eFTI4EU

ADMIRA

WELCOME

AGENDA

09:00	Welcome from eFTI4EU and ADMIRAL
09:05–09:50 *Policy and regulatory context*	**eFTI regulation and eFTI4EU project** by Eva Killar *(Ministry of Climate of Estonia, Head of Mobility Development and Investments Department)* **ADMIRAL project and scope 3 emissions** by Harri Pyykkö (*ADMIRAL Project Coordinator, Senior Researcher at VTT)* **Navigating the future of mobility: How the transport digitalisation is empowering authorities and businesses** by Ieva Markucevičiūtė *(Project manager at Normalis tech, PhD candidate at Lithuanian Centre for Social Sciences)*
09:50–09:55	BREAK
09:55–11:25 *How can companies react to regulatory pressure?*	**Digital transformation pushed by public organisations** by Lasse Nykänen *(Vediafi/Project Director + eFTI EXPERTS/ Senior Partner)* **ADMIRAL Marketplace** by Simo Salminen *(VP of Product at AWAKE.AI)* **Current status of freight transport GHG calculation and reporting** by Alan Lewis *(Chief Technical Officer at Smart Freight Centre)*
11:25	Closing words

eFTI Regulation and eFTI4EU Project

ADMIRAL and eFTI4EU Joint Webinar

27.September 2024

Eva Killar

eFTI4EU Project Coordinator
Estonian Ministry of Climate
eva.killar@kliimaministeerium.ee
+ 372 5885 1083

www.efti4eu.eu

Co-funded by
the European Union

- eFTI Regulation
- eFTI4EU Project

What is eFTI Regulation?

- In 2027, all EU Member States are required to have aligned systems in place to accept electronic freight information presented by economic operators.
- Starting in 2027, only competent authorities are mandated to accept electronic freight information, with economic operators having the option to voluntarily participate.
- Efficient freight transport is crucial for the Union's economy, but reliance on paper documentation hampers logistics.

EU eFTI Regulation 2020/1056

Objectives of eFTI

Promote use of digital technologies to fulfill regulatory requirements within the EU

Reduce administrative cost for operators and enhance the efficiency of rule enforcement

Acceptance by public authorities of freight transport information made available electronically

Uniform implementation of the obligation of acceptance by authorities

Interoperability of the IT systems and solutions used

"*This Regulation establishes a [harmonised] legal framework for the electronic communication of regulatory information between the economic operators concerned and competent authorities in relation to the transport of goods on the territory of the Union*" (Article 1)

European Commission

Key elements of eFTI

Information (already) required by EU & national legislation
- Legislation applicable to the transport of goods on the EU hinterland
- Legislation concerning the means of transport and the personnel not concerned

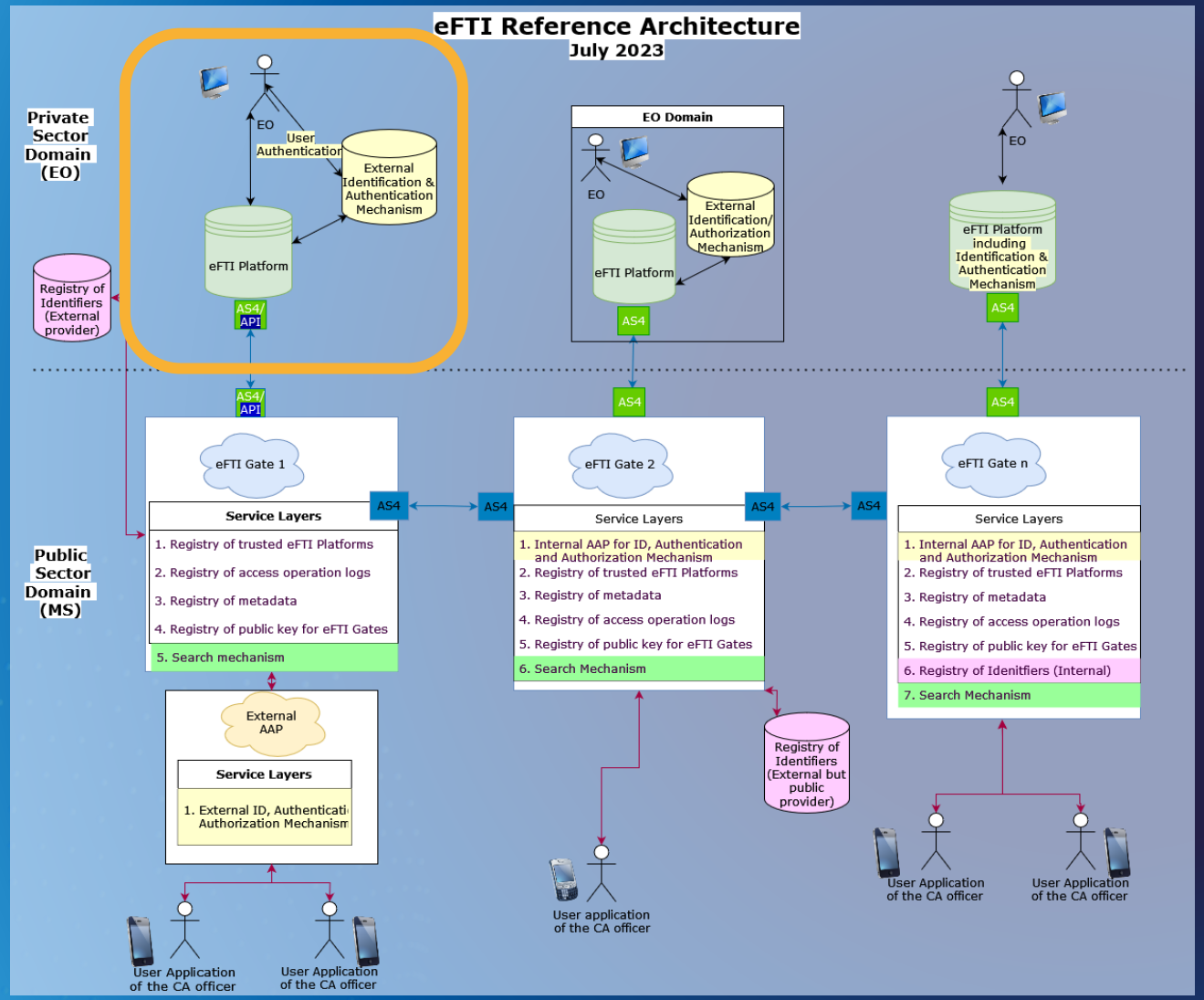
Obligation for all competent authorities in all EU Member States
- Accept the information electronically
- Use common requirements/technical specifications for acceptance (defined by EU implementing legislation)

Option for the economic operators
- Facilitation – possibility to present the information electronically; no obligation
- When opting, obligation to use certified eFTI platforms or service providers

Common requirements for service providers and platforms
- For platforms' functionalities and, respectively, service providers' obligations
- Common implementation specifications (defined by EU implementing legislation)

Harmonised third-party certification for service providers and platforms
- One stop shop, valid EU-wide

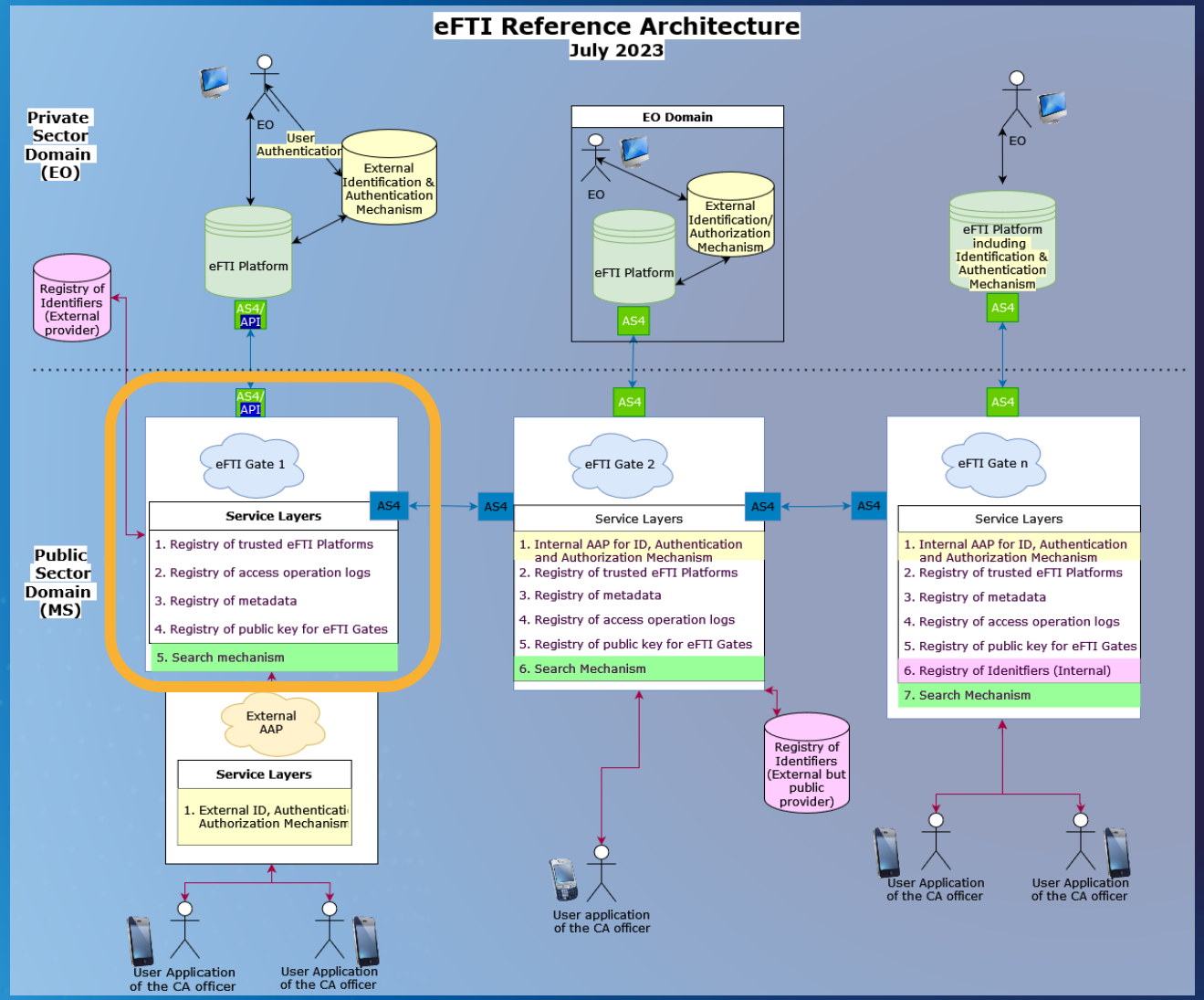
eFTI architecture and its main components



eFTI platform (private sector, economic Operator)

- Could be based on existing TMS and ERP systems and reuse functions if applicable (eFTI Platform to be understood a definition of properties)
- Provides up-to-date eFTI dataset for a transport or a consignment
- Identification of the transport via link and identifier
- Must be certified to demonstrate conformity with requirements (legal act for platforms (IA), legal act for certification (DA))

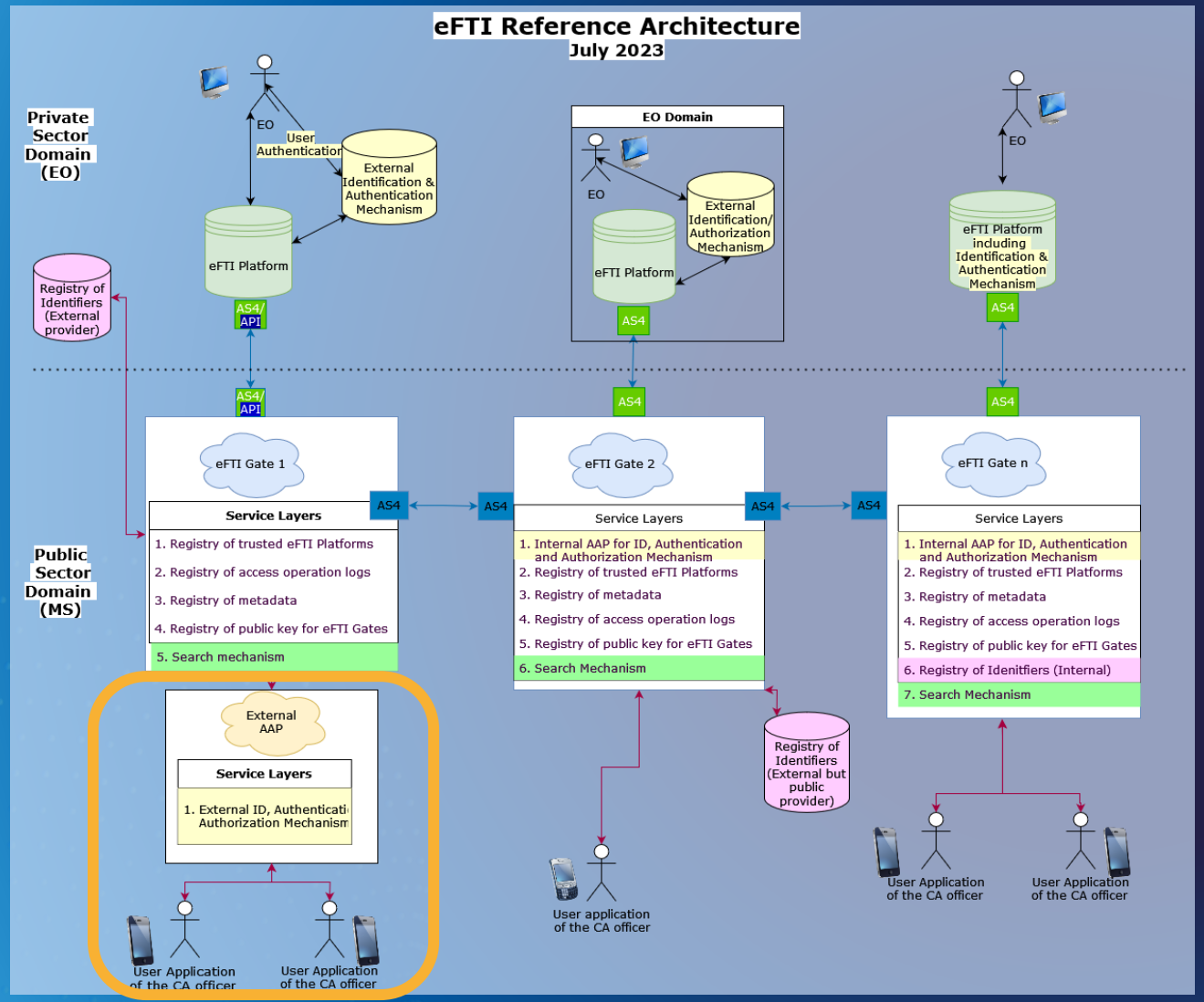
eFTI architecture and its main components



eFTI Gate
(public sector, each EU Member State)

- Intermediary between the eFTI platforms and the competent authorities
- Connected to all other EU eFTI gates
- Use of the eFTI exchange mechanisms to access eFTI data characterised by a Unique Identification Link and identifiers (e.g. number plate, vehicle identifier, etc.).
- No data storage unless irregularities

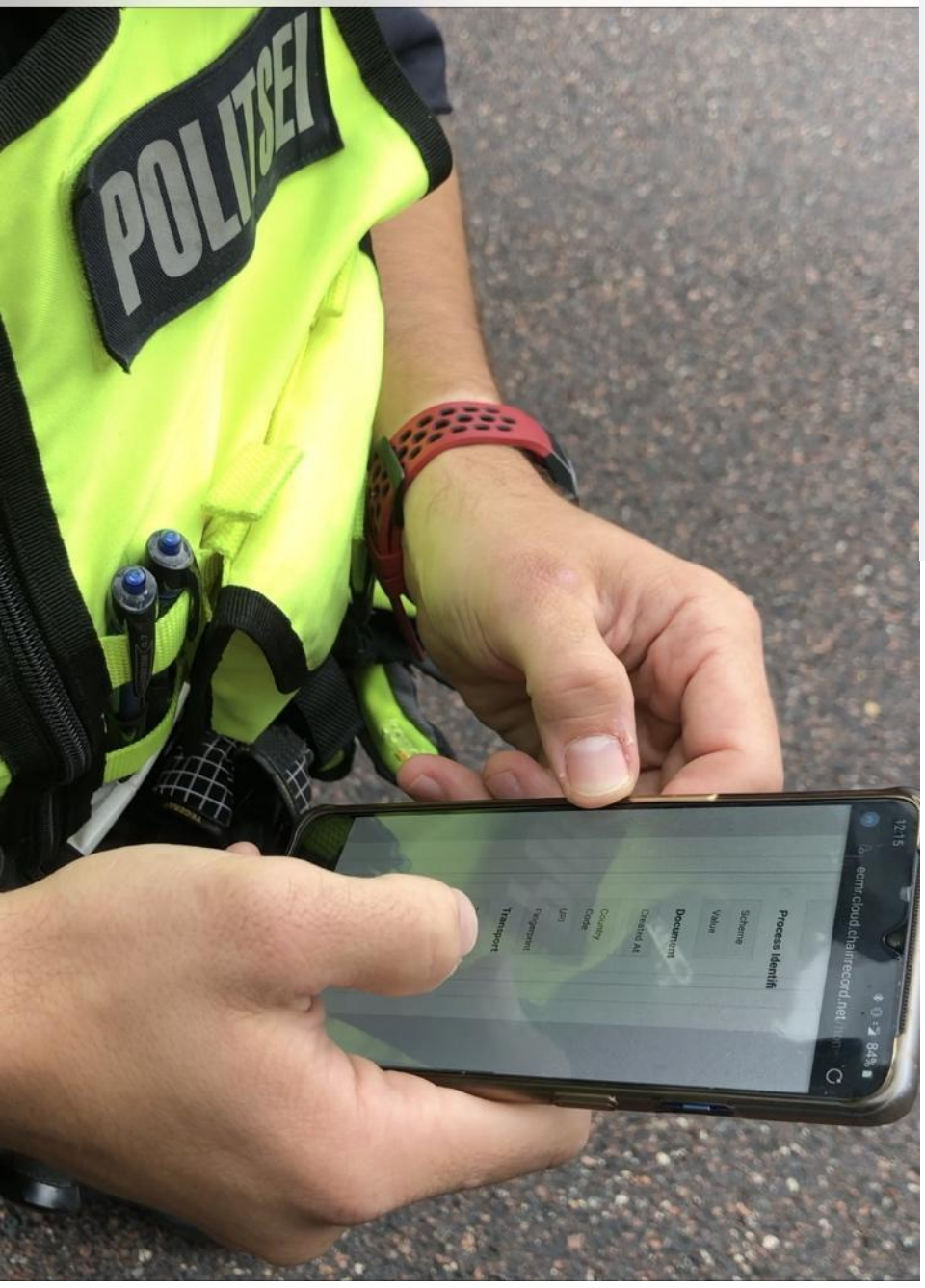
eFTI architecture and its main components



Authority Access Point (public sector)

- Identification, authentication and authorisation of access for competent authorities

Uulu
Thursday 12:15
Edit



Telia 21:17 62%
ecmr.cloud.chainrecord.net

* Truck Registration Number

529MSP

* Transport Country Code

EE

Telia 22:15 49%
ecmr.cloud.chainrecord.net

Transport

660TMN

ee

3 31

646YLJ

ee

3 SM

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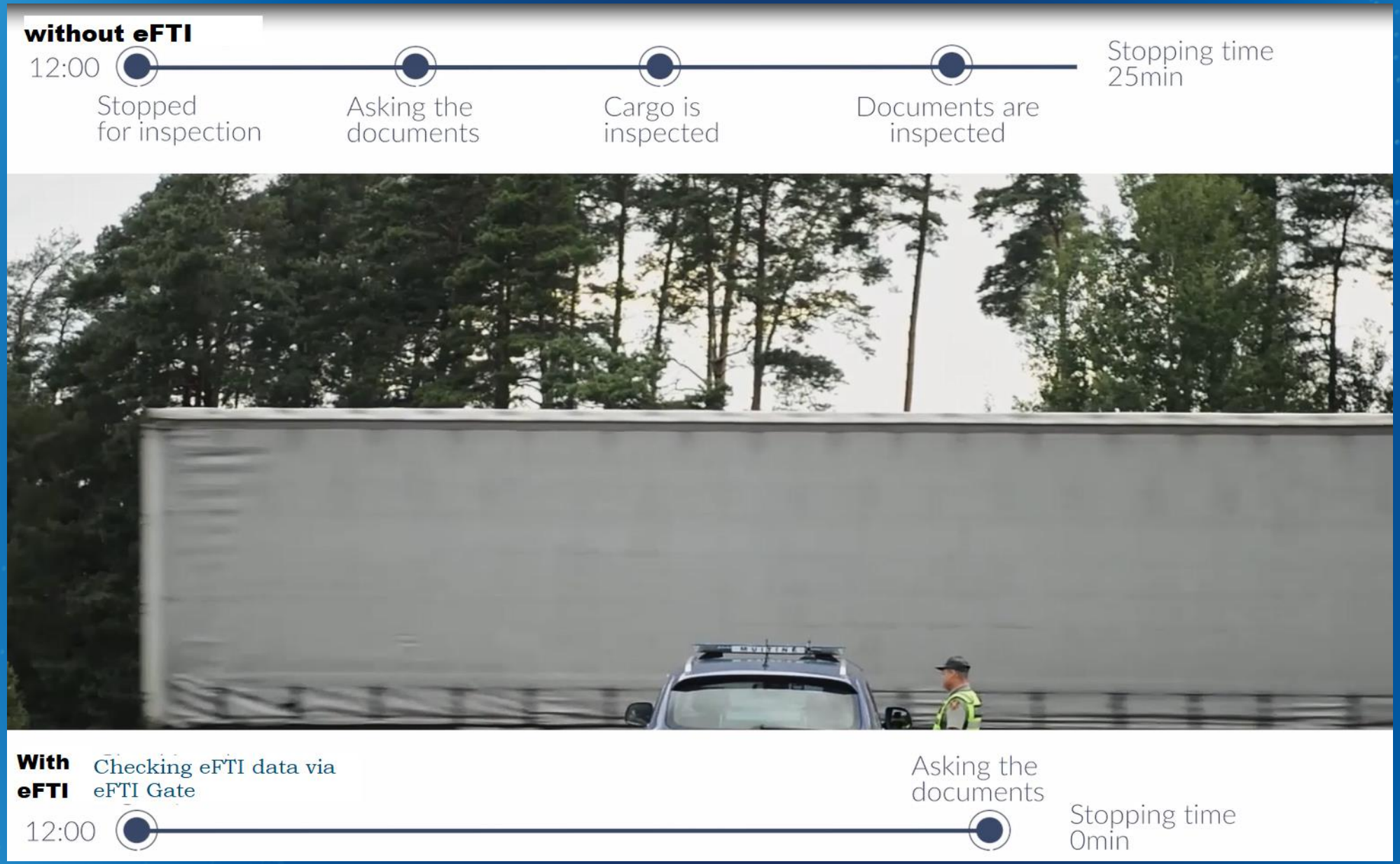
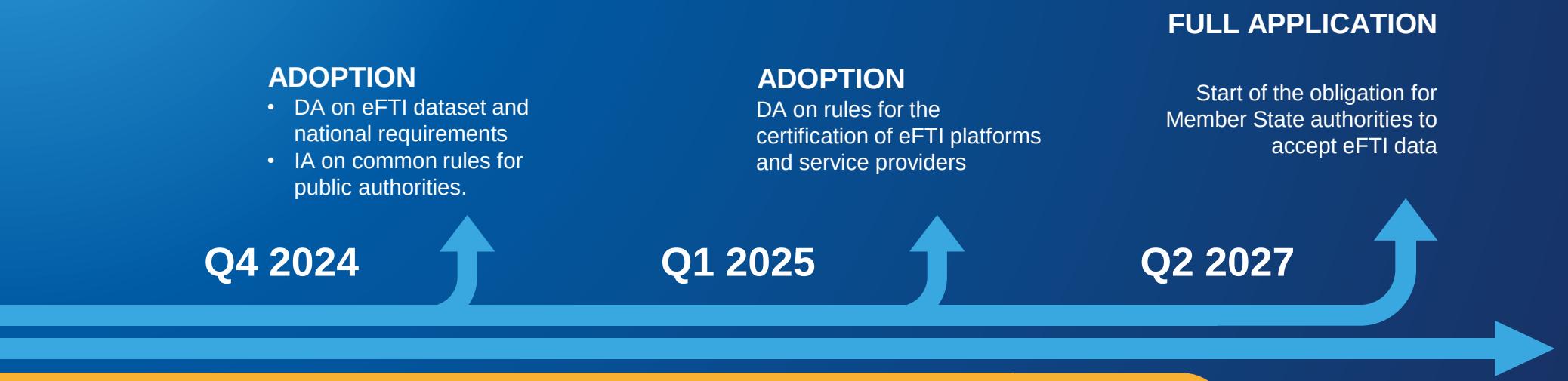

without eFTI
12:00
Stopped for inspection
Asking the documents
Cargo is inspected
Documents are inspected
Stopping time 25min
With eFTI
Checking eFTI data via eFTI Gate
12:00
Asking the documents
Stopping time 0min

eFTI timeline



ADOPTION
- DA on eFTI dataset and national requirements
- IA on common rules for public authorities.

ADOPTION
DA on rules for the certification of eFTI platforms and service providers

FULL APPLICATION

Start of the obligation for Member State authorities to accept eFTI data

Q4 2024

Q1 2025

Q2 2027

2029

REVIEW
- Need for an obligation for economic operators
- Interoperability with other e-enforcement systems

2020

Entry into force Regulation EU 2020/1056

Q4 2024

ADOPTION
IA via eFTI platforms and the specification of service providers

2025

ADOPTION
Date of application start (except for the obligation of MS authorities to accept eFTI data)

DA: Delegated act
MS: Member State
IA: Implementing act
The project will be implemented according to the eFTI timetable

eFTI4EU

PARTNERS and observers

PARTNER

OBSERVER

eFTI4EU - Electronic Freight Transport Information for European Union

eFTI4EU is co-funded by the European Union's CEF Funding Programme through the European Climate, Infrastructure and Environment Executive Agency (CINEA). It is the first project making the EU eFTI Regulation 2020/1056 real.

23
partners

28.3
million euro

36
months duration

9
member states

4
observers

Mission & Goals

eFTI4EU's mission is to encourage Member States to work together to develop a well-harmonised and interoperable European-wide eFTI exchange environment

Encourage digitalisation in freight transport and logistics, streamlining and harmonising eFTI exchange

Reduce administrative expenses while enhancing the control capabilities of Competent Authorities thanks to increased transparency and traceability

Enhance efficiency and sustainability by promoting environmentally friendly practices

Activities

Developing and providing national and regional eFTI roadmaps, ensuring that eFTI is integrated consistently across Member States. Translation of The EU Regulation and accompanying legal acts into specifications.

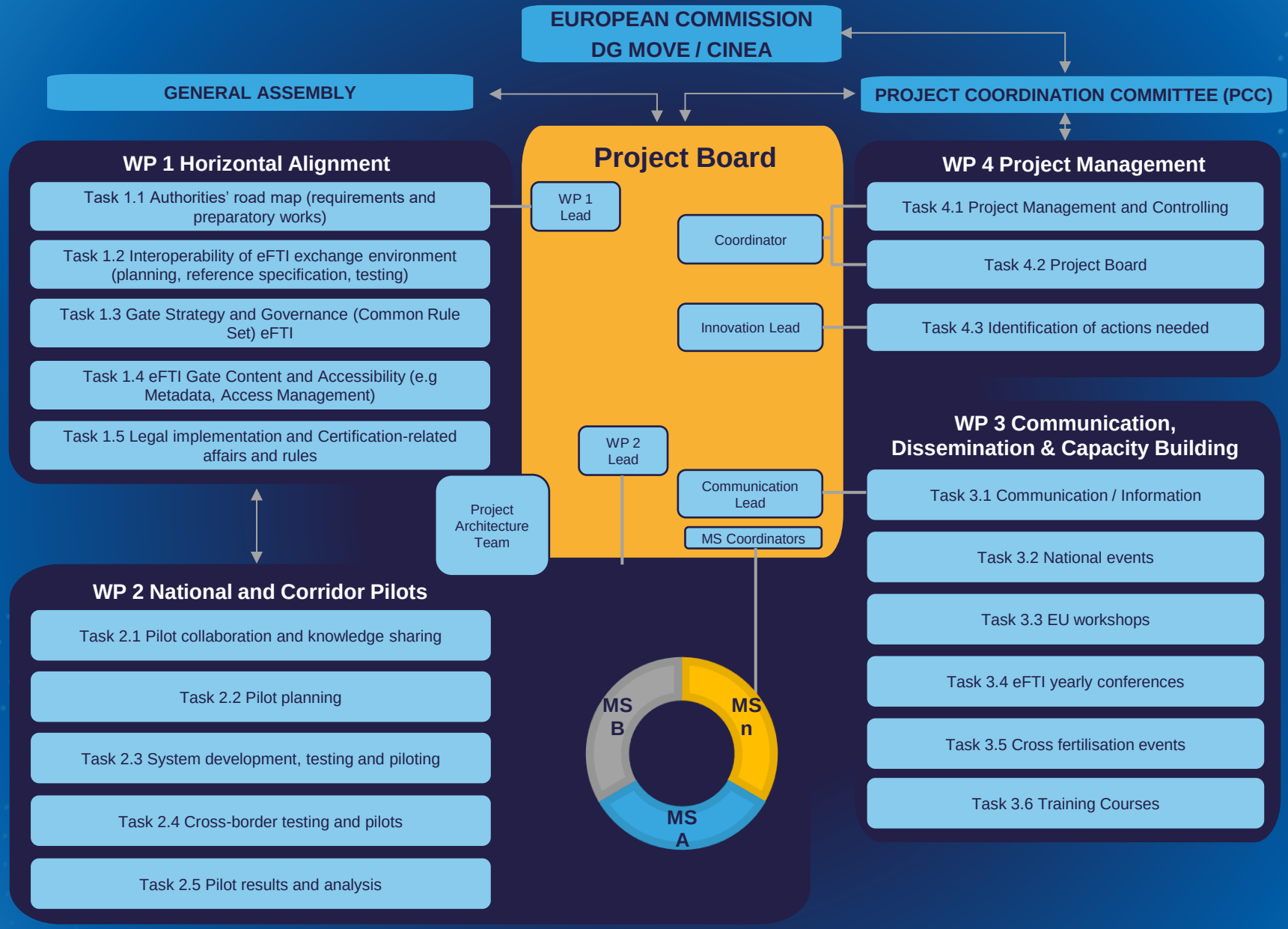
- National Roadmaps
- eFTI Gate Specifications

Developing and testing eFTI Gates in real-world conditions through a series of use cases, both at the national and cross-border level.

- eFTI Architecture
- Open Source reference implementations
- Pilots

Disseminate project achievements and pilot results, while also establishing capacity-building initiatives for the stakeholder community.

- Communication on eFTI
- Dissemination via events & publications


EUROPEAN COMMISSION
DG MOVE / CINEA
GENERAL ASSEMBLY
PROJECT COORDINATION COMMITTEE (PCC)
Project Board
WP 1 Horizontal Alignment
Task 1.1 Authorities' road map (requirements and preparatory works)
Task 1.2 Interoperability of eFTI exchange environment (planning, reference specification, testing)
Task 1.3 Gate Strategy and Governance (Common Rule Set) eFTI
Task 1.4 eFTI Gate Content and Accessibility (e.g Metadata, Access Management)
Task 1.5 Legal implementation and Certification-related affairs and rules
WP 1 Lead
Coordinator
Innovation Lead
WP 2 Lead
Communication Lead
MS Coordinators
Project Architecture Team
WP 4 Project Management
Task 4.1 Project Management and Controlling
Task 4.2 Project Board
Task 4.3 Identification of actions needed
WP 3 Communication, Dissemination & Capacity Building
Task 3.1 Communication / Information
Task 3.2 National events
Task 3.3 EU workshops
Task 3.4 eFTI yearly conferences
Task 3.5 Cross fertilisation events
Task 3.6 Training Courses
WP 2 National and Corridor Pilots
Task 2.1 Pilot collaboration and knowledge sharing
Task 2.2 Pilot planning
Task 2.3 System development, testing and piloting
Task 2.4 Cross-border testing and pilots
Task 2.5 Pilot results and analysis
MS B
MS n
MS A

Benefits for Economic Operators: cargo owners, freight forwarders, carriers

Streamlines the process of exchanging transport-related information:

- Faster processing times
- Quicker turnaround for freight operations
- Real-time tracking and visibility throughout the supply chain
- Based on industry comments the savings can be above 10€ per digital cargo document from the process point of view.
- eFTI4EU Project offers training and supports raising awareness and familiarising with the reference architecture implementation for exchanging logistics and transport data.

Benefits for Competent Authorities

- eFTI4EU enhances cross-border trade controls without bureaucratic burdens, providing insights into goods flow and better enforcement of national and EU regulations through integration with project architecture.

- The eFTI4EU project aims to bridge the gap between implementing and delegated acts texts and the final interoperable implementation of technical systems.

- Transparency in the transportation of goods not only ensures trust between trading partners but also enables automated taxation systems, bolstering public revenue and reducing tax fraud. Moreover, this transparency enhances national and public security by providing real-time visibility into supply chains, enabling swift responses to potential threats and disruptions.

Benefits for Certification Bodies

- The reference architecture developed by the eFTI4EU Project enhances data visibility, providing a comprehensive view of the transport and logistics landscape, aiding in monitoring digital certificate issuance and validation.

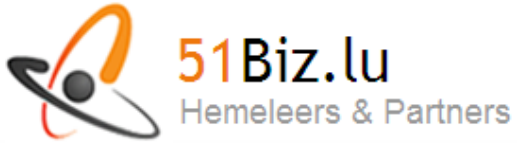
- Championing trustworthiness, security, and interoperability of the eFTI environment is a crucial element to facilitate the eFTI adoption.

eFTI4EU Yearly Conference

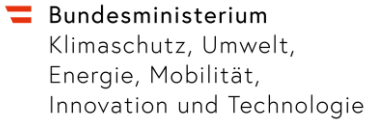
- When: **17th October -** 10:00am – 16:30pm
- Where: **ONLINE & Last in-person spots in Brussels**

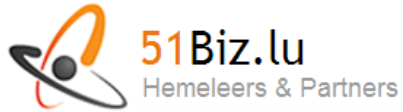
REGISTER NOW

eFTI Expert Team (EET) Partners



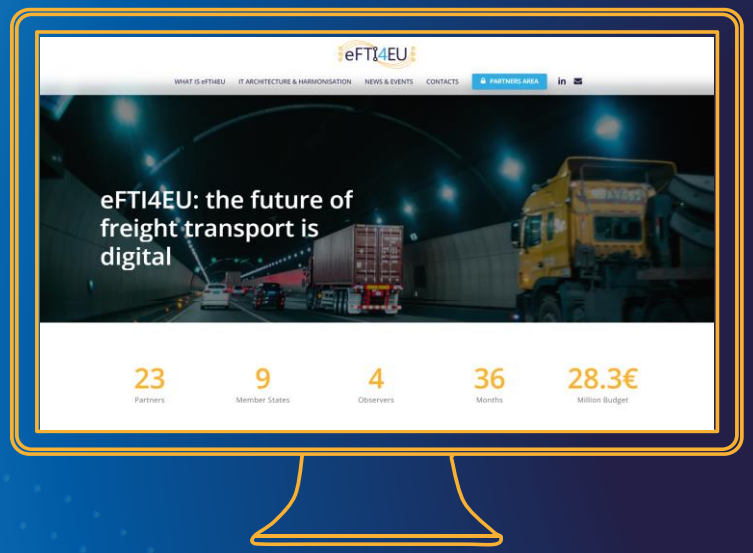
Consortium

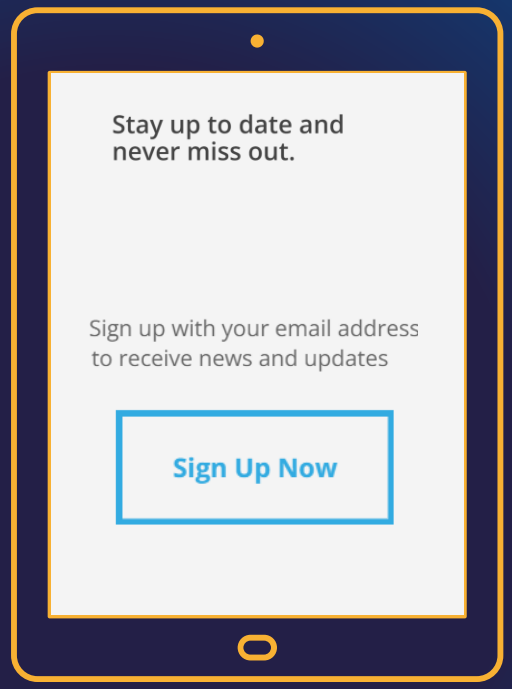




Ministère de la Transition écologique et de la Cohésion des territoires
Ministère de la Transition énergétique

Join our Stakeholder Community!





www.efti4eu.eu

eFTI4EU Newsletter

Scan for the website

@eFTI4EU Project #eFTI #eFTI4EU #eFTI4EUProject

Use the QR below to make your questions directly to eFTI4EU Project!

Thanks!

CONTACTS
info@efti4eu.eu

DISCOVER MORE AT
www.efti4eu.eu

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The opportunities of using digital marketplace(s) to decrease direct and indirect emissions of transport and logistics industry

New Regulations, New Solutions: Digital Tools for Logistics Companies
27.9.2024

Harri Pyykkö
Project Coordinator of ADMIRAL EU Project

VTT Technical Research Centre of Finland

Co-funded by the European Union

Transportation accounts for 25% of greenhouse gas emissions in Europe
- Share set to rise as other industries have larger incentives to reduce emissions

Currently, focus is on primary emissions (Scope 1) and energy use emissions (Scope 2), rarely supply chain emissions (Scope 3)

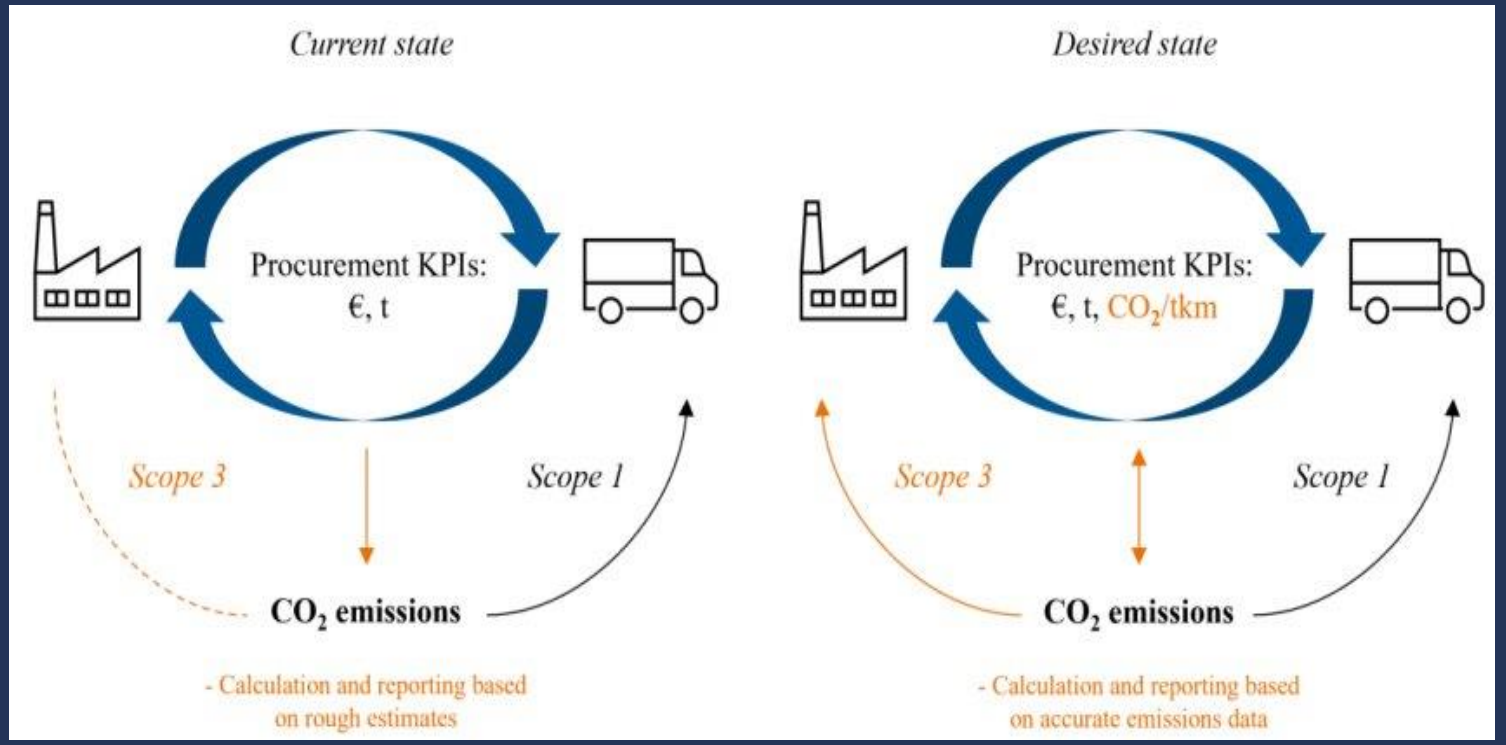
Addressing Scope 3 emissions is essential to combat climate change.
Can account for up to 90% of all emissions, depending on the industry

Challenges to Scope 3 emissions reduction include:
- Poor awareness of Scope 3 emissions and limited influence on them
- Perceived costs and inadequate regulation

EU regulations (CSRD, CountEmissionsEU) creating regulatory push

Co-funded by the European Union

Current practises (prior ISO14083/GLEC Framework) vs. 'Desired state'



Source, Kojo, L. (2023, University of Oulu)

Co-funded by the European Union
Grant agreement 101104163

Digital platforms are online infrastructures that connect different parties, such as service providers and customers, enabling value creation and efficient sharing of resources.

There are plenty of different platforms for different purposes: marketplaces, social platforms, data sharing, application development.

The ADMIRAL project approaches the problem of emission transparency/reduction in multimodal logistics chains through the logistics marketplace concept:

Digital marketplace providing transport and logistics services with emissions data could improve emissions transparency, and enable companies to select less polluting service alternatives

Co-funded by the European Union
Grant agreement 101104163

The main functionality needs for the marketplace:

Sales services for cargo transport and port services

- Emissions data availability and visibility

Services for logistics purchasing activities

- Contracting processes based on supplier profiles

Execution/fulfilment supporting tools

- E.g. route, maps, and chat
- Real-time cargo tracking

Controlled access and data privacy

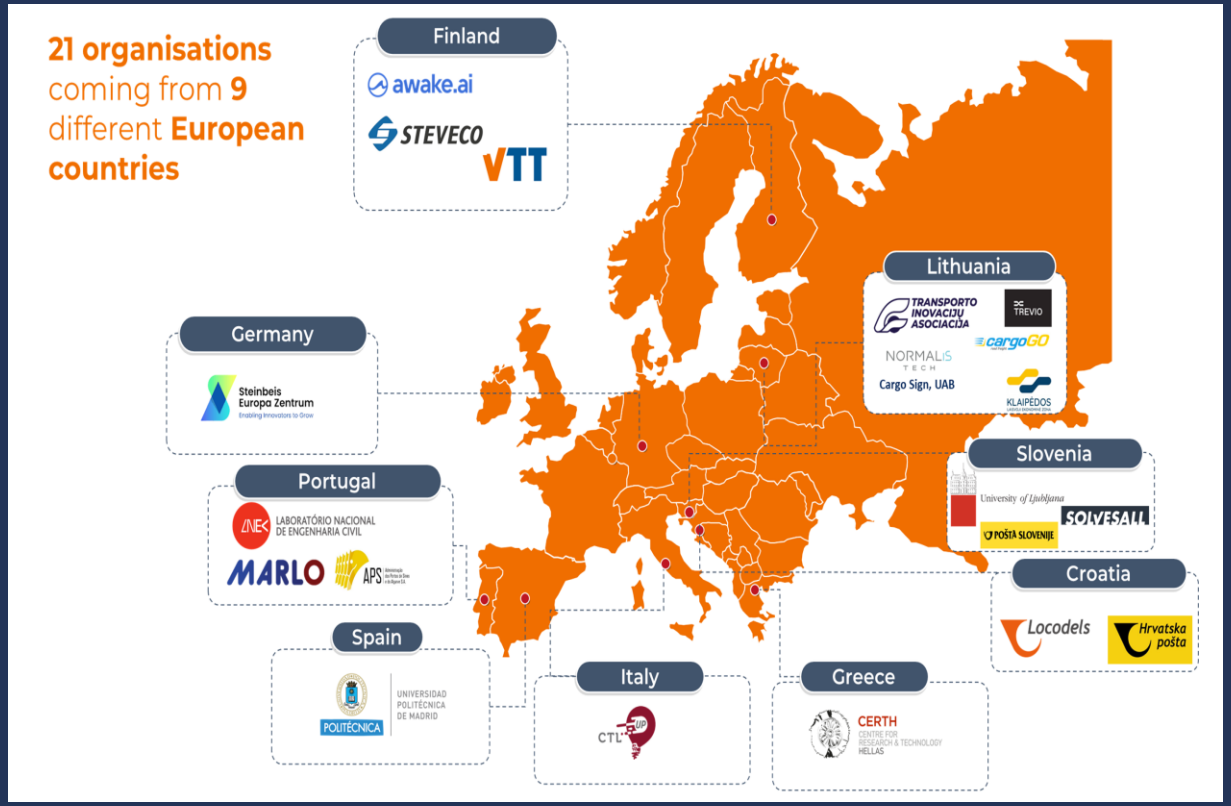
- Entry restricted to trusted, qualified partners
- Role-based view on data
- Visibility into services providers' quality

Challenges and showstoppers for the marketplace:

- Technical integration (e.g. ERP and TMS)
- Marketplace ownership
  - Neutral and trusted owner
- Pricing model
  - Must cover the expenses
  - Avoid lock-in problems, e.g. due to changes in the cost structure
- Ecosystem building
  - Chicken-and-egg problem of attracting both service providers and customers
  - Ensuring services for SME logistics companies
- Uncontrolled data visibility

Co-funded by the European Union
Grant agreement 101104163

- **ADMIRAL** – Advanced Multimodal Marketplace for Low-emission and Energy Transportation
- 01/05/2023-30/04/2026
- **Partner Countries**: Germany, Finland, Greece, Italy, Croatia, Lithuania, Portugal, Slovenia, Spain
- **4 Pilots**: Portugal-Spain, Slovenia-Croatia, Lithuania, Finland



Co-funded by the European Union
Grant agreement 101104163

ADMIRAL EU Project – Key features

ADMIRAL is an EU co-funded project aiming to transform supply chain management in freight transportation by developing a cutting-edge digital marketplace for multimodal logistics

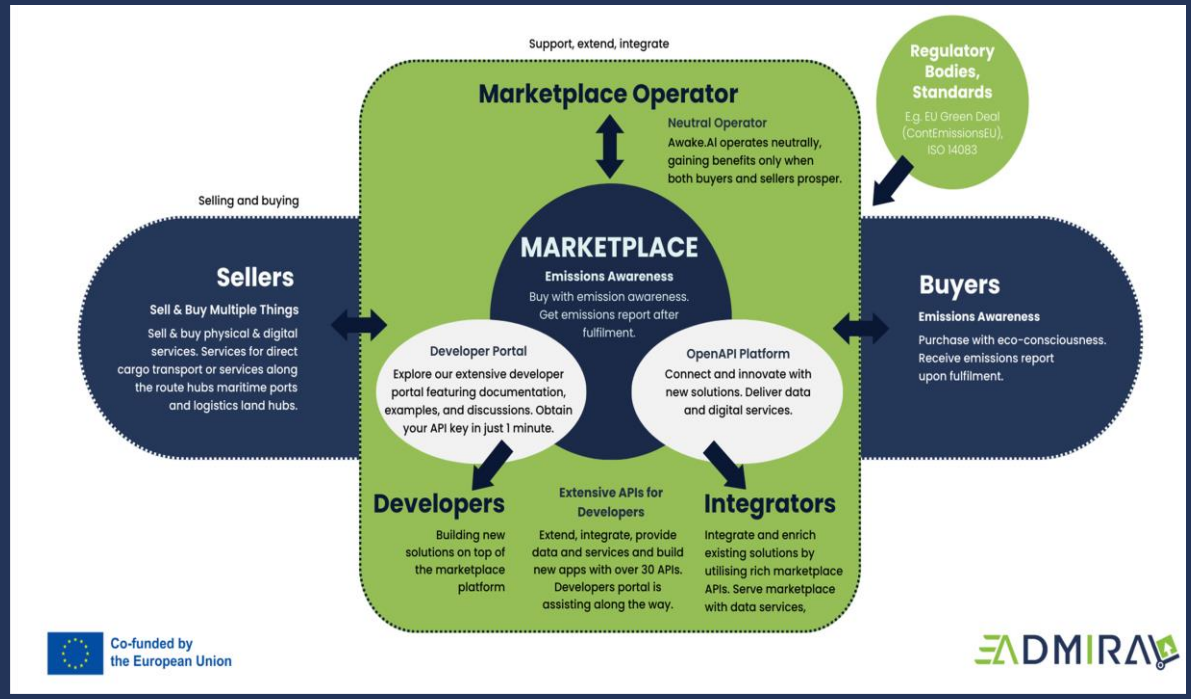
ADMIRAL offers improved visibility between buyers and sellers by sharing information about Scope 3 emissions already at the procurement stage and supporting the increase the quality of emissions data and coherent calculation methods (GLEC Framework, ISO14083, etc.)

ADMIRAL aims to offer potential for buyers to be able to trace 'green' logistics service providers (LSPs) and make reliable comparisons. For the LSPs ADMIRAL marketplace can be used as a tool to gain competitive advantage and return on investments for being able to offer low emission service.

ADMIRAL notes that emissions reductions can be gained also without significant physical I nvestments by increasing the awareness by having emissions as one solid KPI in procurement and reporting

Co-funded by the European Union
Grant agreement 101104163

- Validated **ADMIRAL multimodal low-emission marketplace**
- Optimised logistics processes, resulting in time and cost savings
- 20 % emission reduction in transport and logistics pilot cases through process optimisation
- Enhanced stakeholder cooperation and visibility
- Stronger **emphasis especially on the role of procurement practices to support Scope 3 emission reductions.**
- Business models for low-emission transport chains



Co-funded by the European Union
Grant agreement 101104163

Thank you for your attention

More information:
https://www.admiral-project.eu/

Co-funded by the European Union
Grant agreement 101104163

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the European Union

NAVIGATING THE FUTURE OF MOBILITY: HOW TRANSPORT DIGITALISATION IS EMPOWERING AUTHORITIES AND BUSINESSES

NEW REGULATIONS, NEW SOLUTIONS.
DIGITAL TOOLS FOR LOGISTICS COMPANIES

EU SUPPORT FOR DIGITALISATION IN TRANSPORT

IS FUTURE OF EU TRANSPORT DIGITAL?

- A European Green Deal
- A Europe fit for the digital age

  A smart and innovative transport sector that makes the most of digitalisation and automation, supported by adequate funding
- An economy that works for people
- A stronger Europe in the world

  A fully integrated and connected TransEuropean Transport network with appropriate funding for a robust and modern European transport infrastructure with fully restored connectivity

  An efficient and accessible internal market for transport that drives economic recovery and is governed by clear rules that are applied and enforced consistently
- Promoting our European way of life

eFTI4EU

ADMIRA

WHAT'S THERE BEYOND THE POWER POINTS?

EU policy driven digitalisation initiatives

- Funding research and innovation
- Digital Transport and Logistics Forum
- Transport data digitalisation initiatives (eFTI, Maritime Single Window, Import Control System 2 (ICS2))
- Transport enforcement digitalization (SEDEA, EUCARIS)
- EU building blocks (Only Once Technical System, European Mobility Data Space, eDelivery)

Business driven digitalisation initiatives

- Advanced telematics and transport management systems (TMS)
- CO2 calculation and reporting tools and approaches, including GLEC framework that laid foundation for ISO 14083
- Improving multimodal and intermodal transport chains
- Business to business information exchange
- Digital logistics platforms

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ARE THERE ANY COMMON INTERESTS?

- Enhanced regulatory compliance through real-time data monitoring
- Improved infrastructure planning and traffic management based on data insights
- Better coordination between different transport modes

- Improved compliance
- Increased operational efficiency through automation and predictive analytics
- Enhanced customer satisfaction via real-time tracking and transparency
- Cost savings from optimized routing and reduced delays

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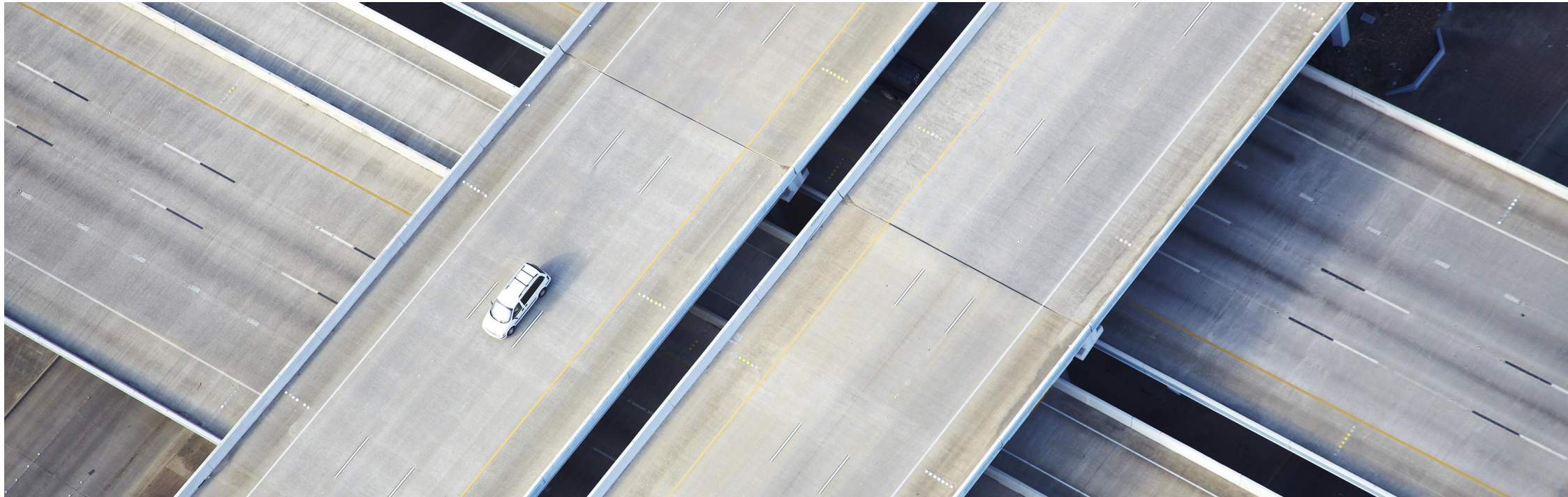
ADMIRAL

WHY AREN'T WE THERE YET?

- National digitalization is more advanced and flexible
- Despite being a union, we are 27 members states with distinct legal regulation
- What comes first? Infrastructure or apps?
- On-boarding business, in particular SMEs is the key priority for success



WHAT IS PREVENTING SME FROM JOINING?

Cargo owners

Quality and transparency barriers:

- High expectations for other marketplace participants.
- Lack of trust in platform control to ensure transparency and traceability are not lost.

Data sharing barriers:

- Platform API integrations cause costs (large enterprises).

Governance barriers:

- The owner of the platform needs to be neutral and trusted partner;
- Platform operator has to have business model to cover the expenses (otherwise impossible to operate the platform);
- Pricing model change in long term may result in lock-in risk for company;
- Overcoming chicken/egg problem in platform – both buyer and supplier sides are needed.

Freight forwarders, transport service providers

Quality and transparency barriers:

- High expectations for other marketplace participants.
- Lack of trust in platform control to ensure transparency and traceability are not lost.
- Logistics subcontractors do not necessary want to provide cargo movement transparency.

Data sharing barriers:

- Data sharing in competition environment. Fear that data will be revealed to competitors.

Investment (company, society) barriers:

- The customers are interested in emission reduction but do not truly commit ordering green logistics services. Lack of commitment hinders investments in green solutions.

IS THERE ANYTHING THAT MOTIVES SME TO JOIN?

Cargo owners

Regulation drivers:

- CSRD (Corporate Sustainability Reporting Directive)/Scope 3 cause emission data collection and reporting responsibility (as well as emission reduction needs).

External drivers:

- Societal/client pressure to “become greener”.
- Value provision to cargo owner’s customer (e.g. required emission data from a single point).

Freight forwarders, transport service providers

Regulation drivers:

- CSRD/Scope 3 cause emission data collection and reporting responsibility for demand-side and also may require offering sustainable alternatives (e.g. biodiesel).

External drivers:

- Fulfilling demand-side requirements (buying power).

Business drivers:

- Return on investment and competitive advantage for green investment.
- Possibility to acquire new customers through platforms and access to more profitable clients and routes.
- Increasing port competitiveness with regulated transparency and intelligent optimization.

THANK YOU

Ieva Markucevičiūtė-Vinckė

https://www.linkedin.com/in/ieva-markuceviciute/


Break
Time!

Digital transformation pushed by public organisations

eFTI4EU

Lasse Nykänen/Vediafi/EET
lasse.nykanen@vedia.fi

Co-funded by
the European Union

eFTI4EU

23
Partners

28.3
million euros

36
Months

9
Member states

4
Observers

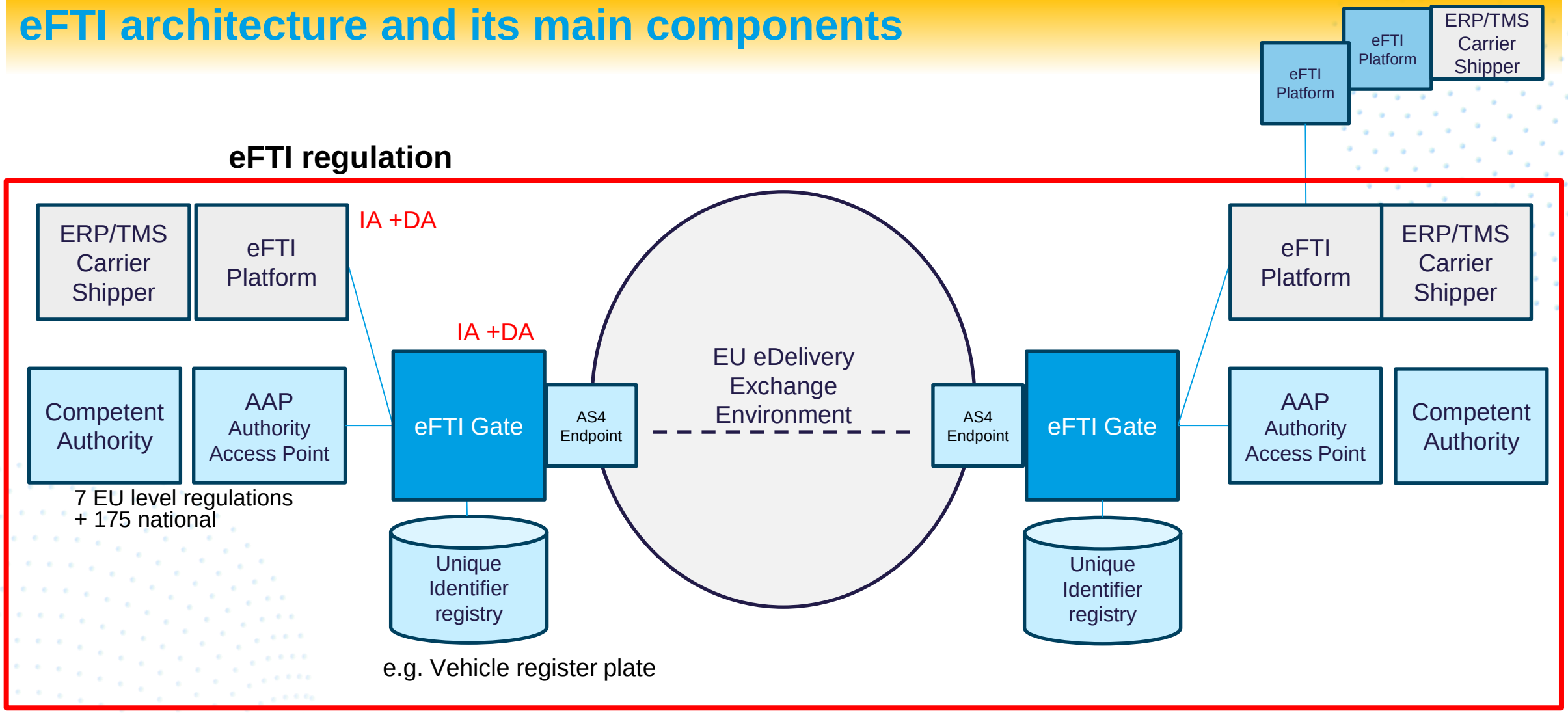
eFTI4EU is co-funded by the European Union's CEF funding programme through the European Climate, Infrastructure and Environment Executive Agency (CINEA). It is the first project aimed at implementing the EU eFTI Regulation 2020/1056.

What is eFTI? Why eFTI?

- An electronic environment to access information across Europe! Enables the digital retrieval of transport information for authorities according Regulation 2020/1056
- Obligation for authorities! Voluntary for the economy!
- Aim: Efficient freight transport is crucial for the Union's economic strength! BUT: Dependence on paper documents makes processes inefficient.
- Regulation 2020/1056 obliges EU control authorities to accept electronic information as proof of compliance; legal acts regulate content requirements, data security and components of the system architecture.
- eFTI works with data records that are defined, not with documents. Data stays at source!
- Start: H1 2027: EU control authorities must have compatible systems and (be able to) accept electronic freight transport information.

eFTI Regulation
EU 2020/1056

eFTI architecture and its main components



eFTI platform opportunities

CO_2 calculations
B2B data exchange
Indirect costs
...

eFTI: benefits for economic operators

- When the eFTI data exchange environment starts (mid-2027), the authorities will not be a bottleneck or an obstacle if economic operators want to use digital solutions
- eFTI offers a standard solution that must work EU-wide and thus offers good scalability
- Digital solutions can be used to improve the overall efficiency of processes and reduce the number of errors
- **Lower Operating Costs**: The Real Time Economy project found that digitalization reduces document costs from **15-20 euros to 5-7 euros** when moving to structured electronic data. If the data is automatically transferred from one document to another, utilizing all automation and electronic management benefits, the cost per document drops to 1-2 euros. The Open Logistics Foundation found that **a paper CMR costs 22.83 euros, while an eCMR costs only 9.72 euros.** @Traficom/FI

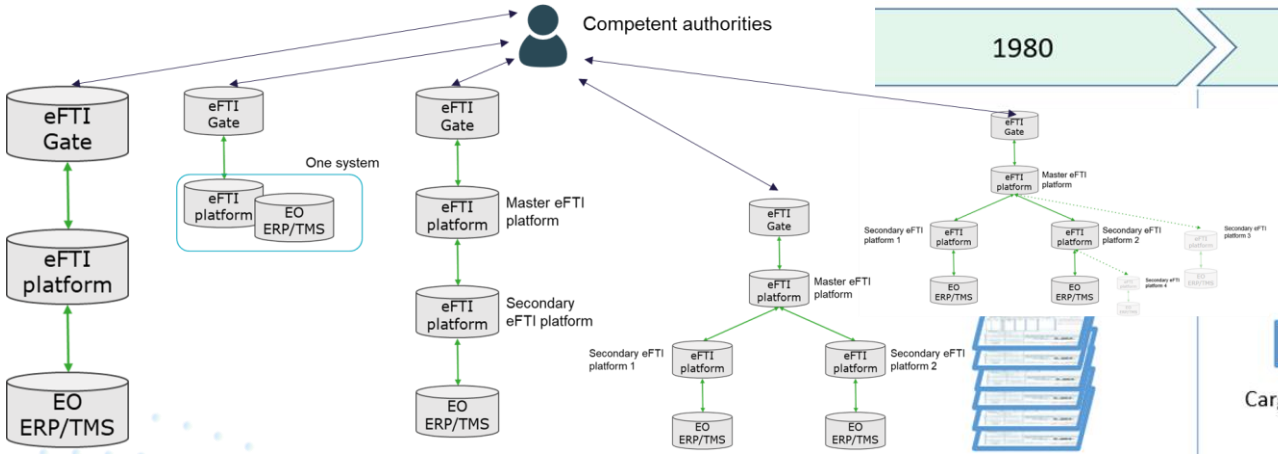
Advantages for freight owners, forwarders and carriers

Simplifies the exchange of transport-related information:

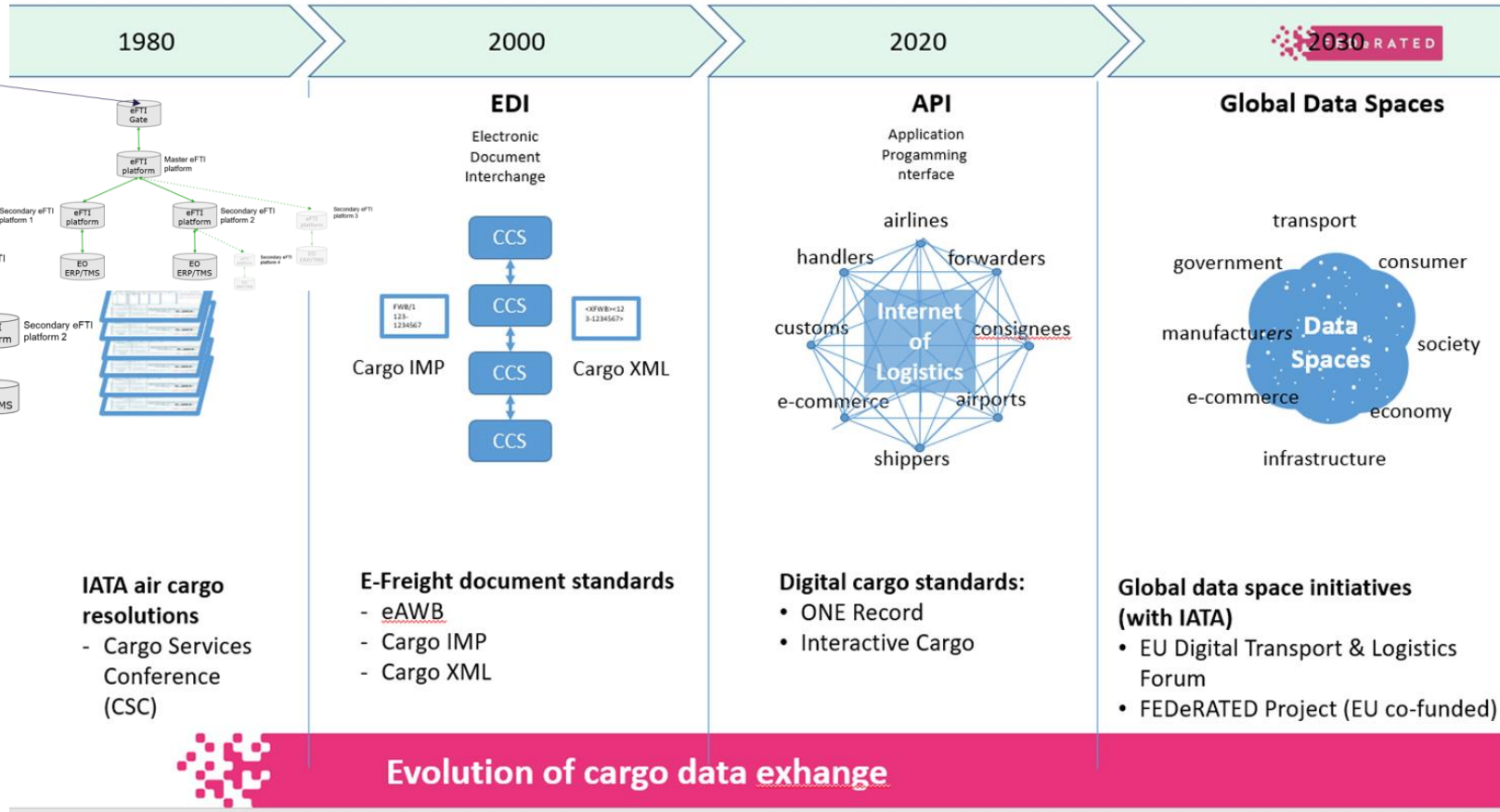
- No paper documents, transport data remains at the source
- Faster checks by the authorities and less interrupted transport operations
- Faster processing times
- Faster handling of freight operations
- Up-to-date transport data sets and better transparency
- Enabler for further development and innovations

eFTI and new digital era of logistics

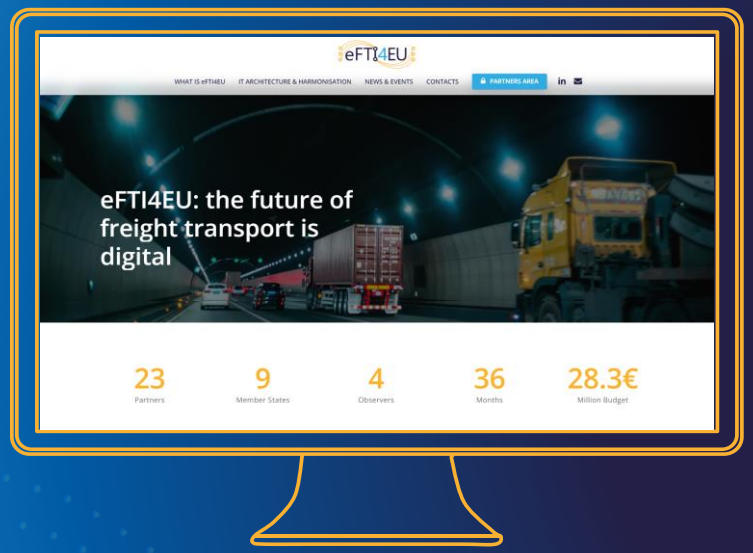
Currently, the majority of economic operators already use digital solutions.
However, we still lack a network approach.



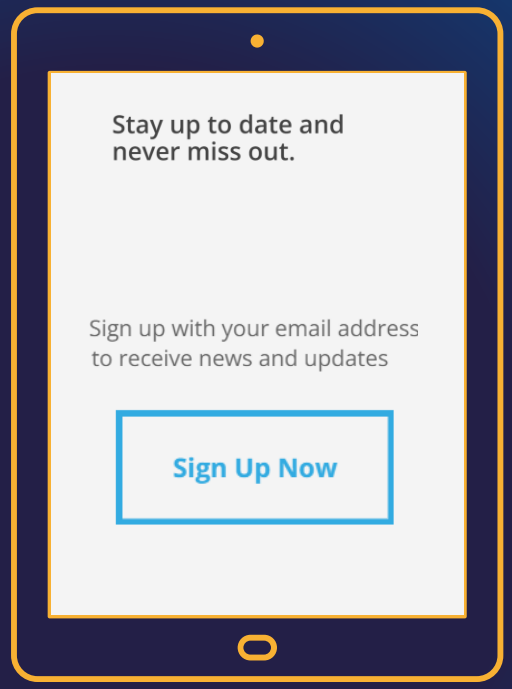
EO = economic operator
TMS = Transport management system



Join our Stakeholder Community!



www.efti4eu.eu



eFTI4EU Newsletter

Scan for the website

@eFTI4EU Project #eFTI #eFTI4EU #eFTI4EUProject

Thanks!

CONTACTS
info@efti4eu.eu

DISCOVER MORE AT
www.efti4eu.eu

eFTI4EU Project

Co-funded by
the European Union

Welcome!

ADMIRAL Marketplace

awake.ai

MARKETPLACE.AWAKE.AI

Emissions Awareness

Buy with emission awareness.
Get emissions report after fulfilment.

Basic & Complex Services

100+ services on hubs and cargo transport supported. Innovate via APIs for new ones.

Intermodal & Multimodal Shipping

Routes spanning Europe with multiple equipment along the multi-country route.

AI Predictions

AI predictions for sea & land vessel & vehicle arrivals, emissions and warnings.

AI Working with Humans

AI assisting humans with suggestions, adv, warnings and human always in decisions.

Open API Platform

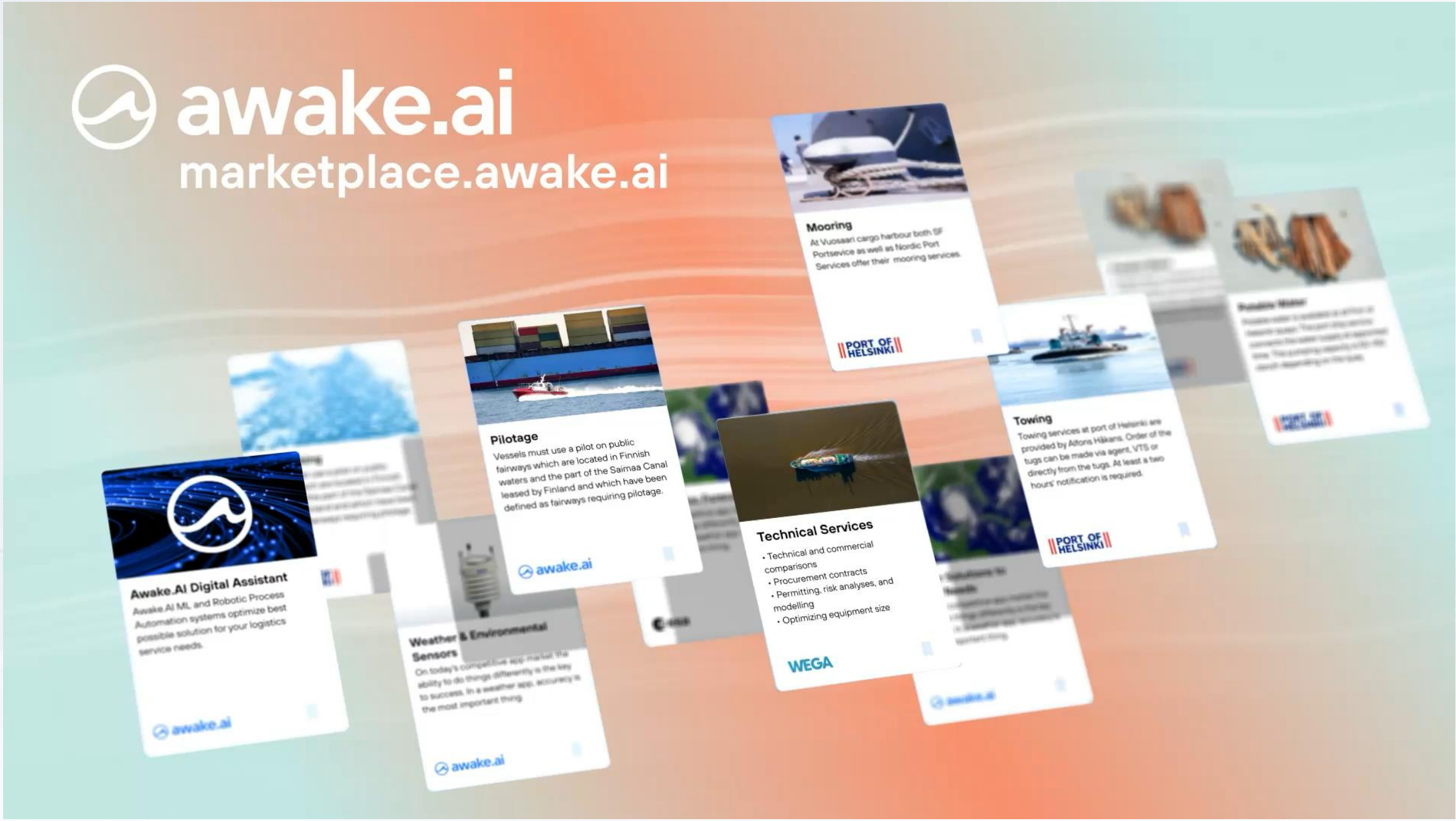
Connect & develop new solutions. Provide data & digital services.

Neutral Operator

Awake.AI as neutral operator, benefiting only when buyers & sellers benefit.

Powerful Developer Experience

Comprehensive developer portal with docs, examples & discussions. Get you API key in 1 min.



Port services marketplace, foundation for ADMIRAL marketplace

Multimodal Emissions Aware Logistics Marketplace

Integrate and serve unique AI driven land & maritime multimodal marketplace via our powerful APIs.

Business Opportunities
API Documentation
Get Started
API Tutorials
Knowledge Base & FAQ
API and UI Status
Discussion Forum
Roadmap
References

Emissions predictions

ID	Leg	Equipment Energy	Red.emission CO2e kg	Traditional CO2e kg	Distance km
TCE1	**Joensuu - Kotka**	Train, electric	**58**	**270**	365
HUB	**Port of Kotka**	Multiple	**4**	**9**	1
TCE2	**Kotka - Antwerp**	Vessel, VLSFO	**496**	**721**	2034
HUB	**Port of Antwerp**	Multiple	**6**	**13**	3
TCE3	**Antwerp - Stuttgart**	Truck, CNG	**1 350**	**1 570**	549
			1 914	**2 583**	2 952

Email emissions prediction to me Emission calculation details Show emission tiers Traditional CO2e?

GLEC v3 emissions predictions, calculations & user choices comparisons

Route for the shipment

Transport chain elements and hubs

TCE-1

Waypoint location: Joensuu train station — Kms: 65

Waypoint location: Port of Kotka — CO2e kgs: 20

Vehicle type: Train — Energy type: Electric

MARITIME HUB

Port of Kotka — Included activities: Container terminal — CO2e kgs: 10.7

TCE-2

Waypoint location: Port of Kotka — Kms: 2 750

Waypoint location: Port of Antwerp — CO2e kgs: 750

Vehicle type: Vessel — Energy type: VLSFO

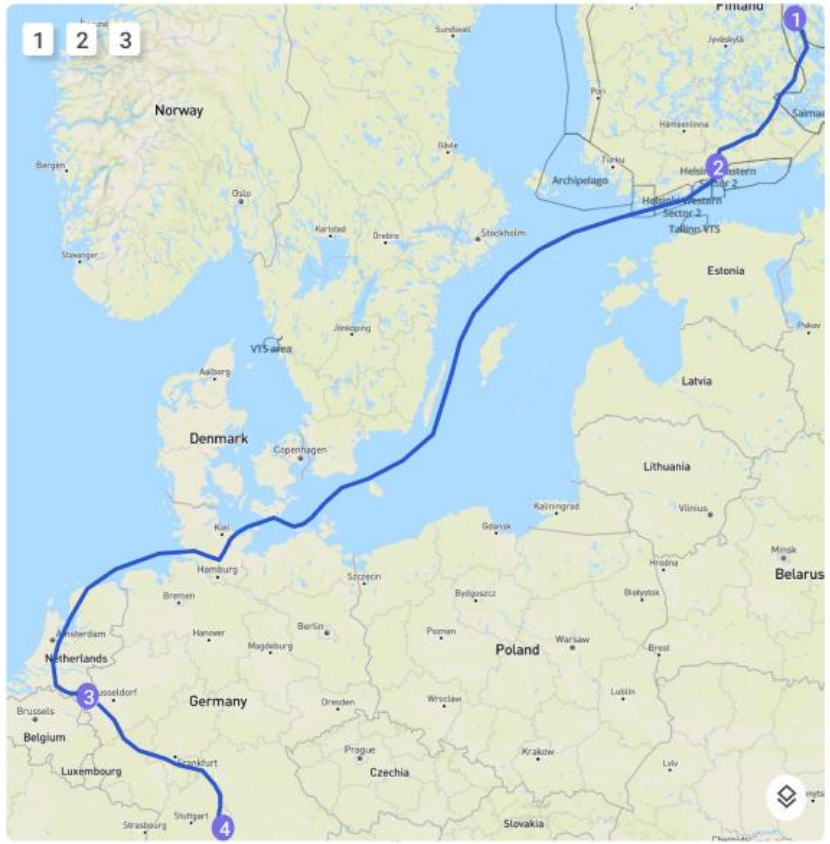
LANDSIDE HUB

Port of Antwerp
Bruges — Included activities: Container terminal — CO2e kgs: 10.7

TCE-3

Waypoint location: Port of Antwerp — Kms: 551

Waypoint location — CO2e kgs



Add transport chain element (TCE) | Add maritime hub (port) | Add landside hub

Whole route emissions prediction

Total kms: 3 366 — Predicted CO2e kgs: 2 091 — Calculation method: ISO 14083 / GLEC v3

Show emission tiers | Show calculation details

Total Tonnes-kms: 92 228

CANCEL | Save route

Intermodal capable transport chain routing when required

Thank you for your attention!

Smart Freight Centre

Current Status of Freight Transport GHG Calculation and Reporting

Alan Lewis
Chief Technical Officer
Smart Freight Centre

Logistics GHG Emissions in Context

Transport emissions: of man-made GHG emissions

Logistics emissions: of transport GHG emissions

Both sets of numbers are increasing

Breakdown of Global Freight Transport GHG Emissions

ITF (2023), ITF Transport Outlook 2023, OECD Publishing, Paris, https://doi.org/10.1787/b6cc9ad5-en

Breakdown of Global Freight Transport GHG Emissions

IPCC's 6th report focused on

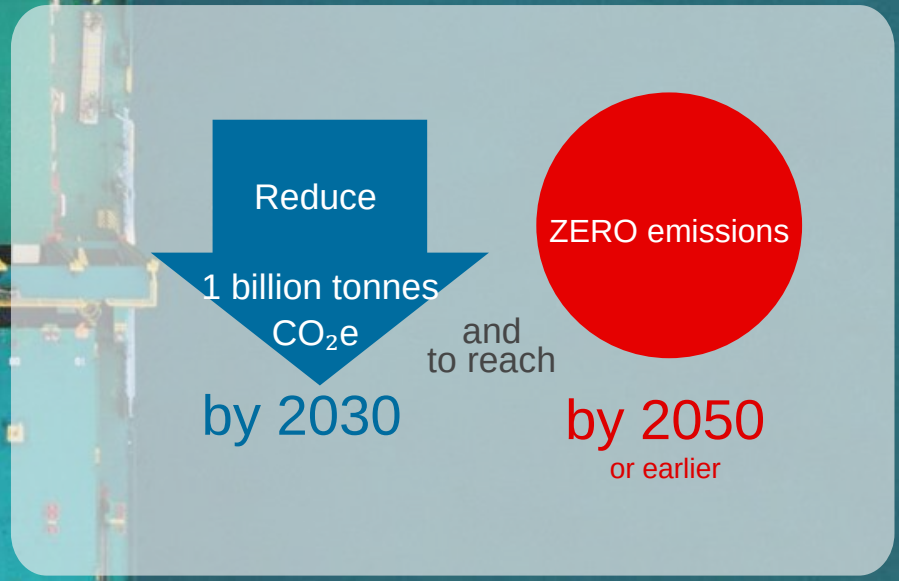
- Shift to electric vehicles
- Decarbonize aviation & shipping via clean fuels and technology

Don't overlook efficiency, optimization and modal shift

ITF (2023), ITF Transport Outlook 2023, OECD Publishing, Paris, https://doi.org/10.1787/b6cc9ad5-en

Smart Freight Centre

SFC is a global non-profit organization focused on reducing the emission impacts of global freight transportation.



Mobilizing the global logistics eco-system

How we make an impact

Drive transparency and set the standard
to simplify, increase efficiency and measure performance

Facilitate solution pathways and catalyze collaboration
to share knowledge and act together

Educate, influence, and scale-up organizations
to allow the sector to accelerate decarbonization

SFC members

SFC has over 170 members consisting of:

- Shippers
- LSPs
- Carriers
- Tool Providers
- Delivery Partners

from a wide range of sectors these including:

- Food and Beverage
- FMCGs
- Chemical
- E-commerce
- Pharmaceutical
- Fashion
- Tech
- Logistics

What is GLEC?

The Global Logistics Emissions Council (GLEC)

- **established in 2014**
- **now more than 150 organizations**
- **companies, industry associations, programs, experts and other.**

Drive widespread, transparent, and consistent **calculation and reporting** of logistics GHG emissions.

SFC and early GLEC members developed the GLEC Framework - a harmonized, efficient and transparent way to calculate and report logistics emissions.

Smart Freight Centre

GHG Standards Hierarchy

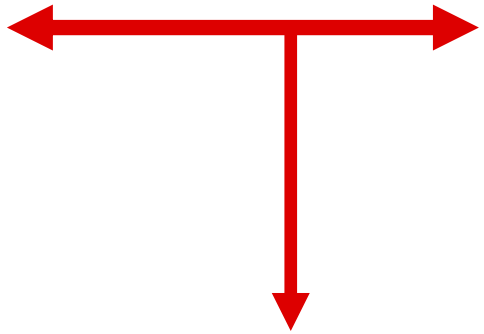
General GHG Accounting and Reporting Standards

GHG Protocol Standards:
- Corporate Reporting Standard
- Value Chain/Scope 3 Standard

ISO 14000 Series
- ISO 14040/ 14064
- ISO 14067

Transport-sector specific GHG Accounting and Reporting Guidance and Standards

GLEC Framework



ISO 14083

Example transport sub-sector GHG Accounting and Reporting Guidance Documents

e.g.
European chemical transport
Automotive logistics

GLEC Framework / ISO 14083

Aligning International GHG Calculation and Reporting

2016 - 2022

GLEC was the only **globally recognized methodology** to calculate GHG emissions consistently across the **multi-modal logistics supply chain**

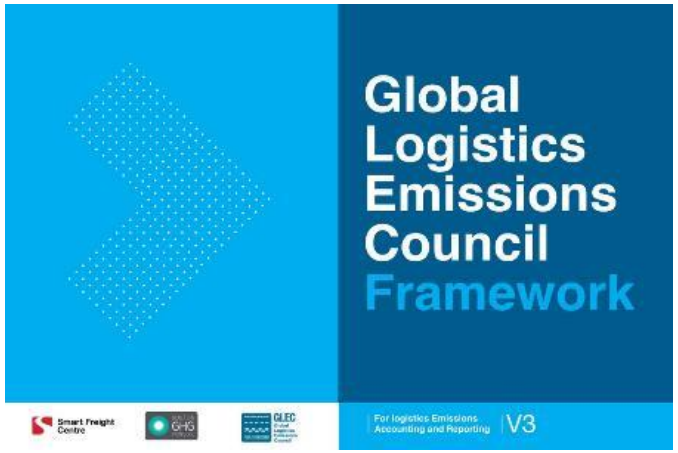
Recognized by

Used by

150+ Multinationals

20+ Programs, tools, initiatives

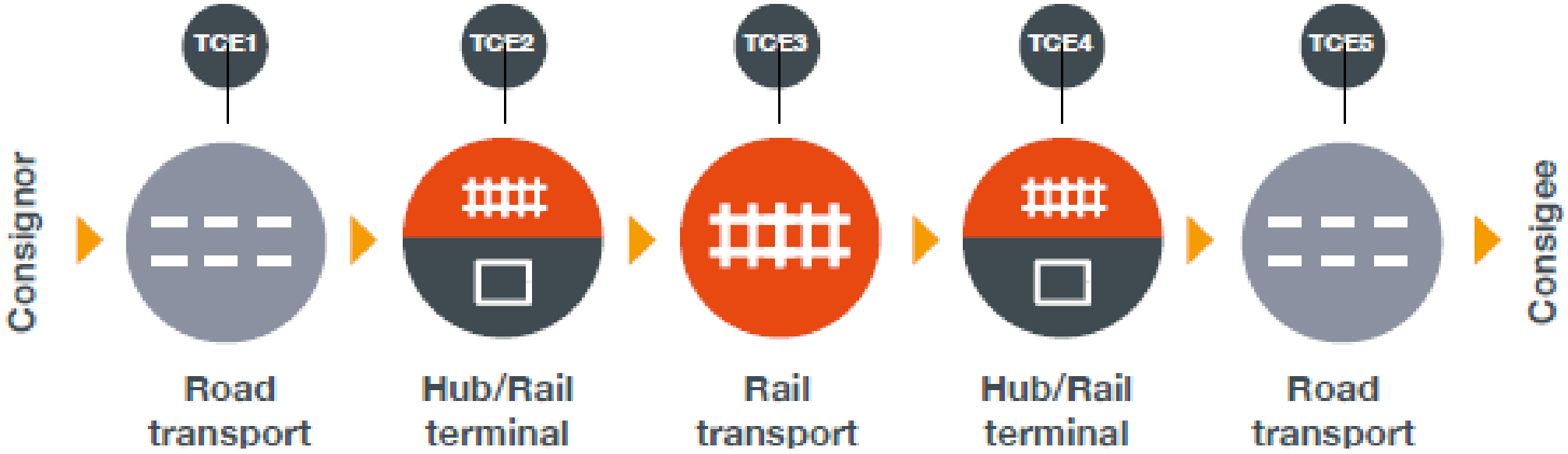
Correlation between the GLEC Fram[illegible] and ISO 1408



- ISO is the most recognized global organization for standardization
- ISO 14083 Covers both freight and passengers transport GHG emissions
- It is based on existing standards including GLEC and EN16258 (now withdrawn)
- Will be updated approx. every 5 years (if there is demand)

- The GLEC Framework is the primary industry guideline for the implementation of ISO 14083
- Covers freight transport GHG emissions
- Industry-led regular updates on emission factors, default emission intensities, sector-specific application guidance
- Testing and development for future scope expansion
- SFC assurance scheme is under development

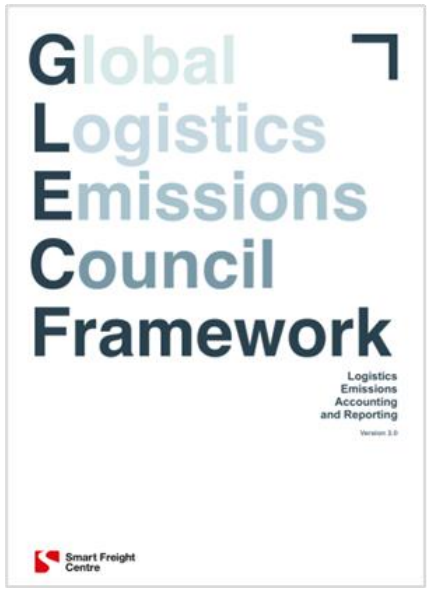
Focus of ISO 14083 is the Transport Chain



Scope, Boundary and Principles

- Full fuel cycle approach
- All UNFCCC GHGs: CO_2, CH_4, N_2O, NF_3 SF_6 PFCs & HFCs, but not black carbon or high altitude emissions (yet)
- Operations only, no maintenance, storage, vehicle production, scrappage, infrastructure or overheads
- Does include repositioning, handling and transfer equipment and auxiliary engines
- Allocation by mass, well-established alternatives (passengers, containers, parcels) accepted in specific circumstances
- Excludes carbon offsets
- Signals direction for more complete climate assessment of transport operations

3 Key Calculation Elements



Methodology

Data inputs

Assurance

(verification /validation)

Emission Factors

Currently no standard for EFs…

- Focus on decarbonization and energy transition has brought lots of interest but also instability…
- Need for harmonized approach to methodology & data
- No one source good for all modes in terms of coverage
  - Mixing sources introduces inconsistency
  - Different assumptions
  - Out-dated inputs (e.g. GWPs or methane leakage data)

Global project with funding from HORIZON Europe Work Program

CLEVER: (Creating Legitimate Emission Factors for Verified GHG Emission Reductions in Transport)

- Started 1st June 2024
- Collaboration aimed at harmonizing methodological approach & understanding the impact of input data on the EFs
- Will also feed into updated database of default emission intensities
  - (recognizing defaults will remain a less-preferred backup to primary data)

SFC Assurance

The importance of disclosing and assuring GHG emissions - how does SFC support?

Standardization brings reliability and comparability of GHG emission data

SFC has developed the GLEC Framework, which served as basis for the new ISO 14083, to standardize transport GHG emission reporting.

"Accreditation"

Currently, SFC checks emission calculation tools and issues accreditations which confirm the tools comply with the GLEC framework. This service will be further revised & improved in 2024.

Independent assurance of GHG emissions brings credibility and transparency

SFC has now developed an assurance scheme. In this scheme, independent organizations verify if the reported GHG emissions are truthfully stated. In the SFC scheme conformity with ISO 14083 is mandatory, with additional optional performance levels.

SFC Conformity Assessment Scheme

Verification and validation of GHG emissions statements for transport chains

Smart Freight Centre

-Defines Assurance framework, incl. performance levels for reporters

-Approves VVBs

-Maintains a registry of approved VVBs and of reporters

-Provides mandatory training to VVB verifiers

-Provides training to reporters

-Allows approved VVBs and reporters to use SFC logos

Verification/ Validation Bodies (VVBs)

-Evaluate the reporter to verify: 1) it meets ISO 14083, 2) claims are accurate, 3) what their performance level is

-Comply with existing ISO standards for their service: 17029, 14065 & 14063-3, 14066

Smart Freight Assurance Approved VVB

GHG reporters

-Calculate emissions according to ISO 14083 & determine what their performance level is

-Obtain a verification opinion and report from the VVB they selected

Smart Freight Assurance Level 2

Need to work with Corporate Finance and Financial Standards

Moves beyond corporate GHG reporting by, for example:

- European Sustainability Reporting Standards (ESRS)
- EFRAG (European PPP On Corporate Reporting

Smart Freight Centre

Join our journey towards efficient and zero-emissions global freight and logistics

Contact
info@smartfreightcentre.org

ADMIRA

Help us shape the future of logistics and freight transport!

We need your help!

The ADMIRAL project is conducting a **survey** (around 10 min) to gather insights from all stakeholders involved in logistics and freight transport on key drivers and solutions in the logistics sector with the transition to green, digital and sustainable logistics.

Co-funded by the European Union

Thank you for your attention!