASTM F3803 FIG. 2 Nesting Transport Unit IDs

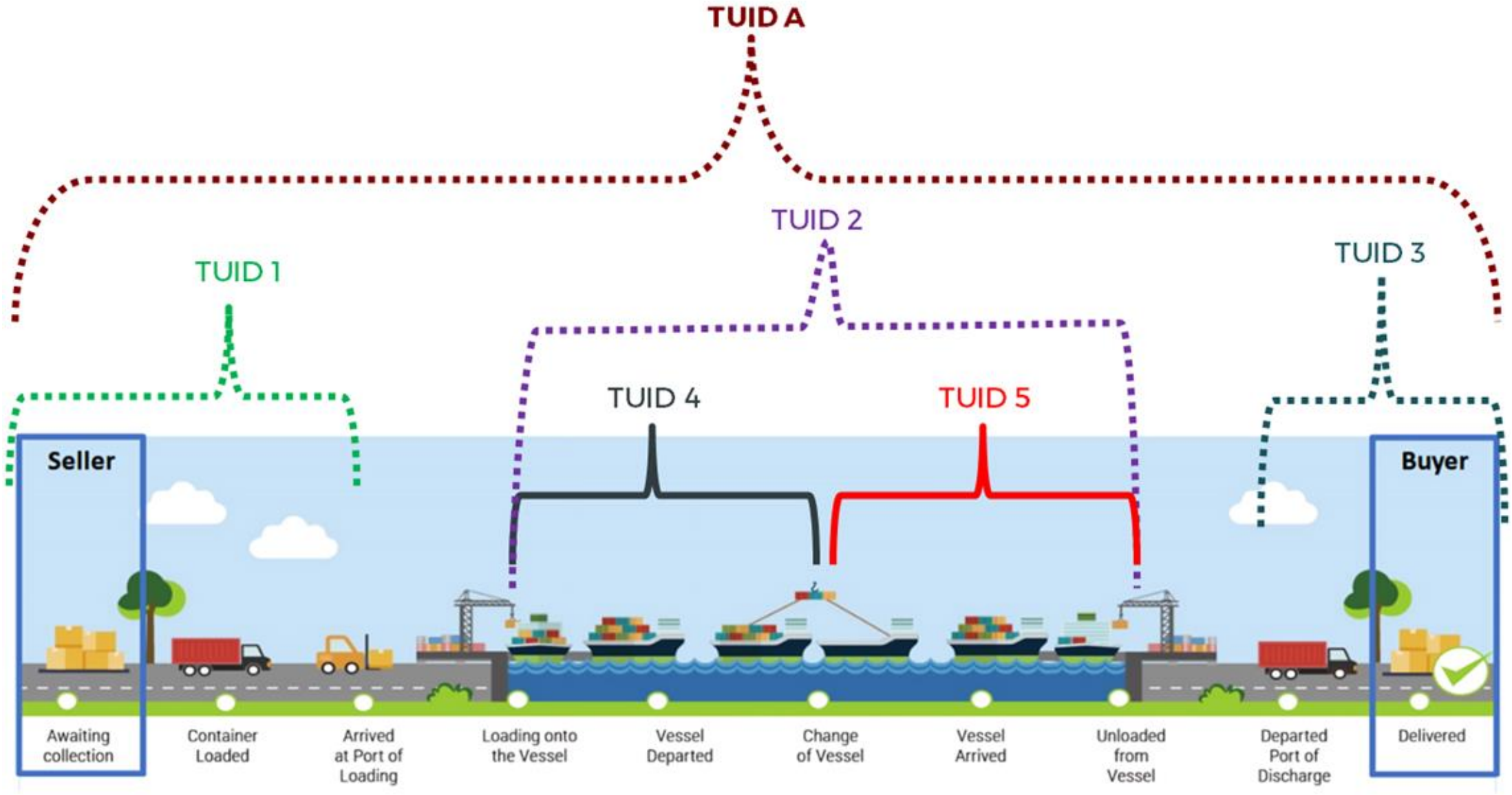


Image from the article *"Buyers and Sellers may finally know where their goods are!"* by Hanane Becha, Todd Frazier, Mikael Lind, Jaco Voorspuij

ASTM F49 Technical Report

TR5-EB

Resolving Data Language Barriers across Maritime Standards Vocabularies

This ASTM Technical Report provides critical insights to standardizing maritime and supply chain terminology for seamless global trade.

In April 2023, the Federal Maritime Commission (FMC) released the Recommendations on the Maritime Transportation Data System Requirements, investigating disruptions in cargo movement through U.S. ports. A key outcome of this initiative was the MTDI Lexicon, a collection of 200 essential terms aimed at improving regulatory clarity and communication among stakeholders in maritime logistics.

Recognizing the need for further refinement, ASTM Committee F49 on Digital Information in the Supply Chain conducted a comprehensive review, aligning the MTDI Lexicon with industry-leading terminology standards. By analyzing over 40 established glossaries from major supply chain and logistics organizations, this report resolves language barriers and enhances interoperability across industries.

This Phase 1 report (ASTM Work Item WK87215) provides critical insights for shippers, carriers, regulators, and supply chain professionals, ensuring a unified language that drives efficiency in global trade.

In progress

TR6

Proposed

TR7

ISO/TS 17187:2019

Intelligent transport systems — Electronic information exchange to facilitate the movement of freight and its intermodal transfer — Governance rules to sustain electronic information exchange methods

Abstract

This document provides governance rules to be used for executing an organized process for business entities to connect to one another electronically for the conduct of electronic trade in a secure and open environment through a standardized framework for information exchange. This standardized framework includes processes and process tools to ease connections between trading partners, to provide full visibility, and to reduce the time goods spend in transit. The application of these rules and attendant standards and technology applications are expected to allow business entities to engage their legacy systems without the cost of upgrades.

General information

Status : Published
Publication date : 2019-12
Stage : International Standard confirmed [90.93]

Edition : 2
Number of pages : 29

Technical Committee : ISO/TC 204
ICS : 03.220.01 35.240.60

RSS updates

← Technical Committees

ISO/TC 204

Intelligent transport systems

About

Secretariat: ANSI (United States)
Committee Manager: Mr Justin Sikorski

Chairperson: Mr Koorosh Olyai

ISO Technical Programme Manager [TPM]: Mr Hakim Mkinsi
ISO Editorial Manager [EM]: Ms Alison Reid-Jamond

Creation date: 1992

Scope

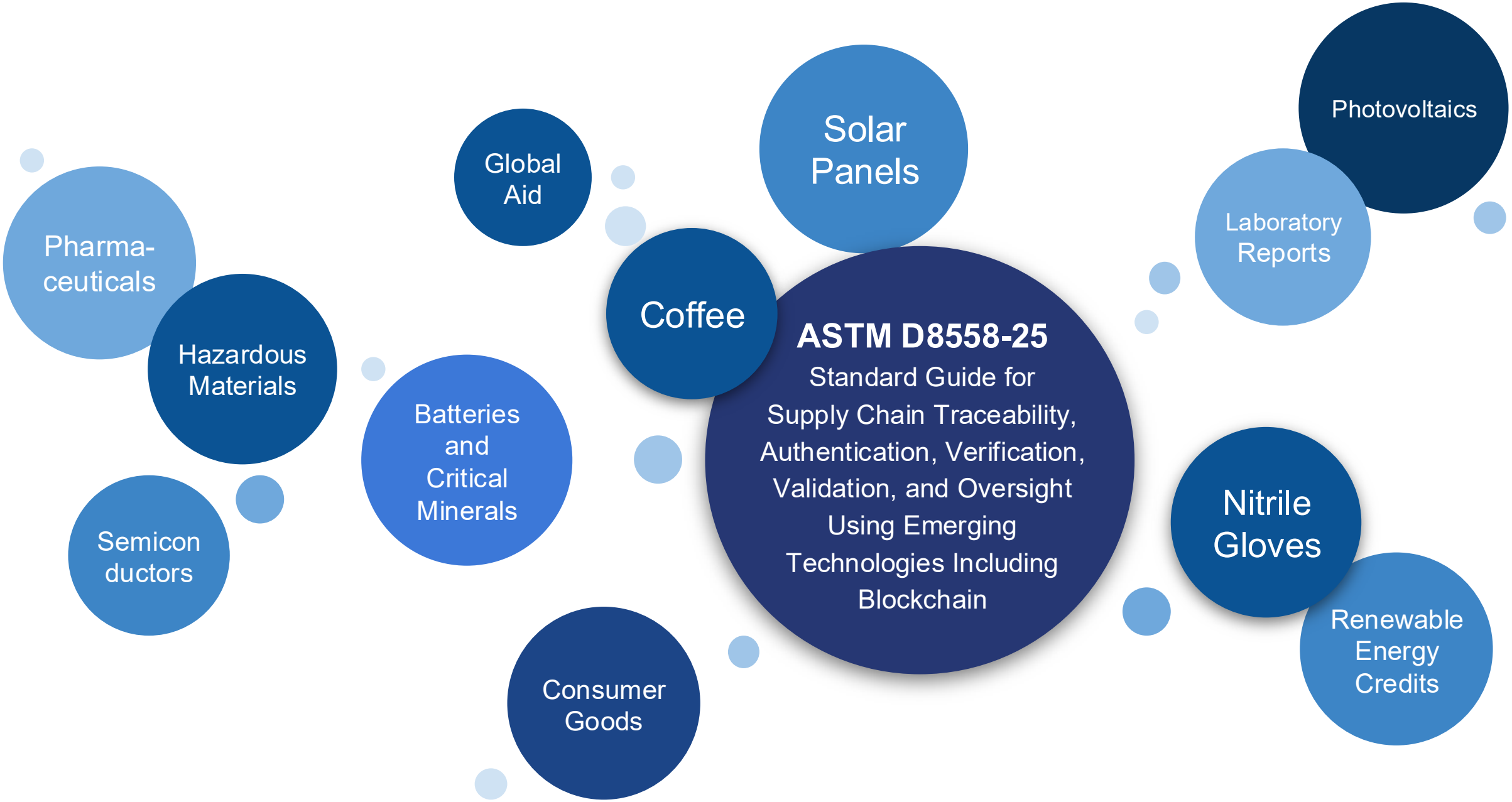
Standardization of information, communication and control systems in the field of urban and rural surface transportation, including intermodal and multimodal aspects thereof, traveller information, traffic management, public transport, commercial transport, emergency services and commercial services in the intelligent transport systems (ITS) field.

Excluded:

- in-vehicle transport information and control systems (ISO / TC 22).

Note:

ISO / TC 204 is responsible for the overall system aspects and infrastructure aspects of intelligent transport systems (ITS), as well as the coordination of the overall ISO work programme in this field including the schedule for standards development, taking into account the work of existing international standardization bodies.

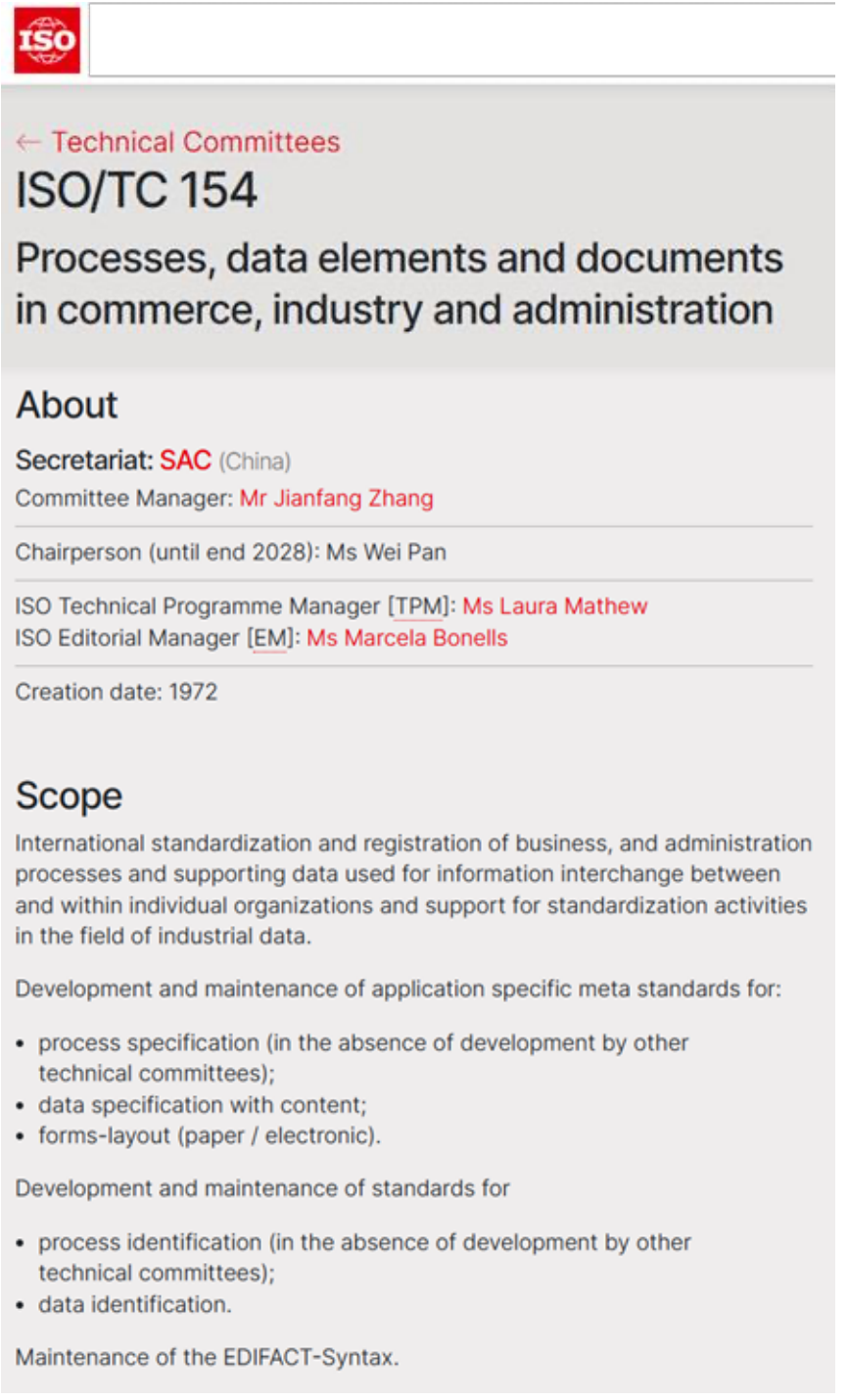

Photovoltaics
Solar Panels
Global Aid
Laboratory Reports
Pharma-ceuticals
Coffee
ASTM D8558-25
Standard Guide for Supply Chain Traceability, Authentication, Verification, Validation, and Oversight Using Emerging Technologies Including Blockchain
Hazardous Materials
Batteries and Critical Minerals
Nitrile Gloves
Semicon ductors
Renewable Energy Credits
Consumer Goods

ISO 7372:2005

Trade data interchange — Trade data elements directory

ISO 5909:2026

Business processes and data interchange of electronic bill of lading based on distributed ledger technology (DLT)



← Technical Committees

ISO/TC 154

Processes, data elements and documents in commerce, industry and administration

About

Secretariat: SAC (China)

Committee Manager: Mr Jianfang Zhang

Chairperson (until end 2028): Ms Wei Pan

ISO Technical Programme Manager [TPM]: Ms Laura Mathew
ISO Editorial Manager [EM]: Ms Marcela Bonells

Creation date: 1972

Scope

International standardization and registration of business, and administration processes and supporting data used for information interchange between and within individual organizations and support for standardization activities in the field of industrial data.

Development and maintenance of application specific meta standards for:

- process specification (in the absence of development by other technical committees);
- data specification with content;
- forms-layout (paper / electronic).

Development and maintenance of standards for

- process identification (in the absence of development by other technical committees);
- data identification.

Maintenance of the EDIFACT-Syntax.

DISCLAIMER: