Prepared by DigitalTrade4.EU

Cybersecurity Assurance and Trade Data Trust Frameworks: Linking EUCC and EUTIR

Feedback to the EU Commission

August 2025

1. Introduction

The amendment of Implementing Regulation (EU) 2024/482, as set out in the Commission's draft highlights the EU's commitment to enhancing **definitions, ICT product series certification, assurance continuity, and state-of-the-art documents** under the European Common Criteria-based cybersecurity certification scheme (EUCC). These measures ensure that certified ICT products and protection profiles remain trustworthy, resilient, and aligned with evolving threats and international standards.

At the same time, the proposed **European Trade Indexes Registry (EUTIR)** extends the principle of **technical trust and verifiable authenticity** from ICT products to **trade datasets and digital documents**. By anchoring metadata, identifiers, and certification status in a secure, interoperable registry, EUTIR operationalises the trust layer necessary for digital trade, customs integration, and ESG-linked compliance.

Linking EUCC assurance mechanisms with EUTIR demonstrates a coherent EU approach: **security by certification at the technical level, and security by verification at the trade data level**. Both instruments respond to the EU Competitiveness Compass and the Digital Single Market strategy, enabling innovation, reducing administrative burdens, and reinforcing Europe's global leadership in **trusted, interoperable digital infrastructures**.

In this way, the EUCC scheme provides the certified technological foundation, while EUTIR delivers the systemic trust anchor for trade and regulatory datasets. Together, they create a continuum of assurance — from the hardware and software level up to cross-border trade operations — ensuring that Europe's digital economy remains both secure and competitive. This alignment also strengthens the EU's ability to set global benchmarks for cybersecurity, digital trade, and sustainable value chains.

1.1. Shared Interests between EUCC Amendments and EUTIR

	Policy / Technical Area	EUCC amendments	EUTIR (Trade Indexes Registry)	Shared Interest
1	**Trust & Certification**	Certification of ICT products and protection profiles under EUCC; definitions of major/minor changes; continuous assurance.	Accreditation and certification of Service Providers; real-time sync with EUTIR registry.	Strong certification-based trust infrastructure across both technology and trade.
2	**State-of-the-Art References**	Annex I–III updates to reflect latest attack potentials, smart cards, HSM, tachographs, etc.	Metadata standards (UUID, hashes, identifiers) ensuring interoperability across registries.	Up-to-date reference frameworks guarantee interoperability and security.
3	**Continuity & Reassessment**	Assurance continuity rules (minor vs. major changes, re-evaluation, maintenance).	Continuous compliance of Service Providers, with real-time suspension/revocation in EUTIR.	Both stress ongoing verification and continuity of trust.
4	**Transparency & Reporting**	New certification report requirements: executive summary, scope, architecture, policies, vulnerabilities.	Mandatory metadata registration and verifiable traceability across supply chains.	Both require structured, transparent reporting for regulators and operators.
5	**Identity & Interoperability**	Certification processes tied to ENISA, CBs, ITSEFs; EU-wide recognition.	LEI/vLEI and EORI dual-identifier model for global and EU interoperability.	Shared objective: harmonised identifiers and cross-border recognition.
6	**Regulatory Alignment**	Based on Regulation (EU) 2019/881 (Cybersecurity Act).	Linked to customs, eFTI, CBAM, DPP regulations; aligned with EUTIR legislative roadmap.	Both integrate with EU-wide regulatory frameworks to avoid fragmentation.
7	**Strategic Goal**	Secure ICT products and protection profiles across EU.	Secure, interoperable, trusted datasets across EU trade ecosystem.	A continuum of assurance: from product-level security to data-level trust.

2. Why a European Trade Indexes Registry (EUTIR) is Needed

The **European Trade Indexes Registry (EUTIR)** — *(in some earlier documents referred to as the Digital Documents Register)* — has been proposed to the European Commission as the **next step in global trade digitalisation** and a catalyst for the **green transition**. Its purpose is to provide a **decentralised, interoperable, and secure infrastructure** for registering and verifying trade-related data sets across the EU and with international partners. EUTIR aligns with the objectives of the **EU Competitiveness Compass**[1], fostering a data-driven trade environment that supports AI/ML-driven trade facilitation, innovation, and sustainable economic growth.

EUTIR acts as a **trust anchor** for Economic Operators, Service Providers, and Competent Authorities, ensuring that all registered data sets — whether related to freight transport, product lifecycle, sustainability compliance, or permits — are **authentic, traceable, and machine-readable**. This not only strengthens legal certainty but also reduces administrative burdens, eliminates duplication, and increases efficiency in cross-border trade.

The strategic value of EUTIR lies in its ability to **harmonise digital verification processes** across sectors, connect with global identifier systems such as **LEI/vLEI** supported by GLEIF[2], and link to EU identifiers like **economic operators registration and identification (EORI)**. By providing a single, trusted verification layer for multiple types of regulated documents and datasets, EUTIR supports interoperability both within the EU and globally.

Importantly, EUTIR also **enables structured data environments** that can be leveraged by **machine learning (ML)** and **artificial intelligence (AI)** tools for advanced analytics, risk assessment, and trade facilitation. This capability creates a significant **competitive advantage**

[1] European Commission. Competitiveness compass
https://commission.europa.eu/topics/eu-competitiveness/competitiveness-compass_en
[2] GLEIF – Global Legal Entity Identifier Foundation
https://www.gleif.org/en

for the EU on the global stage, allowing faster market access, simplified lending procedures for operators choosing environmentally friendly solutions, and streamlined compliance with sustainability standards.

As a decentralised and interoperable infrastructure, EUTIR can also be adapted for **dual-use applications**, including integration into secure supply chain and defence logistics systems, ensuring resilience and trust in critical goods flows.

The name **EUTIR** was deliberately chosen to:

- **Avoid confusion** with the long-established "TIR Convention" (Transports Internationaux Routiers), which is primarily used for international road transport permits.
- **Emphasise the European dimension** of the registry while retaining the clarity of the "Trade Indexes Registry" concept.
- **Highlight interoperability** with global identity frameworks (LEI/vLEI) and alignment with international supply chain and trade finance systems.
- **Provide legislative clarity**, ensuring that EUTIR is defined as a new, distinct registry with its own technical and legal architecture.

3. Roles in the EU Digital Trade Ecosystem

3.1 Economic Operators

Economic Operators are the primary creators, holders, and users of trade-related information. They include:

- **Financial Institutions** – banks, trade finance providers, insurers.
- **Logistics Providers** – carriers, freight forwarders, warehouse operators.
- **Manufacturers** – producers of goods and intermediate products.
- **Importers / Exporters** – companies engaged in cross-border trade.

Legislative Enhancement:

To ensure global and EU interoperability, Economic Operators should be identifiable by **LEI/vLEI** in addition to **EORI** where applicable. This dual-identifier model allows seamless cross-referencing between EU customs systems and international trade finance networks. It reduces the administrative burden on Economic Operators by eliminating the need for duplicate registrations in different jurisdictions. By embedding this requirement into customs, transport, and environmental legislation, the EU ensures that its digital trade infrastructure remains interoperable with global trust frameworks.

3.2 Service Providers

Service Providers operate specialised digital platforms and registries that structure, store, and exchange regulated trade data:

- **European Trade Indexes Registry (EUTIR)** – EU-level trust and indexing registry built on EBSI-based[3] Distributed Ledger Technology (DLT); provides Certified Providers Registry, Data Sets Metadata storage, Traceability, and Verification Services; interoperable with electronic freight transport information (eFTI), Digital Product

[3] European Commission. What is European Blockchain Services Infrastructure (EBSI) https://ec.europa.eu/digital-building-blocks/sites/display/EBSI/Home

Passport (DPP), Permit Registries, and EU Carbon Border Adjustment Mechanism (CBAM) platforms.

- **eFTI Platforms** – manage electronic freight transport information; support Digital Business Wallet submissions to third parties without direct platform access; connected to ICS2, Customs SW, and EUTIR for document version verification.
- **DPP Platforms** – manage product lifecycle, ESG/CE compliance, and linked traceability identifiers; interoperable with eFTI, Permit Registries, CBAM, and eInvoicing.
- **Permit Registries** – issue and manage regulatory certificates (veterinary, phytosanitary, chemical); provide Real-Time Verification APIs for legal validity, complementary to EUTIR's technical authenticity checks.
- **CBAM Registries** – record embedded carbon data for imported goods; interoperable with DPP and Customs SW for compliance validation.
- **Etc**.

Legislative Enhancement:

Require that **all registries and platforms**, including EUTIR, that register or validate trade documents in official EU processes are **accredited** under a harmonised EU-wide scheme. This will ensure consistent technical and legal compliance across all sectors, improving trust and operational reliability. Real-time synchronisation of certification status with EUTIR will prevent non-compliant or revoked Service Providers from participating in regulated processes. Such a requirement will also facilitate mutual recognition of trusted platforms in international agreements, strengthening the EU's position in global digital trade governance.

3.3 Competent Authorities

Competent Authorities are the official bodies responsible for overseeing compliance with EU and national regulations in the context of cross-border trade and market operations. In the EUTIR environment, they play a central role in verifying the authenticity, integrity, and compliance status of trade-related data sets.

- **Customs Authorities** – operate systems such as ICS2 and the EU Customs Single Window, receiving trade data from eFTI, DPP, CBAM, and Permit Registries. They use

EUTIR to verify that the data sets presented are authentic, up-to-date, and linked to certified service providers.

- **Market Surveillance Authorities** – oversee product compliance, safety, environmental standards, and conformity assessments across the EU single market. They access EUTIR to validate the traceability and certification status of product-related data sets, ensuring interoperability with DPP platforms, CBAM registries, and permit databases.
- **Tax Authorities** – manage VAT, excise duties, and other fiscal obligations linked to cross-border trade, using EUTIR to cross-check financial and customs-related data.

Legislative Enhancement:

Mandate that all Competent Authorities, including Customs Authorities, Market Surveillance Authorities, and Tax Authorities, have **direct read-access** to EUTIR Verification Services to authenticate data sets without requiring multiple submissions from Economic Operators. This will streamline regulatory processes, reduce transaction costs, and minimise errors from manual data re-entry. It will also strengthen **real-time risk assessment capabilities**, enabling early detection of non-compliance and fraud. Embedding these access rights in sector-specific legislation will ensure a uniform approach across Member States, eliminating fragmentation in digital verification procedures.

3.4 Accredited Certification Bodies

Independent entities responsible for verifying Service Providers' compliance with technical and legal requirements.

- Must issue **LEI/vLEI-based credentials** to ensure global identity assurance.
- Should be part of a **mutual recognition framework** across Member States and sectors.

Legislative Enhancement:

Integrate mutual recognition clauses for accredited Service Providers across customs, transport, and environmental legislation. This will avoid duplication of certification processes and reduce delays in onboarding new platforms into the EU trust framework. By recognising accreditation issued in one Member State across the EU, regulatory coherence is improved, and cross-border trade digitalisation is accelerated. Including LEI/vLEI credentials in certification requirements will further ensure interoperability with non-EU trust ecosystems.

3.5. Interoperability Ecosystem for EU Digital Trade and Customs Integration

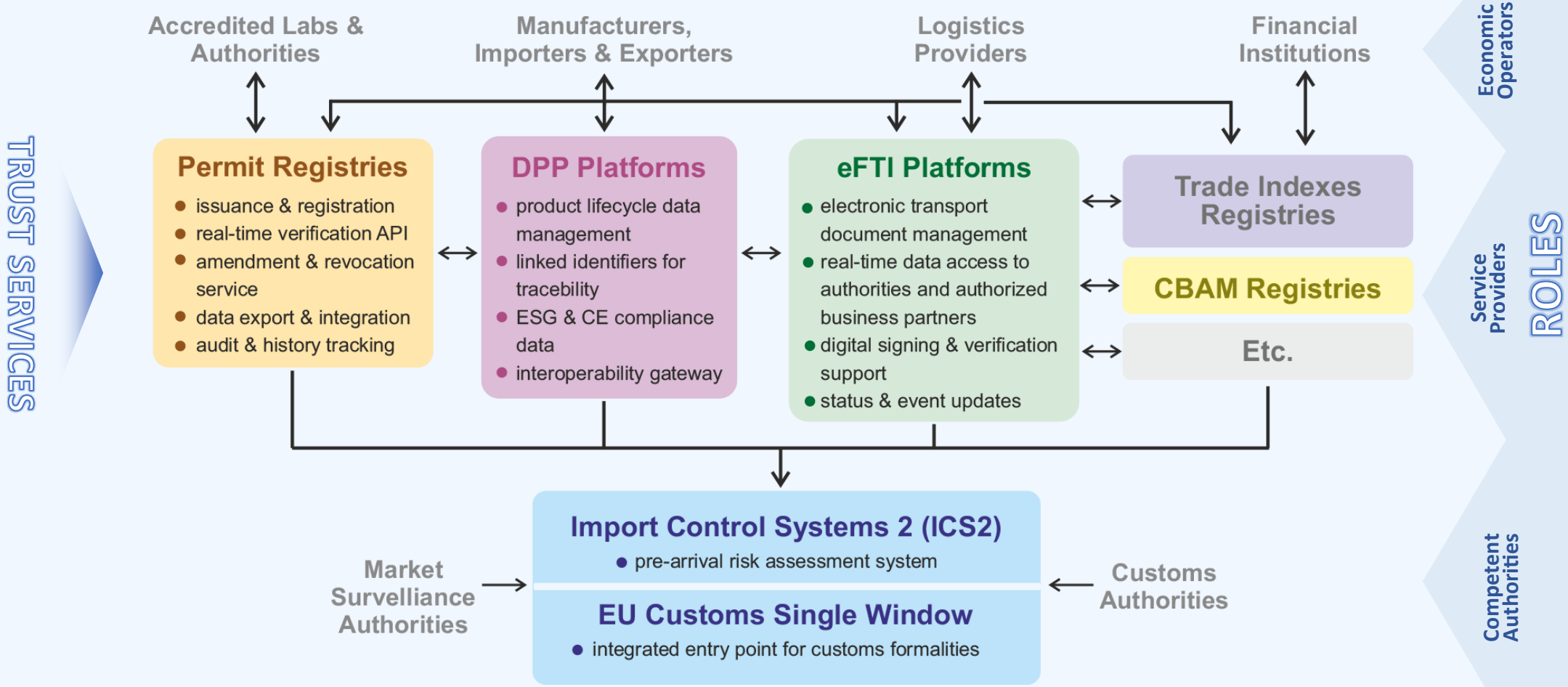


Figure 1. This diagram illustrates the key platforms, data flows, and stakeholder interactions across the EU's digital trade and customs ecosystem. It shows how manufacturers, logistics providers, and regulatory systems connect through structured data platforms—such as eFTI, the Digital Product Passport, and EU Customs systems—while integrating with trusted external sources including TRACES, REACH-IT, and EUDAMED. ***Trust Services*** *supporting this interoperability include LEI/vLEI, Qualified Electronic Signature, Qualified Electronic Seal, Qualified Timestamp, etc. All data exchanges comply with the* ***General Data Protection Regulation (GDPR)****. The diagram was prepared by Riho Vedler and is presented on behalf of the DigitalTrade4.EU consortium.*

3.6. 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	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; 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

4. European Trade Indexes Registry (EUTIR) as the Trust Anchor

The **European Trade Indexes Registry (EUTIR)** is a proposed EU-level trust and indexing layer for electronic trade documents, designed to ensure authenticity, integrity, and traceability across platforms and jurisdictions. It is best suited for development on the **EBSI infrastructure**, leveraging Decentralised Ledger Technology (DLT) to provide tamper-resistant storage of document metadata and verifiable credentials. **EUTIR does not store the actual electronic documents themselves, only the metadata necessary to verify their authenticity, current validity, and the identity of the document's rightful holder.**

A key proposed feature of EUTIR is its interoperability with the **Global Legal Entity Identifier Foundation (GLEIF)** infrastructure, enabling integration of both **Legal Entity Identifiers (LEI)** and **verifiable LEIs (vLEI)**. This alignment would ensure seamless entity identification across jurisdictions, support regulatory compliance, and strengthen trust in cross-border transactions.

- **LEI** ensures globally unique identification of legal entities in compliance with ISO 17442.
- **vLEI**, aligned with the GLEIF trust framework, provides cryptographically verifiable credentials, allowing **real-time machine-verifiable proof of entity identity**.
- This integration allows EUTIR to validate Certified Providers instantly, support **cross-border mutual recognition** of identities, and align with international trade finance and compliance systems already using LEI.
- The combination of **EORI** for EU-specific customs processes and **LEI/vLEI** for global interoperability ensures a dual-identifier model that is both policy-neutral and technically future-proof.

Core Functionalities:

1. **Certified Providers** – organisations, companies, and other accredited entities, each uniquely identified via LEI/vLEI and EORI where applicable.

2. **Data Sets Metadata** – *Refers to the structured descriptive information about each registered data set, without storing its full content. This metadata enables the identification, verification, and traceability of trade-related data across platforms and jurisdictions.*

    a) **Registration** in EUTIR assigns a globally unique identifier (UUID) to each data set, ensuring it can be unambiguously referenced in cross-border transactions. In addition to the core registration process, an electronic document can be linked to:

        - **Insurance information** – allowing stakeholders to confirm the existence and scope of coverage.
        - **Financing Reference** – enabling secure linkage to financing arrangements.

        Why Financing Reference is important:

        - **For banks** – prevents multiple pledging of the same document as collateral.
        - **For customs and market surveillance authorities** – provides immediate visibility into whether a document is under financial obligations.
        - **For service providers** – enables quick API checks before further document processing.

    b) **Traceability** in EUTIR ensures that the lifecycle of a registered data set — including all updates, transfers, and changes of custody — is fully recorded and linked across the supply chain. **EUTIR does not store the actual content of any document**, but instead maintains structured metadata that enables:

- Confirmation that the document presented to a stakeholder is **authentic**.
- Confirmation that it is the **latest valid version** of the data set.
- Identification of the **current legal holder** (owner) of the valid version, which is essential in cases where the document changes hands multiple times during the supply chain — for example, with **Negotiable Cargo Documents**[4], including **electronic Bills of Lading (eBL)**.

This mechanism guarantees that even if a document is modified by multiple Certified Providers in the supply chain, the receiving party can instantly verify its validity and rightful holder before proceeding with any transaction or operational step.

c) **Verification** confirms the authenticity and current validity of a registered data set.

- EUTIR provides **base verification** – confirming whether the data set is valid and whether the source is authentic.
- In cases involving **special conditions** defined by EU Member State legislation (e.g., sector-specific compliance checks, additional technical validations), the additional verification process may be performed by a **Service Provider**.
- EUTIR guarantees that the verification process always uses an **authentic source of truth**, preventing reliance on unverified or tampered data.

Legislative Enhancement:

1. Recognise EUTIR as the official EU-level trust service for registering and verifying trade data set metadata.

[4] United Nations. Working Group VI: Negotiable Cargo Documents https://uncitral.un.org/en/working_groups/6/negotiablecargodocuments

2. Mandate that only Certified Providers listed in EUTIR may participate in regulated trade data exchange processes.
3. Define the admissibility of metadata (UUID, file hash, financing and insurance references) as legal proof of authenticity and integrity in administrative and judicial proceedings.
4. Ensure all Competent Authorities have direct read-access to EUTIR's verification services, avoiding multiple submissions by Economic Operators.
5. Harmonise metadata standards across the EU to guarantee cross-border interoperability and machine-readability.
6. Integrate LEI/vLEI identifiers in sector-specific regulations to ensure global recognition of EU-certified entities.

Relevant EU Legislation:

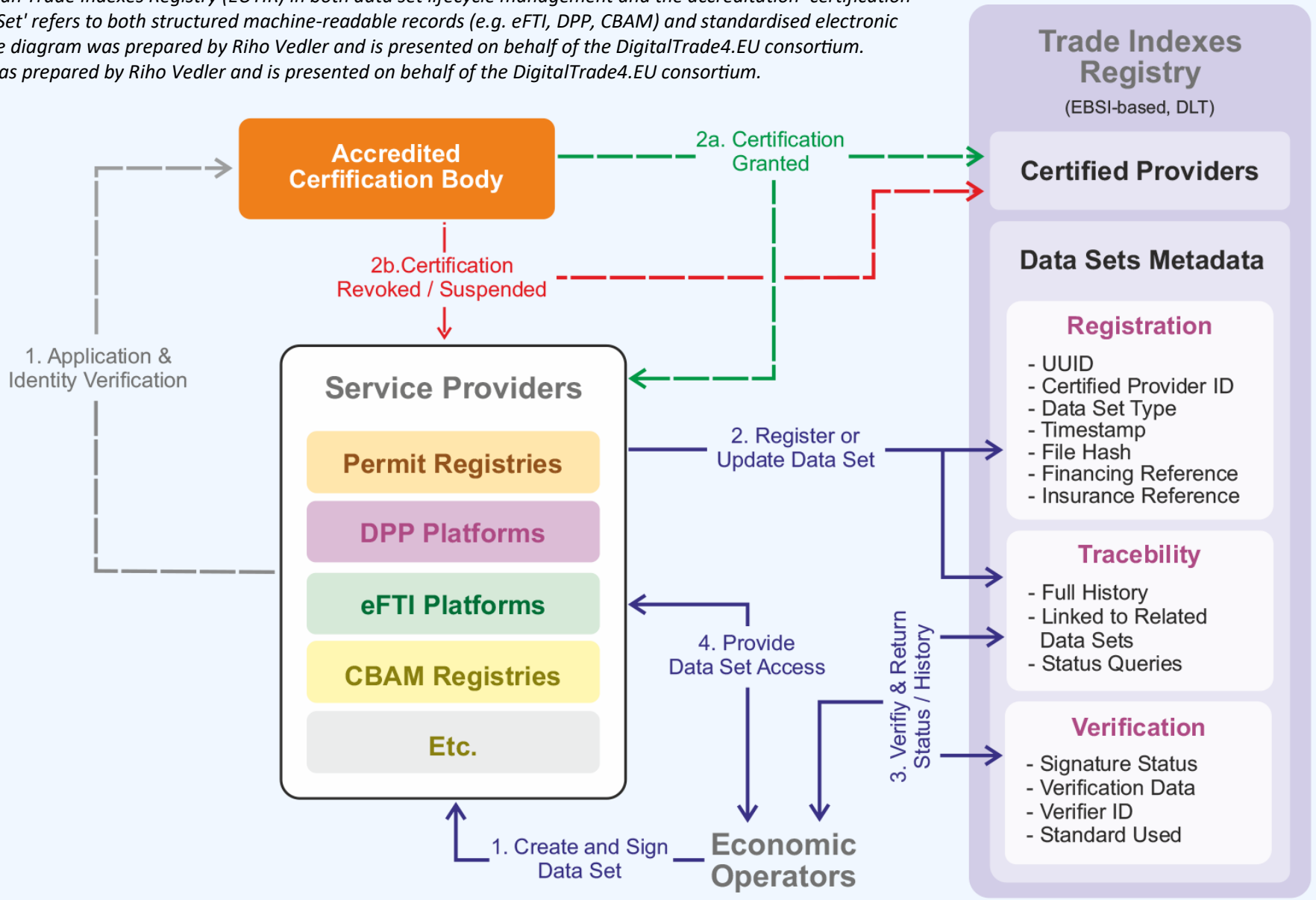
- **Regulation (EC) No 765/2008** – establishes EU accreditation framework; relevant for recognising Certified Providers in EUTIR.
- **Decision No 768/2008/EC** – harmonised rules for product marketing and conformity assessment bodies.
- **Regulation (EU) 2019/1020** – market surveillance and product compliance; can be extended to digital trade data set verification.
- **Regulation (EU) 2020/1056** – eFTI; can integrate EUTIR as a trust verification layer.

Potential Amendments:

- Amend eFTI and customs implementing acts to require EUTIR verification for all relevant logistics and trade datasets.
- Extend market surveillance scope to include trade dataset metadata verification.
- Incorporate LEI/vLEI into regulated trade documentation requirements.

4.1. 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.



4.2. Accreditation and Certification Framework within the EUTIR Environment

EUTIR operates in close alignment with an EU-wide accreditation and certification framework to ensure that all Service Providers meet harmonised technical and legal requirements before participating in regulated data exchange.

- **Accreditation** – Performed by an **Accredited Certification Body (ACB)**, verifying compliance with applicable EU regulations, security standards, and interoperability protocols.
- **Certification** – Granted upon successful accreditation, with the Certified Provider immediately registered in EUTIR.
- **Continuous Compliance** – Certification status (active, suspended, revoked) is synchronised in real-time with EUTIR to ensure only valid providers participate in official processes.
- **LEI/vLEI Integration** – All Certified Providers receive globally unique, verifiable identifiers, enabling cross-border trust and interoperability.

This model ensures that both the **technical authenticity** of data (via EUTIR's Verification Service) and the **legal compliance** of the Service Provider (via ACB certification) are guaranteed.

Legislative Enhancement:

1. Require that all Service Providers participating in regulated trade data exchange processes undergo accreditation by an EU-recognised **Accredited Certification Body (ACB)**.
2. Mandate that certification data, including status changes (active, suspended, revoked), be synchronised in real-time with EUTIR.
3. Integrate **LEI/vLEI** and **EORI** identifiers as mandatory elements in certification records.
4. Require that all issued certificates be machine-readable and cryptographically verifiable.

5. Ensure that suspension or revocation of certification results in immediate access revocation across all regulated digital trade platforms.

Relevant EU Legislation:

- **Regulation (EC) No 765/2008** – accreditation requirements and recognition within EA framework.
- **Decision No 768/2008/EC** – common framework for conformity assessment.
- **Regulation (EU) 2020/1056** – certification model for digital trade platforms (eFTI).
- **Regulation (EU) 2023/956** – authorised declarant framework (CBAM) can integrate EUTIR trust layer.

Potential Amendments:

- Require that all ACB-issued certifications be registered in EUTIR as a condition for legal validity in regulated processes.
- Create a unified EU template for digital accreditation and certification records, linked to LEI/vLEI.
- Introduce real-time API-based status updates from ACBs to EUTIR.

4.3. Data Exchange Between Stakeholders

In the EUTIR environment, data exchange follows a **federated trust model**:

1. **Create and Sign Data Set** – The Economic Operator generates and digitally signs a trade-related data sets (e.g., eFTI, DPP, CBAM).
2. **Register (Update) Data Set** – The Service Provider registers the data set's metadata in EUTIR, including UUID, type, timestamp, file hash, **financing reference, insurance reference**, and Certified Provider ID.
3. **Provide Data Set Access** – EUTIR facilitates access to authorised parties (e.g., customs, tax, banks), enabling them to verify the authenticity and traceability without handling full document content.

Dual Verification Path:

- **Technical Authenticity** – Checked in EUTIR via metadata and hash matching.
- **Content Validity** – Verified by sector-specific registries (e.g., permit registries, CBAM registry) using their own APIs.

This approach avoids unnecessary duplication of verification functions and ensures that each layer of the system performs its most efficient role.

Legislative Enhancement:

1. Require that all trade data sets used in regulated processes be technically verified via EUTIR before acceptance by Competent Authorities.
2. Clearly define the division of responsibilities between **EUTIR** (technical authenticity / integrity) and **sector-specific registries** (content validation).
3. Mandate that Service Providers perform automated pre-checks before registering data sets in EUTIR.
4. Grant Competent Authorities direct API access to EUTIR for authenticity checks.
5. Ensure interoperability between EUTIR and EU-wide systems such as **EU Customs Single Window, ICS2, CBAM Registry, and eFTI platforms**.
6. Require machine-readable, standardised data formats to enable AI and ML-driven analytics.

Relevant EU Legislation:

- **Regulation (EU) 2020/1056** – eFTI Regulation; extend to include mandatory EUTIR verification.
- **Regulation (EU) No 952/2013** – Union Customs Code; integrate EUTIR in customs data workflows.
- **Regulation (EU) 2023/956** – CBAM; require certificate authenticity checks via EUTIR.
- **Regulation (EU) 2019/1020** – Market Surveillance Regulation; link surveillance data to EUTIR metadata.

- Sector-specific permit regulations (veterinary, phytosanitary, chemical) – include UUID/hash verification in EUTIR as a precondition for official acceptance.

Potential Amendments:

- Modify customs and eFTI implementing acts to require an EUTIR verification step before processing.
- Require sector-specific permit registries to register document metadata in EUTIR upon issuance.
- Allow AI-based monitoring tools to use EUTIR datasets for fraud detection and compliance risk scoring.

5. Strategic Digital Models for Sustainable Trade and Logistics

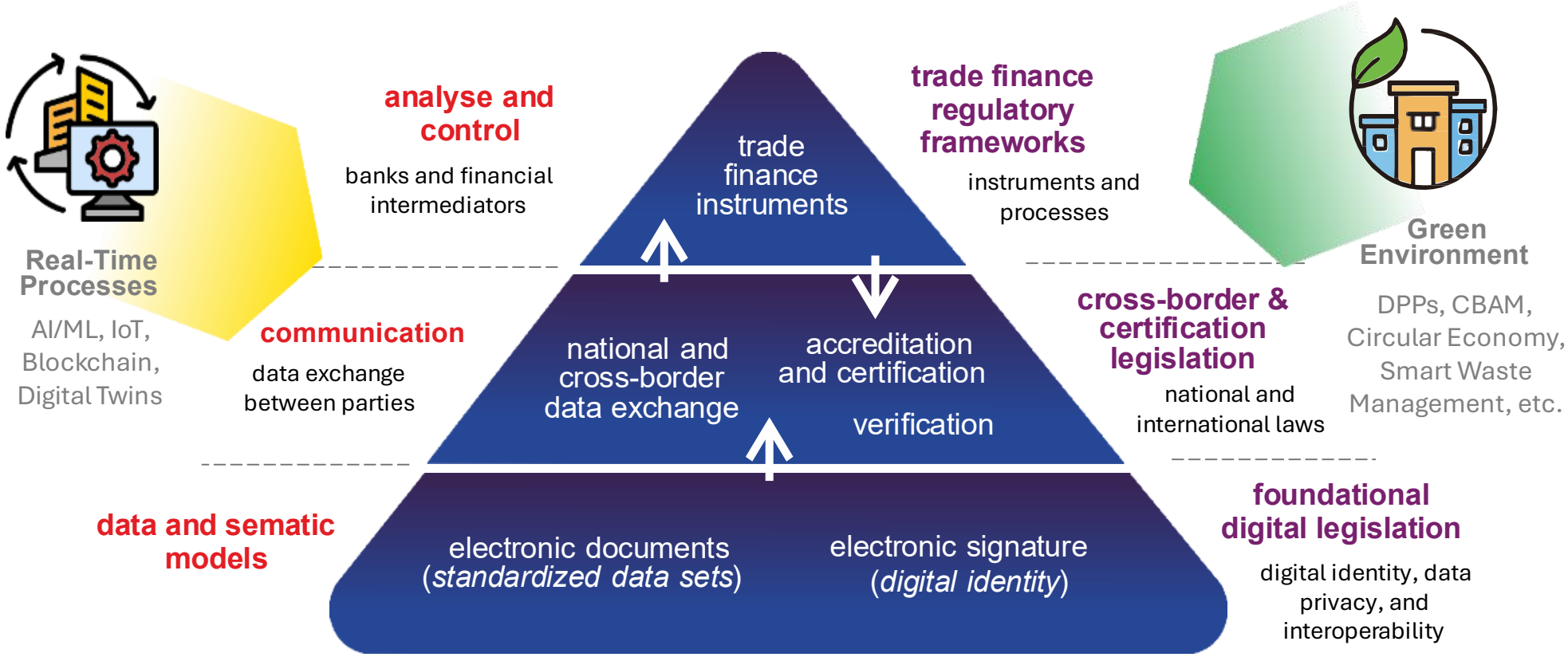


Figure 3 This visual model bridges the European Commission's strategic objectives with the proposed regulatory and operational solutions, illustrating how digital requirements and compliance mechanisms can be implemented in a technologically neutral and future-proof manner. All digital requirements and compliance mechanisms must remain technologically neutral and future-proof, allowing companies to select and reuse their preferred IT solutions. The diagram was prepared by Riho Vedler and is presented on behalf of the DigitalTrade4.EU consortium, icons by Flaticon.

6. Amendments to Draft Legislation and Annexes

6.1. Strengthening the Link Between EUCC Certification and Trade Registries

Proposed Legal Text, Annex V of Implementing Regulation (EU) 2024/482 (Certification Report content) - add a new point (p)**:**

> *Where relevant, the certification report shall indicate interoperability with EU-level registries and trust services, including the European Trade Indexes Registry (EUTIR), to demonstrate the capacity of certified ICT products to support verifiable trade datasets and cross-border digital trust services.*

Justification: This amendment would bridge ICT product assurance with the emerging trade verification ecosystem. By requiring explicit reference to interoperability with registries such as EUTIR, certification reports would ensure that certified ICT products can directly support regulated data flows (eFTI, DPP, CBAM). This increases legal certainty for operators using certified ICT components in trade-related infrastructures. It also aligns EUCC with the EU Competitiveness Compass objectives by embedding trust-by-design across both technical and trade domains. Furthermore, it enhances Europe's leadership in setting global benchmarks for cyber-secure, interoperable trade infrastructures.

6.2. Integration of LEI/vLEI and EORI in Certification Records

Proposed Legal Text, Article 11(3)(b) of Implementing Regulation (EU) 2024/482 (Unique Identification of Certificates) – add point (5):

> *The unique identification of the certificate shall include, where applicable, the Legal Entity Identifier (LEI) or verifiable LEI (vLEI) of the certificate holder. Where the certificate holder is an economic operator participating in EU trade processes, the Economic Operators Registration and Identification (EORI) number shall also be included.*

Justification: The LEI/vLEI system provides globally recognised identifiers for legal entities, enabling seamless cross-border interoperability and integration with financial and trade systems. By requiring LEI/vLEI, certification records become consistent with international trust frameworks and the EUTIR registry. Adding EORI as an optional element for economic operators ensures practical alignment with EU customs and trade procedures, where EORI is already mandatory. This dual approach avoids redundancy while extending EUCC's relevance across both global finance and EU-specific trade ecosystems. It also facilitates automated compliance checks in customs, CBAM, and eFTI systems, strengthening the EU's trusted digital trade infrastructure.

6.3. Assurance Continuity for Trade Data Verification

Proposed Legal Text, Annex IV, point 5a of Implementing Regulation (EU) 2024/482 (assurance continuity procedures)**:**

> *Where assurance measures are linked to registries or trust anchors, such as the European Trade Indexes Registry (EUTIR), the certification body shall ensure that modifications to assurance measures include verification of interoperability with the relevant registry services.*

Justification: Trade datasets evolve with regulatory updates (CBAM, DPP, eFTI). Linking assurance continuity to registries ensures that certified ICT products remain interoperable with EUTIR and other EU registries, even after minor or major changes. This reduces risks of fragmentation when products are updated, as certification bodies would check both technical assurance and registry compatibility. The proposal reinforces assurance continuity by embedding it in Europe's broader digital trade ecosystem. It also supports real-time compliance monitoring by ensuring that updates do not break interoperability with trade verification systems.

6.4. ENISA's Role in Publishing Registry Interoperability Information

Proposed Legal Text, Article 42 of Implementing Regulation (EU) 2024/482 (Publication of information by ENISA) - *add paragraph 3***:**

ENISA shall also publish information on the interoperability of EUCC-certified ICT products with EU-level trust registries, including the European Trade Indexes Registry (EUTIR), and maintain a public reference list of certified products supporting regulated digital trade processes.

Justification: Currently, ENISA publishes certification reports and security targets. Extending this obligation to include interoperability with trust registries (e.g., EUTIR) would provide regulators and operators with a central, authoritative reference point. This amendment would create visibility into which certified ICT products are usable in regulated trade contexts, reducing compliance uncertainty for SMEs and authorities. It would also foster market uptake by making clear which certified solutions directly support the EU's digital trade agenda. Moreover, it would strengthen ENISA's coordinating role, ensuring alignment between cybersecurity assurance and digital trade trust infrastructures.

6.5. Transitional Provisions for State-of-the-Art Documents with Trade Registry Impact

Proposed Legal Text, Article 48 of Implementing Regulation (EU) 2024/482 (Application of state-of-the-art documents) - add to paragraph 4**:**

Where updated or new state-of-the-art documents impact interoperability with EU-level registries, including EUTIR, certification bodies shall ensure transitional measures are communicated to affected operators and competent authorities, allowing sufficient time for adaptation without disruption to cross-border trade processes.

Justification: State-of-the-art documents evolve quickly, particularly regarding attack potentials and composite product evaluations. When these changes impact interoperability with trade registries (e.g., metadata structures, cryptographic requirements), operators need transition time to adapt their systems. This amendment provides legal certainty and operational stability for certification bodies, ITSEFs, and economic operators. It also prevents delays in certificate issuance from spilling over into trade processes, where disruptions could have significant economic consequences. Ensuring transition rules explicitly include registry interoperability makes the regulation more resilient and future-proof.

6.6. Cross-Reference to Customs and Trade Regulations

Proposed Legal Text, New recital in the preamble of Implementing Regulation (EU) …/…**:**

> *In order to ensure coherence across EU law, the certification of ICT products and the verification of trade datasets should be seen as complementary. The assurance continuity rules under this Regulation shall support interoperability with digital trade systems such as the European Trade Indexes Registry (EUTIR), established in line with Regulation (EU) 2020/1056 (eFTI), Regulation (EU) 2019/1020 (Market Surveillance), and Regulation (EU) 2023/956 (CBAM)*

Justification: By inserting a recital that explicitly links EUCC with trade regulations, the Commission ensures policy coherence across digital and green trade initiatives. It also makes clear to Member States and stakeholders that cybersecurity certification is not an isolated process but a foundational layer for trade trust frameworks. This improves regulatory consistency and reduces fragmentation across customs, product compliance, and ESG reporting systems. It also strengthens Europe's ability to negotiate international agreements by demonstrating that ICT certification and trade data verification are embedded in a single, coherent trust model.

6.7. Alignment of Accreditation and Certification Processes with Trade Registries

Proposed Legal Text, Article 56 of Implementing Regulation (EU) 2024/482 (Accreditation and supervision of conformity assessment bodies) - add paragraph 6**:**

> *National accreditation bodies and conformity assessment bodies shall ensure that certification processes under the EUCC scheme include verification of interoperability with EU-level trust registries, including the European Trade Indexes Registry (EUTIR). Accreditation reports shall contain a dedicated section on the capacity of conformity assessment bodies to assess registry interoperability.*

Justification: Accreditation and certification processes form the backbone of trust in the EUCC framework. By explicitly requiring accreditation bodies and conformity assessment bodies to test and verify interoperability with registries such as EUTIR, the EU ensures that certified ICT products are not only technically secure but also functionally aligned with digital trade

infrastructures. This amendment reduces duplication, as operators would not need separate compliance audits for cybersecurity and trade interoperability. It also enhances market uptake by providing assurance that certified products meet both security and trade-related trust requirements. Furthermore, it reinforces the EU's strategic autonomy by embedding registry interoperability into the very structure of accreditation and certification, ensuring consistency across Member States and sectors.

7. Conclusion – The Strategic Value of 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.

Key reasons for establishing EUTIR:

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.
5. **Support for Digital Trust Infrastructure** – Full interoperability with **GLEIF's LEI/vLEI** framework and EBSI-based DLT creates a trust environment that extends beyond the EU, enabling recognition 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 1. Digital Trade & Capital Markets Integration Roadmap (DigitalTrade4.EU 2025)

#	activity	objective	indicative metrics	tools/enablers
1	**Establish EU 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 - 30% reduction in VAT fraud - Full uptake of EU Single Window by 2028	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

Annex 2. EU Green-Digital Trade Leadership Roadmap (DigitalTrade4.EU 2025)

#	activity	objective	indicative metrics	tools/enablers
1	**EU-Singapore DTA & Expand DEPA Partnerships**	Strengthen digital trade diplomacy in Asia through high-standard agreements.	- 5+ new digital trade agreements with key Asian partners (e.g., Japan, India, ASEAN) by 2030 - 15% increase in EU-Asia digital services trade by 2028	DEPA framework, EU-Singapore DTA, Global Gateway Initiative, eIDAS 2.0
2	**Implement Digital Product Passports (DPPs)**	Ensure traceable, sustainable supply chains aligned with EU Green Deal.	- 50% adoption of DPPs by 2030 - 20% reduction in supply-chain carbon intensity by 2030	EU Sustainable Products Initiative, CBAM incentives, UNECE Recommendation 49
3	**Fund Secure Digital Corridors in Asia**	Build interoperable digital infrastructure for EU-Asia trade.	- ~€2B allocated via NDICI-Global Europe - 10+ blockchain-based traceability pilots by 2027	NDICI-Global Europe, ASEAN digital customs systems, EU Customs Data Hub
4	**Harmonize Digital Standards (MLETR/eIDAS 2.0)**	Enable cross-border recognition of e-documents and digital identities.	- 90% mutual recognition of e-signatures by 2028 - 70% SME adoption of eIDAS wallets	MLETR framework, eIDAS 2.0, EU Transport Law updates, UN/UNECE protocols
5	**Implement LEI and vLEI for Supply Chain Trust**	Harmonise and simplify legal entity identification across borders	- 90% entity coverage with LEI by 2030; 50% vLEI use in customs and eFTI transactions	ISO 17442, vLEI, eIDAS 2.0, UNECE UID
6	**Launch Green-Digital Trade Academy**	Upskill SMEs and officials on DPPs and carbon accounting.	- 40% increase in SME participation by 2027 - 60% cost savings for SMEs	Erasmus+ grants, COSME programme, tiered compliance thresholds
7	**Integrate ESG into Trade Finance**	Link trade finance to sustainability metrics for cheaper capital access.	- €10B/year unlocked for green trade finance - 30% lower Scope 3 emissions by 2030	InvestEU guarantees, CSRD-aligned reporting, FinTech platforms
8	**Enforce Platform Interoperability**	Prevent vendor lock-in and empower SMEs.	- 100% compliance with CJEU rulings by 2026 - 50% reduction in platform dominance	Court of Justice of the European Union (CJEU) Case C-233/23, DEPA, eIDAS 2.0, Digital Markets Act (DMA)
9	**Global Digitalisation Projects with EU Standards**	Extend EU digital infrastructure and norms globally.	- 20+ co-funded projects by 2030 - 80% interoperability with EU systems	Digital Europe Programme, CEF funding, EU-Asia Digital Standards Taskforce
10	**Advance UNECE Transparency Protocols**	Globalize EU sustainability standards for supply chains.	- 100% alignment with UNECE Rec. 49 by 2028 - 30% reduction in greenwashing claims	UNECE CEFACT, W3C Verifiable Credentials, EU CBAM registry
11	**Pilot CBAM-DPP Corridors**	Link trade finance to verifiable ESG metrics for tariff incentives.	- 20% CBAM compliance cost reduction - 50% DPP adoption by 2030	IoT carbon trackers, CBAM rebate schemes, EU Customs Single Window

About Us

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

Our consortium is made up of **experts in their field**, including **108 full partners**—trade associations, logistics providers, shipping lines, banks and insurances, technology innovators, etc.—**from 17 European Union countries** (*France, Belgium, Netherlands, Austria, Estonia, Finland, Italy, Latvia, Spain, Germany, Sweden, Poland, Luxembourg, Lithuania, Slovenia, Denmark, Bulgaria*) and **22 non-EU countries** (*United Kingdom, Switzerland, Montenegro, Japan, Singapore, Hong Kong, Australia, New Zealand, India, Nepal, Canada, United States of America, Cameroon, Morocco, Egypt, Kenya, Pakistan, Nigeria, Brazil, Uzbekistan, Turkey, Ukraine*).

Our consortium is already **aligned with the fundamentals** of the **EU Competitiveness Compass**. Learn more:

- How DigitalTrade4.EU Can Help Achieve the Objectives of the EU Competitiveness Compass (February 2025) https://www.digitaltrade4.eu/how-digitaltrade4-eu-can-help-achieve-the-objectives-of-the-eu-competitiveness-compass/

Web page: www.digitaltrade4.eu

EU Transparency Register: 355266197389-94

Contact person: Riho Vedler

Email: riho.vedler@ramena.ee