Strengthening Europe's Digital and Green Competitiveness through the European Trade Indexes Registry (EUTIR)

Feedback to the EU Commission

August 2025

1. Introduction

The Multiannual Financial Framework 2025–2027 underlines the EU's commitment to **cross-border education, training and solidarity, young people, media, culture, creative sectors, values, and civil society**. These priorities converge with the European Trade Indexes Registry (EUTIR), which represents a forward-looking instrument to modernise the Union's trade and knowledge ecosystems. By reducing administrative duplication, ensuring authenticity and traceability of trade-related datasets, and enabling seamless interoperability with both EU and global systems, EUTIR directly contributes to the MFF's objectives of efficiency, transparency, and digital leadership.

EUTIR further strengthens the EU's human capital dimension by supporting learning mobility, youth participation, and cultural exchange, in parallel with trade and innovation. It provides an environment where education and training outcomes can be connected to digital product passports, ESG-linked trade, and AI-ready datasets, ensuring that Europe's next generation benefits from both social solidarity and economic competitiveness.

Equally important is the training of people directly in their workplaces, where the acquisition of new skills is not only linked to higher productivity but also to higher wages. This connection creates a strong incentive for individuals to continuously engage in learning and professional development. At the same time, when citizens experience that digital tools – such as secure EU Digital Wallets – are convenient and trustworthy, they are more likely to integrate them seamlessly into their everyday lives at home. In this way, education, workplace training, and user trust in digital solutions reinforce each other, creating a virtuous cycle of skills, motivation, and adoption.

In addition, EUTIR is strategically aligned with the European Green Deal and the Competitiveness Compass, creating a trusted environment for sustainable trade, cross-border compliance, and global recognition of EU standards. By linking Erasmus+ priorities with modern trade governance, EUTIR acts as a bridge between **people, values, and markets**—a unique combination that reinforces Europe's role as a global leader in resilience, openness, and innovation.

MFF-549 and EUTIR Shared Interests

#	MFF-549 Objectives (2028–2034 Erasmus+)	Shared Interests with EUTIR
1	**Enhancing skills for the digital and green transition**	Digital Product Passports, ESG data integration, AI-ready trade datasets
2	**Fostering inclusion and equal access**	Accessible, transparent, and interoperable trade registries for SMEs, youth, and civil society
3	**Promoting cross-border education, youth, culture, and values**	Interoperable platforms linking education outcomes, youth mobility, cultural exchange, and civil society data with trade and innovation ecosystems
4	**Simplifying governance and reducing administrative burden**	Eliminating duplication in trade compliance, interoperability across EU systems
5	**Strengthening resilience, solidarity, and competitiveness**	Trusted environment for sustainable trade, solidarity-driven cooperation, and resilient supply chains

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**

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[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

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[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

TRUST SERVICES

Economic Operators

Service Providers

ROLES

Competent Authorities

Accredited Labs & Authorities

Manufacturers, Importers & Exporters

Logistics Providers

Financial Institutions

Permit Registries
- issuance & registration
- real-time verification API
- amendment & revocation service
- data export & integration
- audit & history tracking

DPP Platforms
- product lifecycle data management
- linked identifiers for tracebility
- ESG & CE compliance data
- interoperability gateway

eFTI Platforms
- electronic transport document management
- real-time data access to authorities and authorized business partners
- digital signing & verification support
- status & event updates

Trade Indexes Registries

CBAM Registries

Etc.

Import Control Systems 2 (ICS2)
- pre-arrival risk assessment system

EU Customs Single Window
- integrated entry point for customs formalities

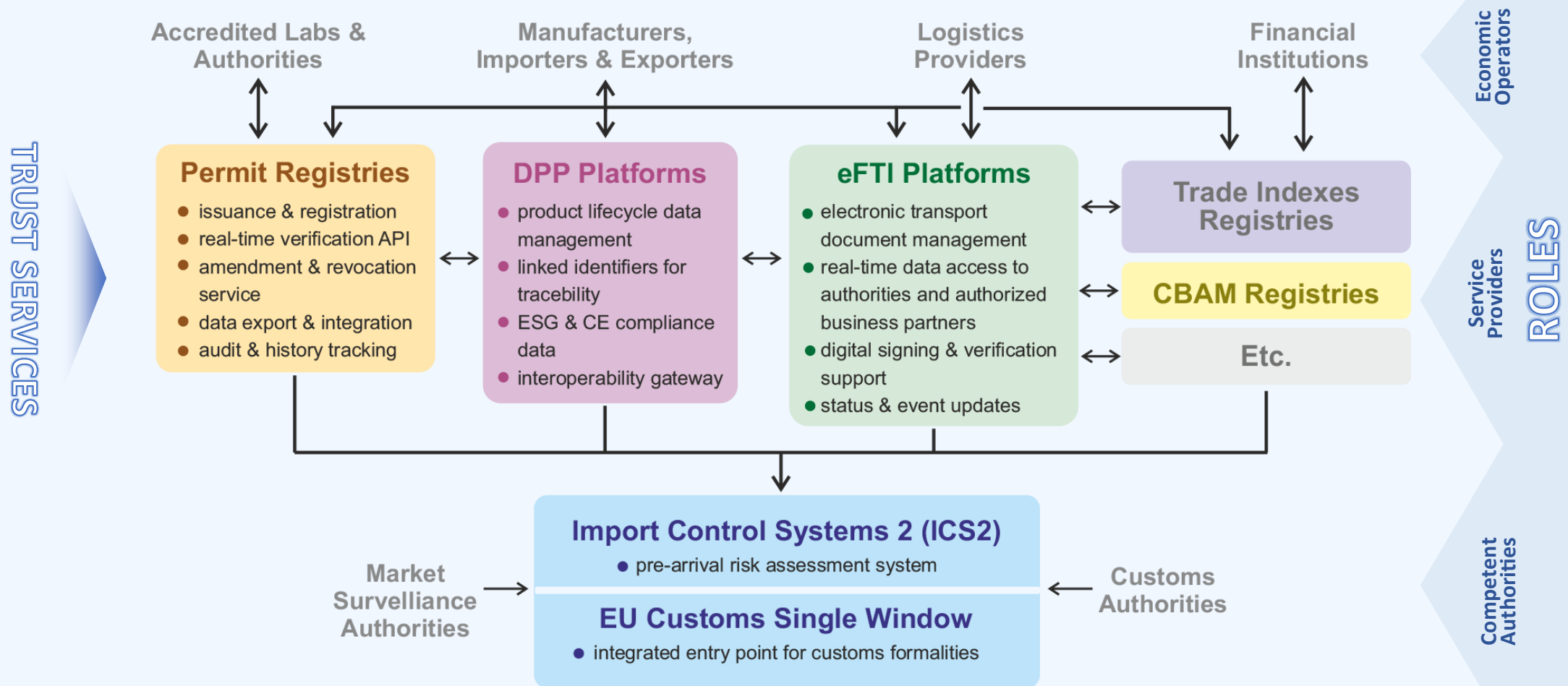**Market Survelliance Authorities**

Customs Authorities

*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.

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[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.
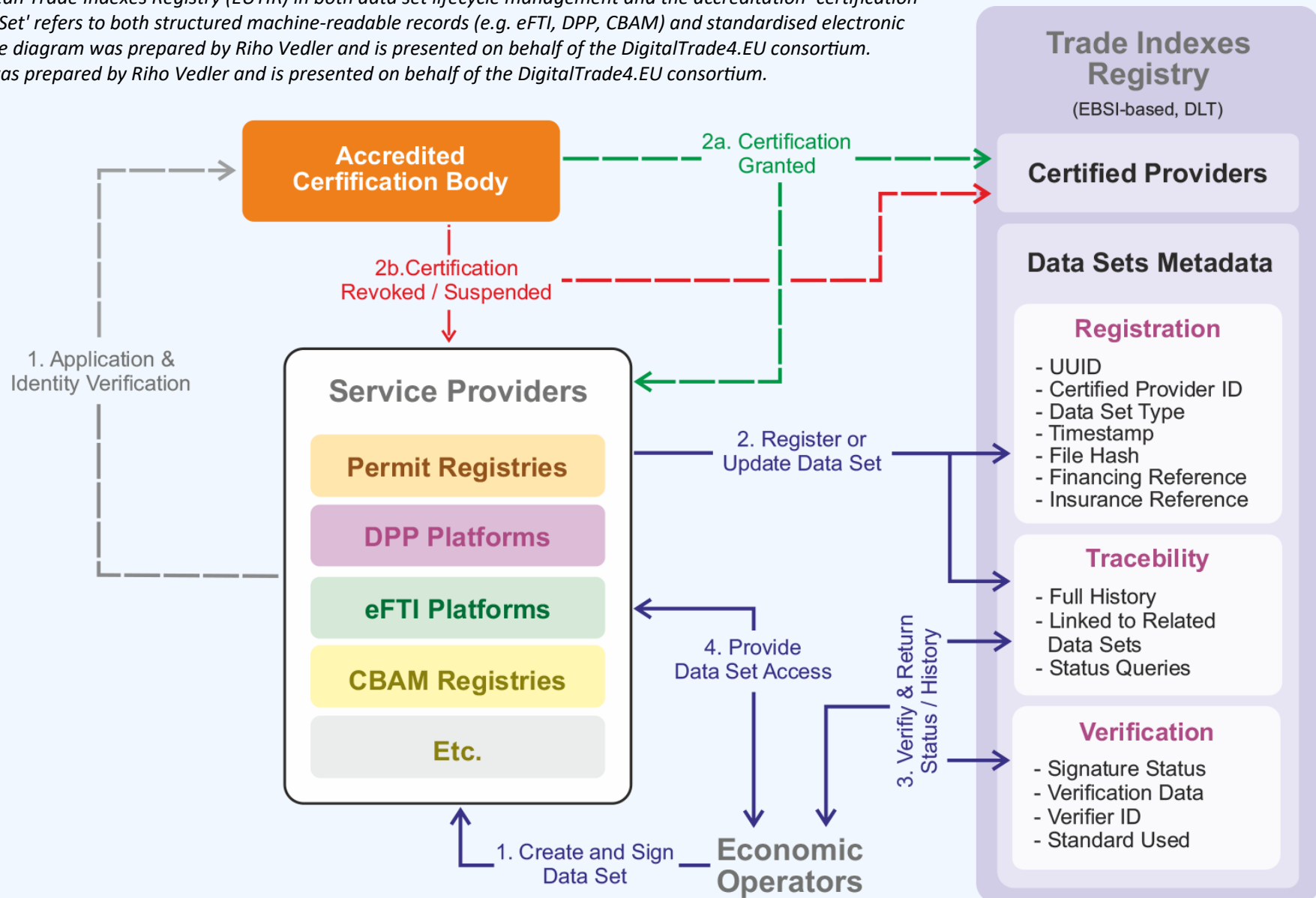
Relevant EU Legislation:

- **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.

Trade Indexes Registry (EBSI-based, DLT)

Accredited Certification Body

2a. Certification Granted

Certified Providers

2b. Certification Revoked / Suspended

1. Application & Identity Verification

Service Providers

- Permit Registries
- DPP Platforms
- eFTI Platforms
- CBAM Registries
- Etc.

2. Register or Update Data Set

4. Provide Data Set Access

3. Verify & Return Status / History

1. Create and Sign Data Set

Economic Operators

Data Sets Metadata

Registration
- UUID
- Certified Provider ID
- Data Set Type
- Timestamp
- File Hash
- Financing Reference
- Insurance Reference

Tracebility
- Full History
- Linked to Related Data Sets
- Status Queries

Verification
- Signature Status
- Verification Data
- Verifier ID
- Standard Used

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

Real-Time Processes

AI/ML, IoT, Blockchain, Digital Twins

analyse and control

banks and financial intermediators

communication

data exchange between parties

data and sematic models

trade finance instruments

national and cross-border data exchange

accreditation and certification

verification

electronic documents (*standardized data sets*)

electronic signature (*digital identity*)

trade finance regulatory frameworks

instruments and processes

Green Environment

DPPs, CBAM, Circular Economy, Smart Waste Management, etc.

cross-border & certification legislation

national and international laws

foundational digital legislation

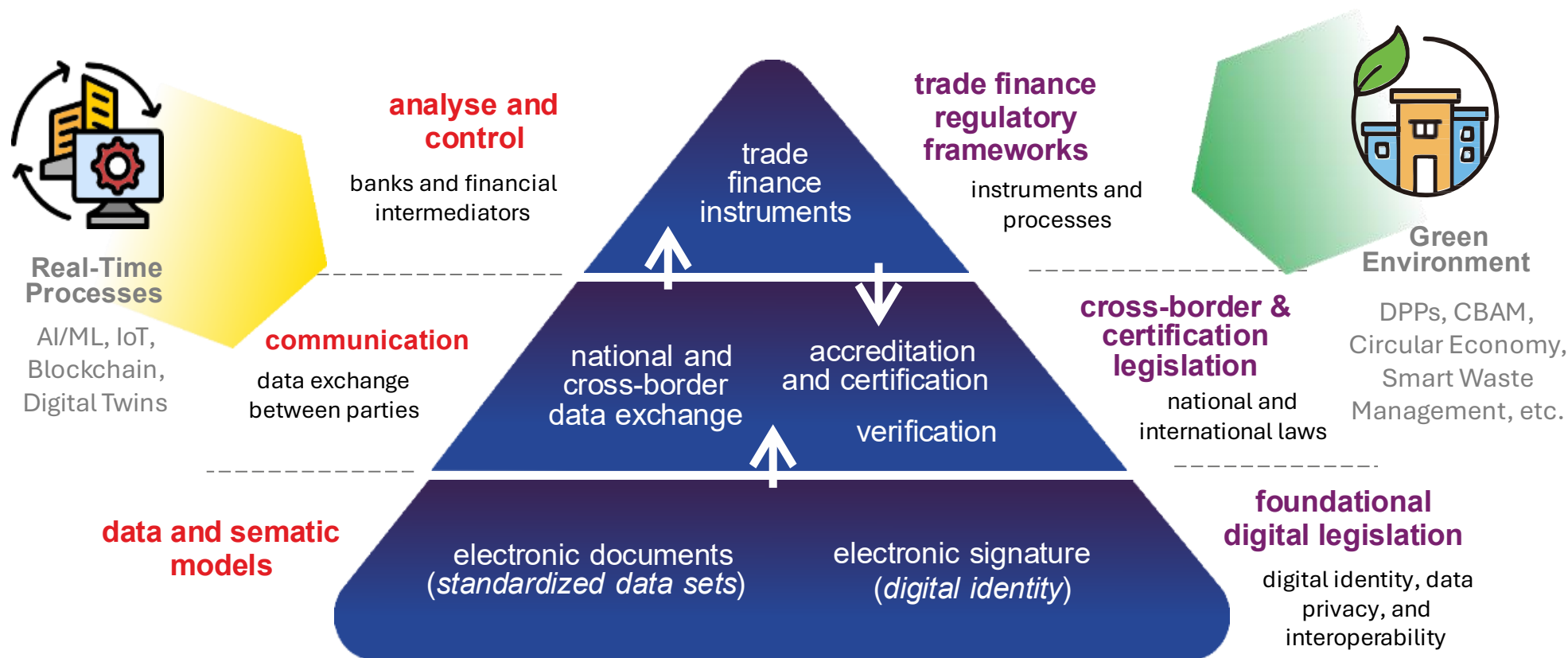digital identity, data privacy, and interoperability

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. Amendment Proposals to Regulation

6.1. Workplace Training and Skills Incentives

Proposed Legal Text, Article 3 – Objectives, paragraph 2(c)**:**

> *(c) to promote lifelong learning, including workplace-based training opportunities, ensuring that newly acquired skills are directly linked to improved employability and wage growth, thereby strengthening motivation for continuous education.*

Justification: The Regulation should explicitly recognise the importance of **workplace training** in enhancing employability and social mobility. Linking skills acquisition to higher wages creates a direct and tangible incentive for citizens to continue learning. This strengthens both the competitiveness and inclusiveness objectives of Erasmus+. It also complements the EU Skills Agenda by addressing labour market realities, ensuring that workers across Member States benefit equally from training opportunities.

6.2. Digital Trust and Secure Tools

Proposed Legal Text, Article 7 – Inclusion and Participation, new paragraph 4**:**

> *The Programme shall promote the use of secure and user-friendly digital tools, such as European Digital Identity Wallets (as established by Regulation (EU) 2024/1183), understood as secure applications for storing and using personal identification, payment, and entitlement data, to ensure that participants can safely and conveniently access services and opportunities across borders. Special attention shall be paid to raising user trust and familiarity, encouraging adoption in both professional and household settings."*

Justification: Building **trust in digital tools** is essential for ensuring wide participation in Erasmus+ opportunities. Secure and user-friendly solutions like digital wallets help participants manage mobility, training, and financial support with confidence. By emphasising usability, the Programme increases continuity between participation and everyday life. This also supports the rollout of **eIDAS 2.0 (Regulation (EU) 2024/1183)** and enhances trust in

Europe's digital economy and ensures that all digital interactions respect the **General Data Protection Regulation (Regulation (EU) 2016/679)**, reinforcing citizens' trust in secure and lawful data processing.

6.3. Green Skills and Climate Transition

Proposed Legal Text, Article 3 – Objectives, paragraph 2(e)**:**

> *(e) to equip learners of all ages with green skills, including climate literacy, sustainable consumption practices, and knowledge for supporting the EU's green transition, in line with the European Green Deal.*

Justification: The Erasmus+ objectives should more clearly reflect the EU's **climate and environmental commitments**. Adding green skills ensures that education and training are aligned with the European Green Deal and the Competitiveness Compass. This will prepare both young people and adults for the jobs of the future in a low-carbon economy. It also helps the EU maintain global leadership in sustainability by linking learning mobility to green transitions.

6.4. Linking Culture, Values, and Trade Innovation

Proposed Legal Text, Article 15 – International Dimension, paragraph 1:

> *International cooperation under the Programme shall promote not only academic and youth exchanges, but also cross-border initiatives in culture, civil society, and innovation ecosystems. Activities shall be interoperable with European digital registries, including the European Trade Indexes Registry (EUTIR), to support cultural exchange, value-driven cooperation, and sustainable trade links with partner countries.*

Justification: Erasmus+ already promotes mobility, but it does not sufficiently highlight the role of **culture and values** in international cooperation. By integrating links to digital trade registries such as EUTIR, the Programme will extend its relevance to innovation ecosystems and sustainable partnerships. This creates synergies between education, civil society, and trade diplomacy. It also positions Erasmus+ as a strategic instrument for strengthening Europe's global influence and partnerships.

6.5. Support for SMEs and Creative Sectors

Proposed Legal Text:, Article 12 – Eligible Actions, paragraph 3:

> *(3) support for small and medium-sized enterprises (SMEs) and organisations in the cultural and creative sectors, enabling them to participate in mobility, training, and innovation actions supported under the Programme.*

Justification: SMEs and creative organisations often face barriers to participating in EU-funded programmes due to administrative burdens and lack of resources. By explicitly including them, Erasmus+ will strengthen innovation and cross-sectoral collaboration. This will enhance employment opportunities and foster resilience in the cultural and creative sectors. The amendment ensures that the Programme contributes to Europe's competitiveness while respecting its cultural diversity.

6.6. Strengthening Civil Society Participation

Proposed Legal Text, Article 7 – Inclusion and Participation, paragraph 2**:**

> *(2) The Programme shall support civil society organisations and community networks in engaging young people and underrepresented groups, ensuring equal access to opportunities across Member States and partner countries.*

Justification: Civil society organisations play a key role in mobilising and supporting communities, especially marginalised groups. Including them explicitly reinforces Erasmus+ as an inclusive programme. This ensures that opportunities are accessible beyond formal education institutions, reaching youth in diverse environments. The amendment also strengthens the Programme's role in promoting **values, democracy, and solidarity**.

6.7. Innovation in Learning Technologies

Proposed Legal Text, Article 13 – Programme Implementation, new paragraph 5**:**

> *5. The Programme shall encourage the development and deployment of innovative learning technologies, including AI-supported language learning tools, immersive virtual environments, and open digital platforms, ensuring accessibility for all participants.*

Justification: The digital transformation of education requires new methods and tools. By supporting innovative learning technologies, Erasmus+ helps participants develop future-ready skills. This reduces the digital divide and provides equal access to modern learning experiences across the Union. The deployment of AI-based learning tools shall be consistent with the principles of the GDPR, ensuring privacy and data protection in education. It also strengthens Europe's global leadership in education technology.

6.8. Solidarity and Resilience in Crisis Situations

Proposed Legal Text, Article 3 – Objectives, new paragraph 2(h)**:**

(h) to strengthen solidarity and resilience by enabling learners, volunteers, and organisations to respond effectively to crises, including health emergencies, conflicts, and natural disasters, in coordination with EU civil protection and humanitarian aid mechanisms.

Justification: Recent crises such as the COVID-19 pandemic, the war in Ukraine, and climate-related disasters have shown the need for resilience mechanisms within education and youth programmes. By adding this objective, Erasmus+ will support preparedness and solidarity actions across borders. This ensures that young people and organisations can contribute meaningfully to Europe's crisis response capacity. It also reinforces the Union's commitment to global responsibility and resilience.

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/

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