Prepared by DigitalTrade4.EU

Enhancing RNQP Traceability, Digital Trust and Data Interoperability

Proposed Amendments to Commission Implementing Regulation (EU) 2019/2072

August 2025

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:

1. 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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1. Introduction

The present document outlines targeted feedback on the proposed amendments to **Commission Implementing Regulation (EU) 2019/2072**, with a particular emphasis on enhancing the digital trust, traceability, and cross-border interoperability of official declarations for **regulated non-quarantine pests (RNQPs)**. The objective of this contribution is to support the European Commission in modernising Annex V of the Regulation in line with the EU's broader goals on digital transformation, sustainability, and resilient trade infrastructure.

The proposed amendments go beyond traditional pest list updates by introducing legal and operational mechanisms that enable:

- machine-readable declarations based on **Digital Product Passports (DPPs),**
- legal identity assurance using **verifiable Legal Entity Identifiers (vLEIs),**
- integration with the **EU's electronic freight transport infrastructure (eFTI platforms)**,
- and cryptographically sealed sampling and testing data using qualified trust services under **Regulation (EU) 2024/1183 (eIDAS 2.0)**.

These recommendations are designed to complement the technical updates in working documents "COMMISSION IMPLEMENTING REGULATION (EU) …/... of XXX amending Implementing Regulation (EU) 2019/2072 as regards the listing and the measures for regulated non-quarantine pests" and "Annexes IV and V to Implementing Regulation (EU) 2019/2072", without altering their core pest-specific provisions. Instead, they introduce enabling clauses within **Annex V** that ensure future-proofing, legal trust, and efficient cross-border implementation of RNQP controls, particularly as inspection authorities adopt more digital and risk-based surveillance tools.

Use of Reference Documents in Justification Sections

The "Justification" sections of this document refer to insights and policy recommendations found in the following strategic background documents:

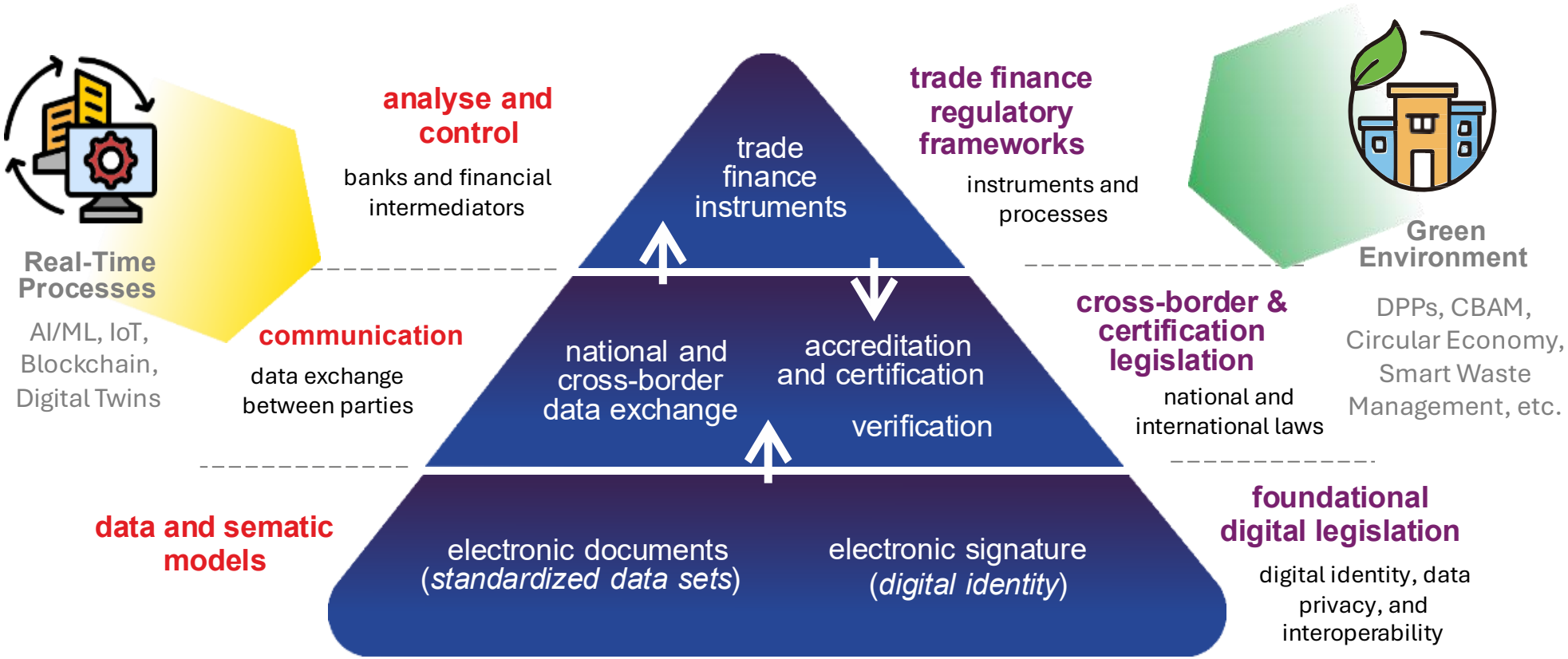
1. ***DigitalTrade4.EU. Aligning the EU Regulation on Pesticide Residues with the Digital Product Passport (DPP) and ESG Objectives (July 2025)***
   https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13764-Pesticide-residues-in-food-methods-for-sampling-and-analysis-update-/F3575978_en
   Hereinafter abbreviation: **Input-to-Pesticide-2025**

2. ***DigitalTrade4.EU. Aligning Digital Trade Solutions with CAP Simplification and Digitalisation (June 2025)***
   https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14704-Common-agricultural-policy-simplifying-the-implementation-of-strategic-plans/F3563472_en
   Hereinafter abbreviation: **Input-to-CAP-2025**

3. ***DigitalTrade4.EU. Feedback on the Future of Digital Trade, eFTI Regulation, and European Strategy (June 2025)***
   https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14373-Electronic-freight-transport-information-eFTI-platforms-specifications-on-the-functional-requirements/F3570740_en
   Hereinafter abbreviation: **Input-to-eFTI-2025**

These references are provided to demonstrate the coherence between the proposed RNQP amendments and cross-cutting EU strategies in plant health, transport, and digital trust infrastructure. Each referenced document has been developed in coordination with the **DigitalTrade4.EU** consortium, with contributions from industry, regulators, and technology experts across Europe. Rather than restating policy arguments, the citations serve to position the legal amendments within a broader strategic and technical context already recognised by EU institutions. This enhances the traceability, rationale, and policy alignment of the proposals set forth in this document.

2. Strategic Digital Models for Sustainable Trade and Logistics



Source. Riho Vedler, DigitalTrade4.EU. 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. Icons by Flaticon.

3. Proposed Amendments to the Implementing Regulation and Annexes

3.1. Integration of Digital Product Passports (DPP) for Enhanced RNQP Traceability

Proposed Legal Text, Annex V, General Provisions; and footnotes to Sections 2 or 3 of Parts A, B, E, F, G, and H:

> *Where applicable, official statements may be digitally issued and stored via interoperable Digital Product Passport (DPP) systems aligned with the EU Sustainable Products Initiative. Data integrity shall be ensured via conformity to Regulation (EU) 2024/1183 (eIDAS 2.0).*

Justification: RNQP declarations currently lack a unified, interoperable digital format that links traceability data such as origin, resistance traits, treatment history, and ESG compliance. This fragmentation limits cross-border inspection efficiency and data reuse. Digital Product Passports (DPPs) on base Regulation (EU) 2024/1781 (Ecodesign for Sustainable Products Regulation) enable secure, structured and machine-readable storage of such data, which can be reused across supply chain checkpoints, certification bodies and customs systems. DPPs also support interoperability with environmental performance data, critical for linking pest-resistance to sustainability objectives. *Input-to-Pesticide-2025* (Art. 4a) calls for DPP-based traceability models in plant health governance. *Input-to-CAP-2025* supports the reuse of structured product compliance data to reduce fragmentation and inspection burden across Member States.

3.2. Use of Legal Entity Identifier (LEI) and verifiable LEI (vLEI) for RNQP Certification Traceability

Proposed Legal Text, Annex V, Sections 1 and 2 of all relevant Parts (A–K); official declaration templates:

> *All phytosanitary certificates and official declarations under Annex V must reference the certified professional operator's Legal Entity Identifier (LEI) or verifiable LEI (vLEI), as defined by ISO 17442. When used, vLEIs must be issued by an authorized global*

operating entity within the LEI ecosystem and comply with applicable international specifications for verifiable credentials and digital trust services.

Justification: Official RNQP declarations must be traceable to both the legal identity and the functional role of the responsible party. Today, such identities are often unverifiable or based on paper-only records. vLEIs provide cryptographically secure, tamper-evident credentials that bind legal entities to operational roles in certification. They facilitate automation, fraud prevention and trustworthy audit trails. In digital workflows, this is key for cross-border recognition and streamlined validation. *Input-to-Pesticide-2025* (Art. 4b) calls for vLEI adoption in plant health certifications to ensure accountability. *Input-to-CAP-2025* supports vLEIs as part of the EU's digital trust infrastructure.

3.3. Authorisation of CBAM-DPP Interface for RNQP-Linked Imports

Proposed Legal Text, Annex V, Parts G and H – additional provisions for imports of oil and fibre plants or vegetable propagating material:

Where imports are linked to carbon-intensive supply chains, authorities may request CBAM-DPP interface data as part of RNQP certification.

Justification: Linking RNQP declarations with carbon-related data via the CBAM-DPP interface allows for integrated environmental risk profiling at borders. It provides insight into sustainability practices and supports traceability of resistant varieties that reduce chemical input. This cross-reference capability allows phytosanitary authorities to benefit from pre-verified environmental performance metrics. *Input-to-Pesticide-2025* (Art. 4f) recommends converging phytosanitary, environmental, and trade measures. Integrating CBAM and DPP data structures reduces redundancy and enhances the efficiency and integrity of import certification.

3.4. Digital Sampling & Certification Logs via eIDAS-Compliant Systems

Proposed Legal Text, Annex V, Sections 2 of Parts A, B, E, F:

Sampling and testing logs may be stored/shared using platforms compliant with Regulation (EU) 2024/1183 (eIDAS 2.0), ensuring auditability.

Justification: Sampling records are essential evidence in RNQP certification but are often stored locally in disparate formats, making cross-border validation inefficient or impossible. Using eIDAS 2.0–compliant platforms for log storage ensures time-stamping, sealing, and legal verifiability. It also enables reuse of certified data across national systems. *Input-to-Pesticide-2025* (Art. 4c) promotes trust service–secured digital logs as a baseline for harmonised surveillance and certification. *Input-to-CAP-2025* affirms that eIDAS-compliant systems are necessary to establish legal certainty in EU-wide automated controls.

3.5. Promotion of ESG-Linked Declarations for RNQP-Resistant Varieties

Proposed Legal Text, Annex V, Section 3 of Part A and similar sections in Parts G and H:

> *Where RNQP-resistant varieties are used, declarations may include ESG-linked indicators of sustainable plant health practices.*

Justification: Varieties with pest resistance contribute to the EU Green Deal and Farm to Fork goals by reducing dependency on pesticides. Including ESG-linked indicators in declarations allows such practices to be recognised, measured and rewarded through digital traceability. These indicators may reflect biodiversity impact, chemical-use reduction or climate resilience, and link to CSRD or taxonomy metrics. *Input-to-Pesticide-2025* (Art. 4a) supports embedding sustainability data into phytosanitary declarations. *Input-to-CAP-2025* recognises ESG-tagging as a bridge between plant health and environmental policy.

3.6. Enabling eFTI Platform Interoperability for Digital Phytosanitary Declarations

Proposed Legal Text, Annex V, introductory notes and Parts A, B, G, H, I:

> *Phytosanitary declarations may be submitted and retrieved via certified eFTI platforms under Regulation (EU) 2020/1056.*

Justification: Manual transmission of phytosanitary declarations is inefficient and often disconnected from logistics data. eFTI platforms certified under Regulation (EU) 2020/1056 offer structured and secure data exchange for multimodal freight, and can accommodate phytosanitary modules with minimal adaptation. Their integration improves compliance efficiency, reduces border delays, and strengthens interoperability between plant health, customs and transport authorities. *Input-to-Pesticide-2025* (Art. 4d) supports this linkage.

Input-to-eFTI-2025 further recommends extending eFTI to include environmental and safety declarations. *Input-to-CAP-2025* affirms that harmonised platforms like eFTI reduce regulatory fragmentation and simplify agri-trade logistics.

3.7. Trustworthy Use of Automated and AI-Generated Data in RNQP Surveillance and Certification

Proposed Legal Text, Annex V, General Provisions; and Sections 2 of Parts A–H (sampling and testing); new paragraph after current obligations:

> *Where RNQP-related data is generated automatically (e.g. by sensors, IoT systems, AI-assisted analytics or laboratory instruments), Member States may accept such data for certification and risk assessment purposes provided that it is cryptographically sealed using a qualified electronic seal under Regulation (EU) 2024/1183 (eIDAS 2.0) and complies with relevant transparency and oversight requirements. AI-assisted analytics may be used to support early detection, pattern recognition and pest outbreak risk forecasting, particularly where manual surveillance is insufficient.*

Justification: RNQP risk monitoring increasingly uses automated sources such as IoT devices, remote sensors and AI-based anomaly detection. However, legal acceptance of such data depends on its authenticity and attribution. Applying qualified eSeals (under eIDAS 2.0) ensures cryptographic integrity and legal traceability of data originating from autonomous systems. This supports real-time surveillance, outbreak mitigation, and remote auditing. *Input-to-Pesticide-2025* (Art. 4e) recommends this approach as a way to scale regulatory effectiveness without expanding inspection staff. *Input-to-CAP-2025* further supports the use of AI to strengthen plant health intelligence.

3.8. Establishment of a Unified Digital Audit Trail for RNQP Declarations via TRACES or Customs SW

Proposed Legal Text, Annex V, introductory provisions; and general notes to Part A and G (plant materials subject to import/export):

> *RNQP declarations and treatments must be archived in TRACES or Customs Single Window in a searchable, verifiable format.*

Justification: Data related to RNQP certification, treatment, and declarations is currently stored inconsistently across Member States, hampering effective inspection coordination and

auditability. Centralising these records within existing platforms like TRACES or the Customs Single Window would enable authorities to retrieve, verify and reuse data instantly. This supports fraud detection, cross-border emergency coordination, and harmonised enforcement. *Input-to-Pesticide-2025* (Art. 4c) promotes EU-wide audit trails for phytosanitary control. *Input-to-CAP-2025* encourages digital traceability and real-time data availability in plant health documentation.

4. Interoperability Ecosystem for EU Digital Trade and Customs Integration

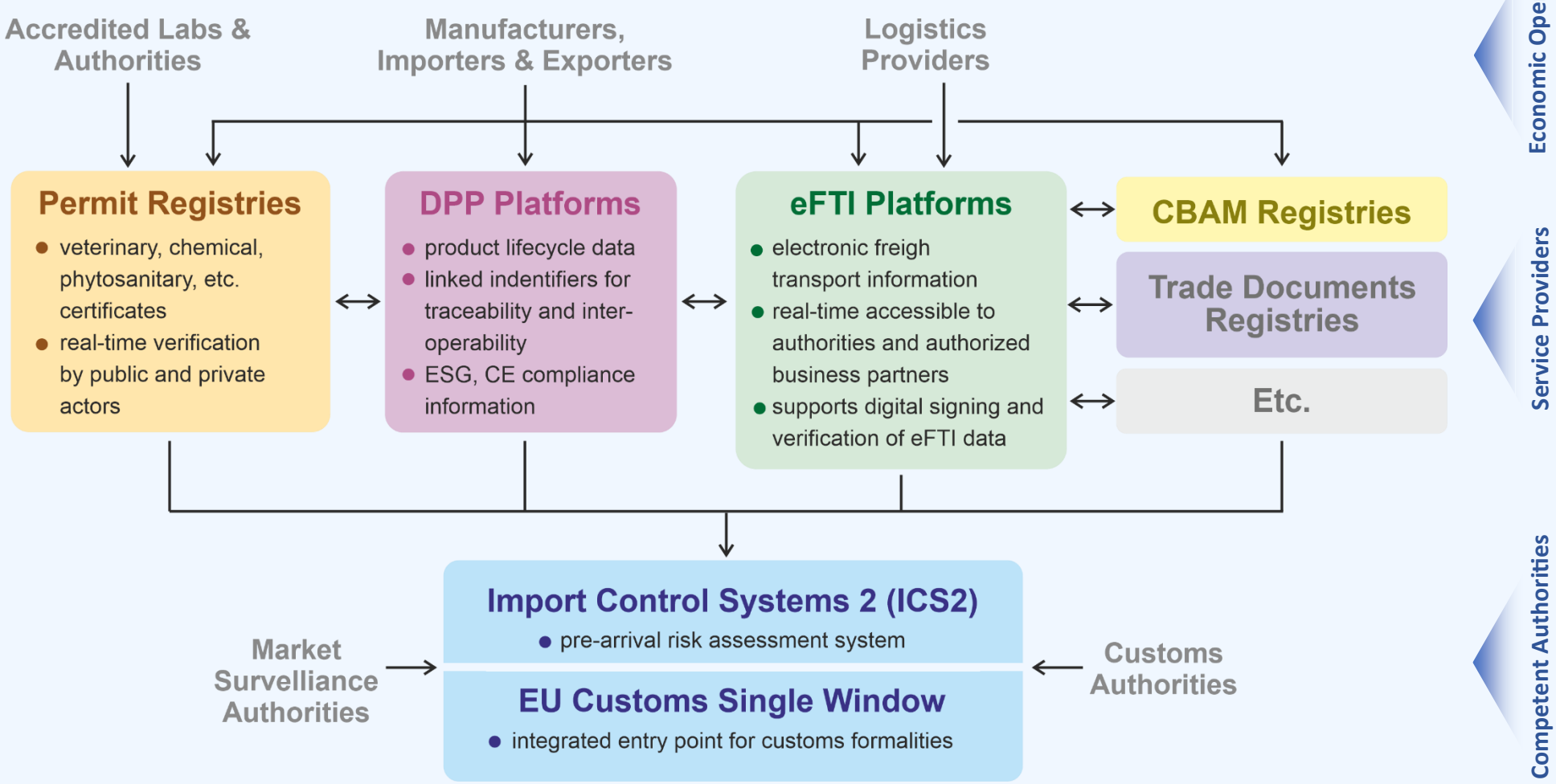


Figure 2. Vedler, R. This diagram illustrates the key platforms, data flows, and stakeholder interactions across the EU's digital trade and customs ecosystem. It highlights how manufacturers, logistics providers, and regulatory systems connect through structured data platforms—such as eFTI, Digital Product Passport, and EU Customs systems—while integrating with trusted external sources including TRACES, REACH-IT, EUDAMED, and digital identity services. All data exchange and processing within this ecosystem strictly adhere to the principles of the General ***Data Protection Regulation (GDPR)****, ensuring lawful, transparent, and purpose-limited handling of personal and sensitive data.*

4.1. 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.	Logistics providers, freight forwarders, customs brokers, software vendors	Connected to ICS2, Customs Single Window, DPP	Signing-enabled, eIDAS/vLEI, traceable submission logs
2	**DPP Platform**	Digitally represents product lifecycle data, compliance (CE, ESG), and traceability information.	Manufacturers, importers/exporters, ESG auditors, platform providers	Linked to eFTI, permit registries, eInvoicing, CBAM Registries, and customs declarations.	Verifiable ESG/CE data
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/permit info	Real-time validation
5	**Permit Registries**	Hosts and validates official permits and certificates (e.g. veterinary, phytosanitary, chemical).	National competent authorities (e.g. TRACES, ECHA), EU agencies	Linked from DPP & eFTI	Real-time verifiability
-	**Business Wallet**	Decentralised environment for securely holding and sharing credentials and electronic documents (data sets) under user control.	Traders, SMEs, logistics operators, authorised representatives, identity providers	Interacts with all above	vLEI identity, eIDAS 2.0
6	**Trade Documents Registry (TDR)**	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, and linkages 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, MLETR compliance, supports traceable audit trails
7	**CBAM Registries**	Record and manage embedded carbon emissions data for imported goods subject to the EU Carbon Border Adjustment Mechanism. Provide CO_2 reporting, verification and certification infrastructure aligned with customs and sustainability frameworks.	Importers, customs authorities, national CBAM authorities, accredited CO_2 verifiers, ESG auditors	Linked with DPP for product-level emission data, Customs Single Window for compliance validation, and trade finance systems for tariff adjustments.	Verified emission declarations, EU-accredited verifier network, secure transmission to customs

Appendix 1. 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

Table 2. The roadmap above, DigitalTrade4.EU's input to the European Commission's "International Digital Strategy" operationalises the recommendations outlined in this document. For instance, Activity 1 (EU-Singapore DTA & Expand DEPA Partnerships) directly supports the harmonisation of international digital standards, while Activity 8 (Global Digitalisation Projects with EU Standards) aligns with efforts to promote dual-use infrastructure globally. These activities collectively reinforce the EU's ability to leverage digital trade diplomacy as a tool for both economic growth and strategic security.

Appendix 2. Digital Trade & Capital Markets Integration Roadmap (DigitalTrade4.EU, 2025)

#	activity	objective	indicative metrics	tools/enablers
1	Establish EU Trade Document Registry (ETDR)	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