

Prepared by DigitalTrade4.EU

Strengthening Simplification through the European Trade Indexes Registry (EUTIR)

Feedback to the EU Commission

October 2025

Introduction

1. Context and Purpose

The European Union has entered a decisive phase in shaping its digital and green transitions. In recent years, a series of ambitious legislative initiatives have been launched to reduce fragmentation across Member States, enhance legal certainty, and strengthen the competitiveness of Europe's business environment. Among these, the forthcoming **Digital Omnibus package** — a central element of the Commission's **Simplification Agenda** — aims to streamline regulatory requirements, lower administrative burdens, and improve the consistency of digital rules that apply to companies, public administrations, and citizens.

The **DigitalTrade4.EU consortium** supports these objectives by proposing a complementary and future-proof mechanism: the **European Trade Indexes Registry (EUTIR)**. This document outlines how the EUTIR framework can reinforce the Omnibus initiative — transforming simplification into long-term structural coherence across EU policies.

2. The Strategic Role of the Digital Omnibus

The **Digital Omnibus** should not be regarded merely as a technical simplification exercise. It represents the **European Union's coordination instrument** for aligning legislative updates across multiple regulatory domains — from data governance and digital identity to sustainability and market surveillance. By synchronising amendments to Regulations and Directives that share overlapping objectives, the Omnibus acts as a **meta-layer of coherence** within the EU's legislative architecture.

However, achieving genuine coherence requires more than aligned legal language. It requires **operational interoperability** — the ability of systems, authorities, and legal frameworks to interact seamlessly. Fragmented implementation across sectors has long undermined the efficiency of the Single Market. The Omnibus therefore provides a unique opportunity to embed interoperability as an **active legislative principle**, not as an afterthought or purely technical requirement.

3. EUTIR – Turning Interoperability into Law

The **European Trade Indexes Registry (EUTIR)** provides the practical and legal foundation to achieve this objective. It establishes a **cross-sector trust infrastructure** that connects various EU registries and regulatory frameworks in a verifiable and machine-readable manner. Once the metadata of an electronic document — whether related to customs, finance, sustainability reporting, or health certification — is registered and verified in the EUTIR environment, that document automatically gains **full legal effect** across the Union.

This approach allows sector-specific legislation to remain focused on substantive content, while verification, compliance, and authenticity follow a single, uniform process. **EUTIR therefore transforms interoperability from a policy aspiration into a legislative reality**, linking diverse initiatives such as **eIDAS 2.0, the DPP, eFTI, CBAM, and the CSDDD** within one trusted framework. In doing so, it offers the European Union a **one-stop compliance infrastructure** that strengthens transparency, supervision, and competitiveness within the Single Market.

4. Political and Financial Coherence

EUTIR is not a theoretical concept but a **public-sector trust layer** designed to serve as a permanent, state-backed component of the EU's digital infrastructure. It is provided under public authority to ensure that digital documents and certificates retain their **legal validity regardless of the technology platform or service provider**. The model guarantees equal access for all Member States, enterprises, and supervisory bodies, reinforcing the rule of law in the digital domain.

DigitalTrade4.EU, a consortium of 109 members representing industry, academia, and public administrations, has submitted **111 feedback documents** to the European Commission during 2025, **98 of which are referenced in this overview**. This track record demonstrates the feasibility of applying a single technical and legal architecture across multiple legislative processes — confirming that interoperability, when legislated, becomes a structural enabler of simplification.

To realise this vision, EUTIR requires **stable and predictable financing**. Given its cross-regulatory and strategic nature, it should be anchored under a **dedicated budget line within the Multiannual Financial Framework (MFF 2028–2034)**. This would ensure policy continuity, legal certainty, and long-term investment confidence — something fragmented or short-term project funding cannot deliver.

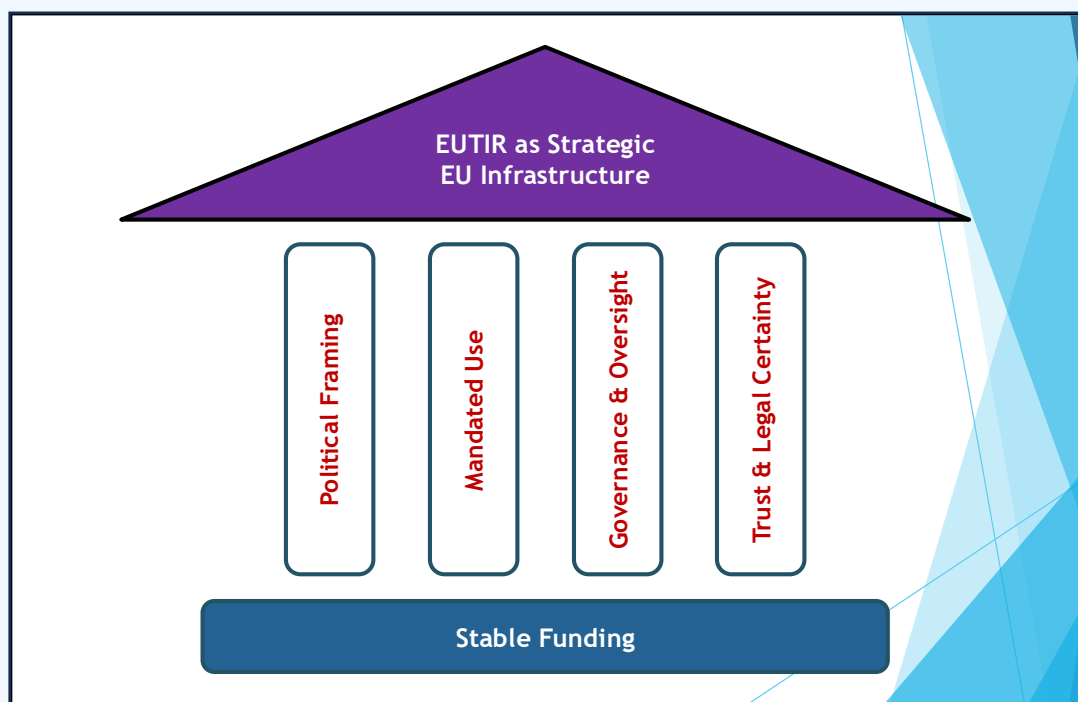


Figure 1. Together, the Digital Omnibus and EUTIR provide the European Union with the governance and infrastructure needed to achieve a coherent, competitive, and verifiable Single Market.

 Looking ahead, the European Trade Indexes Registry (EUTIR) may be further developed into a broader **European Trusted Infrastructure for Registries**, while retaining the same acronym (EUTIR). Such an evolution would allow the Registry to go beyond trade indexes and serve as a common backbone for multiple trusted registries across the Union — including certificates, permits, sustainability data, agricultural policy instruments, and other sectoral frameworks. Considering this option in the future would ensure that the EU maintains a flexible and scalable infrastructure that can seamlessly integrate with the **Digital Business Wallet** and reinforce strategic initiatives such as the DPP, eFTI, CBAM, and the CAP.

Impact Matrix: Digital Omnibus × EUTIR Framework

	Digital Omnibus Area	Problem / Objective (Omnibus)	EUTIR Contribution / Impact
1	Data Acquis (DGA, Free Flow, Open Data)	Fragmentation, SME burden, unclear rules	EUTIR provides a single metadata registry , reducing duplication and simplifying access; enables automated machine-readable verification; strengthens SME participation.
2	Cookies and ePrivacy	Consent fatigue, lack of legal clarity, fragmented implementation	EUTIR can act as a trust anchor , aligning user rights and business obligations through a machine-readable metadata model → reduces fragmentation across Member States.
3	Cybersecurity Incident Reporting	Duplicated reporting obligations, costly for businesses	EUTIR audit trail + immutable records allow unified and reusable reporting across legal instruments; reduces compliance burden.
4	AI Act Implementation	Need for legal clarity and SME support	EUTIR architecture is AI/ML-ready , supporting risk assessments and proactive supervision; aligning with AI Act requirements enhances legal and technical certainty.
5	eIDAS 2.0 / EU Business Wallet	Need for coherence and legal certainty	EUTIR uses LEI/vLEI + eIDAS 2.0 qualified trust services , ensuring direct compatibility with the EU Business Wallet and avoiding parallel systems.
6	SME Burden Reduction (cross-cutting)	SMEs face disproportionate compliance costs	EUTIR automates compliance checks, enables a tiered compliance model , lowers entry barriers, and reduces costs for smaller companies.
7	Global Dimension (indirect)	Omnibus focuses on simplifying the EU Single Market	EUTIR adds the international dimension (MRAs, DEPA, UNECE standards), turning EU rules into global benchmarks.
8	CSDDD – Corporate Sustainability Due Diligence	Companies must undertake due diligence over human rights and environmental risks across value chains, produce reports, and face civil liability and supervisory regimes.	EUTIR provides a trust anchor for sustainability data, ensuring authenticity, immutability, and legal evidentiary value. With exclusive control and identifiers (EORI + LEI/vLEI, eIDAS 2.0), it enables interoperability and prevents manipulation. Its AI/ML-ready metadata supports early risk detection, while automated checks lower SME costs and improve access to ESG finance.

Overview of DigitalTrade4.EU Feedback Documents (May–October 2025)

1. [Advanced electronic signatures and seals – formats to be recognised by sector bodies](#)

September 2025

Our feedback supports the European Commission in refining the draft Implementing Regulation on advanced electronic signatures and seals, with a focus on ensuring interoperability, SME accessibility, and international alignment. Drawing on UNCITRAL and World Bank principles, we propose targeted amendments and advocate for the integration of trusted digital infrastructures particularly the European Trade Indexes Registry (EUTIR) to strengthen legal c...

2. [Trade in agricultural products – accepting supply contracts as a proof of origin for certain tariff rate quotas](#)

September 2025

Our feedback on the European Commissions draft Implementing Regulation highlights targeted improvements to the proof of origin requirements for poultry tariff rate quotas, while advocating for the integration of the European Trade Indexes Registry (EUTIR) as a Union-wide trusted digital layer to ensure authenticity, traceability, and legal certainty across Member States...

3. [EU antitrust procedural rules \(revision\)](#)

September 2025

Our feedback to the European Commission highlights the strategic role of the European Trade Indexes Registry (EUTIR) in modernising EU antitrust procedural rules. As digital markets generate vast, complex evidence, traditional enforcement tools are no longer sufficient. EUTIR offers a trusted, immutable, and machine-readable digital infrastructure that enhances transparency, accelerates interim measures, reduces administrative burdens especially ...

4. [Roadmap towards Nature Credits](#)

September 2025

Our feedback outlines a strategic proposal to integrate Nature Credits into the European Trade Indexes Registry (EUTIR), establishing a unified digital trust

infrastructure for environmental, trade, and sustainability data. By anchoring Nature Credits within EUTIRs accredited certification framework and immutable metadata lifecycle, the EU can ensure high-integrity, legally enforceable, and interoperable credits that align with key instruments li...

5. [28th regime – a single harmonized set of rules for innovative companies throughout the EU](#)

September 2025

Our feedback to the EU Commission on the proposed 28th regime for an EU corporate legal framework highlights its potential to significantly strengthen Europes business environment by reducing legal fragmentation and lowering administrative burdens. We emphasize that while the 28th regime establishes a unified legal company form, its full potential can only be realized by integrating it with the European Trade Indexes Registry (EUTIR). EUTIR serve...

6. [Evaluation of the Defence Transfers Directive](#)

September 2025

Our feedback proposes integrating the European Trade Indexes Registry (EUTIR), a decentralised digital trust infrastructure based on Distributed Ledger Technology, into Directive 2009/43/EC on intra-EU transfers of defence-related products. This integration aims to address the Directives longstanding implementation challenges such as fragmentation, administrative burden, and low SME uptake by providing a secure, interoperable, and legally reliable ...

7. [Qualified electronic ledgers](#)

September 2025

Our feedback on the draft Implementing Regulation for Qualified Electronic Ledgers aims to future-proof the legal framework by embedding essential functionalities such as metadata lifecycle management, exclusive control, and harmonised certification that ensure interoperability and legal validity across all electronic documents. We advocate for these amendments to lay the groundwork for a Digital Business Wallet and to align seamlessly with upcoming...

8. Qualified trust service providers – requirements on compliance and security

September 2025

Our feedback presents targeted proposals to strengthen the draft Implementing Regulation for Qualified Trust Service Providers (QTSPs) under eIDAS 2.0. We advocate for enhanced legal certainty, global interoperability, and robust cybersecurity by embedding core principles like exclusive control over digital records, immutable metadata audit trails, and the mandatory use of globally recognised identifiers (e.g., LEI/vLEI alongside EORI). Drawing o...

9. Tackling drug trafficking – EU drugs strategy and EU action plan

September 2025

Our feedback to the European Commission proposes leveraging the European Trade Indexes Registry (EUTIR) as a critical digital trust infrastructure to enhance the upcoming EU Drugs Strategy (2026-2030). In response to the increasingly complex threats posed by drug trafficking, synthetic opioids like nitazenes, and AI-powered organized crime, we argue that EUTIRs capabilities in ensuring document immutability, supply chain transparency, and cross-b...

10. Review of the Digital Markets Act

September 2025

Our feedback proposes the European Trade Indexes Registry (EUTIR) as a foundational, cross-sectoral trust layer to empower the enforcement of the Digital Markets Act (DMA) and accelerate the EUs digital and green transitions. Designed as a decentralized, blockchain-based infrastructure, EUTIR ensures the authenticity, traceability, and interoperability of electronic trade documents and data, transforming how gatekeeper compliance is monitored and...

11. CBAM certificates – adjustment of obligation to surrender them to take account of free ETS allowances

September 2025

Our feedback proposes integrating the European Trade Indexes Registry (EUTIR) as a foundational digital trust infrastructure to strengthen the implementation of the Carbon Border Adjustment Mechanism (CBAM). By anchoring emissions data, EU ETS free allocation benchmarks, and foreign carbon price payments through cryptographic hashes, unique identifiers, and Mutual Recognition Agreements, EUTIR enhances verification, reduces administrative burdens...

12. Carbon border adjustment mechanism (CBAM) methodology for the definitive period starting on 1 January 2026

September 2025

Our feedback proposes integrating the CBAM implementing acts with the European Trade Indexes Registry (EUTIR) and eIDAS 2.0 to transform CBAM from a compliance mechanism into a trusted digital trade infrastructure. By leveraging secure identifiers, machine-readable metadata, and digital trust services, this alignment reduces administrative burdens especially for SMEs enhances transparency, ensures legal certainty, and strengthens the EUs global lea...

13. Carbon border adjustment mechanism (CBAM) – carbon price paid in a third country

September 2025

Our feedback proposes integrating the Carbon Border Adjustment Mechanism (CBAM) with the European Trade Indexes Registry (EUTIR) to create a trusted, interoperable digital foundation for carbon price deduction and compliance. This linkage ensures authentic, machine-readable verification of third-country carbon payments, reduces administrative burdens especially for SMEs and strengthens legal certainty, global interoperability, and the EUs leadership...

14. Data retention by service providers for criminal proceedings – impact assessment

September 2025

This document presents formal feedback to the European Commission on its Impact Assessment for Data Retention in Criminal Proceedings. It argues that the proposed framework can be significantly enhanced by integrating it with the European Trade Indexes Registry (EUTIR), ...

15. Legislative initiative on CO2 transportation infrastructure and markets

September 2025

Our feedback to the European Commission links the development of a CO Market and Infrastructure with the EU Trade Framework 2025 (EUTIR), advocating for a unified digital trust backbone. We demonstrate how EUTIRs secure, interoperable registry can provide legal certainty, reduce risks, and enable SME access for cross-border carbon transport and storage. By integrating with key initiatives like CBAM, eFTI, and the Digital Product Passport, EUTIR ...

16. Toy safety – amendment to the Toy Safety Directive as regards cobalt

September 2025

Our feedback proposes integrating the EUs cobalt-toys safety regulation into the broader EU Trusted Digital Trade Framework specifically through the European Trade Indexes Registry (EUTIR), Digital Product Passport (DPP), and eIDAS 2.0. This strategic alignment transforms toy safety compliance from a fragmented, paper-based process into a seamless, real-time, and globally interoperable digital system. By anchoring safety data in trusted digital...

17. Organic production – amended list of products and substances authorised for use in organic production processes

September 2025

Our feedback to the European Commission proposes a strategic alignment between the evolving rules for organic production and the emerging European Trade Indexes Registry (EUTIR) digital infrastructure. We argue that integrating amendments such as the authorization of new processing aids and transitional cleaning agent provisions with EUTIRs capabilities for metadata management, immutable audit trails, and digital trust (via eIDAS 2.0, LEI/vLEI, and...

18. EU strategy to boost global climate and energy transition

September 2025

This document presents a detailed proposal for the European Trade Indexes Registry (EUTIR), envisioned as a foundational digital trust layer for the EUs carbon market, trade infrastructure, and broader green transition. Submitted as feedback to the European Commission, it argues that EUTIR is a critical, cross-cutting digital infrastructure designed to ensure the interoperability, traceability, and verification of product, trade, financial, and s...

19. Sustainable transport investment plan

September 2025

The document presents a comprehensive proposal for the European Union Trade Index Registry (EUTIR), a digital infrastructure designed to enhance the authenticity, traceability, and legal validity of electronic trade, transport, customs, and compliance documents across the EU. Developed by the DigitalTrade4.EU consortium, it outlines a metadata-based registry system that anchors cryptographic hashes, timestamps, and standardized identifiers (such as...

20. Merger guidelines – review

September 2025

The document is a comprehensive feedback to the European Commissions Call for Evidence on the Review of the Merger Guidelines. It advocates for modernizing the EUs merger control framework to align with the green and digital transitions, emphasizing the integration of data-driven competition, sustainability, and resilience into merger assessments. Central to the proposal is the European Trade Indexes Registry (EUTIR), a digital trust infrastructure...

21. Omnibus Regulation Aligning product legislation with the digital age

September 2025

Our feedback addresses the European Commissions proposal COM(2025) 504 and its annexes, focusing on the integration of the European Trade Indexes Registry (EUTIR) into the New Legislative Framework (NLF). We propose EUTIR as a foundational digital infrastructure that ensures legal validity, traceability, security, and interoperability of electronic trade documents across the EU. Built on Distributed Ledger Technology (DLT) via the European Blockc...

22. Markets in financial instruments (MiFIR) – post-reform changes on RCB, liquid markets for equity instruments, and PTRR

September 2025

Our feedback outlines a strategic vision for strengthening the EUs New Legislative Framework (NLF) and broader trade governance through the proposed European Trade Indexes Registry (EUTIR). This comprehensive contribution supports the ongoing NLF revision and aligns with key EU initiatives such as the Digital Product Passport (DPP), electronic Freight Transport Information (eFTI), and the Carbon Border Adjustment Mechanism (CBAM). EUTIR is design...

23. Product legislation – ensuring futureproof rules (revision of the New Legislative Framework - NLF)

September 2025

The document outlines the proposed European Trade Indexes Registry (EUTIR), a strategic digital infrastructure designed to support the European Unions digital and green transition. EUTIR aims to serve as a horizontal trust layer for secure, interoperable, and legally valid exchange of trade-related metadata across EU policy areas, including digital trade, sustainability, customs, finance, and climate. By leveraging technologies such as distribute...

24. Consumer Agenda 2025-2030 and action plan on consumers in the Single Market

August 2025

The document titled Strengthening Consumer Protection and Market Fairness through the European Trade Indexes Registry (EUTIR) provides strategic input to the European Commission in support of the upcoming Consumer Agenda 2025-2030. It introduces the proposed European Trade Indexes Registry (EUTIR) as a decentralised, interoperable digital infrastructure designed to enhance trust, transparency, and efficiency in cross-border trade within the EU. Sin...

25. European Climate Law amendment

August 2025

The document titled Climate-Digital Synergies for a Trusted Trade Framework presents a strategic policy proposal to the European Commission, advocating for the integration of digital and climate objectives through the establishment of the European Trade Indexes Registry (EUTIR). It argues that achieving the EU's climate neutrality goals by 2050 and its 2040 greenhouse gas reduction target requires a trusted, interoperable digital infrastructure fo...

26. European climate resilience and risk management – integrated framework

August 2025

The document is a comprehensive policy feedback submission by the DigitalTrade4.EU consortium to the European Commission, focusing on the revision of the New Legislative Framework (NLF) and its integration with the European Climate Resilience Framework. It proposes the European Trade Indexes Registry (EUTIR) as a strategic, digital trust infrastructure designed to enhance transparency, traceability, and compliance across EU trade, sustainability,...

27. Cybersecurity - peer review of National Cybersecurity Certification Authorities

August 2025

The document is a comprehensive policy and technical submission by the DigitalTrade4.EU consortium to the European Commission, originally prepared as feedback on the revision of the EU's New Legislative Framework (NLF). It proposes the establishment of the European Union Trade Indexes Registry (EUTIR) as a digital trust infrastructure designed to enhance transparency, traceability, and interoperability across EU trade, sustainability, and compliance s...

28. Carbon Border Adjustment Mechanism (CBAM) – downstream extension, anti-circumvention and rules on electricity emissions

August 2025

This document, prepared by the DigitalTrade4.EU consortium, provides strategic input for the revision of the EU's Carbon Border Adjustment Mechanism (CBAM) and the New Legislative Framework (NLF). It proposes the European Trade Indexes Registry (EUTIR) as a foundational digital trust infrastructure to support secure, transparent, and efficient cross-border trade. EUTIR is designed as a decentralised, machine-readable registry that anchors metadata...

29. Import of third countries' organic products compliant with EU rules: list of recognised control authorities and bodies

August 2025

The document outlines a strategic proposal for integrating recognised organic control bodies with the European Trade Indexes Registry (EUTIR) to enhance trust, transparency, and efficiency in organic trade. It advocates for EUTIR as a decentralised, interoperable digital infrastructure that verifies the authenticity, integrity, and traceability of trade-related data through metadata registration, leveraging technologies like Distributed Ledger Te...

30 EU cybersecurity certification – amendment to the scheme on common criteria

August 2025

The document presents a strategic proposal to strengthen the EU's digital trade and cybersecurity infrastructure by integrating two key frameworks: the European Common Criteria-based cybersecurity certification scheme (EUCC) and the proposed European Trade Indexes Registry (EUTIR). It emphasizes the need for a unified, secure, and interoperable digital ecosystem that ensures trust in both ICT products and cross-border trade data. By aligning cyber...

31. Farm Sustainability Data Network – compiling data on farm sustainability

August 2025

This document provides strategic feedback to the European Commission on enhancing the Farm Sustainability Data Network (FSDN) by integrating it with the proposed European Trade Indexes Registry (EUTIR). It outlines how linking agricultural sustainability data such as soil health, plant protection product use, and antimicrobial reporting with a secure, decentralised, and interoperable...

32. [Carbon Border Adjustment Mechanism \(CBAM\) – downstream extension, anti-circumvention and rules on electricity emissions](#)

August 2025

The European Trade Indexes Registry (EUTIR) is a proposed EU-level digital infrastructure designed to enhance trust, transparency, and interoperability in cross-border trade. By securely registering and verifying metadata of trade-related datasets such as those used in the Carbon Border Adjustment Mechanism (CBAM), Digital Product Passports (DPP), and electronic Freight Transport Information (eFTI) EUTIR acts as a trust anchor across the EU's digital...

33. [Measures related to specific plant pests](#)

August 2025

The document is a feedback submission to the European Commission on the proposed Regulation concerning pest surveys and reporting. It welcomes the initiative to strengthen the EU's plant health framework in response to growing challenges such as climate change, global trade, and invasive species. The submission advocates for a modern, digital-by-design approach that integrates pest management into the broader EU digital trade ecosystem.

34. [Fisheries Control Regulation – Implementing Act on the provision applying as from January 2026 of the amended Regulation](#)

August 2025

This document presents a set of targeted proposals from the DigitalTrade4.EU consortium for modernizing the EU's fisheries control system. It provides feedback on the draft Implementing Regulation under Regulation (EU) 1224/2009, advocating for a shift towards a digital, trust-based, and interoperable framework. The proposals aim to reduce administrative burdens, enhance transparency, and strengthen enforcement by integrating advanced digital tools...

35. [Requests for customs enforcement of intellectual property rights – update of application forms for businesses](#)

August 2025

This document presents feedback from the DigitalTrade4.EU consortium on the European Commission's draft proposal to update application forms for the customs enforcement of Intellectual Property Rights (IPR). It outlines a series of targeted recommendations to modernize the process,

emphasizing digitalization, interoperability with key EU systems, and improved accessibility for businesses, particularly SMEs. The proposals aim to create a more efficient...

36. [EU's next long-term budget \(MFF\) – EU funding for cross-border education, training and solidarity, young people, media, culture, and creative sectors, values, and civil society](#)

August 2025

This document presents a proposal for a European Trade Indexes Registry (EUTIR) as a foundational trust layer for the EU's digital and green transition. It positions EUTIR as a decentralized, interoperable system to verify the authenticity and traceability of trade data, aiming to reduce administrative burdens, enhance competitiveness, and ensure seamless integration with global standards. The proposal is strategically designed to support and amplify...

37. [EU's next long-term budget \(MFF\) – EU funding for competitiveness](#)

August 2025

This document presents a proposal for a European Trade Indexes Registry (EUTIR), a foundational digital infrastructure designed to strengthen EU competitiveness. Acting as a trust anchor for trade data, EUTIR ensures authenticity, traceability, and machine-readability across the Single Market. It aims to reduce administrative burdens, enhance supply chain resilience, support ESG compliance (integrating with systems like the Digital Product Passport)...

38. [EU's next long-term budget \(MFF\) – EU funding for civil protection, preparedness and response to crises](#)

August 2025

This document presents a strategic proposal for establishing the European Trade Indexes Registry (EUTIR) as a foundational trust infrastructure for EU digital trade. It outlines how EUTIR supports the EU's Multiannual Financial Framework (MFF) priorities by enhancing resilience, enabling the green and digital transitions, and improving crisis preparedness. EUTIR is proposed as a decentralised, interoperable registry based on blockchain technology ...

39. EU's next long-term budget (MFF) – implementing EU funding with Member States and regions

August 2025

The document presents the European Trade Indexes Registry (EUTIR) as a strategic digital infrastructure to support the EU's Multiannual Financial Framework (MFF) 2028-2034. Proposed by the DigitalTrade4.EU consortium, EUTIR aims to enhance the digitalisation, transparency, and sustainability of cross-border trade by providing a decentralised, interoperable, and trusted verification layer for trade-related data. Aligned with key EU regulations such as ...

40. EU's next long-term budget (MFF) – EU funding for external action

August 2025

The document provides strategic feedback to the European Commission on integrating the European Trade Indexes Registry (EUTIR) into the EU's long-term budget and digital trade framework. It positions EUTIR as a decentralised, interoperable trust infrastructure designed to enhance digital trade by ensuring authenticity, traceability, and machine-readability of trade-related data. Aligned with key EU objectives such as the green transition, competition...

41. Burden reduction and simplification for competitiveness of small mid-cap enterprises - Omnibus Regulation

August 2025

The document provides feedback to the European Commission on the 2025 Omnibus Package (COM(2025) 501), advocating for proportional regulation tailored to small mid-cap enterprises (SMCs). It highlights the need to extend SME-friendly simplifications such as reduced administrative burdens in GDPR, Prospectus Regulation, Batteries Regulation, and F-gas Regulation to SMCs, which face similar challenges but are often overlooked...

42. 28th regime – a single harmonized set of rules for innovative companies throughout the EU

August 2025

The document provides strategic input to the European Commission on the integration of the European Trade Indexes Registry (EUTIR) into the proposed 28th Company Law Regime. It outlines how EUTIR can serve as a digital trust anchor, enhancing legal certainty, interoperability, and efficiency for EU-based businesses...

43. Passenger name record (PNR) data – evaluation of Directive

August 2025

The document provides strategic feedback to the European Commission on strengthening trust in data for security and trade, linking the evaluation of the Passenger Name Record (PNR) Directive with the proposed European Trade Indexes Registry (EUTIR). It highlights the PNR system's role in combating terrorism and serious crime while respecting fundamental rights, and draws parallels with the need for a secure, interoperable digital trade infrastructure...

44. European Innovation Act

August 2025

This document provides feedback to the European Commission on the proposed European Innovation Act, emphasizing the strategic role of the European Trade Indexes Registry (EUTIR) in advancing a digital, sustainable, and innovation-friendly Single Market. It outlines how EUTIR serves as a trusted, decentralized infrastructure for verifying and interoperating trade-related data across the EU, supporting objectives such as regulatory harmonization, a...

45. Critical Raw Materials Act – Commission Implementing Act establishing a strategic project application template

August 2025

The document presents a strategic proposal for integrating the European Trade Indexes Registry (EUTIR) with the EU's framework for recognizing critical raw material projects under Regulation (EU) 2024/1252. It advocates for EUTIR as a decentralized, interoperable digital infrastructure that enhances trust, authenticity, and traceability in cross-border trade. By anchoring metadata from key documents such as permits, sustainability certifications, a...

46. Trade measure addressing the negative trade-related effects of global excess capacity on the EU steel sector

August 2025

The document outlines a strategic proposal to strengthen the European Union's steel sector through digital transformation by integrating the European Trade Indexes Registry (EUTIR) into the EU's regulatory and trade infrastructure. It emphasizes the need for digital trust, traceability, and interoperability in safeguarding the steel industry against global...

47. Simplification of administrative burdens in environmental legislation

August 2025

Our feedback to the European Commission highlights the European Trade Indexes Registry (EUTIR) as a strategic enabler for simplifying environmental administrative burdens while advancing the EUs digital and green transitions. By establishing a decentralised, interoperable trust infrastructure, EUTIR streamlines compliance, eliminates reporting duplication, and enhances real-time verification of environmental data across trade and regulatory systems...

48. European strategy for housing construction

15 August 2025

Our feedback to the European Commission highlights the strategic integration of the European Trade Indexes Registry (EUTIR) into the EU Housing Construction Strategy as a cornerstone for a competitive, digital, and sustainable built environment. By leveraging decentralised, interoperable digital infrastructure, EUTIR can transform the housing construction sector through enhanced trust, efficiency, and transparency across cross-border processes...

49. Clean corporate vehicles

August 2025

Our feedback to the European Commission highlights the strategic role of the European Trade Indexes Registry (EUTIR) in enabling the successful implementation of the Clean Corporate Vehicles Regulation and advancing the EUs green-digital transition. EUTIR offers a decentralised, interoperable, and secure digital infrastructure that ensures authenticity, traceability, and trust in trade-related data across borders and sectors. By integrating vehic...

50. European Border and Coast Guard – update of EU rules

August 2025

Our feedback to the European Commission highlights the strategic integration of the European Trade Indexes Registry (EUTIR) as a foundational element for strengthening the European Border and Coast Guards operational capabilities. Developed by the DigitalTrade4.EU consortium, this proposal supports the modernisation of EU border management through a secure, decentralised, and interoperable digital infrastructure. EUTIR acts as a trust anchor for ...

51. Technical updates of the Emissions Trading Scheme (ETS) State aid guidelines

August 2025

Our feedback to the European Commission proposes the integration of the European Trade Indexes Registry (EUTIR) into the 2025 update of the EU Emissions Trading Scheme (ETS) State Aid Guidelines as a strategic enabler for competitive, low-carbon trade. Rising electricity prices and CO costs are increasingly affecting energy-intensive industries, heightening the risk of carbon leakage and undermining industrial competitiveness. To address these ch...

52. Digitalisation of justice: 2025-2030 European judicial training strategy

August 2025

The document outlines a strategic proposal for integrating the European Trade Indexes Registry (EUTIR) into the EUs digital justice and trade ecosystems. It emphasizes how EUTIRa decentralized, interoperable registry built on blockchain-based infrastructure (EBSI) can support the digital transformation of judicial systems by ensuring the authenticity, traceability, and integrity of trade-related data. By aligning with global standards such as LEI/...

53. Circular Economy Act

August 2025

The document outlines the strategic synergy between the proposed Circular Economy Act (CEA) and the European Trade Indexes Registry (EUTIR) as a foundation for advancing the EUs green and digital transition. It advocates for EUTIR as a decentralized, interoperable digital infrastructure that ensures authenticity, traceability, and trust in cross-border trade data. By integrating systems like the Digital Product Passport (DPP), electronic Freight ...

54. Critical Raw Materials Act – Commission Implementing Act establishing a strategic project application template

August 2025

The document provides structured feedback from the DigitalTrade4.EU consortium on the draft Implementing Regulation for strategic project applications under the EUs Critical Raw Materials Act (Regulation (EU) 2024/1252). It emphasizes the importance of integrating advanced digital, legal, and operational frameworks to enhance the sustainability, security, and efficiency of critical raw material projects across the EU and its partner countries. Dr...

55. Firearms – electronic licensing system for import, export and transit

August 2025

The document is a feedback submission by the DigitalTrade4.EU consortium to the European Commission on the proposed Implementing Regulation for the Electronic Licensing System for Firearms, Their Essential Components and Ammunition (FIRE). It advocates for a fully digital, interoperable, and future-proof system aligned with the EU's broader digital trade and regulatory strategies..

56. Insurance and reinsurance firms - review of technical rules (Solvency II)

August 2025

The document is a feedback submission by the DigitalTrade4.EU consortium to the European Commission on the proposed amendments to the Solvency II regulatory framework (Delegated Regulation (EU) 2015/35). It emphasizes the need to future-proof EU insurance supervision by embedding strong digitalisation requirements. The consortium advocates for enhanced digital reporting standards, legal recognition of eIDAS 2.0 digital identities and electronic s...

57. Amendment of protective measures against pests of plants

August 2025

The document presents proposed amendments to Commission Implementing Regulation (EU) 2019/2072, aimed at modernizing the EU's framework for regulating non-quarantine pests (RNQPs). Developed by the DigitalTrade4.EU consortium, it advocates for the integration of digital solutions such as Digital Product Passports (DPP), verifiable Legal Entity Identifiers (vLEI), and eIDAS 2.0-compliant cryptographic sealing to improve traceability, trust, and cr...

58. Waste batteries - format to be used by national authorities reporting on collection and treatment

July 2025

This document presents feedback from the DigitalTrade4.EU consortium on the draft implementing regulation under Regulation (EU) 2023/1542, focusing on enhancing digital interoperability, legal trust, and ESG integration in battery data reporting. It proposes strategic amendments to ensure that battery-related reporting systems are future-proof, technologically neutral, and aligned with key EU digital initiatives such as the Digital Product Passport...

59. Fisheries control and enforcement – detailed rules

July 2025

The document presents a comprehensive set of proposed amendments to the EU Delegated Regulation (EU) 1224/2009 on fisheries control, aiming to modernize the sector through digitalization and sustainability. Developed by the DigitalTrade4.EU consortium, it advocates for the integration of advanced digital tools such as Digital Product Passports (DPP), eIDAS 2.0 digital identities, blockchain traceability, AI-driven monitoring, and Legal Entity Ide...

60. EU Aviation Safety Agency Board of Appeal – organisation and composition (update)

July 2025

The document is a proposal submitted by the DigitalTrade4.EU consortium to the European Commission, outlining comprehensive amendments to the Delegated Regulation on the Organisation and Composition of the Board of Appeal of the European Union Aviation Safety Agency (EASA). It advocates for the full digitalisation of the Boards procedures, aligning them with key EU initiatives such as eIDAS 2.0, the Digital Single Market, and the EU AI Act. The p...

61. Security of gas supply – composition of risk groups (update)

July 2025

The document is a feedback submission by DigitalTrade4.EU to the European Commission on the draft delegated regulation concerning the composition of gas supply security risk groups. It proposes seven key amendments to strengthen the digital dimension of the regulation, advocating for the integration of digital tools and standards such as the EU Digital Product Passport (DPP), EU Trade Document Registry (ETDR) principles, MLETR, eIDAS 2.0, LEI/vLE...

62. Firearms – electronic licensing system for import, export and transit

July 2025

The document is a feedback submission by the DigitalTrade4.EU consortium to the European Commission on the proposed Implementing Regulation for the Electronic Licensing System for Firearms, Their Essential Components and Ammunition (FIRE). It advocates for a fully digital, interoperable, and future-proof system aligned with the EUs broader digital trade and regulatory strategies. The consortium emphasizes integration with key frameworks such as e...

63. [EU Design Implementing Regulation](#)

July 2025

Our feedback outlines the DigitalTrade4.EU consortium's recommendations to the European Commission on modernizing EU design protection for the digital age. The document emphasizes aligning design law with technological advancements, enhancing legal certainty, and supporting innovation through secure digital identity solutions (eIDAS 2.0), integration with Digital Product Passports (DPPs), and the application of Artificial Intelligence and Machine...

64. [EU industrial maritime strategy](#)

July 2025

Global trade is experiencing a major shift driven by the combined forces of environmental sustainability and digital innovation. The European Union is positioning itself as a leader in this transformation, particularly within the maritime industry, through strategic initiatives that integrate green goals with advanced digital solutions. At the heart of this effort is the DigitalTrade4.EU consortium, which advocates for a seamlessly interconnected...

65. [Export and import of hazardous chemicals](#)

July 2025

The DigitalTrade4.EU consortium welcomes the opportunity to provide feedback on the draft delegated act amending Regulation (EU) No 649/2012 on the export and import of hazardous chemicals. As an alliance committed to advancing a green and digital European trade ecosystem, we see this revision as an important step in enhancing sustainability, transparency, and trust in global supply chains. This regulation plays a vital role in protecting human h...

66. [Single-use plastic beverage bottles – EU rules for calculating, verifying and reporting on recycled plastic content](#)

July 2025

This document provides feedback from the DigitalTrade4.EU consortium to the European Commission on the digitalization of recycled plastic content reporting for single-use beverage bottles. It emphasizes the strategic importance of the Digital Product Passport (DPP) in enhancing transparency, traceability, and compliance across the EU Single Market. The consortium advocates for the adoption of decentralized digital architectures, trusted digital ...

67. [EU Ports Strategy](#)

July 2025

Shared document, prepared by DigitalTrade4.EU, provides feedback to the European Commission on strengthening cybersecurity in European ports and maritime trade. It highlights the importance of digitalisation for efficiency and competitiveness while emphasizing the growing risks from cyber threats and regulatory fragmentation. The document outlines key challenges, strategic priorities, and actionable recommendations to ensure secure, resilient, an...

68. [Sustainable products – exemptions to prohibiting the destruction of unsold apparel and footwear](#)

July 2025

Our feedback presents recommendations to the European Commission on strengthening EU leadership in green-digital trade through the Ecodesign for Sustainable Products Regulation (ESPR). It highlights the urgent need to integrate digital and environmental objectives, emphasizing tools such as Digital Product Passports, the adoption of global digital standards, and enhanced international cooperation. The document outlines strategic approaches for ad...

69. [Revision of the CO2 emission standards for cars and vans](#)

July 2025

Our feedback addresses the strategic integration of Digital Product Passports (DPPs) into the revised Regulation (EU) 2019/631, which sets CO emission standards for new passenger cars and light commercial vehicles. We highlight how DPPs can provide a robust digital infrastructure for tracking emissions, vehicle lifecycle data, and sustainability metrics across the automotive sector. By linking DPPs with CO regulation, the European Union can ...

70. [Omnibus Regulation Aligning product legislation with the digital age](#)

July 2025

The DigitalTrade4.EU consortium provides feedback to the European Commission on strengthening the EU's leadership in green and digital trade. The consortium supports the Commissions Omnibus proposals aimed at reducing administrative burdens, promoting digital-by-default practices, and introducing common specifications for harmonized standards. Key recommendations include fostering global interoperability of digital trade laws and standards (such a...

71. Pesticide residues in food – methods for sampling and analysis (update)

July 2025

This feedback outlines the DigitalTrade4.EU consortium's recommendations to align the EU Regulation on Pesticide Residues with the Digital Product Passport (DPP) and broader Environmental, Social, and Governance (ESG) objectives. We emphasize the critical role of digitalization and sustainability in enhancing food safety, traceability, and transparency across the agri-food sector. By integrating pesticide residue data into DPP systems, leveraging...

72. Carbon emissions pricing for goods entering the exclusive economic zone of Member States – detailed rules

July 2025

Our feedback proposes integrating Digital Product Passports (DPPs) into the Carbon Border Adjustment Mechanism (CBAM) to streamline carbon reporting for imported goods. Developed by the DigitalTrade4.EU consortium, this initiative aligns with the EU's Green Deal and Digital Europe goals, aiming to reduce administrative burdens, enhance data accuracy, and support SMEs. By leveraging DPP digital framework for tracking product sustainability CBAM co...

74. EU emissions trading system for maritime, aviation and stationary installations, and market stability reserve – review

July 2025

Our feedback to the European Commission outlines strategic steps to modernize the EU Emissions Trading System (ETS) through digital innovation, ensuring it becomes a globally integrated, data-driven carbon market. DigitalTrade4.EU recommends integrating Digital Product Passports (DPPs) for sector-specific emissions tracking (steel, cement, batteries), automating green finance via the EU Financial Data Access Framework (FiDA) to link ETS revenues ...

75. Amendments to the treatment of securitisation exposures under the Liquidity Coverage Ratio Delegated Regulation

June 2025

Our feedback aims to support the European Commission in aligning the Liquidity Coverage Ratio Delegated Regulation with the EU's broader goals of digitalisation, sustainability, and competitiveness. Building on recent policy milestones, our recommendations focus on enhancing financial resilience through the integration of digital tools, interoperable standards, and ESG-linked incentives...

76. Electronic freight transport information (eFTI) platforms – specifications on the functional requirements

June 2025

This updated feedback from DigitalTrade4.EU outlines strategic recommendations to strengthen the European Commission's digital trade agenda and implementation of the eFTI Regulation. It calls for aligning EU rules with global frameworks such as UNCITRAL's MLETR and eIDAS 2.0, promoting decentralised and interoperable architectures, and integrating Digital Product Passports (DPPs) into both commercial and defence supply chains. These measures are es...

77. EU-Mauritania sustainable fisheries agreement and protocol – negotiation mandate for a new protocol

June 2025

Our feedback highlights how the EU can reinforce its leadership in green and digital trade through strategic partnerships, legal interoperability, and infrastructure investment. We recommend leveraging frameworks like DEPA, AfCFTA, MLETR, and eIDAS 2.0 to promote global standards, with Mauritania as a key partner in Africa. Accelerating Digital Product Passport (DPP) deployment, integrating ESG into trade finance, and supporting SMEs through ...

78. Sustainable products – disclosure of information on unsold consumer products

June 2025

Our feedback highlights the urgent need for the European Commission to align sustainability goals with digital transformation by accelerating the adoption of Digital Product Passports (DPPs), enhancing interoperability through global standards like MLETR and eIDAS 2.0, and simplifying compliance for businesses especially SMEs. We recommend investments in secure digital infrastructure, automated data reporting on discarded products, and stronger di...

79. High-risk organic and in-conversion products – import checks (amendment)

June 2025

Our feedback aims to support the European Commission's efforts to strengthen the EU's leadership in green and digital trade. We outline key developments such as the EU-Singapore Digital Trade Agreement and the UNECE Recommendation No.

49and propose strategic actions to promote cross-border interoperability, accelerate the adoption of Digital Product Passports, and integrate environmental goals into trade policy. This input reflects the collective ex...

80. [Energy efficiency – EU energy labelling for refrigerating appliances with a direct sales function – revision.](#)

June 2025

Shared document represents the DigitalTrade4.EU consortiums contribution to the European Commissions strategy for a simpler, seamless, and stronger Single Market. It outlines practical recommendations to accelerate the EUs green and digital transition by embedding interoperable digital tools, global standards, and ESG-linked trade finance into the core of Single Market policy. With over 100 partners spanning 39 countries, DigitalTrade4.EU provide...

81. [Digital Networks Act](#)

June 2025

The Input to Digital Network Acts 2025 presents the consolidated feedback of the DigitalTrade4.EU consortium in response to the European Commissions strategic initiatives on the Digital Networks Act and the European Data Union. Our consortium outlines a unified vision for a secure, interoperable, and dual-use digital infrastructure that supports both economic competitiveness and defence readiness. The document emphasizes the critical role of harm...

82. [Industrial Decarbonisation Accelerator Act - speeding up decarbonisation](#)

June 2025

DigitalTrade4EU welcomes the European Commission's initiative for an Industrial Decarbonisation Accelerator Act and outlines how digital trade solutions can enhance its success. This document emphasizes that digitalisation is not just complementary but essential to achieving rapid cost effective and inclusive decarbonisation in Europe. To read more download the full document

83. [European Data Union Strategy](#)

June 2025

Our input presents the consolidated feedback on the European Commissions initiatives for a Single Market, a future European Data Union, and European Defence Readiness. It highlights the importance of harmonized digital standards, such as MLETR and eIDAS 2.0, for

both commercial and defence logistics, and advocates for extending the Digital Product Passport framework to enhance supply chain security. The report stresses the need for a unified digital...

84. [Mini omnibus for defence](#)

June 2025

This document presents the DigitalTrade4.EU consortiums feedback to the European Commission on the European Defence Readiness 2030 strategy and related industrial initiatives. It highlights how digital transformation, based on interoperable and decentralized standards, can strengthen the EUs defence capabilities, enhance military mobility, secure supply chains, and foster innovation within the European Defence Technological and Industrial Base...

85. [Burden reduction and simplification for competitiveness of small mid-cap enterprises - Omnibus Regulation](#)

June 2025

Our consortium DigitalTrade4.EU input to the European Commissions Omnibus 2025 proposals focuses on digital trade reforms to enhance the competitiveness of SMEs and Small Mid-Cap enterprises through interoperable infrastructure and reduced administrative burdens. The document emphasizes integrating green and digital strategies, including Digital Product Passports, ESG compliance, and global digital trade partnerships. It also recommends legal...

86. [Fruit and vegetables – reviewing sectoral rules and modernising certain market-monitoring rules and mechanisms](#)

June 2025

DigitalTrade4.EU aims to create a seamlessly interconnected Europe and neighboring regions by harmonizing standards for the digitalization of trade documents and processes. This initiative supports economic integration, cooperation, and trade facilitation across borders. The document provides feedback on the European Commissions draft Delegated Regulation amending rules for producer organisations in the fruit and vegetables sector. It highlights ...

87. Common agricultural policy – simplifying the implementation of strategic plans

June 2025

This document presents feedback from the DigitalTrade4.EU consortium on the European Commissions proposals to simplify and digitalise the Common Agricultural Policy (CAP). It highlights the importance of leveraging digital tools and interoperability standards to reduce administrative burdens, support SMEs, and enhance the competitiveness and sustainability of the EU agricultural sector. The feedback emphasizes integrating digital trade solutions,...

88. The EU Cybersecurity Act

June 2025

This document presents feedback from DigitalTrade4.EU, a pan-European consortium of trade, logistics, and technology experts, to the European Commission. It advocates for aligning digital trade solutions particularly interoperable standards like MLETR and eIDAS 2.0 with the EU's cybersecurity and defense initiatives. The proposal emphasizes decentralized systems and dual-use technologies to simultaneously strengthen civilian supply chains, military...

89. A European Strategy for AI in science – paving the way for a European AI research council

June 2025

DigitalTrade4.EU supports the strategys vision while advocating for stronger synergies between scientific AI advancements and key economic sectors like green/digital trade, logistics, and capital markets. Key recommendations include integrating AI research with foundational EU digital frameworks (e.g., eFTI, eIDAS 2.0), leveraging funding to support SME adoption, prioritizing trustworthy AI principles, and enhancing resilience against global challenge...

90. Wine package – implementation of the recommendations of the High-Level Group on Wine Policy

June 2025

DigitalTrade4.EU supports the proposals goals enhancing competitiveness, managing climate risks, and meeting consumer demand sand advocates for integrating digital tools and sustainability practices to achieve them. Key recommendations include adopting Digital Product Passports (DPPs) for supply-chain transparency, harmonizing e-labelling, promoting global digital trade standards (like MLETR), and supporting SMEs through dedicated funding and skill...

91. F-gases – new template for the Declaration of Conformity

June 2025

DigitalTrade4.EU advocates for integrating F-gas compliance data (Regulation EU 2024/573) into the Digital Product Passport (DPP) framework to enhance supply chain transparency and regulatory efficiency. This document outlines how mandatory inclusion of F-gas declarations (e.g., HFC type, GWP value, verification reports) in DPPs can streamline sustainability reporting, reduce SME burdens, and align with EU green finance incentives like CBAM ...

92. Batteries Regulation – postponement of the battery due diligence obligations

June 2025

The DigitalTrade4.EU consortium welcomes the European Commissions proposal to postpone battery due diligence obligations to August 2027. This response advocates leveraging the delay to build a resilient digital framework centered on Digital Product Passports (DPPs), ensuring supply chain transparency and regulatory alignment with EU Green Deal goals. Key recommendations include adopting digital-by-default standards (eIDAS 2.0, MLETR), allocating ...

92. Fruit and vegetables – reviewing sectoral rules and modernising certain market-monitoring rules and mechanisms

June 2025

The DigitalTrade4.EU consortium outlines a strategy to position the EU as a global leader in green-digital trade. Central to this vision is the adoption of Digital Product Passports (DPPs), enabling traceable sustainability data, streamlined compliance (e.g., CBAM), and access to green finance. To read more, download the full document

93. Apply AI Strategy – strengthening the AI continent

May 2025

The document by DigitalTrade4.EU outlines a strategic vision for integrating artificial intelligence (AI) into the European Unions trade, logistics, and capital markets to advance green and digital transitions. Key priorities include harmonizing AI adoption with foundational frameworks like Electronic Freight Transport Information (eFTI), eIDAS 2.0 for secure digital identities, and Digital Product Passports (DPPs) for sustainability tracking. It...

94. [Proposal for an amendment to the InvestEU Regulation.](#)

May 2025

Our consortium, representing over 100 trade and technology partners across Europe and globally, welcomes the European Commission's proposal to enhance the InvestEU Programme's efficiency. However, we express strong concern about the proposal's assessment that it has "no digital relevance." This overlooks a critical opportunity to align EU investments with the twin green and digital transitions. We argue that modern digital tools like Digital Prod...

95. [European Business Wallet: digital identity, secure data exchange and legal notifications for simple, digital business](#)

May 2025

Created document by DigitalTrade4.EU outlines a strategy to harmonize digital innovation and sustainability in EU trade. Central to this vision are the European Business Wallet (EBW) and Green Economy framework, which together aim to streamline cross-border business operations while advancing environmental accountability. The EBW leverages secure digital identities (e.g., verifiable Legal Entity Identifiers, eSeals) to reduce administrative burde...

96. [Revision of EU rules on sustainable finance disclosure](#)

May 2025

The Commissions assessment rightly points out limitations in the current SFDR framework that hinder private investment in the sustainable transition and risk excluding certain sectors. To avoid a fragmented single market for sustainable finance, Union-level action is needed to simplify the existing framework. The most effective approach is to establish a robust digital infrastructure that provides verifiable, real-time data essential for clear an...

97. [Savings and Investments Union: Regulation fostering EU market integration and efficient supervision](#)

May 2025

The Commissions impact assessment confirms that fragmentation remains one of the most persistent barriers to fully integrated EU capital markets. National regulatory and supervisory silos continue to drive up costs, limit investment opportunities, and hinder market-driven consolidation ultimately

preventing the single market from reaching its full potential. While legislative progress is being made in trade, finance, transport, and sustainability,...

98. [International Digital Strategy](#)

May 2025

The DigitalTrade4.EU consortium supports the EUs International Digital Strategy as a foundation for strengthening global digital partnerships and advancing interoperable trade systems. We believe this strategy provides the right framework to expand high-trust digital trade agreements, especially with Asia through DEPA, and to embed sustainability through tools like Digital Product Passports. The EU-Singapore Digital Trade Agreement demonstrates ...

Prepared by DigitalTrade4.EU



Towards a Trusted Digital Trade Framework: The Role of the European Trade Indexes Registry (EUTIR)

Summary of Feedback
to the European Commission

September 2025, v8.11 [GLOBAL]

Table of Contents

Executive Summary.....	21
1. EU Strategic Digital Models for Trade, Logistics and Sustainability	23
2. Strategic Alignment: EUTIR Framework and Future EU Legislation	24
2.1. EUTIR as a Solution for the Revision of the New Legislative Framework (NLF)	24
2.2. “Trust Anchor” in Digital Trade: Strategic Value and Global Leadership	25
2.3. Exclusive Control as a Foundational Principle	26
2.4. Institutional Coherence and Governance	27
3. In-Depth Evaluation of EUTIR’s Operational Backbone	28
3.1. Accreditation and Certification Framework (Annex II): Critical Review	28
3.2. Data Submission and Lifecycle Rules (Annex III): Functional Analysis.....	29
4. From Theory to Practice: Implementing the EUTIR Framework.....	32
4.1. Model Validation Through Use Cases (Annex V)	32
5. Conclusions and Recommendations.....	35
5.1. Overall Assessment of Framework Integrity.....	35
5.2. Policy Recommendations for the Commission	35
5.3. Cybersecurity as a Horizontal Principle	36
5.4. Long-Term Perspective	36
5.4. Key reasons for establishing EUTIR.....	37
Annex I. EUTIR Environment: Data Set Lifecycle and Accreditation–Certification Flow	39
Annex II. Accreditation and Certification Framework for Service Providers	40
Annex III. Rules on Metadata Submission, Status and Verification Rules	52
Annex IV. EUTIR Common Technical Specifications (CTS)	67
Annex V. Use Cases for Legislative Input and Technical Implementation	74
Annex VI. EUTIR Technical Infrastructure	88
Annex VII. Platform Functions and Trust Roles in the EU Digital Trade Ecosystem	89
Annex VIII. Digital Trade & Capital Markets Integration Roadmap	90
About Us.....	91

Executive Summary

The **European Trade Indexes Registry (EUTIR)** is a proposed framework designed as a **strategic enabler for the European Union's digital and green transition**, supporting not only the ongoing revision of the **New Legislative Framework (NLF)** but also a wide range of related Union initiatives. Its central purpose is to provide a **horizontal digital trust layer** for product, trade, financial, and sustainability data, addressing weaknesses in fragmented digital integration, inconsistent compliance signals, and excessive administrative burdens identified in the Commission's 2022 evaluation.


By ensuring that **electronic documents, data sets, and associated metadata are authentic, traceable, and machine-readable**, EUTIR strengthens **market surveillance**, reinforces **consumer and business trust**, and enables **secure interoperability** across CBAM, DPP, eFTI, MiFIR, FiDA and other sectoral frameworks. In this way, EUTIR not only supports the EU's internal governance but also enhances Europe's role as a **global standard-setter for trusted digital trade infrastructures**.

EUTIR creates **synergies across multiple flagship EU initiatives**, including the **Digital Product Passport (DPP)**, **electronic freight transport information (eFTI)**, and the **Carbon Border Adjustment Mechanism (CBAM)**. This non-exhaustive list also extends to instruments such as the **EU Deforestation Regulation (EUDR)**, the **Corporate Sustainability Due Diligence Directive (CSDDD)**, and the upcoming **Forced Labour Regulation**. It strengthens legal certainty, reduces costs for SMEs by automating compliance verification, and positions the EU as a frontrunner in **global digital trade governance** by linking the **Economic Operator Registration and Identification (EORI)** system with the globally recognised **Legal Entity Identifier (LEI)** and its secure digital counterpart, the **verifiable LEI (vLEI)**. Importantly, EUTIR should be scoped in close alignment with the ongoing **EU Customs Code reform** and its planned **Customs Data Hub**, ensuring that both authorities and economic operators benefit from seamless and fully digital data exchange. By relying on existing trusted infrastructures, including qualified trust services under **eIDAS 2.0**, EUTIR ensures **technical feasibility** while enhancing **digital sovereignty**.

The governance model follows a **hybrid approach**: decentralised infrastructure nodes (e.g. the **European Blockchain Services Infrastructure, EBSI**) combined with centralised supervision led by the **European Securities and Markets Authority (ESMA)** and the competent national authorities. This balance ensures both resilience and legal consistency. EUTIR's architecture is designed for integration with **Artificial Intelligence (AI)** and **Machine Learning (ML)**, supporting real-time risk assessment and proactive interventions to combat fraud and non-compliance.

EUTIR is more than a regulatory tool—it is an **enabling infrastructure** for cross-border trade, sustainability, and competitiveness. Its successful implementation will:

1. Reduce **administrative burden** and duplication, especially for **SMEs**;
2. Provide **legal certainty**, including clearer **liability allocation** across the logistics chain, and strengthen **consumer trust**;
3. Support the **circular economy** by linking compliance and sustainability data;
4. Enable **interoperability** with international trade and financial systems;
5. Position the EU as a **global standard-setter** for **digital trade**;
6. Build the foundation of a **trusted** and **resilient digital economy**, strengthening Europe's global competitiveness.

 Looking ahead, the European Trade Indexes Registry (EUTIR) may be further developed into a broader **European Trusted Infrastructure for Registries**, while retaining the same acronym (EUTIR). Such an evolution would allow the Registry to go beyond trade indexes and serve as a common backbone for multiple trusted registries across the Union — including certificates, permits, sustainability data, agricultural policy instruments, and other sectoral frameworks. Considering this option in the future would ensure that the EU maintains a flexible and scalable infrastructure that can seamlessly integrate with the **Digital Business Wallet** and reinforce strategic initiatives such as the DPP, eFTI, CBAM, and the CAP.

1. EU Strategic Digital Models for Trade, Logistics and Sustainability

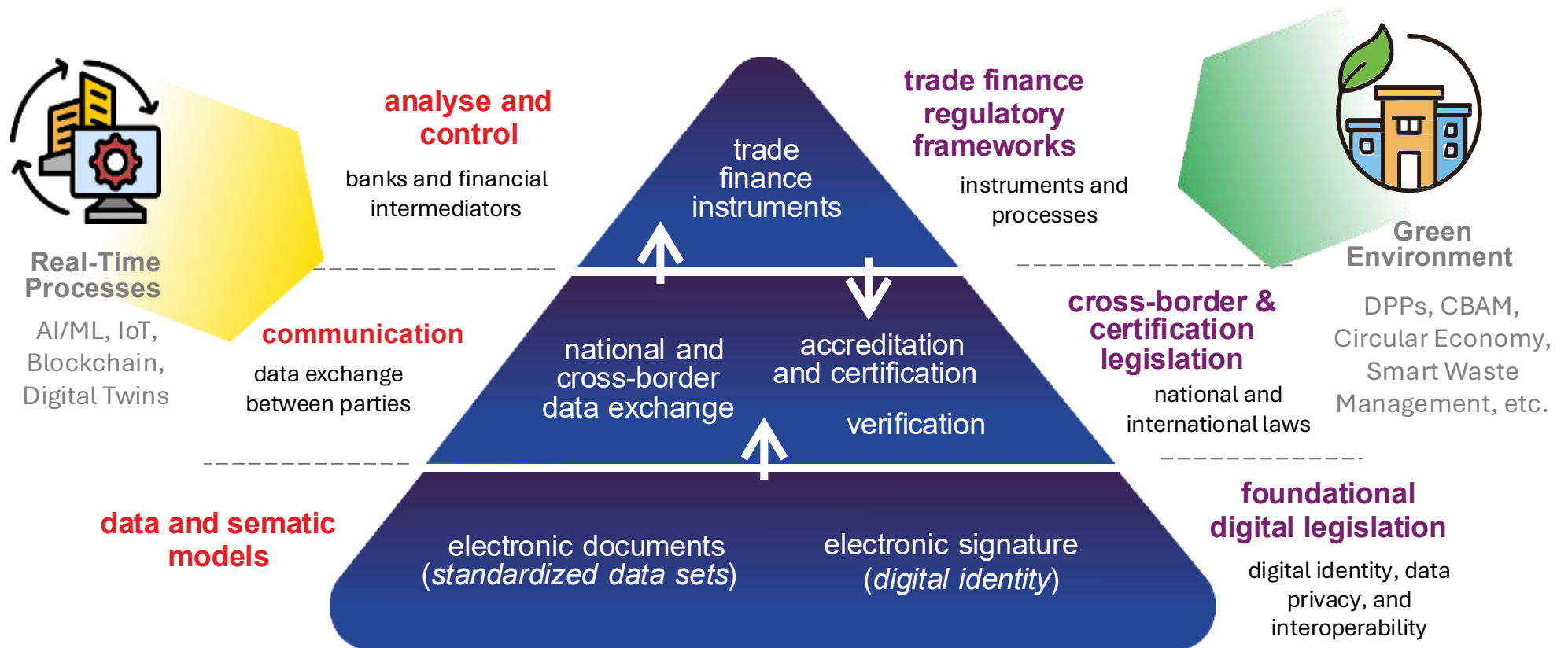


Figure 1. This visual model bridges the European Commission's strategic objectives with the proposed regulatory and operational solutions, illustrating how digital requirements and compliance mechanisms can be implemented in a technologically neutral and future-proof manner. Companies remain free to select and reuse their preferred IT solutions, ensuring flexibility and innovation. The diagram was prepared by Riho Vedler on behalf of the DigitalTrade4.EU consortium (icons by Flaticon).

2. Strategic Alignment: EUTIR Framework and Future EU Legislation

2.1. EUTIR as a Solution for the Revision of the New Legislative Framework (NLF)

The ongoing review of the NLF is a **critical opportunity** to update EU product legislation in light of new challenges related to **digitalisation**, the **circular economy**, and **sustainability**. The Commission's 2022 evaluation highlighted the need to adapt the framework to new realities, identifying shortcomings in fragmented digital integration, underutilised circular economy potential, and insufficient consumer awareness of product compliance signals. **EUTIR** has been proposed as a solution that acts as a **"trust anchor"** for trade-related data verification, providing the missing **technical and administrative layer** that enables the NLF revision to fully embrace digitalisation while avoiding fragmentation.

The system's value lies in its ability to **synergistically support** other major EU initiatives, such as the **Digital Product Passport (DPP)** under the **Ecodesign for Sustainable Products Regulation (ESPR)** – Regulation (EU) 2024/1781, **electronic Freight Transport Information (eFTI)** – Regulation (EU) 2020/1056, and the **Carbon Border Adjustment Mechanism (CBAM)** – Regulation (EU) 2023/956 registries. The EUTIR proposal supports the NLF objectives of **harmonisation**, reduction of **regulatory burdens**, digital integration, enhanced **market surveillance**, and the integration of **circular economy** and **sustainability principles**. The table below illustrates EUTIR's contribution to the objectives of the NLF revision.

Table 1: EUTIR contribution to NLF revision objectives

#	NLF Revision Objectives	EUTIR Contributions	Shared Interest / Added Value
1	Harmonisation of EU product legislation	Provides a single, trusted registry for trade-related datasets (DPP, eFTI, CBAM, permits)	Avoids fragmentation across Member States; ensures consistency of compliance verification

2	Reduction of regulatory burdens, especially for SMEs	Automates verification through metadata and machine-readable identifiers (LEI/vLEI, EORI)	Cuts administrative costs, reduces duplication of filings, supports SME participation in cross-border trade
3	Digital integration (e.g. Digital Product Passport)	Anchors and verifies product lifecycle and compliance datasets in real time	Ensures that DPP and other product data are authentic, traceable, and interoperable
4	Strengthened market surveillance and consumer trust	Grants Competent Authorities direct access to verification services	Improves legal certainty, increases consumer confidence, enables faster detection of non-compliance
5	Circular economy and sustainability objectives	Links ESG/CE compliance datasets with traceability mechanisms	Guarantees that refurbished, remanufactured, and sustainable products remain compliant and transparent
6	Future-proof regulatory framework	Built on interoperable, decentralised, and AI/ML-ready architecture	Provides resilience, innovation capacity, and long-term adaptability for the Single Market

2.2. “Trust Anchor” in Digital Trade: Strategic Value and Global Leadership

EUTIR’s strategic value stems from its role as a **“trust anchor”** for **economic operators**, **service providers**, and **competent authorities**. The registry ensures that all registered datasets—whether related to freight, product lifecycle, sustainability, or licences—are **authentic**, **traceable**, and **machine-readable**. This is achieved by building a system that does not store complete documents but only the **metadata necessary for verification**, such as cryptographic hashes, timestamps, and unique identifiers.

EUTIR’s distinctive feature is the **dual identifier model**, combining the EU-specific **Economic Operators Registration and Identification (EORI)** number with the globally recognised **Legal Entity Identifier (LEI)** and **verifiable LEI (vLEI)**. This approach, adopted from the **Markets in Financial Instruments Regulation (MiFIR)**, enables seamless **interoperability** with international **trade** and **financial networks**. It is not just a technical choice but a **strategic step**

to ensure **digital sovereignty**. By relying on a globally recognised system (LEI/vLEI), the EU avoids the need to create a new, separate global identification framework, while maintaining control over its internal market through the EORI number. This balanced approach positions the EU as a **leader in global digital trade**, promoting interoperability without compromising regulatory integrity. In addition, EUTIR's architecture is designed to support **artificial intelligence** and **machine learning** tools, creating a structured data environment essential for **data-driven risk assessment** and **trade facilitation**, thus providing the EU with a **competitive edge** globally.

The EUTIR framework reflects the Pull-Based Data Model as described in UN/CEFACT's paper *Globally Unique Identifiers in Supply Chains*¹. Instead of exchanging full documents, only identifiers and metadata are shared, while authorized parties may securely pull the precise data they need through EUTIR. This enforces the "Need-to-know" and "Minimum Privilege" security principles, ensures immutability and traceability, promotes ESG transparency, prevents fraud, and supports SME inclusion.

2.3. Exclusive Control as a Foundational Principle

One of the foundational principles of the EUTIR is the recognition and enforcement of **exclusive control** over Metadata Records, which acts as a bridge between functional requirements and international legal alignment. Exclusive control means that at any given time, only one identified party holds the full right to exercise the entitlements associated with a Metadata Record, to prevent others from exercising such rights, and to lawfully transfer them to another party. This ensures that electronic records function in a manner comparable to traditional paper-based documents, while exceeding them in traceability and security.

From a legal perspective, this principle guarantees that digital trade documents managed within the EUTIR carry the same evidentiary value as their paper equivalents. The transfer of exclusive control is critical in commercial and financial transactions: it ensures that records are transferable and can be reliably used as collateral, in financing arrangements, or in risk management practices. In this way, **small and medium-sized enterprises (SMEs)** benefit from

¹ <https://unece.org/trade/documents/2025/06/standards/white-paper-globally-unique-identifiers-supply-chains>

enhanced access to finance, as banks and insurers may rely on EUTIR-verified records with the same confidence as they do with traditional documents.

From a technical perspective, Certified Service Providers (CSPs) are required to implement reliable and verifiable mechanisms to demonstrate the existence and transfer of control. Such mechanisms must remain **technologically neutral** and support **international interoperability**. This may include cryptographic linkages, status changes, or unique identifiers (e.g. LEI/vLEI), which enable the system to track at all times who the lawful controller of a record is.

From an international perspective, the principle of exclusive control creates common ground with other jurisdictions that regulate possession and transfer of rights in electronic documents. While the EUTIR does not replicate the legal framework of any third country, it reflects **international best practices** to ensure that records can be recognised and relied upon in cross-border transactions. This lays the foundation for future **Mutual Recognition Agreements (MRAs)**, which are necessary for achieving global legal certainty and trusted data exchange.

2.4. Institutional Coherence and Governance

The EUTIR proposal foresees coordinated efforts among several **Commission Directorates-General (DGs)** to ensure **policy coherence** and **technical interoperability**. Project governance should be led by **DG FISMA** (financial stability, financial services, and Capital Markets Union), **DG TRADE**, and **DG TAXUD**, ensuring synergies between the NLF revision, the ongoing Customs Code reform (including the planned Customs Data Hub), and MiFIR.

The governance model is built on the **EBSI infrastructure**, using **Distributed Ledger Technology (DLT)** to guarantee the **immutability** of document metadata. This hybrid model combines a **decentralised technological backbone**, managed by **accredited service providers (CSPs)**, with **centralised supervision** and control exercised by **EU bodies (e.g., ESMA)** and **national accreditation authorities**. However, this creates a tension between **centralised oversight** and the **resilience** inherent in a decentralised network. While central supervision ensures **legal consistency**, it may also potentially undermine **DLT advantages**, such as **censorship resistance** and resilience. This contradiction is a critical aspect the Commission must manage clearly in the long term.

3. In-Depth Evaluation of EUTIR's Operational Backbone

3.1. Accreditation and Certification Framework (Annex II): Critical Review

Annex II outlines a comprehensive framework for the **accreditation** and **certification** of EUTIR-certified **service providers (CSPs)**, which is critical to the operational integrity of the system.

Table 2: Functional rights by participant role

ID	Participant Role	Authorised Actions	Restrictions
1	Certified Service Provider (CSP)	Creation and amendment of new Metadata Records within their authorised scope (e.g., trade, transport, product, insurance, customs). All CSP actions are logged in immutable audit trails.	Limited strictly to the domains for which the CSP is accredited and certified. Cannot impose or alter statuses beyond their scope of authorisation.
2	Competent Authority (CSP with extended rights)	Status change of Metadata Records (e.g., flagged, locked, released, cancelled). Cannot change the content of the underlying Data Set or Electronic Document, only its status.	Powers derive exclusively from Union or national legislation applicable to the authority's domain. No right to amend substantive business data.
3	Financial Institution (CSP with extended rights)	Creation and amendment of financial and payment-related Metadata Records under obligations linked to AML/CTF legislation. These entries must be linked to parent trade Metadata Records and verified through EUTIR.	Restricted to financial and payment-related metadata. No authority to alter trade, transport, or product Metadata Records.

3.1.1. Strengths and Legal Foundations

One of the framework's main strengths is the **mutual recognition** of accreditation decisions issued by a **Member State accreditation body** in line with **Regulation (EC) No 765/2008**. This ensures that CSPs accredited in one Member State can operate across the Union without additional national requirements, thereby addressing **single market fragmentation**. The framework also mandates that all CSPs are uniquely identified with a valid **LEI or vLEI**, and an **EORI number** within the EU, guaranteeing **global identity assurance** and **interoperability** with international trade systems. Furthermore, the framework requires all CSPs to use **qualified trust services** under the **eIDAS 2.0 Regulation (EU) 2024/1183**, ensuring **data authenticity** and **non-repudiation**. Importantly, **ESMA** is tasked with maintaining and publishing the **public registry** of all CSPs linked to EUTIR. This registry is **machine-readable** and interoperable with other EU registries, which is critical for **real-time verification** and **trust**.

3.1.2. Gaps and Considerations for Legal Integrity

While Annex II provides a strong accreditation framework, certain **gaps** require clarification. The framework distinguishes three roles (**Certified Service Provider**, **competent authority**, **financial institution**), but the technical implementation of their differentiated rights is delegated to Annex III. This raises the question of whether this separation provides sufficient **legal clarity** to avoid overlaps or gaps in authority, particularly since **competent authorities** hold specific rights such as **data Metadata Record locking**. Although **ESMA** is designated as the **supervisory body**, its precise mandate across multiple domains within EUTIR should be defined more clearly to avoid duplication of oversight responsibilities with other **supervisory authorities**.

3.2. Data Submission and Lifecycle Rules (Annex III): Functional Analysis

Annex III sets out the core principles of EUTIR's **data Metadata Record lifecycle** and **management**, which is a key strength in meeting **authenticity** and **traceability** requirements.

3.2.1. Immutable and Auditable Lifecycle Model

The core of the system is the **immutable** and **auditable** data lifecycle model. Annex III clearly stipulates that “**no data Metadata Record may be deleted or overwritten.**” Instead, all Metadata Records remain in the registry, linked chronologically, with each new version or amendment including the **cryptographic hash** of the relevant document or dataset. This creates an **unbroken audit trail** essential for **trust** and **accountability**. The model represents a major step forward by shifting the focus of **legal validity** from **paper documents**, which can be manipulated, to **immutable, verifiable data Metadata Records**. However, legal certainty must also include a clear allocation of liability, especially in cases where actors later in the value chain possess more accurate or updated information. In such cases, responsibility for corrections and their legal effects must be explicitly defined. Based on this model, the **EUTIR registry** itself becomes the **legal proof** of **authenticity** and **validity**.

Table 3: EUTIR data Metadata Record lifecycle statuses and legal implications

Id	Status	Definition	Legal Effect
1	active (submitted)	Status assigned when a new record is created for a new document or initial data set.	The record is legally valid and has full effect until it is amended, terminated, cancelled, or expired.
2	superseded	Status assigned to a record when a new version has been registered referencing it.	The record remains preserved for audit and traceability but no longer has legal validity. Only the most recent version is legally valid.
3	transferred (controlled)	A status indicating that exclusive control over a Metadata Record has been lawfully transferred to a new party. This status confirms that the transfer is completed and that the record is now associated with the new controller.	Upon application of this status, the previous holder permanently loses all rights associated with the Metadata Record. The new controller obtains exclusive and enforceable rights to the record, with the same legal certainty as if the record had been originally issued to them.
4	flagged	Status applied when a record is marked for irregularities, pending review by a Competent Authority.	The record remains legally valid but is subject to regulatory review. Its use may be restricted depending on applicable Union or national law.
5	locked	Status imposed by a Competent Authority to prevent further amendments or supplements.	No new linked records may be created until the lock is released. The locked record itself remains preserved in its prior state.

6	released	Status update applied by a Competent Authority lifting a previous lock or flag.	The record regains the status it held before being locked or flagged (typically active), unless it has since been superseded, terminated, or cancelled.
7	cancelled	Status applied when a record is invalidated due to error, withdrawal, or regulatory order before it takes legal effect.	The record remains preserved for audit but has no legal validity.
8	terminated	Status applied when the underlying legal or contractual process has concluded (e.g., contract ended, shipment completed).	The record ceases to have legal effect from the time of termination, but remains preserved in EUTIR.
9	expired	Status automatically applied when a predefined validity period lapses.	The record ceases to have legal effect after the expiry time but remains preserved for audit purposes.

3.2.2. Functional Rights and Implementation Adequacy

Annexes III and II operate together to define specific **functional rights** for each participant role (**CSP, competent authority, financial institution**). Only **competent authorities** may **lock** or **flag** data Metadata Records, while **financial institutions** may create and modify **metadata** related to financial transactions. This strict **rights system** is crucial for **security** and **governance**, preventing **unauthorised manipulation**. The model is **flexible** enough to accommodate diverse actors and transactions, but its implementation details depend on **sector-specific delegated acts**, which must ensure alignment with core principles.

4. From Theory to Practice: Implementing the EUTIR Framework

4.1. Model Validation Through Use Cases (Annex V)

The use cases presented in Annex V provide practical examples of how the rules described in Annexes II and III operate in real life. The analysis shows that these cases demonstrate the functionality and resilience of the EUTIR conceptual framework.

- **Supply chain and finance integrity:** Use Case 4 (shipment custody chain) and Use Case 5 (financial amendment) illustrate how EUTIR's **immutable Metadata Record chain** maintains the **custody of goods** even when carriers or owner change in transit. The model allows a **financial institution** to add a **verifiable financial reference** to a shipment Metadata Record, preventing **multiple pledges** of the same document.
- **Real-time data-driven supervision:** Use Case 6 shows how a **customs authority** can change a Metadata Record status to **"flagged"** or **"locked"** to prevent further modification until an investigation is completed. This marks a shift from **reactive paper-based checks** to **proactive, data-driven interventions**, significantly strengthening **market surveillance** and reducing **fraud risks**.
- **Multiple applications and document tree:** Use Case 9 (AML investigation) shows how EUTIR can also function as an **anti-money laundering tool**, demonstrating its **broader applicability** beyond trade. Use Case 10 illustrates the **"document tree" model**, where a base document (e.g., bill of lading) can be linked with related Metadata Records (e.g., customs declaration) without affecting the validity of the base document, ensuring **traceability** and **validity** across the chain.

These use cases are **illustrative examples**: the data fields, identifiers, and statuses shown are not exhaustive or prescriptive, but are included to demonstrate the flexibility of Metadata Records, versioning, and parent–child relationships. Their primary purpose is to showcase the potential of managing a **decentralised technical infrastructure** through the EUTIR environment in a transparent and auditable way across the Union.

4.2. Interoperability and AI/ML Integration

EUTIR is not intended to replace other registries (**CBAM**, **DPP**, **eFTI**) but to act as an **index layer** that provides a single **trusted point** for **data verification**. This **federated approach** supports **interoperability** without centralising all data. Moreover, EUTIR's framework is designed for integration with **artificial intelligence (AI)** and **machine learning (ML)**, which are critical for **risk assessment** and **fraud detection**. Annex III establishes strict rules requiring compliance with the **AI Act** and **GDPR**, ensuring that automated data use does not undermine **privacy** or **regulatory integrity**. **AI systems** may only process **machine-readable metadata**, not full documents or personal data.

4.3. Global Dimension: International Nodes and Mutual Recognition Agreements (MRAs)

The EUTIR proposal also addresses the **international dimension**, which is essential for the system's **long-term success**. Annex II sets out the framework for **Mutual Recognition Agreements (MRAs)**², providing the **legal** and **technical basis** for connecting **third-country registries** to the **EUTIR network**. This approach aligns with broader EU initiatives such as **Global Gateway** and the **Digital Economy Partnership Agreement (DEPA)**³, which aim to extend **EU digital norms** and **influence globally**.

Table 4: EUTIR use cases and their regulatory connections

Use Case	Description	Link to Regulatory Rules
Use Case 1	New version, where the old hash is superseded by a new one.	Aligns with the amendment rules in Annex III, Section 4, which ensure that only the most recent Metadata Record is valid.
Use Case 4	Tracking the chain of custody of a shipment between carriers.	Illustrates the Metadata Record chain principle from Annex III, ensuring that each change in the chain of custody corresponds to a new, immutable Metadata Record .

² European Commission. Mutual Recognition Agreements
https://single-market-economy.ec.europa.eu/single-market/goods/international-aspects/mutual-recognition-agreements_en

³ Digital Economy Partnership Agreement (DEPA)
<https://www.mti.gov.sg/Trade/Digital-Economy-Agreements/The-Digital-Economy-Partnership-Agreement>

Use Case 5	Financial amendment added to an eBL by a financial institution.	Implements the functional rights model of Annexes II and III, which grants financial institutions the authority to add financial Metadata Records .
Use Case 6	A customs officer flagging and locking a Metadata Record .	Establishes the rules for flagging and locking in Annex III, Section 5, giving Competent Authorities the right to real-time intervention.
Use Case 9	AML suspicion and investigation.	Shows how the role models and rules in Annexes II and III allow a financial institution to identify and flag data in case of AML suspicion, notifying the Competent Authorities.
Use Case 10	Linking a T-document to a Consignment Note.	Proves the “document tree” concept, where supplementary documents are linked to a base Metadata Record without affecting the base document’s validity.
Use Case 11	Submission of a Digital Product Passport (DPP) with lifecycle, sustainability, and repairability data.	Aligns with ESPR Regulation (EU) 2024/1781 and Annex IV CTS rules (JSON-LD/RDF + XBRL), ensuring semantic interoperability and extended retention (10–15 years).
Use Case 12	Submission of a CBAM report with embedded CO ₂ emissions data, verified by an accredited body.	Aligns with CBAM Regulation (EU) 2023/956 and Annex IV CTS rules (XBRL + liabilityReference), ensuring traceable verification and audit retention of 84 months.

5. Conclusions and Recommendations

5.1. Overall Assessment of Framework Integrity

In conclusion, the **EUTIR framework**—particularly its **operational backbone** in Annexes II and III—is notably **comprehensive, coherent, and legally robust**. The proposal sets out a clear model for **immutable data lifecycles** and strictly defined **functional rights**, which are critical for building **trust** and **accountability**. The **technical approach**, based on **cryptographic hashing** and **Distributed Ledger Technology (DLT)**, together with the **legal framework** granting the **registry itself evidentiary value**, creates an **innovative and reliable system**. The framework succeeds in establishing a **horizontal, digital trust layer** that enables **proactive real-time supervision** and facilitates **cross-border trade** by linking **physical goods** with **digital data**. **5.2a Cybersecurity as a Horizontal Principle**

5.2. Policy Recommendations for the Commission

- **Clarify governance:** While the model is hybrid, the division of authority between **centralised supervision (ESMA)** and **decentralised EBSI nodes** must be defined more clearly. An official **governance structure** with explicit mandates is recommended to prevent **overlaps** and **gaps**.
- **Strengthen legal mandate:** Competent authorities' rights to **lock Metadata Records** should be explicitly linked to relevant **EU legislation**, ensuring **legal certainty** and **due process** for economic operators.
- **Standardise technical requirements:** Although the proposal references **international standards** (e.g., **ISO, WCO**), the Commission should issue more detailed **implementing acts** to ensure **technical interoperability** and a consistent **user experience** across CSPs.

5.3. Cybersecurity as a Horizontal Principle

The IISD report *Cybersecurity and International Trade Policy* (August 2025)⁴ stresses that **strong cybersecurity** is now a **prerequisite for resilient global trade**. **Weaknesses in one jurisdiction** undermine the integrity of entire supply chains. The EUTIR framework is **designed to integrate** key safeguards—immutability of records, qualified trust services under eIDAS 2.0, NIS2 compliance, and a strict accreditation framework—that directly address these risks. Making **cybersecurity** an explicit **horizontal principle** within EUTIR would strengthen **legal certainty** and demonstrate that EU measures are **proportionate and WTO-compatible**.

Linking the EUTIR **certification framework** with **international standards** (ISO/IEC 27001, Common Criteria) and **mutual recognition agreements** would enhance **global interoperability**. In addition, **international nodes** could become channels for **capacity-building in partner countries**, helping to close **cybersecurity gaps** highlighted in the IISD analysis. Embedding **cybersecurity** visibly into the **EUTIR proposal** would reinforce **institutional coherence**, enable **AI-driven risk monitoring**, and strengthen the EU's position as a **global benchmark for secure digital trade infrastructures**.

5.4. Long-Term Perspective

EUTIR is not a standalone project but a **strategic preventive measure**. Its successful implementation is critical to supporting the EU's **green and digital transition**, providing the foundation for **sustainable, AI-enabled supply chains**. In addition, its **MRA framework** and alignment with **global identification systems (LEI/vLEI)**, as well as its potential for “**dual-use applications**”, position the EU as a **global leader** in creating **transparent, interoperable**, and **innovation-friendly** digital trade ecosystems.

Recommendations, strategic implementation and further development of EUTIR:

1. **Implement Specific Measures for SMEs:** While the EUTIR project mentions reducing the regulatory burden on SMEs, these measures should be clearly highlighted and implemented. In the coming years, **support programmes** for SMEs should be established to help them adapt to new digital requirements, including training on

⁴ Mishra, N. (2025, August). *Cybersecurity and International Trade: Understanding the policy landscape*. International Institute for Sustainable Development.

DPPs and **carbon accounting**. **Tiered compliance thresholds** could also be offered to avoid a disproportionate burden.

2. **Promote Global Interoperability:** For the EU to maintain its **leadership** in **digital trade**, the EUTIR framework should be integrated with global initiatives, such as the **UNECE recommendations** and the **eIDAS 2.0 framework**. Negotiations for **Mutual Recognition Agreements (MRAs)** with third countries and regional registries should be accelerated to ensure seamless **cross-border data exchange**. By embedding pull based models, it is ensured only necessary data is shared, improving efficiency and enabling trusted and compliance data exchange.
3. **Clarify the Technical and Legal Framework:** Although the fundamental principles of EUTIR are strong, it is essential to clarify its **technical** and **legal aspects**. The Commission should issue **implementing acts** that provide more detailed guidance on **technical interoperability** and **data submission standards**. This would prevent **fragmentation** among Member States and ensure that **AI and ML systems** can reliably use EUTIR data in compliance with the **General Data Protection Regulation (GDPR)**.
4. **Integrate Financial and Sustainability Data:** EUTIR offers a unique opportunity to connect **trade** and **financial data**. Rules for adding **financial data** (e.g., guarantees) and **ESG/CE compliance data** (e.g., DPPs) to data-derived Metadata Records should be further developed. This would strengthen **trust** among **financial institutions** and enable new financing models that offer lower interest rates to companies using **sustainable supply chains**.
5. **Strengthen Institutional Coordination:** The successful implementation of EUTIR depends on close cooperation among **DG FISMA**, **DG TRADE**, and other relevant **Directorates-General**. A permanent **inter-institutional task force** should be established to ensure the project's **coherence** and **alignment** with all EU policy areas, including **financial stability**, **consumer protection**, and **environmental goals**.

5.4. Key reasons for establishing EUTIR

EUTIR is a strategic enabler for Europe's future competitiveness, sustainability, and security. By providing a trusted, decentralised verification environment, it accelerates trade,

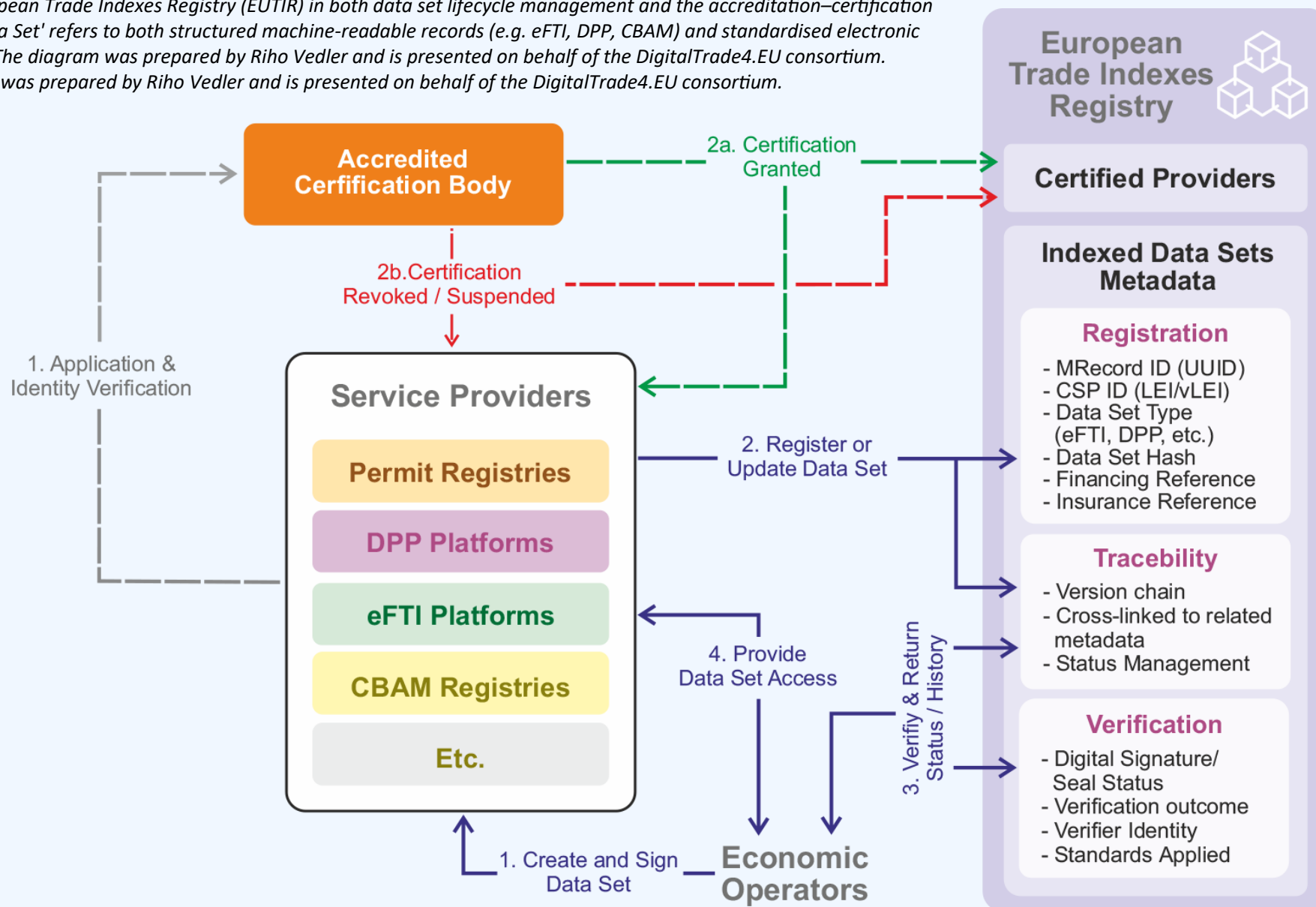
strengthens resilience, and supports the EU's green and digital ambitions. Its adoption would not only modernise cross-border processes but also position Europe as a global leader in transparent, ML/AI-ready trade ecosystems.

1. **Global Unique Identification:** International trade involves vast flows of data across multiple stakeholders, systems, and jurisdictions. Without globally unique identifiers, there is a high risk of duplication, misassociation, and fraud.
2. **Interoperability Across Platforms:** Modern trade relies on multiple specialised registries and platforms (eFTI, DPP, CBAM, permit registries). EUTIR functions as the **index layer**, enabling automated cross-referencing between systems without requiring manual reconciliation.
3. **Traceability & Accountability:** EUTIR maintains a full custody chain, showing the entire lifecycle of a document or shipment, including transfers between different Certified Providers, enabling transparent compliance checks.
4. **Single Source of Truth:** By acting as the authoritative reference, EUTIR ensures that both authorities and market actors can confirm that the information they use is the latest, valid, and authentic version. At the same time, in cross-border contexts, incidents occurring outside the Union are governed by the applicable legislation of the jurisdiction concerned (e.g., Japan), interpreted in light of relevant international conventions and established practices. EUTIR therefore provides a harmonised audit trail that supports recognition across jurisdictions, while respecting the primacy of local law.
5. **Support for Digital Trust Infrastructure:** Full interoperability with **Global Legal Entity Identifier Foundation (GLEIF) LEI/vLEI** framework and EBSI-based DLT creates a trust environment that extends beyond the EU, enabling recognition and interoperability in global supply chains and finance networks.

Now is the time to integrate EUTIR into the EU's digital policy framework and make it a cornerstone of the Single Market's next evolution.

Annex I. EUTIR Environment: Data Set Lifecycle and Accreditation–Certification Flow

Figure 2. This diagram illustrates the interaction between Economic Operators, Service Providers, Accredited Certification Bodies, and the European Trade Indexes Registry (EUTIR) in both data set lifecycle management and the accreditation–certification process. 'Data Set' refers to both structured machine-readable records (e.g. eFTI, DPP, CBAM) and standardised electronic documents. The diagram was prepared by Riho Vedler and is presented on behalf of the DigitalTrade4.EU consortium. The diagram was prepared by Riho Vedler and is presented on behalf of the DigitalTrade4.EU consortium.



Annex II. Accreditation and Certification Framework for Service Providers



1. Definitions

1.1. Core Registry Concepts & Processes

- a) **“European Union Trade Index Registry (EUTIR)”** means the Union-wide digital infrastructure based on a distributed ledger technology (DLT) network, created for the secure submission, indexing, verification, and retrieval of trade-related Metadata Records. EUTIR is operated by Certified Service Providers (CSPs) and authorised stakeholders through national nodes, ensuring interoperability with other Union digital systems.
- b) **“Node”** means a technical instance participating in the EUTIR distributed ledger infrastructure, maintaining a synchronised copy of the registry and executing validation and consensus functions in accordance with Union interoperability and security standards. Nodes may be operated by Member States, Certified Service Providers (CSPs), or, subject to international agreements, third countries (“international nodes”).
- c) **“Metadata”** means structured descriptive information associated with an Electronic Document or Data Set, including unique identifiers, cryptographic hashes, timestamps, status fields, and references (e.g., financing or insurance links). Metadata enables verification of authenticity, integrity, and traceability across platforms and jurisdictions, while avoiding the storage of full document contents in EUTIR.
- d) **“Metadata Record (Record)”** means the registered unit of information in the EUTIR. A Metadata Record represents the authoritative and legally valid reference to an Electronic Document or Data Set, consisting solely of metadata elements (hash, timestamp, identifiers, status). Each Metadata Record is immutable, auditable, and preserved for at least the same legal retention period as its associated Electronic Document or Data Set. Metadata Records constitute legal

proof of authenticity and validity, while never storing the full content of the underlying document.

- e) **“Record Relationship”** means the structural link between Metadata Records, covering both versioning (supersede relationships) and parent–child relationships. The detailed rules and categories (including dependent and independent inheritance, recursive descendant chains, and applicability to version sequences) are defined in the **Common Technical Specifications (CTS)**.
- f) **“Submission”** means the act of transmitting metadata into EUTIR by a Certified Service Provider (CSP).
- g) **“Control”** means the exclusive ability of a person or entity to exercise rights associated with a Metadata Record, including the ability to prevent others from exercising such rights and to transfer those rights lawfully to another party. Control shall be demonstrated through reliable and verifiable technical means, ensuring technological neutrality and international interoperability.
- h) **“Verification”** means the process of confirming, through the EUTIR, that an **Electronic Document or Data Set** corresponds to its registered Metadata Record and meets the applicable requirements of Union or national legislation. Verification establishes that the Electronic Document or Data Set is authentic, intact, and legally valid. Detailed rules for verification services are set out in **Chapter 16** of this Annex.

1.2. Documents and Data

- a) **“Electronic Document (eDocument)”** means any digital file or dataset, including but not limited to trade, transport, customs, financial, environmental, or compliance documents, created, transmitted, or stored in electronic form. Electronic Documents may exist in both structured formats (e.g., XML, JSON, XBRL) and unstructured formats (e.g., PDF). **For the purposes of EUTIR, full Electronic Documents are not stored in the registry; only their metadata is referenced.**
- b) **“Data Set”** means a structured, machine-readable electronic document consisting of standardised fields and formats, in line with Union or international data

exchange standards (e.g., ISO 20022, WCO Data Model, UN/CEFACT Core Components). Where Union sectoral legislation requires the use of structured electronic records, such documents shall be treated as Data Sets and may serve as the basis for creating Metadata Records in EUTIR.

- c) **“Cryptographic Hash (Hash)”** means a unique, fixed-length value generated by a cryptographic hash function representing the content of a digital document or dataset. Any alteration of the original content results in a different hash, ensuring integrity and enabling traceability without storing the full content in EUTIR.

1.3. Actors and Roles

- a) **“Certified Service Provider (CSP)”** means an entity accredited in accordance with Union or national law to perform technical functions in EUTIR, including the secure submission, creation, and validation of Metadata Records. A CSP acts solely in its certified technical role and does not assume liability for the legal, regulatory, or economic content of the underlying Electronic Document or Data Set. The responsibility for the correctness and legal validity of the content remains with the Economic Operator or the party creating the document.
- b) **“Actor”** means any entity authorised to interact with the EUTIR registry under this Regulation, including but not limited to Certified Service Providers (CSPs), Competent Authorities, Financial Institutions, and Economic Operators, each within the scope of their designated roles.
- c) **“Economic Operator”** means any natural or legal person who, in the course of business, is required under Union law to submit, maintain, or rely on records linked to compliance, customs, trade, sustainability, or product-related obligations within the EUTIR framework. This includes, where applicable, manufacturers, importers, exporters, distributors, freight forwarders, and other supply chain participants, but excludes Certified Service Providers acting solely in their technical role.
- d) **“Financial Institution”** means a credit institution, payment service provider, insurance undertaking, investment firm, or other entity authorised under Union or

national law to provide financial services, including banking, payments, guarantees, collateral, insurance, and supply chain finance. Financial Institutions under EUTIR are subject to regulatory supervision by competent financial or supervisory authorities.

- e) **“Parties”** means all actors interacting with EUTIR in relation to a transaction or record, including Economic Operators, Certified Service Providers (CSPs), Financial Institutions, and Competent Authorities, each within the scope of their designated roles.
- f) **“Competent Authority”** means an authority or body designated by a Member State, or by Union law, to exercise regulatory, supervisory, or enforcement functions in relation to EUTIR. Competent Authorities may include, depending on their mandate:
 - i. logistics and transport authorities, including customs, border, and transport administrations;
 - ii. environmental and climate authorities, including bodies supervising the Carbon Border Adjustment Mechanism (CBAM), carbon registries, and sustainability regulators;
 - iii. financial and tax authorities, including VAT authorities, payment supervision authorities, and financial market regulators.

Each Competent Authority shall exercise oversight only within its designated legal mandate.

1.4. Identifiers and Trust

- a) **“Legal Entity Identifier (LEI)”** means a 20-character alphanumeric code compliant with ISO 17442, ensuring the clear and unique identification of legal entities engaged in financial transactions and other official interactions. The LEI connects to key reference data enabling interoperability across jurisdictions. The Global Legal Entity Identifier Foundation (GLEIF) oversees the governance and operational framework of the LEI system.

- b) **“Verifiable Legal Entity Identifier (vLEI)”** means, in accordance with ISO 17442-3, digitally trustworthy version of the 20-digit LEI code which is automatically verified, without the need for human intervention and interoperable with Regulation (EU) 2024/1183 (eIDAS 2.0), enabling secure and automated identification and authorisation of legal entities.

2. Accreditation Bodies

- 2.1. Accreditation bodies shall be designated by the Member States in accordance with Regulation (EC) No 765/2008 and shall operate in full independence and impartiality.
- 2.2. Accreditation bodies shall be responsible for the accreditation of Certified Service Providers (CSPs) within the EUTIR framework, in accordance with applicable Union legislation and internationally recognised standards.
- 2.3. Accreditation decisions issued by a national accreditation body shall be **mutually recognised across all Member States**, ensuring that CSPs accredited in one Member State may operate Union-wide without additional national requirements.
- 2.4. Accreditation bodies may delegate testing and technical evaluation to accredited Conformity Assessment Bodies (CABs) in line with ISO/IEC 17065, ensuring consistency with established Union conformity assessment practices.
- 2.5. Accreditation bodies shall maintain appropriate technical competence, resources, and procedures to ensure the integrity and reliability of the accreditation process, including regular monitoring and reassessment of accredited entities.
- 2.6. Accreditation bodies shall cooperate at Union level, ensuring effective peer evaluation and preventing duplication of assessments, in order to promote uniform application of accreditation rules across all Member States.

3. Certified Service Providers: Requirements, Roles and Scope

- 3.1. **General requirements.** Only Certified Service Providers (CSPs) are authorised to perform submissions into EUTIR. Each CSP shall be uniquely identifiable via a valid **LEI** or **vLEI**, and, where applicable, an **EORI**. Certification shall be valid for **five years** and may be renewed following reassessment. Every submission shall include the CSP

identifier linked to its LEI/vLEI. Certification shall always include designation of the certified role (Certified Service Provider, Competent Authority, or Financial Institution), which determines the functional rights applicable under Annex III.

3.2. **Certification validity and scope.** Certification granted in one Member State shall be valid across all Member States without additional requirements. All CSPs must use **qualified trust services under eIDAS 2.0** (Regulation (EU) 2024/1183), ensuring authenticity, non-repudiation, and interoperability.

3.3. **Role model.** All certified organisations automatically hold the role of **Certified Service Provider (CSP)**. During certification, organisations may additionally be marked as:

- a) **Competent Authority**, if they are legally mandated to enforce compliance under Union or national legislation (limited to status-related updates such as flagged, locked, released).
- b) **Financial Institution**, if they hold a valid license or registration under Union or national financial supervision law (limited to financial and payment-related metadata).

These designations are recorded in the Union CSP Register and form part of the organisation's certification status in EUTIR.

3.4. **Scope limitation.** Certification under this Annex establishes the right of a Service Provider to act within the EUTIR framework under its designated role. The legal validity of submissions, as well as all processes of validation, verification, amendment, and termination, are governed exclusively by Annex III.

4. Technical and Organisational Requirements for CSPs

4.1. CSPs shall comply with the following requirements:

4.2. **Data integrity and security** – all submitted metadata must be complete, accurate, and protected against unauthorised access.

4.3. **GDPR and data protection** – personal data processing must comply with Regulation (EU) 2016/679.

- 4.4. **Cybersecurity** – CSPs must comply with the security requirements of the NIS2 Directive.
- 4.5. **Audit trail** – all activities in EUTIR must be logged; logs shall be immutable and accessible to competent authorities.
- 4.6. **Use of trust services** – CSPs must use qualified trust services in accordance with eIDAS 2.0 (Regulation (EU) 2024/1183).
- 4.7. **Standardised data sets** – all metadata submissions must comply with the Union’s standardised data set frameworks.
- 4.8. **Interoperability obligation** – all submissions shall be machine-readable and interoperable with Union digital infrastructures, including but not limited to:
- **Digital Product Passport (DPP)** (under ESPR),
 - **Carbon Border Adjustment Mechanism (CBAM)** (Regulation (EU) 2023/956),
 - **electronic Freight Transport Information (eFTI)** (Regulation (EU) 2020/1056),
 - **Union licensing and permitting registers** (e.g., F-Gas Regulation, chemicals, waste shipments),
 - **Union electronic invoicing and VAT reporting frameworks,**
 - **other Union-wide registries** relevant to trade, environment, and compliance as defined by delegated acts of the Commission.
- 4.9. **Compliance with data standards** – CSPs shall ensure that all submissions comply with the Data Submission Standard set out in Annex III and the detailed technical requirements defined in the Common Technical Specifications (CTS, Annex IV).

5. Certification Process

- 5.1. CSPs shall undergo independent assessment covering technical capacity, security measures, and compliance with Union law, including GDPR.
- 5.2. Certification shall be granted by the national accreditation body in cooperation with ESMA.
- 5.3. Certification shall be revoked if the CSP breaches the obligations set out in this Regulation.

6. Supervision and Reporting

- 6.1. ESMA shall act as the Union-level supervisory authority responsible for the accreditation, certification, and Union-wide register of Certified Service Providers (CSPs) under EUTIR. ESMA's mandate shall cover horizontal oversight of certification integrity, cybersecurity standards, and compliance with this Regulation.
- 6.2. Sector-specific supervision shall remain within the competence of the respective Union and national supervisory authorities. This includes, inter alia, the European Banking Authority (EBA) and national financial supervisors for financial services, the European Insurance and Occupational Pensions Authority (EIOPA) for insurance-related records, customs authorities and OLAF for customs and trade data, and competent environmental authorities for environmental and climate-related submissions.
- 6.3. Where sector-specific supervision falls under the competence of Commission Directorates-General, the respective Directorate-General shall retain supervisory responsibility in its domain. This includes, inter alia, DG MOVE for logistics and electronic Freight Transport Information (eFTI) service providers, DG GROW for Digital Product Passport (DPP) providers, DG TAXUD for customs and related trade processes, and DG CLIMA and DG ENV for climate- and environment-related records. In the case of licences and permits, which fall under diverse Union and national regimes, the competent licensing authority shall retain full responsibility for the legal validity and enforcement of such records.
- 6.4. Each Commission Directorate-General responsible for sectoral legislation integrated into EUTIR shall designate a specialised supervisory unit. These units shall coordinate with ESMA and participate in the Joint Supervisory Coordination Platform. Their role shall be to ensure that sector-specific records and licensing regimes (including eFTI, Digital Product Passports, customs and environmental declarations, and permits) are properly integrated into EUTIR, without duplicating the certification and accreditation functions assigned to ESMA.
- 6.5. In order to avoid duplication of competences, ESMA shall establish and coordinate a **Joint Supervisory Coordination Platform**, bringing together the relevant Union

agencies, Commission Directorates-General, and national competent authorities. The Platform shall ensure coherent supervision across all domains of EUTIR, promote mutual recognition of supervisory actions, and facilitate the exchange of incident reports. The Joint Supervisory Coordination Platform shall operate as a permanent inter-institutional working group, ensuring consistency of EUTIR implementation across all Union policy domains, including financial stability, trade, consumer protection, and environmental objectives.

6.6. Accreditation bodies shall submit annual reports to the Commission, ESMA, and DG JUST, covering certification processes, breaches, and systemic incidents.

6.7. The Commission shall review the framework every three years and may adopt additional implementing measures.

6.8. CSPs shall ensure that their services are **globally interoperable** and aligned with international standards (e.g., ISO metadata models).

7. Rules on Termination, Cancellation, and Suspension for CSPs

7.1. CSPs shall establish procedures for **suspending, cancelling, or terminating submissions** under the following conditions:

- a) the submission is incomplete or inconsistent with required data standards
- b) the economic operator withdraws the declaration before validation;
- c) a competent authority issues an order for cancellation or invalidation;
- d) a cybersecurity incident or system failure requires temporary suspension.

7.2. Cancelled or terminated submissions shall not be erased. Instead, they shall be preserved in EUTIR with a status label **“cancelled”** or **“terminated”**, ensuring full auditability.

7.3. CSPs must notify both the economic operator and the competent authority of any suspension, cancellation, or termination, including justification and timestamp.

7.4. Suspended submissions may only be reactivated once the root cause has been resolved and, where applicable, with competent authority approval.

- 7.5. All suspension, cancellation, and termination events shall be recorded in the **audit logs**, accessible to ESMA and competent authorities.
- 7.6. In the event of the bankruptcy, insolvency, or compulsory liquidation of a Certified Service Provider, its certification shall be automatically revoked. The CSP shall be removed without delay from the Union CSP Register, and all pending submissions shall either be transferred to another authorised CSP designated by the competent authority or preserved in EUTIR with the status label “terminated”.
- 7.7. In the event of suspension of a CSP, all records already submitted shall remain valid in EUTIR with their original status. The CSP shall not be permitted to make new submissions or amendments during the suspension period. Any pending processes (e.g., flagged records awaiting lock) shall be managed directly by the competent authority or transferred to another authorised CSP as designated.

8. CSP Register

- 8.1. The Commission shall maintain and publish, on a **dedicated webpage**, a **Union-wide register of Certified Service Providers (CSPs)** authorised to operate within the EUTIR framework.
- 8.2. The register shall be kept up to date and include at minimum:
- a) the name and LEI/vLEI of the CSP,
 - b) the Member State of accreditation,
 - c) the date of certification and expiry,
 - d) the status (active, suspended, withdrawn).
- 8.3. The register shall be made available:
- a) via a **public webpage**, and
 - b) via a **public API service**, enabling real-time verification of CSP status.
- 8.4. The register shall be **machine-readable and interoperable** with other Union registers (e.g., **EU Trusted List (EUTL)**, **NANDO**) and provided in open data formats (JSON, XML, XBRL).

8.5. CSPs not listed in the register shall **not be recognised** as authorised submitters to EUTIR.

9. Future Categorisation

9.1. CSPs shall be certified under a single Union-wide framework, based on the functional rights defined in this Annex.

9.2. The Commission may, by delegated acts, establish **sector-specific categories or sub-categories of Certified Service Providers**, and define differentiated requirements and rights where justified by:

- a) the nature of the service,
- b) the risk profile, or
- c) sectoral legislation.

9.3. Any such categorisation shall remain consistent with the general rights-based framework of EUTIR and ensure interoperability across all Member States.

10. International Nodes

10.1. Subject to international agreements or adequacy decisions, third countries may connect their own blockchain node to the EUTIR distributed ledger infrastructure. Such connection shall be based on a **Mutual Recognition Agreement (MRA)** between the Union and the respective third country, and shall ensure that:

- a) the node fully complies with the Union's interoperability, cybersecurity and governance standards for EUTIR;
- b) the node is subject to joint supervision, monitoring, and auditability in cooperation with the competent Union authority;
- c) the legal and technical validity of the node and its operations are mutually recognised.

10.2. Procedural rules:

- a) A third country requesting connection of a node shall submit a formal request to the European Commission.

- b) The Commission, in consultation with ESMA and the relevant Union bodies, shall assess the technical readiness and legal framework of the requesting country.
 - c) Where the assessment is positive, a mutual recognition agreement shall be negotiated, defining rights, obligations, governance arrangements, and dispute resolution.
 - d) Upon entry into force of the agreement, the third-country node may be connected to the EUTIR infrastructure and shall be listed in the official EU register as an “international node”.
 - e) The operation and compliance of international nodes shall be reviewed at least every three years.
- 10.3. International nodes may also be operated as part of equivalent regional trade index registries, provided that a **Mutual Recognition Agreement (MRA)** between the Union and the respective regional body ensures interoperability, compliance with common standards, and reciprocal supervision mechanisms.
- 10.4. The detailed rules on data protection and the handling of personal data in relation to international nodes shall be defined in the respective **Mutual Recognition Agreement (MRA)**, ensuring full compliance with Union law, including the GDPR.

Annex III. Rules on Metadata Submission, Status and Verification Rules

DRAFT

OPERATIVE LEVEL

1. General Principles

- 1.1. EUTIR shall serve as a **Union-wide trusted registry** for the **submission, amendment, verification, flagging, locking, and availability** of trade-related metadata.
- 1.2. All operations in EUTIR shall be performed in accordance with the **accreditation and certification framework** defined in Annex II and the **functional rights** defined in this Annex.
- 1.3. The EUTIR framework is designed to be **language-neutral**, verifying metadata and machine-readable formats (such as XML, JSON, or XBRL) rather than the human-readable content of documents. This ensures that documents are validly registered in EUTIR regardless of language. The acceptance of such documents for customs, regulatory, or judicial purposes remains subject to **domestic rules and the applicable provisions of Union law**.

2. Functional Rights of Actors in EUTIR

- 2.1. **Certified Service Providers (CSPs):** May create and amend Metadata Records within their authorised scope (e.g., logistics, product, insurance, customs). All CSP actions are logged in immutable audit trails.
- 2.2. **Competent Authorities:** May update the status of records (flagged, locked, released, cancelled) but cannot alter substantive business content. Their authority to impose restrictive statuses derives exclusively from Union or national legislation applicable to their domain.
- 2.3. **Financial Institutions:** May create and amend only financial and payment-related metadata under obligations linked to AML/CTF legislation. These entries must be linked to parent trade records and verified through EUTIR.

- 2.4. **Universal rights:** Verification of records is open to all via EUTIR APIs and the public web-based service, which confirms authenticity, current status, and legal validity without modifying the record.
- 2.5. **Sector-specific rules:** Each Union policy domain (customs, transport, environment, climate/CBAM, product compliance) shall define detailed submission and amendment rules in implementing or delegated acts, consistent with Annex II and this Annex.
- 2.6. A Joint Supervisory Coordination Platform shall be established, composed of the European Commission (DG FISMA, DG TRADE, DG TAXUD), ESMA, and national accreditation authorities, to ensure coherent supervision of EUTIR. This platform shall coordinate policy, technical standards, and compliance monitoring.

3. Submission and Amendment Rules

- 3.1. **Metadata records** in EUTIR may be created only by **CSPs** within the scope of their certified role.
- 3.2. Each initial submission shall constitute the creation of a base record for a new digital document or dataset, and must include: timestamp, LEI/vLEI, a qualified trust service seal (eIDAS 2.0), a cryptographic hash, and initial status “submitted”.
- 3.3. **Amendments** shall take one of three forms:
- a) **new version** (previous record becomes “superseded”),
 - b) **supplementary record** referencing a **parent record**,
 - c) **status update** (flagged, locked, released, cancelled, terminated, expired).
- 3.4. Each new record must include a new **cryptographic hash**, ensuring **traceability** via **version chains** or **document trees**.
- 3.5. Only the most recent record in a version chain is legally valid; earlier versions are preserved for audit purposes.

4. Metadata Record Lifecycle

- 4.1. Statuses include:

	Status	Definition	Legal Effect
1	active (submitted)	Status assigned when a new record is created for a new document or initial data set.	The record is legally valid and has full effect until it is amended, terminated, cancelled, or expired.
2	superseded	Status assigned to a record when a new version has been registered referencing it.	The record remains preserved for audit and traceability but no longer has legal validity. Only the most recent version is legally valid.
3	transferred (controlled)	A status indicating that exclusive control over a Metadata Record has been lawfully transferred to a new party. This status confirms that the transfer is completed and that the record is now associated with the new controller.	Upon application of this status, the previous holder permanently loses all rights associated with the Metadata Record. The new controller obtains exclusive and enforceable rights to the record, with the same legal certainty as if the record had been originally issued to them.
4	flagged	Status applied when a record is marked for irregularities, pending review by a Competent Authority.	The record remains legally valid but is subject to regulatory review. Its use may be restricted depending on applicable Union or national law.
5	locked	Status imposed by a Competent Authority to prevent further amendments or supplements.	No new linked records may be created until the lock is released. The locked record itself remains preserved in its prior state.
6	released	Status update applied by a Competent Authority lifting a previous lock or flag.	The record regains the status it held before being locked or flagged (typically active), unless it has since been superseded, terminated, or cancelled.
7	cancelled	Status applied when a record is invalidated due to error, withdrawal, or regulatory order before it takes legal effect.	The record remains preserved for audit but has no legal validity.
8	terminated	Status applied when the underlying legal or contractual process has concluded (e.g., contract ended, shipment completed).	The record ceases to have legal effect from the time of termination, but remains preserved in EUTIR.
9	expired	Status automatically applied when a predefined validity period lapses.	The record ceases to have legal effect after the expiry time but remains preserved for audit purposes.

- 4.2. Liability attaches from the moment a record is submitted to the EUTIR registry. Where a later actor submits more accurate or updated information, liability for that correction begins from the moment of its registration in EUTIR. Earlier records remain immutable and auditable, but legal reliance rests exclusively on the most recent verified version. Later corrections do not release the original actor from liability for incidents or damages that occurred prior to the correction. Where an error is corrected by the same actor who submitted the original record, liability remains with that actor for both the initial error and the correction. Where a correction is submitted by a different actor, liability for the accuracy of the correction attaches to the correcting actor, while the original actor remains liable for any damage or legal effect caused before the correction was registered.
- 4.3. All access to EUTIR records shall be fully logged. Logs shall be preserved as metadata for auditability and legal certainty for at least the same retention period as the underlying records, and in any case no shorter than the applicable statutory limitation periods for liability or claims. Logs must remain in their original, unaltered form throughout this period and shall be subject to secure archiving practices.

5. Retention and Preservation Rules

- 5.1. **Metadata Records.** Each Metadata Record has distinct legal effects but all Metadata Records remain preserved and auditable. No Metadata Record shall be deleted or overwritten. If no explicit expiry date is added at the time of creating the Metadata Record, the Metadata Record shall remain in active status for 24 months from the date of its creation and thereafter automatically transition to terminated (archived) status. All Metadata Records must be preserved and auditable for a minimum of 84 months (7 years), unless longer periods are required by Union or national law. The validity and retention period of a Metadata Record shall always align with the legal retention period of its associated Electronic Document or Data Set.
- 5.2. **Logs of Metadata Records.** All logs associated with Metadata Records shall be preserved and auditable for at least the same retention period as the Metadata Record itself. No log may be deleted, overwritten, or expired before the

corresponding Metadata Record, and logs must follow any extended retention period resulting from parent–child relationships.

5.3. Versioning and Parent–Child Rules. The rules governing versioning chains (supersede relationships) and parent–child inheritance, including dependent and independent descendants, shall be specified in the Common Technical Specifications (CTS). These CTS rules shall ensure compliance with internationally recognised standards (UN/CEFACT, ISO 15000/20022, WCO Data Model) and guarantee that all relationships remain auditable, machine-readable, and legally reliable.

5.4. Orphan Metadata Records. Where a Metadata Record is preserved in EUTIR but the associated Electronic Document or Data Set is no longer available, the Metadata Record shall continue to prove that such a document once existed and was validly registered. The evidentiary value of an orphan Metadata Record shall be limited to authenticity and timestamp verification, while full evidentiary value requires the associated Electronic Document or Data Set to remain preserved.

6. Flagging and Locking Rules

6.1. Records may be flagged or locked only by authorised Competent Authorities.

6.2. Locked records cannot be amended until released by the authority that imposed the lock.

6.3. All actions are logged immutably in EUTIR.

7. Content-Specific Rules

7.1. Product and Sustainability Data. EUTIR records shall integrate product- and sustainability-related metadata, including Digital Product Passport (DPP) identifiers, carbon footprint declarations, and compliance with the Carbon Border Adjustment Mechanism (CBAM) and due diligence frameworks such as the Corporate Sustainability Reporting Directive (CSRD) and the Corporate Sustainability Due Diligence Directive (CSDDD). These data fields ensure traceability from production and manufacturing to reporting obligations, providing verifiable links between product-level and corporate-level compliance.

7.2. Contract and Order Metadata. EUTIR records shall allow for integration of order and contract-related metadata, including purchase orders, delivery contracts, and financial guarantees linked to contractual obligations. This enables transparent monitoring of contractual performance and facilitates compliance audits across the supply chain.

7.3. Logistics and Trade Documentation. EUTIR records shall allow for integration of logistics- and customs-related metadata, such as electronic freight transport information (eFTI), consignment notes, import and export declarations, and electronic Bills of Lading (eBL) or other negotiable cargo documents. This provides a continuous custody chain and ensures that regulatory, transport, and commercial records are synchronised and auditable.

8. Transparency, Auditability and Traceability

8.1. All actions (submission, amendment, verification, flagging, locking, release) are logged in immutable audit trails, including actor's LEI/vLEI, timestamp, action, and digital signature.

8.2. An Audit Log shall mean the complete, immutable record of all such actions within EUTIR, covering submissions, amendments, linkages, status changes, verification queries, and authority interventions.

8.3. Version history must be fully traceable, enabling competent authorities to reconstruct document lifecycles.

8.4. Audit logs shall be accessible to ESMA and competent authorities.

9. Liability and Legal Certainty

9.1. **General principle.** EUTIR shall ensure not only authenticity and traceability of metadata but also a clear allocation of liability among actors. Liability follows the principle that each participant is responsible for the data they submit or the actions they take. Liability attaches from the moment a record is submitted to the EUTIR registry, ensuring that legal responsibility is clear and enforceable. This strengthens legal certainty across value chains and trade ecosystems and provides a basis for dispute resolution.

9.2. Role-based liability.

9.2.1. **Certified Service Providers (CSPs):** liable for the technical correctness, authenticity, and timely submission of metadata, including proper use of qualified trust services under eIDAS 2.0.

9.2.2. **Competent Authorities:** liable for restrictive actions (flagged, locked, cancelled, released), ensuring these are based on valid legal mandates and respecting due process.

9.2.3. **Financial Institutions:** liable for the accuracy and lawfulness of financial and AML/CTF-related metadata they submit.

9.2.4. **Economic Operators:** liable for the substantive accuracy of the underlying business, customs, or product data linked to EUTIR records.

9.3. **Damages and corrections.** In case of disputes or damages resulting from incorrect, misleading, or unlawful records, liability shall be attributed according to these roles. Where a later actor submits a correction, liability for that correction attaches to the correcting actor, while the original actor remains liable for any damages or legal consequences that occurred prior to the correction. Any material damage caused to third parties or Competent Authorities as a result of false or fraudulent information shall be borne by the submitting actor, in accordance with Union and national law.

9.4. **Sanctions.** Repeated or deliberate submission of false or misleading information by a Certified Service Provider, Financial Institution, or Economic Operator may result in suspension or revocation of certification under this Regulation, without prejudice to further administrative, civil, or criminal sanctions provided under Union or national law.

9.5. **SME access to finance.** EUTIR shall support SME access to finance by enabling financial institutions to rely on EUTIR-verified records for credit risk assessment. Records validated through EUTIR may be used by banks to reduce risk weights in line with prudential rules, subject to guidance from the European Central Bank (ECB) and the European Banking Authority (EBA).

10. Verification Services

- 10.1. Verification services enable non-certified parties to confirm authenticity, integrity, legal validity, and status of records.
- 10.2. Verification is based solely on the registered hash and lifecycle status, not on the identity of the submitter. The EUTIR register itself constitutes legal proof of authenticity and validity of electronic documents and datasets.
- 10.3. **Verification results** include:
 - a) **unique record identifier**,
 - b) **current status**,
 - c) **submitting CSP**,
 - d) **timestamp** of last change,
 - e) **competent authority identifier** (restricted layer only),
 - f) **legal validity** at reference time,
 - g) and **role-specific metadata visibility**.
- 10.4. **Verification** services operate in two layers:
 - a) **public** (basic confirmation),
 - b) **restricted** (authenticated access to detailed metadata).
- 10.5. CSPs must provide verification services as part of their certification. All queries are logged and retained for at least 7 years, or longer if required by Union or national legislation.
- 10.6. The right of Competent Authorities to impose restrictive statuses, including locking, releasing, or cancelling of records, shall derive exclusively from Union or national legislation applicable to their domain.
- 10.7. Each restrictive action must be explicitly linked to a specific legal mandate under Union law, ensuring legal certainty for economic operators and guaranteeing due process.
- 10.8. Member States may introduce additional or extended verification options under

their national legislation. In such cases, verification must be performed by a CSP, and EUTIR shall provide metadata confirming that the CSP performing the verification is duly certified and listed in the Union CSP Register.

11. Data Exchange and Access

- 11.1. **General Principle.** EUTIR registers Metadata Records as legally valid references to Electronic Documents or Data Sets. The registry does not replace the actual transmission of such data between parties, but ensures authenticity, integrity, and traceability of the exchanges. Electronic Documents or Data Sets that are verified through EUTIR and submitted in accordance with Union or national law shall have full legal effect equivalent to their paper-based counterparts.
- 11.2. **Business-to-Business (B2B) Exchange.** In B2B contexts, parties may exchange Electronic Documents or Data Sets directly, either bilaterally or through trusted platforms. Each exchange shall include a reference to the corresponding Metadata Record in EUTIR. The Metadata Record provides legal proof of authenticity, status, and versioning of the exchanged data.
- 11.3. **Business-to-Government (B2G) Exchange.** In B2G contexts, Economic Operators shall provide to Competent Authorities the Electronic Documents or Data Sets required by Union or national legislation. Each submission shall include a reference to the corresponding Metadata Record in EUTIR, which serves as proof of authenticity and immutability.
- 11.4. **Verification and Control.** Competent Authorities shall use EUTIR to verify authenticity, integrity, and legal status of Metadata Records. Automatic checks, risk assessment, and decision-making processes shall be performed by national or Union IT systems in accordance with sectoral legislation.
- 11.5. **Interoperability of Data Models.** Data exchange under this Article shall ensure interoperability with recognised international and Union standards. The specific standards applicable to metadata formats, data models, and secure transmission protocols are defined in the Common Technical Specifications (CTS, Annex IV).
- 11.6. **Transmission Methods.** Transmission of Electronic Documents or Data Sets

between parties shall take place through secure communication channels in compliance with Union trust service and security requirements. The applicable transmission methods, including short-range communication, network-based delivery, or registered electronic delivery, are defined in the Common Technical Specifications (CTS, Annex IV).

- 11.7. **Submission to Competent Authorities.** Economic Operators shall ensure that all Electronic Documents or Data Sets required by Union or national law are submitted or made available to the relevant Competent Authorities. Such submissions shall always reference the corresponding EUTIR Metadata Record, enabling verification of authenticity, integrity, and legal status. The obligation to provide data shall be exercised strictly in accordance with the applicable Union or national legislation governing the mandate of each Competent Authority.

12. Interoperability and Data Submission Standards

- 12.1. Submissions must be machine-readable and interoperable with Union infrastructures (DPP, CBAM, eFTI, licensing registers, e-invoicing, etc.).
- 12.2. The Commission shall adopt **Common Technical Specifications (CTS)** defining metadata structures, hash algorithms, APIs, timestamp formats, logging requirements, financial/ESG metadata, and AI/ML safeguards.
- 12.3. Implementing acts shall further specify technical interoperability and submission standards, preventing fragmentation among Member States and ensuring AI/ML systems can process metadata in line with GDPR.
- 12.4. Compliance with CTS is mandatory for CSP certification under Annex II. The Commission shall regularly review CTS with ESMA, CEN/CENELEC, and relevant Union agencies.
- 12.5. Federated interoperability shall allow verification across regional or international registries, based on harmonised standards, ensuring authenticity and traceability across jurisdictions. The legal and international framework for such interoperability is further specified in **Chapter 17**.

CONTENT-SPECIFIC LEVEL

13. Payments, Financial and ESG Metadata

- 13.1. Processing of financial and payment metadata under EUTIR shall be based on a lawful ground under Article 6 of the GDPR (public interest, legal obligation, contractual necessity, or consent, as applicable).
- 13.2. Financial Institutions may submit supplementary records including guarantees, payments, collateral, or insurance. Each has its own hash and is linked to parent trade records.
- 13.3. ESG and Circular Economy compliance metadata may include sustainability declarations, carbon footprint data, DPP identifiers, or CBAM compliance. Such metadata, once linked, constitutes verifiable legal evidence.
- 13.4. Verification queries may enable financial institutions to apply preferential financing terms based on ESG/CE compliance metadata.
- 13.5. These provisions shall enable financial institutions to apply innovative financing models, such as preferential rates for companies operating sustainable supply chains.
- 13.6. Disclosure of sensitive financial and ESG data is restricted to authenticated users, ensuring compliance with GDPR and eIDAS 2.0.
- 13.7. EUTIR shall ensure interoperability with the VAT in the Digital Age (ViDA) initiative, including structured invoicing and VAT reporting, so that tax-related metadata can be directly verified and used for compliance purposes.
- 13.8. EUTIR shall align with the forthcoming Payment Services Regulation (PSR) and PSD3 Directive, ensuring that payment references and financial transaction data can be integrated and applied uniformly across Member States. This alignment shall prevent divergent national implementations observed under PSD2.
- 13.9. EUTIR shall also ensure consistency with the proposed **Financial Data Access (FiDA) framework**, enabling interoperability between trade-related financial

metadata in EUTIR and broader financial data-sharing infrastructures once adopted. This ensures synergies between trade compliance, financing, and risk assessment.

14. AI/ML Integration

- 14.1. Metadata may be used in AI/ML systems for risk assessment, fraud detection, compliance, and supply chain analytics, provided systems comply with EU AI Act, GDPR, and eIDAS 2.0.
- 14.2. AI/ML applications may not alter records but may rely on standardised metadata and pseudonymised logs for anomaly detection.
- 14.3. The Commission may adopt delegated acts to establish additional technical standards for AI/ML.
- 14.4. EUTIR may provide AI- and machine learning-based risk dashboards for Competent Authorities and financial supervisors, enabling predictive monitoring of fraud, money laundering, and customs risks. Such tools shall only use providers that are subject to regulatory oversight in accordance with the AI Act and GDPR requirements. Providers established in the Union shall be supervised under Union law, while providers from third countries shall only be eligible where equivalent regulatory frameworks and supervisory mechanisms are in place.

IMPLEMENTATION LEVEL

15. SME Support and Proportionality

- 15.1. To reduce compliance burdens, the Commission shall provide support programmes for SMEs (training, guidance, financial aid).
- 15.2. The Commission shall establish targeted SME support programmes including training on DPP and carbon accounting, as well as phased compliance thresholds to avoid disproportionate burden.
- 15.3. Simplified reporting or phased compliance thresholds may be introduced to maintain proportionality.

16. Service Availability

- 16.1. EUTIR verification services (API and web) must ensure minimum annual availability of 99.9% (excluding notified maintenance).
- 16.2. CSPs must guarantee equivalent standards for their services. Fallback procedures must be available to ensure continuity of critical compliance operations.
- 16.3. ESMA shall continuously monitor and report service availability to the Commission.

POLICY AND INTERNATIONAL LEVEL

17. Global Interoperability and Mutual Recognition

- 17.1. EUTIR shall align with UNECE recommendations, UNCITRAL model laws (such as the Model Law on Electronic Transferable Records), and other relevant international standards to ensure interoperability, legal certainty, and wide acceptance of digital trade practices at the global level.⁵
- 17.2. For third countries and regional registries to join and cooperate, a **Mutual Recognition Agreement (MRA)** must be concluded, ensuring interoperability and supervision. Such MRAs are international agreements between jurisdictions and cannot be substituted by private or bilateral commercial contracts. MRAs shall act as **bridging instruments**, similar to international transport conventions, to guarantee that EUTIR records obtain equivalent recognition across different legal regimes.
- 17.3. Recognition of EUTIR records outside the Union shall be subject to the applicable **national law** of the jurisdiction concerned, interpreted in light of relevant international conventions (such as CMR, Hague-Visby, or Montreal) and customary trade practice. Where no MRA exists, EUTIR records may serve as **evidence of authenticity**, but do not constitute binding legal validity unless explicitly recognised in the applicable jurisdiction.

⁵ This approach follows established international practice, comparable to the way **INCOTERMS** become binding when incorporated into contracts, or how transport conventions such as **CMR** recognise documents as evidence unless explicitly granted binding legal effect by national law or international agreement.

- 17.4. Contractual clauses may provide that EUTIR records constitute binding proof of authenticity and validity for transactions between the contracting parties. Such contractual recognition simplifies cross-border processes, reduces disputes, and strengthens the evidentiary role of EUTIR in arbitration and litigation. **This contractual effect binds only the parties to such agreements and does not extend to public authorities (such as customs, police, or courts) unless recognised by law or international agreement.** This principle reflects established international practice, where private contracts may regulate rights and obligations between parties but cannot replace compliance with mandatory public law (e.g., customs or safety requirements).
- 17.5. The Union shall prioritise the negotiation and conclusion of **Mutual Recognition Agreements (MRAs)** with third countries and regional registries in areas such as transport documentation, customs data, financial information, and sustainability-related compliance. These MRAs shall ensure that EUTIR records obtain the same legal effect as equivalent paper-based documents, guarantee reciprocal supervision mechanisms, and provide a legally certain basis for seamless cross-border data exchange.
- 17.6. Regular reporting on international alignment shall be conducted by the Commission with Member States and international partners.



1. Shipper issues eBL

- The shipowner/operator issues an **electronic Bill of Lading (eBL)** with a digital signature.
- An **eBL Metadata Record** is created in the EUTIR database, legal confirming its existence and validity.



2. Bank verifies and links eBL to financing

- The bank conducts due diligence: verifying the shipper, consignee, and the validity of the eBL to mitigate risks.
- Once conditions are met, the bank finances the cargo.
- The eBL Metadata Record added update in EUTIR, marking the eBL as pledged (collateral).



3. Consignee pays the bank

- The consignee pays the bank for the goods, either as a lump sum or according to a payment schedule.
- The bank acts as intermediary, ensuring the seller receives payment and the cargo is ready for release.



4. Bank releases the cargo

- After the payment has been made, the bank adds the removal of the pledge to the EUTIR eBL metadata record.
- The supplier/port operator checks in EUTIR that the pledge has been lifted.
- Based on this, the consignee receives the cargo at the port or terminal.

Figures 3. Illustrative images generated with AI.

Annex IV. EUTIR Common Technical Specifications (CTS)

DRAFT

This Annex presents a **draft version** of the Common Technical Specifications (CTS) for the European Union Trusted Issuance Registry (EUTIR). The objective of this draft is not to provide a final, legally binding standard, but rather to **illustrate how different pieces of EU legislation can be connected in a coherent technical framework**. The draft CTS demonstrates how **interoperability, security, and accountability** can be achieved across regulatory domains such as eFTI, DPP, CBAM, CSRD, and customs.

The draft CTS therefore serves as a **reference model** to guide further discussion and refinement. It highlights the points of convergence between multiple legislative acts, while leaving space for adjustment as the European Commission and Member States continue developing implementing acts.

1. Scope and Objectives

- a) **Purpose:** Ensure interoperability, security, legal validity, liability certainty, and cross-border recognition of metadata submissions and verification within EUTIR.
- b) **Applicability:** Binding for all Certified Service Providers (CSPs), Competent Authorities, Financial Institutions, and Economic Operators interacting with EUTIR.

2. Normative References

- a) Regulation (EU) 2024/1183 (**eIDAS 2.0**)
- b) Regulation (EU) 2016/679 (**GDPR**)
- c) Regulation (EU) 2025/XXX (**AI Act**)
- d) **ISO/IEC 27001** (Information Security)
- e) **ISO 20022** (Financial Messaging Metadata)
- f) **XBRL** (Extensible Business Reporting Language – ESEF, IFRS, ESRS, CBAM, PEPPOL-UBL taxonomies)
- g) **JSON-LD / RDF / Ontologies** (for semantic data under DPP)
- h) **WCO Data Model**

- Customs & Trade
 - Previous / Supporting Document Reference
- i) **UN/CEFACT Core Components Library (CCL)**
 - j) **ETSI EN 319 400-series** (Trust Services)
 - k) Regulation (EC) No 765/2008 (**Accreditation**)

3. Data Structures and Formats

a) Metadata Schema

Format: **JSON, XML Schema, XBRL, or JSON-LD/RDF** (machine-readable).

- **JSON/XML** preferred for operational metadata.
- **XBRL mandatory** for structured financial, tax, and sustainability reports (ESEF, CBAM, ESRS).
- **JSON-LD/RDF required** for semantic interoperability under **DPP**.

b) Document Types and Profiles

1. Predefined profiles for:

- **eFTI** (Regulation (EU) 2020/1056)
- **DPP** (ESPR Regulation (EU) 2024/1781)
- **CBAM reports** (Regulation (EU) 2023/956)
- **Customs declarations** (EU Customs Code reform)
- **Financial guarantees**
- **Insurance certificates**
- **E-invoices and VAT reporting** (ViDA, PEPPOL-UBL/XBRL)
- **Corporate ESG/CSRD reporting** (XBRL ESRS taxonomy)

c) Financial and Regulatory Metadata Formats (**ISO 20022 + XBRL + JSON-LD/RDF**)

1. **ISO 20022** defines financial messaging semantics (pacs, tsrv, camt).
2. **XBRL** ensures structured sustainability and supervisory reporting (ESEF, PEPPOL, CBAM, ESRS).
3. **JSON-LD / RDF** required for semantic interoperability of product and lifecycle data under **DPP**.

All financial submissions must reference both the **ISO 20022 message type** and the relevant **XBRL or RDF taxonomy**.

Example: a **guarantee record** = ISO 20022 tsrv.001 message + XBRL tags for supervisory reporting.

Example (DPP): a **product passport entry** = JSON-LD file linking to RDF ontology with sustainability attributes.

d) **Legal Entity Identification (LEI/vLEI)**

1. All actors interacting with EUTIR must be uniquely identified by a **Legal Entity Identifier (LEI)** issued under **ISO 17442**
2. **Certified Service Providers (CSPs)** must also be identified by **LEI**.
3. Where verifiable credentials are used, the **verifiable LEI (vLEI)** framework issued under the **GLEIF governance model** shall apply.
4. **vLEI credentials** allow binding of a **person's role** (e.g. CEO, customs representative, CSP officer) to the organisation's **LEI**, in compliance with **W3C Verifiable Credentials standards**.
5. **All audit log entries** must include **actor LEI or vLEI**, together with a **QSeal signature**, to ensure **legal accountability** and **evidentiary value**.
6. For **SMEs** lacking direct LEI registration, **proxy issuance of vLEI** by accredited CSPs may be permitted under Commission guidance.

4. **Cryptographic Requirements**

a) **Hashing**

- **Algorithm:** minimum **SHA-256**; higher algorithms (e.g. **SHA-3**) are permitted.
- **Input:** full content of the electronic document or dataset.
- **Output:** **Base64-encoded hash value**.

a) **Digital Signatures and Seals**

1. Each Metadata Record must include a qualified electronic signature (QES) or qualified electronic seal (QSeal) in accordance with **Regulation (EU) 2024/1183 (eIDAS 2.0)**. QES shall be used where a natural person

signs, while QSeal shall be used for legal entities and Certified Service Providers.

2. Digital seals and signatures ensure **authenticity, integrity, and non-repudiation** of Metadata Records throughout their lifecycle.
3. Implementations must follow relevant standards, including **X.509v3 with QSeal extension**, ETSI EN 319 102-1/2 (qualified signature profiles for XAdES, CAdES, PAdES), and **ISO 14533** (long-term validation and business process signatures).
4. The preservation and retention rules for Metadata Records and logs are defined in **Annex III, Article 5**, and apply equally to signed and sealed records.
5. All audit log entries must include actor LEI/vLEI, a timestamp, and the QSeal signature cryptographically bound to the Metadata Record ID.

5. APIs and Interfaces

- a) **Submission API:** POST /eutir/submit, supports JSON/XML/XBRL.
- b) **Verification API:**
 1. **Public Layer:** GET /eutir/verify/{metadataRecordId}.
 2. **Restricted Layer:** GET /eutir/verify/{metadataRecordId}/detail (requires authentication).
- c) **Audit Log API:** restricted to **Competent Authorities** and **ESMA**, format NDJSON.

6. SME Financing Support

- a) Verification API must allow **authorized Financial Institutions** to access structured **financial/ESG metadata (ISO 20022/XBRL)** for **credit risk assessment**.
- b) This supports **SME financing** and **preferential risk treatment** under EU financial legislation.

7. DLT Integration (EBSI-based)

- a) **Off-chain storage:** original documents stored by CSPs in compliance with GDPR.
- b) **Interoperability:** EBSI DIDs, alignment with EBSI Trusted Issuance Registry.

- c) **International Nodes:** allowed only via **Mutual Recognition Agreements (MRAs)**, reviewed every 3 years.
- d) **Outside the Union**, metadata validity is interpreted in light of **local law and international conventions** (e.g. CMR, Hague-Visby, Montreal).

8. Security and Compliance

- a) Compliance with **NIS2 Directive**.
- b) **Encryption in transit:** TLS 1.3+
- c) **Encryption at rest:** AES-256
- d) **Immutable audit logs:** retained ≥ 84 months.
- e) **Audit logs** must include **actor LEI/vLEI, action, timestamp, QSeal signature**.
- f) **Monitoring:** real-time anomaly detection (ML-based).
- g) **Data protection:** Privacy by Design, no personal data stored in EUTIR.
- h) **AI/ML safeguards:** metadata usable for risk analysis only under **AI Act & GDPR**.

9. Conformity Assessment

- a) CSPs undergo **annual audits** against CTS.
- b) Certification bodies accredited under Regulation (EC) No 765/2008.
- c) **Liability rules:**
 - **CSPs:** technical correctness & trust services.
 - **Competent Authorities:** restrictive actions (flag/lock/release/cancel).
 - **Financial Institutions:** financial & AML/CFT metadata.
 - **Economic Operators:** substantive trade/customs/product data.
 - **Corrections:** if made by another actor, the original actor retains liability for the original submission; the correcting actor assumes liability only for the amended part.

10. Data Exchange Models and Transmission Methods

- a) **Data Exchange Models.** Data exchange within EUTIR must support interoperability across recognised international and Union frameworks
 1. **Single Window systems** (WTO TFA, EU Customs SW, ASEAN SW) for centralised submissions.
 2. **Verifiable Credential model** (W3C, eIDAS 2.0, vLEI, DIDs) for decentralised B2B/B2G document proofs.

3. **KERI (Key Event Receipt Infrastructure)** for event-based validation of identity and document lineage.
 4. **UN/CEFACT Core Components Library** and **WCO Data Model** as the baseline for trade, customs, and transport data exchange.
 5. **ISO 20022, XBRL, and JSON-LD/RDF ontologies** for financial, tax, ESG, and product lifecycle data.
- b) **Transmission Methods.** Transmission of Electronic Documents or Data Sets shall rely on secure communication channels aligned with Union legislation (eIDAS 2.0, NIS2, GDPR)
1. **NFC-based short-range communication** – recommended for physical border checkpoints (truck drivers, customs terminals).
 2. **Wi-Fi / Bluetooth local communication** – applicable in controlled environments (ports, airports, warehouses).
 3. **CEF eDelivery / AS4** – mandatory in maritime, customs, and financial supervisory reporting.
 4. **Registered Electronic Delivery Services (REDS)** under Regulation (EU) 2024/1183 – mandatory where legal proof of sending/receiving is required.
 5. **API-based secure transfer** (REST/GraphQL with TLS 1.3+) – allowed for B2B operational integration.

11. Service Quality and Availability

- a) **Minimum uptime per node:** 99.9% annually.
- b) **Network availability target:** 99.95% annually, ensured through multi-node redundancy across Member States and CSPs.
- c) **Fallback continuity procedures:** mandatory for all nodes, including automatic rerouting of queries and submissions to other available nodes.
- d) **Node redundancy and backup:** each Member State or CSP node functions as a **backup** for others. In case of downtime, maintenance, or **cyberattack** on one node, operations continue seamlessly via other nodes without loss of data integrity.
- e) **Logs:** retained in original form for ≥84 months, accessible to Competent Authorities under audit and investigation right

12. Versioning and Maintenance

- a) CTS reviewed every **24 months**.
- b) Backward compatibility ensured for at least **36 months**.
- c) Changes notified via **EU Official Journal**.

13. SME Proportionality

- a) Tiered compliance thresholds.
- b) SME training and financial support programmes.
- c) Simplified reporting / phased roll-out allowed.

Annex V. Use Cases for Legislative Input and Technical Implementation

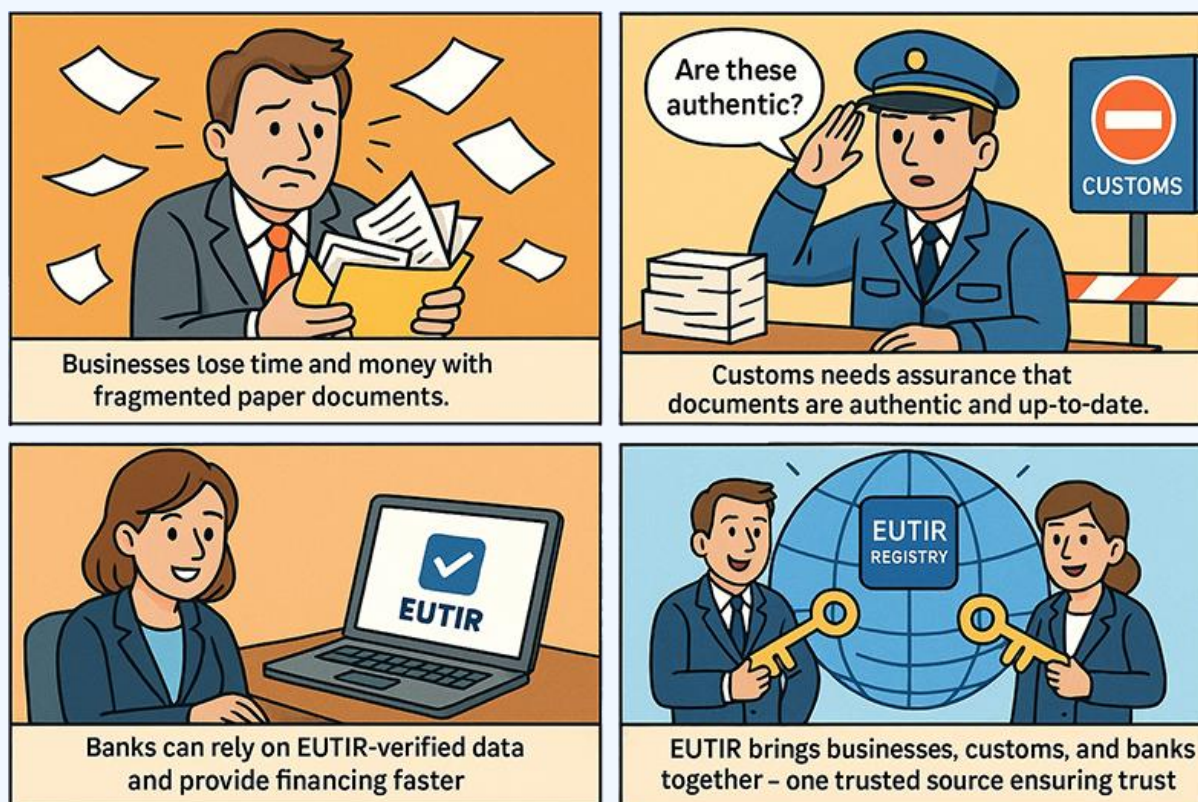


Figure 4. Illustration of how EUTIR ensures legal certainty, transparency, and efficiency for all trade actors. (Illustrative image generated with AI.)

This Annex provides harmonised, real-world use cases that demonstrate how the European Union Trade Index Registry (EUTIR) operates across sectors. The objective is twofold:

1. **Legislative input** – to show how the rules in **Annex II** (Accreditation and Certification) and **Annex III** (Submission, Status and Verification) apply in practice.
2. **Technical design guidance** – to give software architects end-to-end flows with version chains, linkages, access layers, and status transitions.

Use Case 1 – New Version (Hash Superseded)

Scenario. A company renegotiates a long-term supply contract to reflect updated delivery conditions and pricing. The original contract is still stored and auditable, but a newer version must take precedence to avoid confusion. The EUTIR ensures that the most recent version is

clearly identified as the only valid one, while still preserving the historic version for audit purposes.

Actors. CSP (Annex II).

Process.

1. CSP creates Contract v1 and applies **signature**.
2. Metadata submitted → Metadata Record 1 (*active*).
3. Contract v2 created and signed.
4. Metadata submitted → Metadata Record 2 (*active*, supersedes Metadata Record 1).
5. Verification shows Metadata Record 2 valid.

Sample Data.

1. {hash:"ABC123", status:"active", signature:"QES"}
2. {metadataRecordId:"R1", hash:"ABC123", status:"active", ts:"2025-08-12T10:05:00+02:00"}
3. {hash:"XYZ987"}
4. { metadataRecordId:"R2", hash:"XYZ987", supersedesMetadataRecordId:"R1", status:"active", ts:"2025-08-15T14:00:00+02:00"}
5. verify:{current_hash:"XYZ987", chain:["ABC123"→"XYZ987"], checked_at:"2025-08-15T14:05:00+02:00"}

Outcome. Metadata Record 2 valid; Metadata Record 1 superseded (new contract replaces old)

Benefits: Companies – clarity; Authorities – audit trail; Architects – versioning logic.

Use Case 2 – Continuing Validity (No Termination)

Scenario. A customs declaration is filed without an expiry date, as many declarations are valid until the goods reach their destination or are formally cancelled. Businesses and customs

authorities need to rely on its ongoing validity until an explicit change occurs. The EUTIR ensures that such records remain visible and legally binding until an official update is made.

Actors. CSP (Annex II).

Process.

1. CSP creates Declaration v1 and signs it.
2. Metadata submitted → Metadata Record 1 (*active*).
3. Verification shows status *active*.

Sample Data.

1. {hash:"DEC456", status:"active", signature:"QES"}
2. {metadataRecordId:"R1", hash:"DEC456", status:"active", ts:"2025-08-12T12:05:00+02:00"}
3. verify:{current_hash:"DEC456", status:"active", checked_at:"2025-08-13T09:00:00+02:00"}

Outcome. Metadata Record continues indefinitely (open-ended contract).

Benefits: Companies – stability; Authorities – certainty; Banks – enforceability.

Use Case 3 – Termination of Record

Scenario. A logistics company enters into a transport agreement that later becomes unnecessary when the shipment is cancelled. Authorities must ensure that the terminated record cannot be reused for fraud or misrepresentation. The EUTIR provides a transparent termination entry, preserving the history but clearly marking the record as no longer valid.

Actors. CSP, Competent Authority.

Process.

1. CSP creates Contract v1 and signs it.
2. Authority issues termination order.
3. Termination submitted → Metadata Record 2 (*terminated*).

Sample Data.

1. {hash:"LOG123", status:"active", signature:"QES"}
2. {order:"terminate", authority:"EE-Customs"}
3. {metadataRecordId:"R2", hash:"LOG123", status:"terminated", ts:"2025-08-15T15:00:00+02:00"}

Outcome. Contract ended (cancellation).

Benefits: Companies – obligations end; Authorities – certainty; Banks – avoid invalid reliance.

Use Case 4 – Chain of Custody for Goods

Scenario. Manufactured goods often pass through several hands – manufacturer, carrier, warehouse – before reaching the customer. Each handover must be provable, ensuring no tampering or substitution of goods has occurred. The EUTIR allows every custody event to be registered, creating a verifiable and immutable chain of responsibility.

Actors. Manufacturer CSP, Carrier CSP, Warehouse CSP, Customs.

Process.

1. Manufacturer submits Shipment M1.
2. Carrier submits Handover T1 (parent=M1).
3. Warehouse submits Receipt W1 (parent=T1).
4. Customs flags W1.

Sample Data.

1. {metadataRecordId:"M1", hash:"SHIP001", status:"active", ts:"2025-08-12T08:00:00+02:00"}
2. {metadataRecordId:"T1", hash:"SHIP002", parentMetadataRecordId:"SHIP001", status:"active", ts:"2025-08-12T12:00:00+02:00"}
3. {metadataRecordId:"W1", hash:"SHIP003", parentMetadataRecordId:"SHIP002", status:"active", ts:"2025-08-12T18:00:00+02:00"}
4. {action:"flag", target:"SHIP003", authority:"EE-Customs"}

Outcome. Custody chain traceable (obligation transfer).

Benefits: Logistics – proof; Authorities – integrity; Banks – assurance.

Use Case 5 – Financial Amendment (Guarantee on eBL)

Scenario. A bank issues a financial guarantee based on an electronic bill of lading (eBL) that secures the payment obligations of a buyer. Later, the buyer requests a higher credit line and the bank adjusts the guarantee amount. The EUTIR ensures all versions of the guarantee are visible, so that the final financing terms are always enforceable.

Actors. Logistics CSP, Bank CSP.

Process.

1. Logistics CSP submits eBL.
2. Bank submits Guarantee FIN1 (parent=eBL).
3. Bank amends → FIN2 (parent=FIN1).

Sample Data.

1. {metadataRecordId:"E1", hash:"EBL001", status:"active", ts:"2025-08-12T07:30:00+02:00"}
2. {metadataRecordId:"FIN1", hash:"FIN001", parentMetadataRecordId:"E1", amount:"€100000", status:"active", ts:"2025-08-12T09:00:00+02:00"}
3. {metadataRecordId:"FIN2", hash:"FIN002", parentMetadataRecordId:"FIN1", amount:"€120000", status:"active", ts:"2025-08-14T11:15:00+02:00"}

Outcome. Financing traceable.

Benefits: Banks – visibility; Companies – secure; Authorities – fraud reduced.

Use Case 6 – Flagging and Locking by Authorities

Scenario. Customs authorities often encounter declarations with anomalies or risk factors. To prevent fraud, they must temporarily freeze such records while an investigation is underway. The EUTIR supports this by allowing flagging and locking, preventing any further actions until the authority resolves the case.

Actors. CSP, Competent Authority.

Process.

1. CSP submits declaration D1.
2. Authority flags D1.
3. Authority locks D1.
4. Authority releases or terminates.

Sample Data.

1. {metadataRecordId:"D1", hash:"SHIPX", status:"active", ts:"2025-08-12T09:10:00+02:00"}
2. {action:"flag", target:"SHIPX"}
3. {action:"lock", target:"SHIPX"}
4. {action:"release", target:"SHIPX"}

Outcome. Record frozen, then resolved (suspension)

Benefits: Authorities – control; Companies – clarity; Banks – protection.

Use Case 7 – Public Verification (Two-Layer Model)

Scenario. Importers often need only to confirm that a record exists and is authentic, while banks require full legal and status details. A two-layer verification model balances transparency with privacy by allowing different levels of access. The EUTIR logs all queries, ensuring accountability.

Actors. Importer, Bank.

Process.

1. Importer queries public layer.
2. Bank queries restricted layer.
3. Both queries logged.

Sample Data.

1. public_verify:{hash:"SHIPY", exists:true, checked_at:"2025-08-13T15:00:00+02:00"}
2. restricted_verify:{hash:"SHIPY", status:"terminated – delivered", checked_at:"2025-08-13T15:05:00+02:00"}
3. audit_log:{caller:"BANK-LEI-777", ts:"2025-08-13T15:06:00+02:00"}

Outcome. Two-tier access (public vs private clauses).

Benefits: Importers – confirmation; Banks – detail; Authorities – privacy.

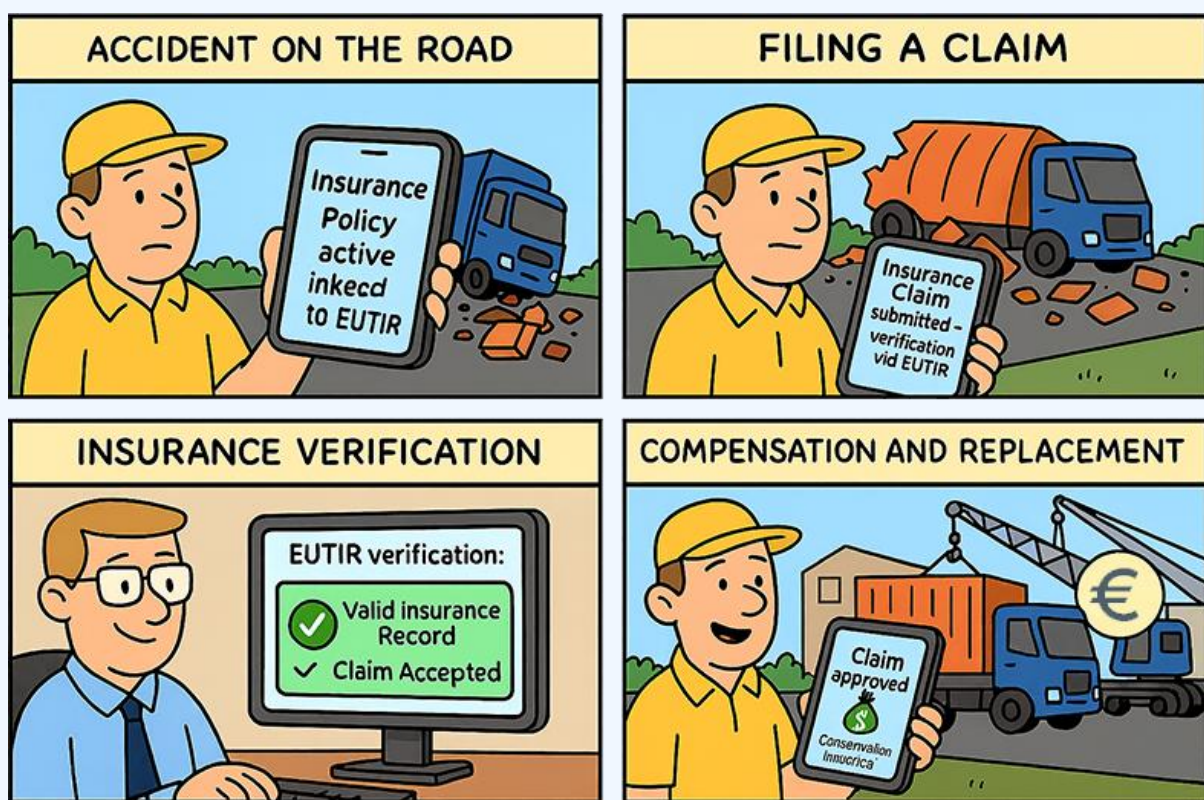


Figure 5. Electronic cargo documents and the related electronic cargo insurance certificate verified via EUTIR. (Illustrative image generated with AI.)

Use Case 8 – Insurance Linkage

Scenario. A shipment is insured against risks such as loss or damage. Later, the insured company decides to extend the coverage amount. The EUTIR links the insurance record to the shipment, ensuring that the relationship and updates are visible to both authorities and financial institutions.

Actors. Logistics CSP, Insurer CSP.

Process.

1. Logistics CSP submits Shipment S1.
2. Insurer submits Policy INS1 (parent=S1).
3. Insurer extends Policy INS2 (parent=INS1).

Sample Data.

1. {metadataRecordId:"S1", hash:"SHIP001", status:"active", ts:"2025-08-12T08:00:00+02:00"}
2. {metadataRecordId:"INS1", hash:"INS001", parentMetadataRecordId:"SHIP001", coverage:"€200000", status:"active", ts:"2025-08-12T09:15:00+02:00"}
3. {metadataRecordId:"INS2", hash:"INS002", parentMetadataRecordId:"INS1", coverage:"€300000", status:"active", ts:"2025-08-14T10:30:00+02:00"}

Outcome. Insurance traceable.

Benefits: Insurers – linkage; Companies – certainty; Authorities – fewer disputes.

Use Case 9 – AML Suspicion and Investigation

Scenario. Banks are obliged to monitor transactions and guarantees for signs of money laundering. When suspicious patterns appear, a Financial Intelligence Unit (FIU) must be involved. The EUTIR allows banks to flag, and FIUs to lock, ensuring immediate containment of risky records.

Actors. Bank CSP, FIU.

Process.

1. Bank submits Guarantee G1.
2. Bank flags record.
3. FIU locks record.
4. FIU resolves case.

Sample Data.

1. {metadataRecordId:"G1", hash:"FINAML001", status:"active", ts:"2025-08-12T11:00:00+02:00"}
2. {action:"flag", target:"FINAML001"}
3. {action:"lock", target:"FINAML001", authority:"EE-FIU"}
4. {action:"resolve", target:"FINAML001", outcome:"cleared", ts:"2025-08-16T11:20:00+02:00"}

Outcome. Risk contained (suspension due to suspicion).

Benefits: Banks – early warning; Authorities – control; Companies – reputational safety.



Figure 6. Illustrative process flow for submission of truck digital documents: Digital Business Wallet → data upload at the border sensor via NFC technology → electronic documents verified through the EUTIR system → automated control performed by the customs system → the driver proceeds without direct interaction with customs officers. (Illustrative image generated with AI.)

Use Case 10 – Supplementary Record (Declaration + Consignment Note)

Scenario. A trucking company uploads a consignment note (e.g. CMR for international movements) for a shipment, and later the exporter attaches a customs declaration to the same record. This ensures that all documentation is linked in one place, providing transparency for cross-border checks. Authorities and financial institutions can easily verify both the base transport record and the supplementary customs declaration.

Actors. Trucking CSP, Exporter CSP.

Process.

1. Trucking CSP submits CMR1.
2. Exporter submits Declaration DEC1 linked to CMR1.

Sample Data.

1. {metadataRecordId:"CMR1", hash:"CMR123", status:"active", ts:"2025-09-02T08:00:00+02:00"}
2. {metadataRecordId:"DEC1", hash:"DEC456", parentMetadataRecordId:"CMR123", status:"active", ts:"2025-09-02T08:30:00+02:00"}

Outcome. Both valid (annex to contract)

Benefits: Exporters – extend docs; Authorities – oversight; Banks – certainty.

Use Case 11 – Digital Product Passport (DPP) Submission

Scenario. A manufacturer of electronic appliances must issue a **Digital Product Passport (DPP)** to comply with ESPR Regulation (EU) 2024/1781. The passport contains sustainability, reparability, and recycling information. The EUTIR ensures that the passport is submitted in a **semantically interoperable format (JSON-LD/RDF)** and remains valid for the product lifecycle (up to 15 years), while still enabling auditability and version control.

Actors. Manufacturer CSP, Competent Authority (CA), Financial Institution (FI).

Process.

1. Manufacturer generates a DPP in **JSON-LD** format, referencing RDF ontology and sustainability data.
2. CSP applies **QSeal**, computes **cryptographicHash**, and assigns **metadataRecordId**.
3. Metadata submitted → metadata Record 1 (active, expiryDate = 2038-12-31).
4. CA verifies the digitalSeal, LEI/vLEI, and ontology compliance.
5. FI queries restricted API to check product sustainability classification.

Sample Data.

1. {hash:"DPP123", productId:"GTIN:4006381333931", status:"active", signature:"QSeal"}

2. {metadataRecordId:"R1001", hash:"DPP123", status:"active", ts:"2025-09-10T09:30:00Z", expiry:"2038-12-31"}
3. {actorLei:"5493001KJTIIGC8Y1R12", actorVlei:"vc-12345", cspld:"529900T8BM49AURSDO55"}
4. {ESGmetadata:"XBRL-ESRS:E1-1", ontology:"RDF:repairabilityIndex"}
5. verify:{current_hash:"DPP123", valid:true, chain:["R1001"], checked_at:"2025-09-10T09:35:00Z"}

Outcome. DPP record accepted and preserved; expiry aligned with product lifecycle.

Benefits. Manufacturers – compliance with ESPR; Authorities – ontology validation; Financial Institutions – ESG-linked financing; Consumers – trusted repair/recycling data.



Figure 7 & 8. LEI and vLEI verification reduces confusion with similarly named companies, eliminates the use of “shell firms” or bankrupt entities, and provides a solid basis to ensure that the trading partner is real and legally registered. By combining company identification (LEI) with representative authorization (vLEI), customs and public authorities can achieve faster, safer, and more trustworthy clearance processes. (Illustrative image generated with AI.)



Use Case 12 – CBAM Report Submission

Scenario. An EU importer submits a **CBAM report** under Regulation (EU) 2023/956, detailing embedded CO₂ emissions in imported steel. The report is structured in **XBRL CBAM taxonomy** and verified by an accredited body. The EUTIR ensures authenticity, traceability to the verifier, and long-term retention (84 months).

Actors. Importer CSP (Verifier), Competent Authority (CA), European Commission (EC).

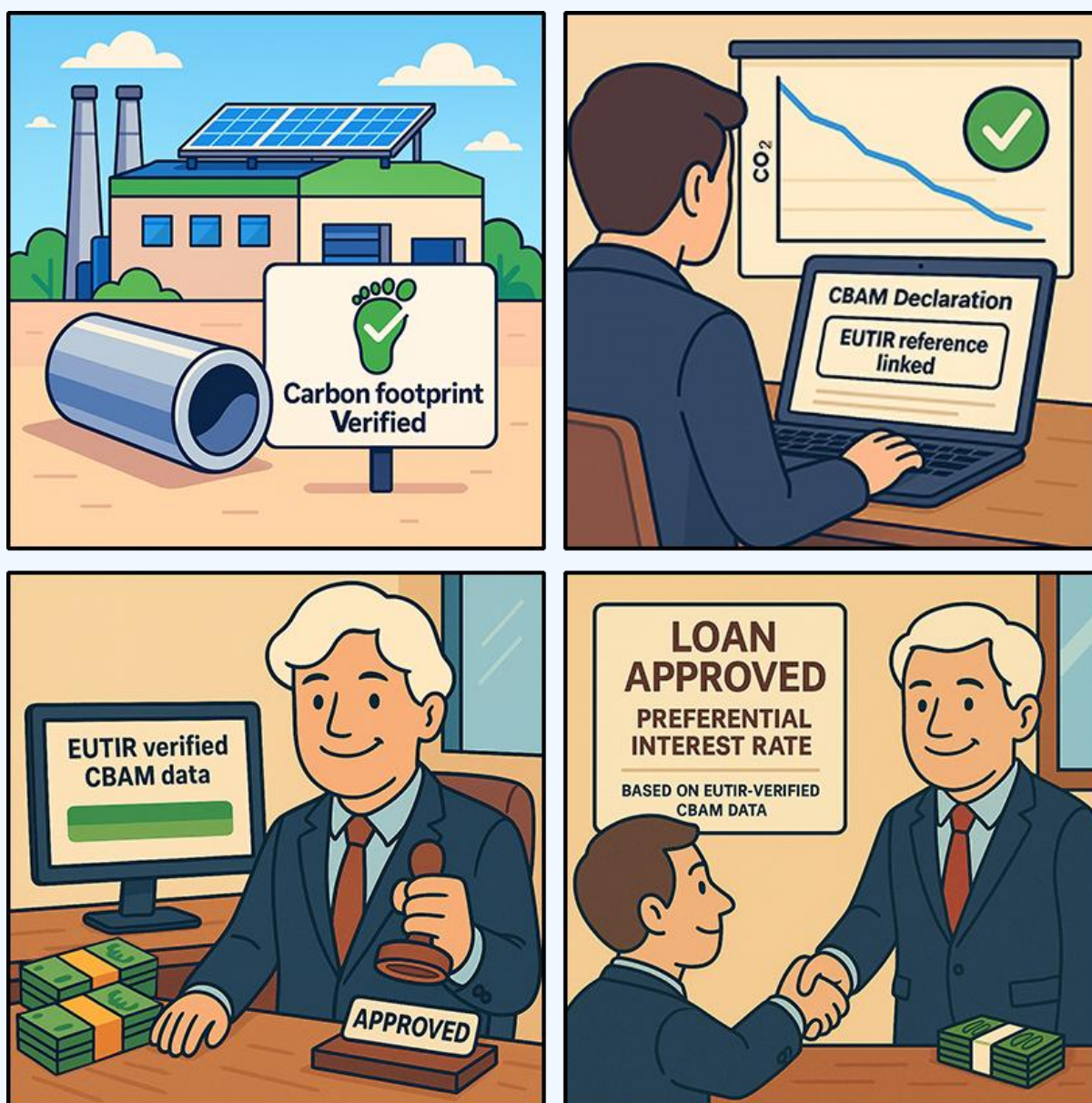


Figure 9. Illustrative process flow: low-carbon products certified through EUTIR-verified CBAM data enable financial institutions to assess sustainability performance and grant preferential financing with lower interest rates, in line with the EU Framework for Financial Data Access (FiDA). (Illustrative image generated with AI.)

Process.

1. Importer prepares CBAM report in XBRL format.
2. Verifier validates emissions data and provides certificate.
3. CSP applies **QSeal**, computes **cryptographicHash**, and assigns **metadataRecordId**.
4. Metadata submitted → metadata Record 2001 (active).
5. CA retrieves record and verifies verifier linkage (liabilityReference).
6. EC consolidates reports via restricted API.

Sample Data.

1. {hash:"CBAM789", status:"active", signature:"QSeal"}
2. {metadataRecordId:"R2001", hash:"CBAM789",
actorLei:"529900T8BM49AURSO55", ts:"2025-07-15T16:00:00Z"}
3. {liabilityReference:"VerifierID:V-2025-11", ESGmetadata:"XBRL-CBAM:CO2e"}
4. verify:{current_hash:"CBAM789", valid:true, checked_at:"2025-07-15T16:05:00Z"}
5. reportStatus:{submitted:true, expiry:"2032-07-15"}

Outcome. CBAM report accepted; linked to accredited verifier; preserved for audit for 84 months.

Benefits. Importers – simplified compliance; Authorities – traceable verification; Commission – EU-wide consolidation; Auditors – long-term audit trail.

Use Case 13 – Customs Declarations & Supporting Documents

Scenario. An economic operator submits a customs declaration together with supporting documents (invoice, packing list, certificates). The declaration (parent record) is later amended and superseded. Authorities must ensure that supporting records linked to the old declaration lose their legal validity once the parent is superseded, while still remaining preserved and auditable.

Actors. Economic Operator, CSP, Customs Authority (Competent Authority).

Process.

1. EO submits Customs Declaration v1 → Metadata Record P1 (status: active).
2. EO/CSP submit supporting docs (invoice, packing list, origin certificate) → Metadata Records C1, C2, C3 with parentMetadataRecordId:P1 and validityInheritance:dependent.
3. EO submits amended Declaration v2 → Metadata Record P2 with supersedesMetadataRecordId:P1.
4. P1 becomes superseded. C1–C3 remain preserved but lose legal validity as of supersede date. New supporting docs may be linked to P2.

Sample Data.

1. {metadataRecordId:"P1", type:"CustomsDeclaration", status:"active"}
2. {metadataRecordId:"C1", parentMetadataRecordId:"P1", type:"Invoice", validityInheritance:"dependent", status:"active"}
3. {metadataRecordId:"P2", type:"CustomsDeclaration", supersedesMetadataRecordId:"P1", status:"active"}
4. {metadataRecordId:"P1", status:"superseded"}
5. {metadataRecordId:"C1", parentMetadataRecordId:"P1", status:"active", legalValidity:"invalid"}

Outcome. Declaration v2 replaces v1; supporting records tied to v1 lose legal effect but remain preserved for audit. New declaration has its own valid children.

Benefits. EO – clear audit trail, reduced risk of double filing; Authorities – legal certainty, prevention of fraud; Banks – clarity which documents remain valid for trade finance.

Annex VI. EUTIR Technical Infrastructure

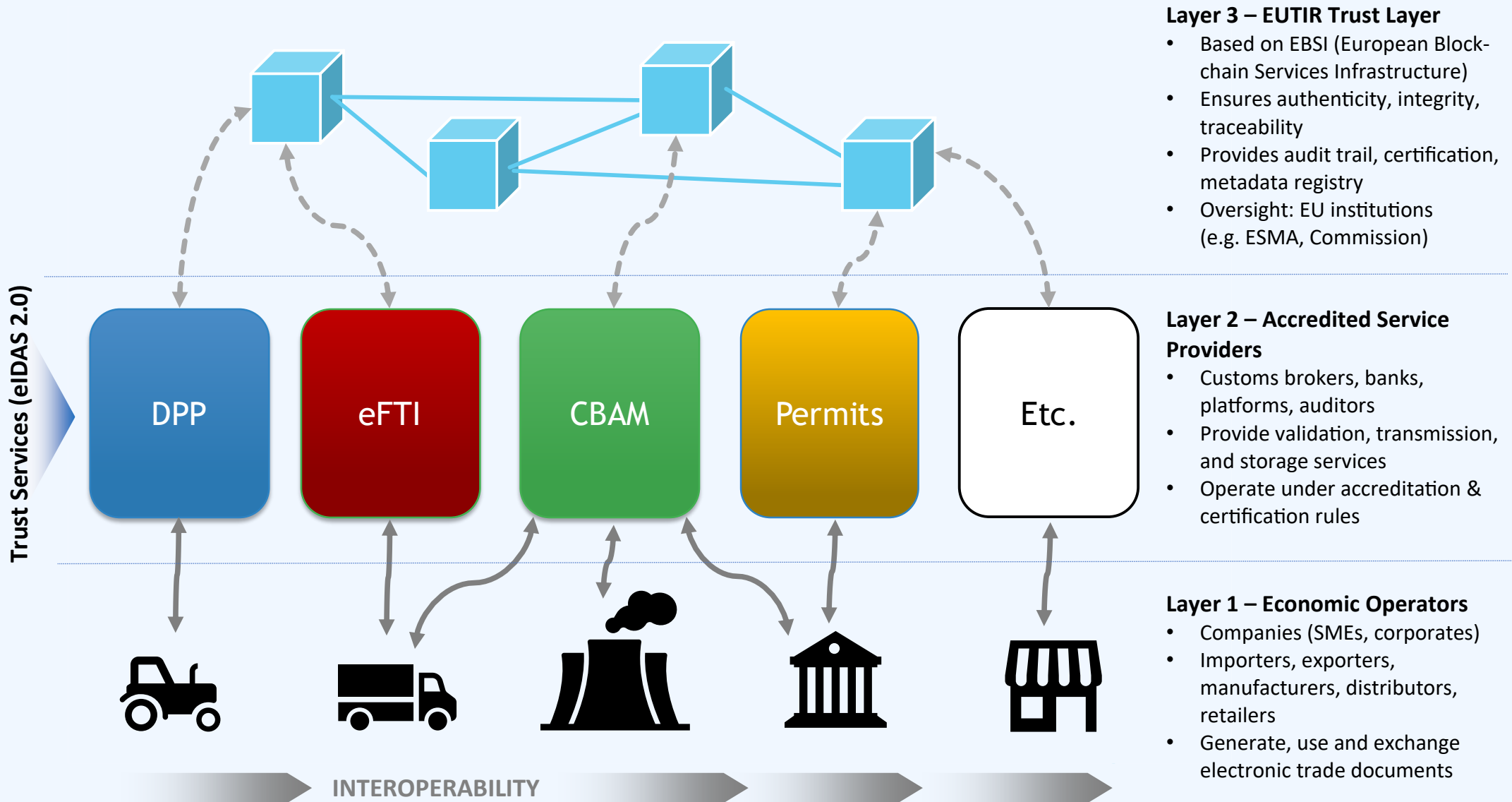


Figure 10. The diagram was prepared by Riho Vedler on behalf of the DigitalTrade4.EU consortium.

Annex VII. Platform Functions and Trust Roles in the EU Digital Trade Ecosystem

#	Platform	Core Function	Key Actors	Interoperability Role	Trust Features
1	eFTI Platform	Structures and exchanges electronic freight transport information in accordance with EU regulation. Supports Digital Business Wallet submissions to third parties (e.g., warehouses) without granting direct platform access.	Logistics providers, freight forwarders, customs brokers, software vendors, cargo owners	Connected to ICS2, Customs SW, DPP; can interact with TDR for version verification before release to third parties.	Signing-enabled, eIDAS/vLEI, traceable submission logs, TDR-assisted latest-version checks
2	DPP Platform	Digitally represents product lifecycle data, ESG/CE compliance, and traceability information.	Manufacturers, importers/exporters, ESG auditors, platform providers	Linked to eFTI, permit registries, eInvoicing, CBAM Registries, customs declarations; interoperable via linked identifiers.	Verifiable ESG/CE data, linked traceability to other platforms
3	EU Customs Single Window	Single EU-wide gateway for customs and regulatory documentation (incl. permits).	National customs authorities, inspection agencies	Receives data from eFTI, DPP, ICS2, CBAM Registries and directly from importers; pushes to national systems.	Integrated with risk analysis
4	ICS2	Performs pre-arrival cargo risk assessments using Entry Summary Declarations (ENS).	EU customs administrations, transport carriers, EU security agencies	Pulls eFTI/DPP/ permit info	Real-time validation
5	Permit Registries	Hosts and validates official permits and certificates (e.g., veterinary, phytosanitary, chemical). Real-Time Verification API checks legal validity, current status, and conditions — even when TDR provides technical authenticity verification.	National competent authorities (e.g., TRACES, ECHA), EU agencies	Linked from DPP & eFTI; accessible to TDR for live status lookups.	Real-time legal verifiability, amendment and revocation logs
6	EU Trade Indexes Registry (EUTIR)	Anchors and registers metadata (e.g., hashes, signatures, timestamps) of trade documents (e.g., eFTI, eBL, invoices), enabling full document traceability across platforms. Tracks document origin, versioning, Certified Provider ID (LEI/vLEI), and custody history without exposing content.	Registry operators (EU or delegated), customs, logistics integrators, financial institutions	Reference point for document verification and linking across eFTI, DPP, CBAM, and Customs SW.	Tamper-proof identifiers, issuer verification, Certified Provider registry, MLETR compliance, traceable audit trails with DocumentCustodyHistory
7	CBAM Registries	Record and manage embedded carbon emissions data for imported goods under the EU Carbon Border Adjustment Mechanism.	Importers, customs authorities, national CBAM authorities, accredited CO ₂ verifiers, ESG auditors	Linked with DPP for product-level emission data, Customs SW for compliance validation, trade finance systems for tariff adjustments.	Verified emission declarations, EU-accredited verifier network, secure transmission to customs
–	Business Wallet	Decentralised environment for securely holding and sharing credentials and electronic documents under user control.	Traders, SMEs, logistics operators, authorised representatives, identity providers	Interacts with all above	vLEI identity, eIDAS 2.0

Annex VIII. Digital Trade & Capital Markets Integration Roadmap

#	activity	objective	indicative metrics	tools/enablers
1	Establish European Trade Indexes Registry (EUTIR)	Decentralize and secure cross-border trade/ESG data for supervision using a distributed architecture, enabling trusted and interoperable access to regulatory and ESG information across the EU.	- 30% reduction in duplicate filings by 2027 - 100% fraud detection rate	Zero Trust Architecture & cross-border verification (e.g., blockchain-based systems like EBSI), MLETR-compliant systems, PSD3-PSR/FiDA APIs, vLEI
2	Digitalise Tax & Customs Interfaces	Integrate trade, tax, and customs data flows to reduce friction and fraud	- 50% faster customs clearance (full cycle) - 30% reduction in VAT fraud (detected cases) - Full EU Single Window uptake by 2028 (MS + procedures)	EU Customs Data Hub, Single Window for Customs, VAT in the Digital Age (ViDA), vLEI for trader authentication, eFTI/eCMR linkages
3	Adopt MLETR + eIDAS 2.0	Enable seamless digital negotiable instruments and cross-border recognition	- 70% faster transaction times - 95% SME adoption of e-signatures	MLETR framework, eIDAS 2.0 digital identity wallets, EU legal harmonization tools
4	Develop RegTech supervision tools	Enhance real-time oversight of capital markets and ESG compliance	- 50% reduction in supervisory costs - 80% automated ESG data collection	AI/ML dashboards, Legal Sandboxes, ETDR-linked reporting systems
5	Digital Bonds & Convertibles	Enable automated, ESG-linked debt instruments	- 30% reduction in issuance costs - 20% lower interest rates for ESG-compliant bonds - 100% real-time conversion execution	ETDR registry, smart contracts, DPP/ESG data integration, eIDAS 2.0 authentication
6	SME-friendly compliance frameworks	Ensure SMEs benefit from digital reforms without disproportionate burden	- 40% increase in SME participation - 60% cost savings for SMEs	Tiered compliance thresholds, Green-Digital Trade Academy, Erasmus+ grants
7	Pilot CBAM-DPP Corridors	Link trade finance to verifiable ESG metrics for tariff incentives	- 20% CBAM compliance cost reduction - 50% adoption of DPPs by 2030	Digital Product Passports (DPPs), IoT carbon trackers, CBAM rebate schemes, CBAM certificate registry integration, EU Customs Single Window
8	Harmonize e-document laws	Eliminate legal fragmentation for digital trade documents	- 90% mutual recognition of e-Bills of Lading - 0 paper-based processes	EU Transport Law updates (e.g. eFTI, eCMR), UN/UNECE protocols, Legal Harmonization Sandboxes
9	ESG-linked finance incentives	Reward sustainable supply chains with cheaper capital	- €10B/year green trade finance unlocked - 30% lower Scope 3 emissions	InvestEU guarantees, FinTech platforms, CSRD-aligned reporting templates

About Us

The **DigitalTrade4.EU** consortium envisions a **seamlessly interconnected Europe and neighbouring regions**, powered by **harmonised standards** for the **digitalisation of trade documents and processes**. By driving the **digital transformation of trade**, we aim to **strengthen economic integration, enhance cross-border cooperation**, and **ensure long-term trade facilitation** across regions.

Our consortium brings together **109 full partners**, including **trade associations, logistics providers, shipping lines, banks and insurers, technology innovators**, and others. Members represent **17 EU countries** (France, Belgium, the Netherlands, Austria, Estonia, Finland, Italy, Latvia, Spain, Germany, Sweden, Poland, Luxembourg, Lithuania, Slovenia, Denmark, and Bulgaria) and **22 non-EU countries** (Norway, the United Kingdom, Switzerland, Montenegro, Japan, Singapore, Hong Kong, Australia, New Zealand, India, Nepal, Canada, the United States, Cameroon, Morocco, Egypt, Kenya, Pakistan, Nigeria, Brazil, Uzbekistan, Turkey, and Ukraine).

The consortium's activities are **fully aligned with the principles of the EU Competitiveness Compass**, supporting the Union's goals for **innovation, sustainability**, and **digital leadership** across the Single Market.

Contact person: Riho Vedler

Email: secretariat@digitaltrade4.eu

Web page: www.digitaltrade4.eu

EU Transparency Register: 355266197389-94

