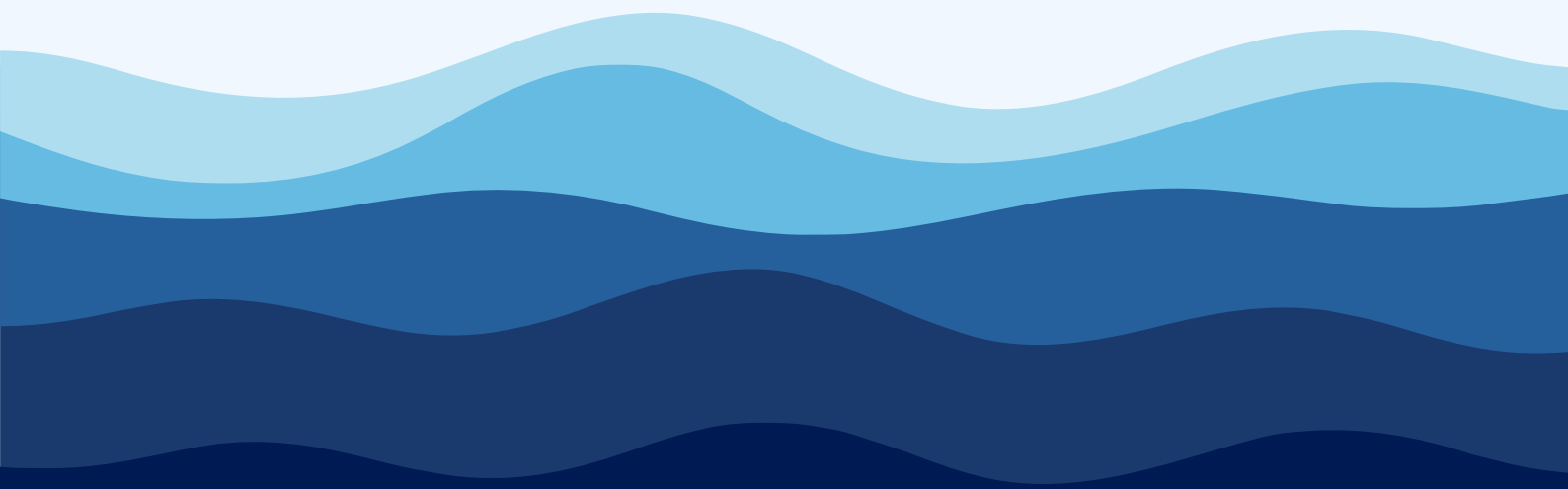


Prepared by DigitalTrade4.EU

The top half of the cover features a series of horizontal, wavy bands in various shades of blue, ranging from light sky blue to deep navy blue, creating a layered, ocean-like effect.

Strengthening EU Competitiveness through the European Trade Indexes Registry (EUTIR)

Feedback to the EU Commission

August 2025

1. Introduction

The European Commission's *EU Competitiveness Compass* has set a clear direction for Europe: to build a more resilient, innovative, and sustainable economy. Achieving this vision requires trusted, interoperable, and future-proof digital infrastructures that reduce administrative burdens, foster innovation, and support Europe's twin green and digital transitions.

The proposed **European Trade Indexes Registry (EUTIR)** directly responds to these expectations by acting as a trust anchor for trade-related data sets across the Single Market. By ensuring authenticity, traceability, and machine-readability, EUTIR enables more efficient customs procedures, strengthens sustainability verification, and supports advanced analytics powered by AI and ML. In doing so, it aligns with the competitiveness priorities of the EU: securing supply chains, enhancing regulatory efficiency, and unlocking innovation potential for both large companies and SMEs.

EUTIR is not only a technical solution but also a strategic instrument to integrate digital trade, ESG-driven finance, and secure data exchange into one coherent framework. Its adoption would create a **single, verifiable layer for European and international trade data**, reducing duplication, increasing trust, and reinforcing Europe's leadership in global digital governance.

In line with the Horizon Europe framework and the European Competitiveness Fund, EUTIR also supports research, innovation, and cross-sectoral valorisation of data by enabling businesses, public authorities, and research institutions to collaborate on trusted platforms. This strengthens Europe's knowledge base, accelerates the deployment of green and digital technologies, and ensures that innovation translates into concrete competitiveness gains across the Union.

Furthermore, EUTIR reinforces Europe's strategic autonomy and global influence by providing a model for interoperable and transparent trade registries that can be adopted beyond the EU. By fostering international cooperation, while safeguarding European values of trust, sustainability, and openness, the registry ensures that Europe remains both a global standard-setter and a reliable partner in shaping the digital economy.

1.1. Alignment of EUTIR with EU Competitiveness Priorities

#	EU Competitiveness Compass & Horizon Europe Priorities	Contribution of EUTIR
1	Strengthening research & innovation (Horizon Europe, ERC, EIC)	Provides trusted trade datasets for research institutions and innovators, enabling advanced analytics, AI/ML-driven solutions, and cross-sectoral valorisation.
2	Green transition & sustainability (Green Deal, CBAM, DPP)	Supports verification of ESG criteria and integration with the Digital Product Passport , ensuring compliance with carbon and resource-efficiency standards.
3	Digital transformation & secure data flows (eIDAS 2.0, data spaces)	Acts as a digital trust anchor for trade-related data, ensuring interoperability, authenticity, and machine-readability across the EU Single Market.
4	SME competitiveness & market access	Reduces administrative burdens by providing a single verifiable registry , lowering compliance costs and enabling SMEs to participate in global trade.
5	Resilient supply chains & strategic autonomy	Increases traceability and transparency in critical supply chains, supporting Europe's resilience against external shocks and dependencies.
6	International cooperation & global leadership	Positions the EU as a standard-setter in digital trade governance, promoting trusted registries and interoperable solutions globally.

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 GLEIF², 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-based³ 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

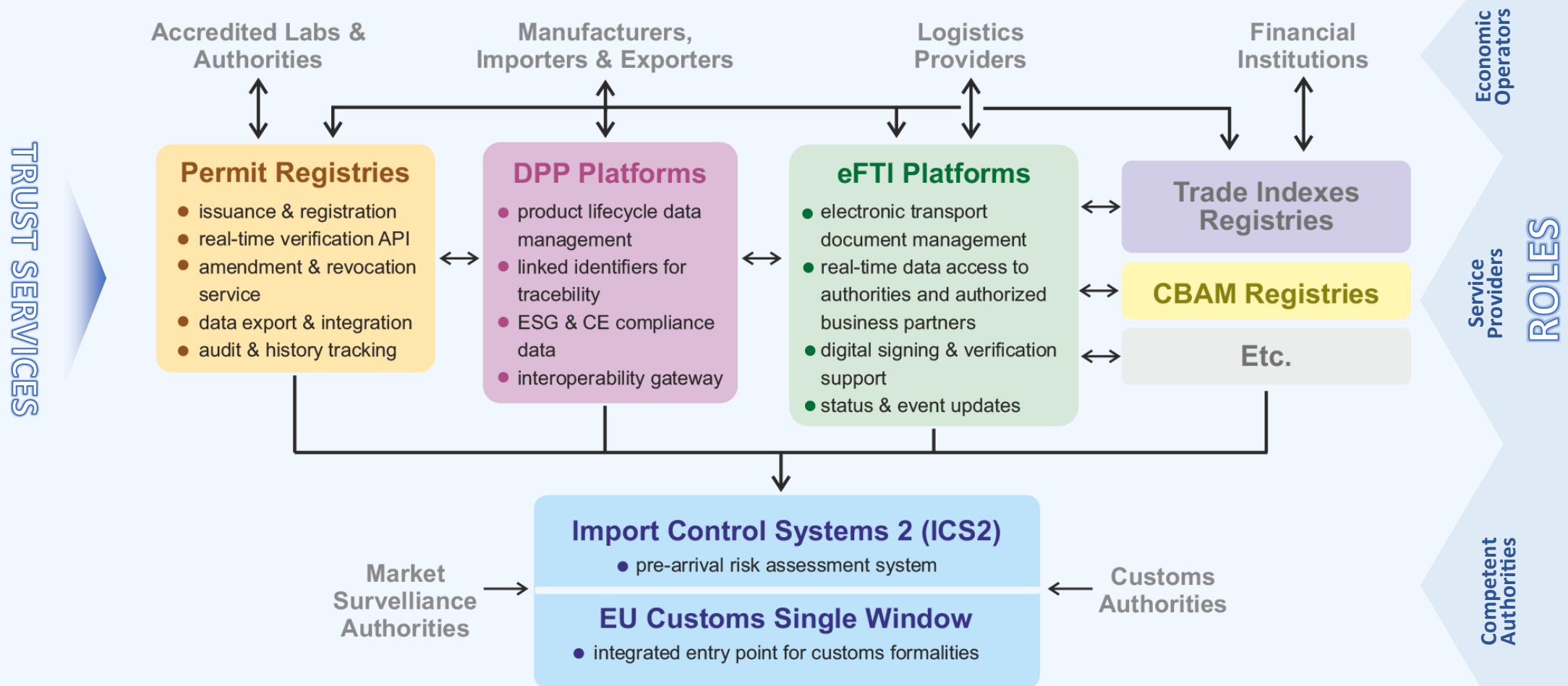


Figure 1. This diagram illustrates the key platforms, data flows, and stakeholder interactions across the EU's digital trade and customs ecosystem. It shows how manufacturers, logistics providers, and regulatory systems connect through structured data platforms—such as eFTI, the Digital Product Passport, 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:

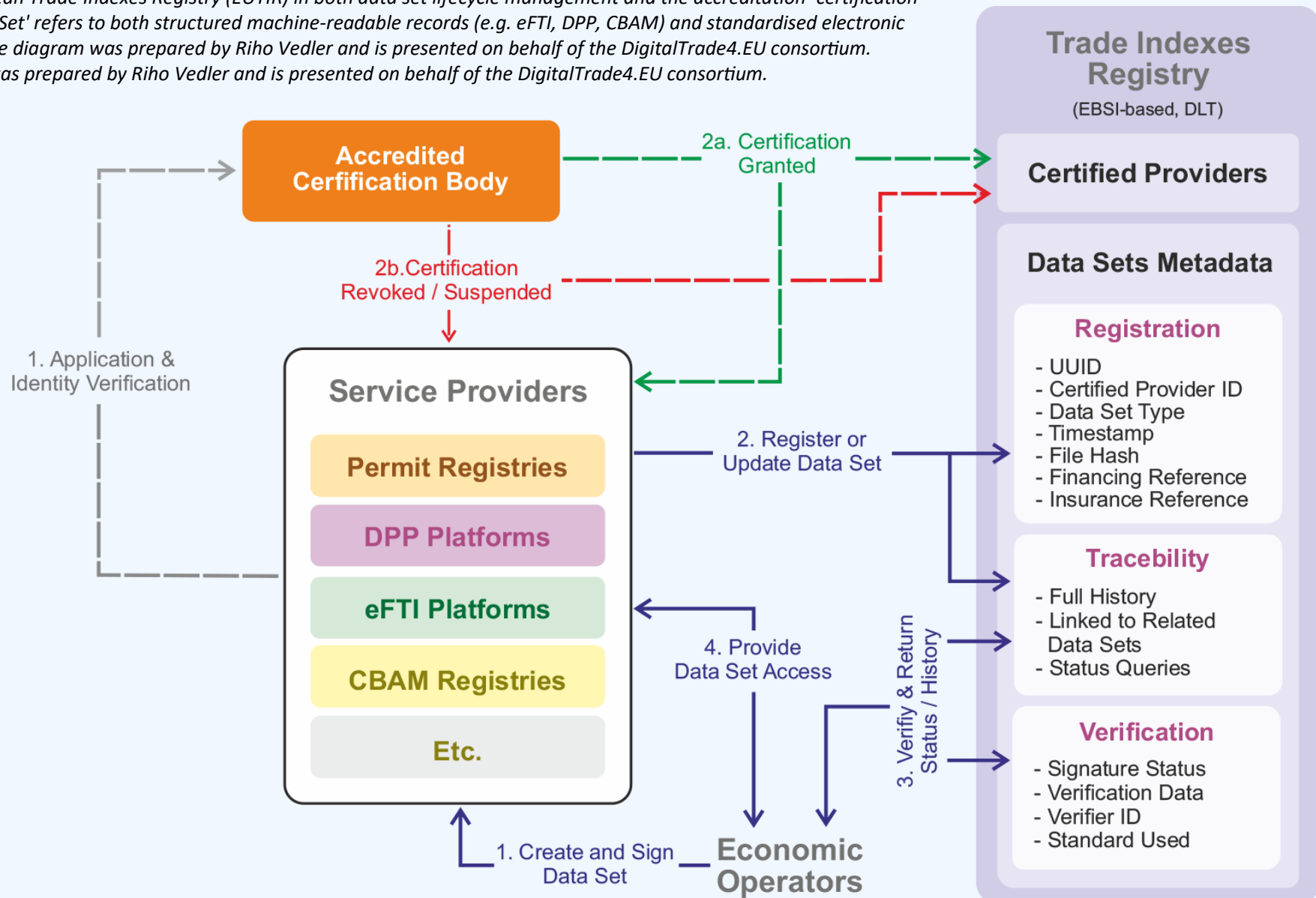
- **Regulation (EC) No 765/2008** – establishes EU accreditation framework; relevant for recognising Certified Providers in EUTIR.
- **Decision No 768/2008/EC** – harmonised rules for product marketing and conformity assessment bodies.
- **Regulation (EU) 2019/1020** – market surveillance and product 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

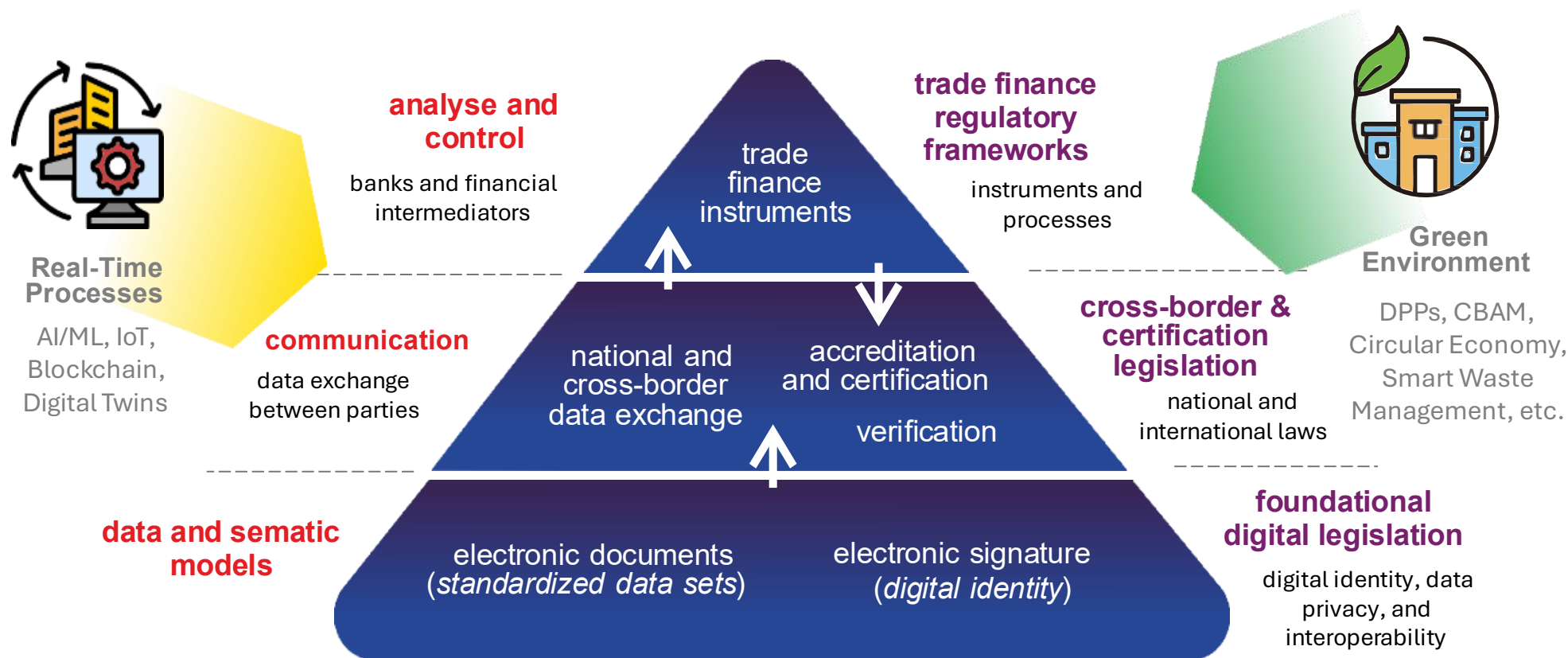


Figure 3 This visual model bridges the European Commission's strategic objectives with the proposed regulatory and operational solutions, illustrating how digital requirements and compliance mechanisms can be implemented in a technologically neutral and future-proof manner. All digital requirements and 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. Draft Amendment Proposals

6.1. Digital Trade Infrastructures under Horizon Europe

Proposed Legal Text, Article 3 (Objectives), paragraph 2(b):

The Programme shall support the development of trusted digital trade infrastructures, including the European Trade Indexes Registry (EUTIR), as a key enabler of competitiveness, innovation, and cross-border interoperability.

Justification: This amendment ensures that Horizon Europe explicitly recognises digital trade infrastructures as fundamental to EU competitiveness. While the regulation already highlights innovation and knowledge valorisation, it does not specifically address the critical role of interoperable and verifiable digital registries in reducing administrative burdens and enabling SMEs to access global markets. By adding EUTIR as an example, the Regulation underlines its commitment to strengthening Europe's position as a leader in trusted digital governance. Furthermore, it aligns with the twin transition objectives by embedding sustainability and ESG compliance into digital infrastructures. This targeted clarification would also provide legal certainty for future funding streams, ensuring that projects like EUTIR are prioritised under Horizon Europe and the Competitiveness Fund.

6.2. Strengthening SME Participation through Simplified Access

Proposed Legal Text, Article 6 (Participation and Access), paragraph 1 - replace the second sentence with:

Special measures shall be taken to reduce administrative burdens for SMEs, including simplified lump-sum funding, digital-first applications, and access to EU-wide registries that provide verifiable compliance data.

Justification: Although Horizon Europe commits to simplifying procedures, SMEs still face disproportionately high compliance and reporting costs. This amendment introduces the principle of *digital-first participation* by leveraging EU-wide registries such as EUTIR. By integrating verifiable compliance data directly into application and reporting systems, SMEs

would avoid redundant paperwork and benefit from faster evaluation procedures. This approach is consistent with the EU Competitiveness Compass, which stresses the need to unlock innovation potential across all company sizes. It also reduces the participation gap between SMEs and larger entities, contributing to more inclusive and balanced innovation ecosystems.

6.3. Linking Green Transition with Trade Compliance

Proposed Legal Text Annex I, Part II (Global Challenges and European Competitiveness), Section 2.3 (Climate, Energy and Mobility) - insert new point (g):

Support the integration of carbon border adjustment and digital product passport (DPP) mechanisms with trusted registries such as the European Trade Indexes Registry (EUTIR), in order to strengthen traceability, transparency, and sustainability compliance in supply chains.

Justification: This amendment bridges Horizon Europe’s green transition goals with practical trade compliance mechanisms. The inclusion of CBAM and the Digital Product Passport is crucial for ensuring that climate and sustainability policies are effectively implemented across supply chains. By anchoring these instruments in trusted digital registries like EUTIR, the EU can reduce fraud risks, improve traceability, and enhance data reliability. This also supports Europe’s international credibility, as partners and third countries would benefit from transparent, verifiable compliance standards. Embedding such digital tools within Horizon Europe ensures that innovation funding is not only future-oriented but also directly aligned with EU environmental and trade policy priorities.

6.4. Enhancing International Cooperation through Trusted Registries

Proposed Legal Text, Article 12 (International Cooperation), paragraph 3 - add the following sentence:

Particular attention shall be given to the interoperability of trusted digital registries, such as the European Trade Indexes Registry (EUTIR), in order to promote global standards for data authenticity, transparency, and sustainability.

Justification: While international cooperation is a longstanding element of Horizon Europe, the regulation lacks specific references to digital infrastructures as instruments of cooperation. This amendment highlights how EUTIR can function as a bridge between EU and third-country systems by offering a transparent and interoperable model. It would help the EU set the tone for global standards on trade data governance, reinforcing Europe's role as both a partner and a leader. Furthermore, by promoting interoperability, the EU can facilitate smoother cross-border research, reduce trade frictions, and ensure mutual recognition of sustainability criteria. This improves the Union's international standing while safeguarding European values.

6.5. Open Science and Data Valorisation in Innovation Projects

Proposed Legal Text, Article 18 (Open Science), paragraph 2 - insert new point (d):

Promote the use of verifiable and machine-readable datasets from EU registries, such as EUTIR, to ensure that open science contributes to industrial innovation, ESG reporting, and cross-sectoral knowledge transfer.

Justification: The Horizon Europe framework already includes provisions on open science, but it focuses mainly on access rather than on data quality and valorisation. This amendment introduces a more practical dimension by encouraging the use of verifiable and machine-readable datasets. By doing so, the programme would not only advance academic excellence but also ensure that scientific outputs feed directly into industrial innovation and policy implementation. Registries such as EUTIR provide a ready-made source of trusted data that can be reused across sectors. This strengthens the innovation ecosystem, increases return on public investment, and ensures that open science principles translate into measurable competitiveness benefits.

6.6. Strategic Autonomy and Resilience in Supply Chains

Proposed Legal Text, Annex I, Part IV (Strengthening the European Research Area), Section 4.2 (Resilient and Secure Europe) - add new bullet point:

Develop digital infrastructures, including the European Trade Indexes Registry (EUTIR), to increase the EU's strategic autonomy by improving supply chain traceability,

reducing dependency on external actors, and supporting evidence-based policymaking.

Justification: The regulation identifies resilience as a goal but does not provide sufficient operational clarity on how to achieve it. This amendment introduces a concrete tool – digital infrastructures like EUTIR – to operationalise resilience and strategic autonomy. By enabling supply chain traceability, the EU can better monitor dependencies, identify vulnerabilities, and secure critical raw materials. Furthermore, EUTIR’s integration into policy frameworks would provide evidence-based insights for decision-makers, improving regulatory agility. This also aligns with the Competitiveness Compass priority of strengthening Europe’s autonomy while remaining open to global cooperation. Ultimately, the amendment anchors resilience not only in political ambition but in tangible, digital solutions.

6.7. Trusted Identities and Data Protection

Proposed Legal Text: Article 15 (Ethics and Data Protection), paragraph 1 - add after the first sentence:

The Programme shall promote the use of trusted identity and reference systems, including the European Unique Reference Identifier (EURI), the Economic Operators Registration and Identification (EORI) number, the Legal Entity Identifier (LEI/vLEI), and compliance with the General Data Protection Regulation (GDPR), to ensure secure, transparent, and privacy-respecting participation in EU research and innovation ecosystems.

Justification: This amendment integrates trusted digital identity and reference systems directly into Horizon Europe’s implementation. By leveraging EURI, EURI and LEI/vLEI, the EU can improve legal certainty, reduce fraud, and facilitate the secure identification of research participants, businesses, and public authorities. The explicit link to GDPR ensures that innovation and competitiveness are pursued without compromising citizens’ fundamental rights. Trusted identity systems are also essential for cross-border collaboration and interoperability with global partners. Embedding these elements in Horizon Europe reinforces Europe’s leadership in responsible digital governance while aligning with the Competitiveness Compass objectives of resilience and trust.

6.8. Integration with eFTI and Digital Transport Infrastructures

Proposed Legal Text, Annex I, Part II (Global Challenges and European Competitiveness), Section 2.4 (Industry, Transport and Space) - insert new point (h):

Promote the integration of research and innovation actions with digital transport frameworks, including Regulation (EU) 2020/1056 on electronic Freight Transport Information (eFTI), in order to strengthen interoperability, efficiency, and sustainability in European and international logistics chains.

Justification: Transport and logistics are critical enablers of competitiveness, yet the current regulation does not explicitly connect Horizon Europe projects with existing EU transport digitalisation frameworks. This amendment ensures that innovations developed under Horizon Europe can be tested and scaled in alignment with the eFTI Regulation, which establishes a common framework for digital freight information. Linking research outputs with eFTI maximises synergies, avoids duplication, and accelerates the deployment of sustainable transport solutions. It also enables supply chain transparency, reduces administrative burden, and contributes to decarbonisation objectives. By embedding eFTI in Horizon Europe, the EU ensures that investments in research translate directly into stronger, greener, and more competitive logistics ecosystems.

6.9. Accreditation and Certification for Innovation Outputs

Proposed Legal Text, Annex I, Part IV (Strengthening the European Research Area), Section 4.3 (Innovation Ecosystem Support) - insert new point (f):

Support the development of sector-specific accreditation and certification frameworks to ensure that innovations funded under the Programme can be validated, standardised, and placed on the market more rapidly, while strengthening Europe's strategic autonomy in conformity assessment.

Justification: This amendment ensures that Horizon Europe does not only generate innovative research but also creates the conditions for its market adoption. Accreditation and certification are often overlooked bottlenecks that delay the deployment of new technologies, especially in regulated sectors such as health, transport, energy, and digital security. By supporting sector-specific certification schemes, the EU can accelerate the time-

to-market for funded innovations, increase the competitiveness of SMEs, and reduce dependence on third-country conformity assessment bodies. Furthermore, investing in European certification capacity enhances trust, ensures compliance with ESG and safety requirements, and strengthens the Union's strategic autonomy. This amendment bridges the gap between research excellence and economic impact, ensuring that innovations become tangible benefits for industry and society.

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 CEFAC, 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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