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The new TSI Telematics:
impacts on intermodal transport

JOIN AN ONLINE WEBINAR

THURSDAY, 12 DEC
10:00-11:30

Co-funded by the European Union

Agenda

Welcome, introduction to digital sharing

Eric Feyen - Technical Director – UIRR

The new TSI Telematics: principles and key requirements
Yann Seimandi - Policy Officer – European Commission, DG MOVE, C.4

Insights from the EDICT project: key achievements and UIRR request
Eric Feyen - Technical Director – UIRR

Q&A session

Smart ways for connecting through Common Interface and the RNE TIS Group Solution
Jaroslav Lučkay - Sales Manager – RailNetEurope

KV4.0 as data hub for intermodal transport
Christoph Büchner - Managing Director – DXI

CEF project: funding opportunities and conclusions
Eric Feyen - Technical Director - UIRR

Speakers (4)

Eric Feyen
Technical Director

Yann Seimandi
Policy Officer

Jaroslav Lučkay
Sales Manager

Christoph Büchner
Managing Director

Introduction to data sharing

Eric Feyen
Technical Director

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UIRR – the voice of intermodal freight in Europe

Data sharing: definition and prerequisites

Definition

the exchange of **master and dynamic transactional data** between businesses and also public stakeholders

Prerequisites

- **Willingness to share data**
  Addresses the mutual benefits of sharing for both the data holder and the data recipient
- **Capabilities to share**
  Adequate IT capabilities, use of applicable standards and IT systems.
- **Monitoring of data sharing and improvement**
  the capability to monitor the current data quality, to identify gaps and irregularities

UIRR position paper on data sharing for door-to door intermodal freight transport competitiveness

https://www.uirr.com/en/media-centre/press-releases-and-position-papers/2024/mediacentre/3026-tsi-telematics-intensified-and-improved-data-sharing.html

1. **Improved data sharing** is required to achieve attractiveness of intermodal rail freight transport

2. **Relevant data elements and messages** need to be agreed & shared with **relevant intermodal stakeholders**

⇒ **Only then** exception & prevention mgmt. can work to increase door-to-door service quality (reliability, resilience & trust)

Data sharing: key requests of the intermodal rail freight segment

- **Standardising and harmonizing the master data** under clear governance rules
- **Similar efforts for the transactional data** with definition of data elements and their values to be standardised between each stakeholder group
- **Maximise the value of data exchange for SME intermodal stakeholders**

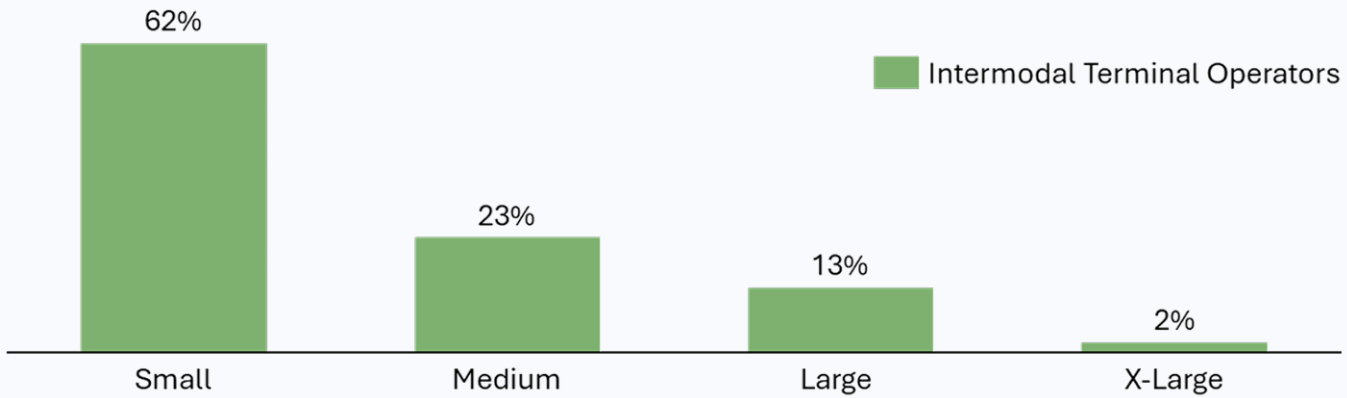

Figure 2 – Overview of UIRR terminal member sizes

The new TSI : principles and key requirements

Yann Seimandi
Policy Officer

UIRR
INTERNATIONAL UNION FOR ROAD-RAIL COMBINED TRANSPORT

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Insights from the EDICT project: key achievements and requests

Eric Feyen
Technical Director

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EDICT:

improving data interoperability & sharing in Combined Transport

Webinar on TSI Telematics

12/12/2024

Interoperability push through reuse & decoupling to improve door-to-door intermodal competitiveness

Principles:

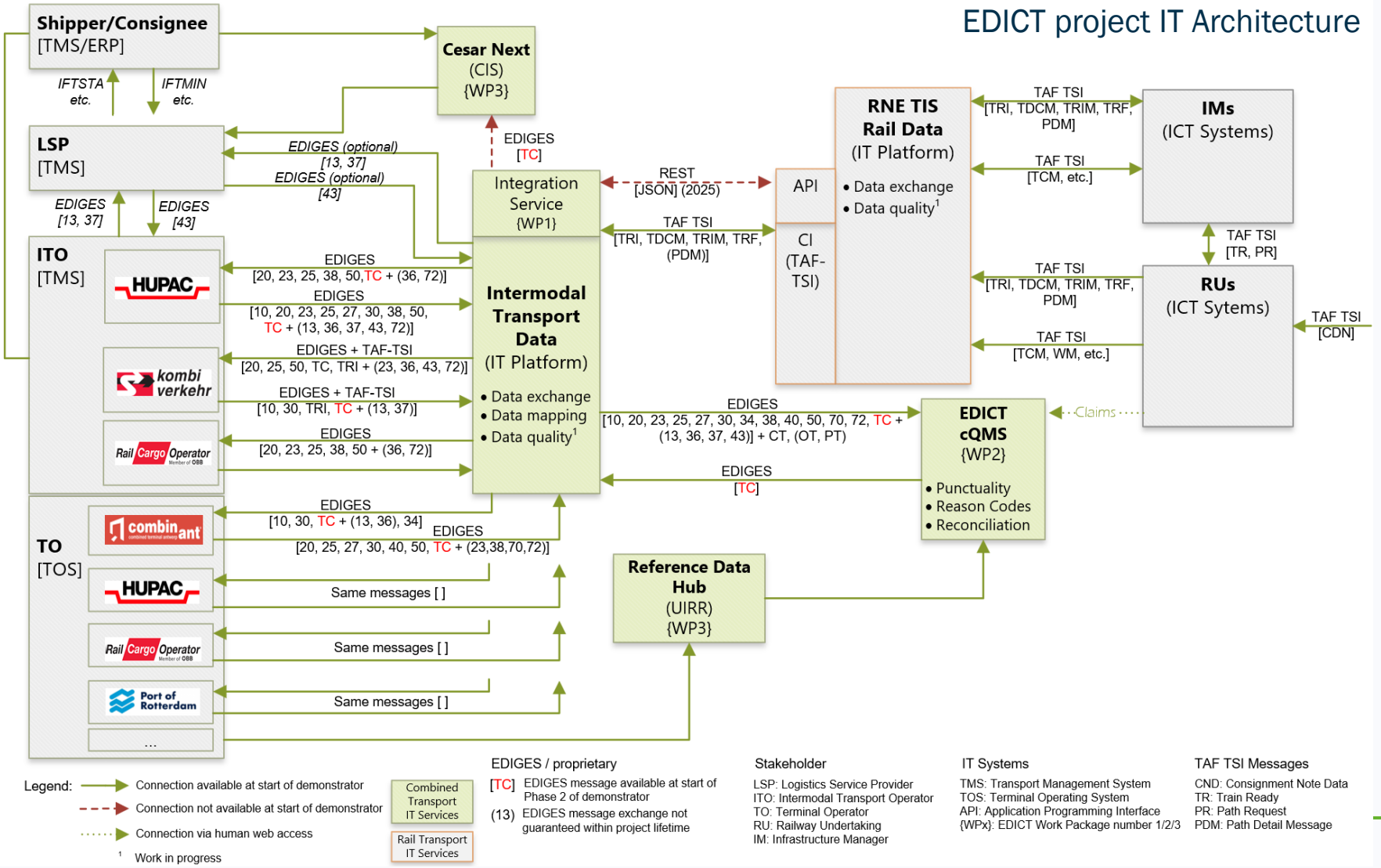
- Interoperability of standards
- Reuse of existing capabilities
- Decoupling of standardisation needs within rail and road

Benefits:

1. Fast implementation
2. Fast scaling
3. Reduced costs of through
   - Standardisation
   - Minimum ITC system changes

Practical demonstration in EDICT project

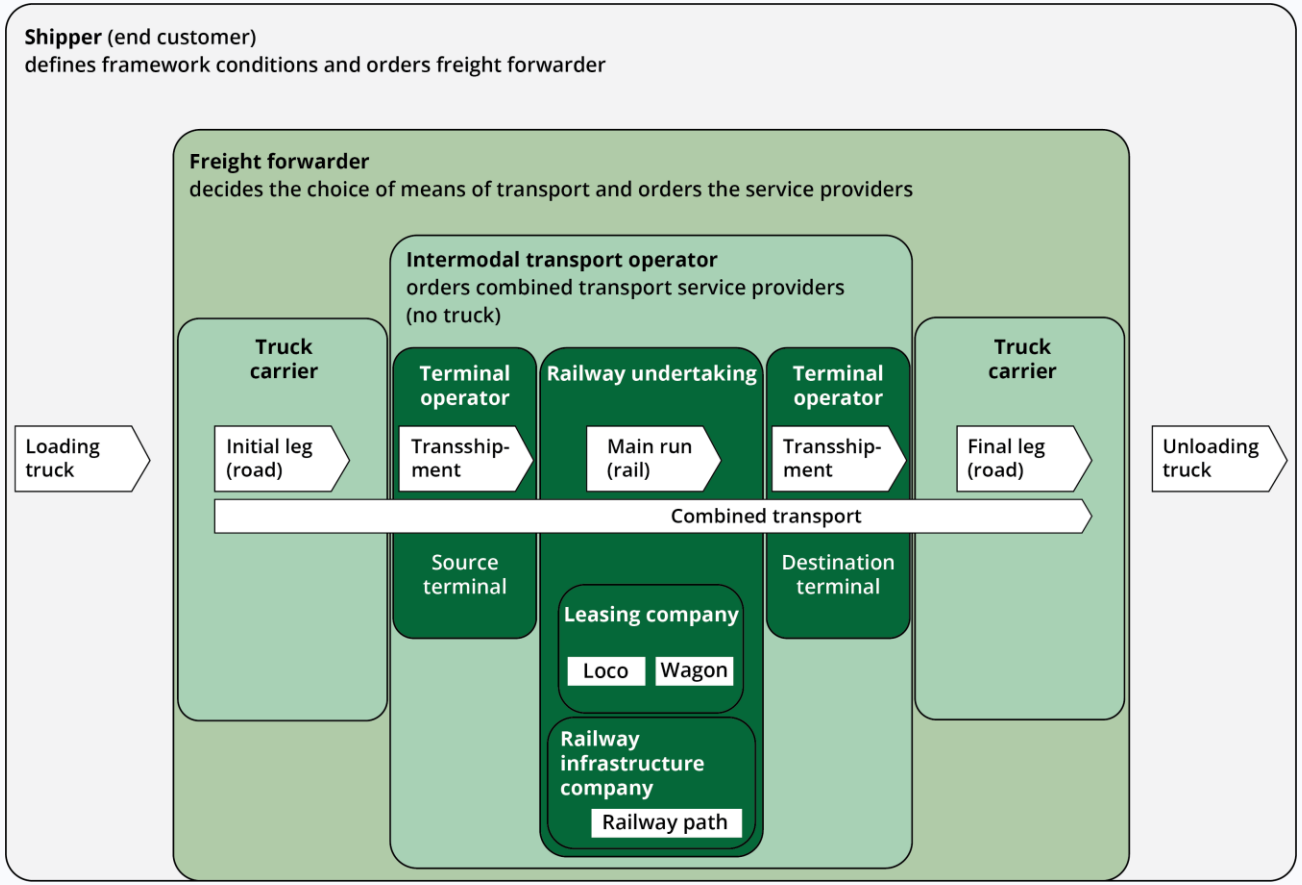
EDICT project IT Architecture



TSI Telematics (Act – recital 10) : reference to the Rotterdam declaration and alignment requested for intermodal logistics process

(10) In the Ministerial Declaration "Rail freight corridors to boost international rail freight"[12] endorsed by EU Member States, Switzerland, and Norway on 21 June 2016 in Rotterdam, ministers encourage stakeholders to share data within the logistic chain, including terminals, to further develop the competitiveness of EU cross-border and international rail freight transport, and to use digital information sharing on train movements to enhance the attractiveness of rail freight and to better align intermodal logistics processes. They also stress the importance of removing technical rules at national level and ask infrastructure managers to contribute actively on the harmonisation of safety and operational rules. Associated to it, in a corresponding sector statement[13] infrastructure managers and railway undertakings committed to make train reporting information available to their contract partners directly or indirectly involved in the transport service at stake, including terminals and intermodal transport operators, and to provide freight forwarders and shippers with up-to-date and forecast information about the status of their freight.

TSI Telematics (Act) : improved intermodal integration with new definition and role



Definitions

Article 3 (8) – operators of rail service facilities
Including the terminal operators (Directive 2012/34)

Article 3 (9) – telematics stakeholders
Include freight terminals and intermodal transport operators (as data holder or recipient)

Article 3 (30) – freight customer
Including intermodal transport operator

Article 3 (31): intermodal transport operator
entity which organises intermodal freight transport services connecting freight terminals

TSI Telematics (Act): bilateral contractual agreements can be a hurdle for data sharing and drives complexity

Act 4 (1)

Article 4
Access to data and right of use

(1) → Without·prejudice·to·Articles·5,·telematics·stakeholders·shall·share,·grant·each·other·access·to,·and·grant·the·right·to·use,·data·required·to·carry·out·the·activities·and·processes·referred·to·in·Articles·1(a)·and·1(b),·and·1(c)·insofar·it·concerns·rail·passenger·travel·information·where·they·have·a·legal,·commercial,·or·operational·responsibility·on·the·basis·of·legislation·or·a·contractual·agreement,·and·in·accordance·with·Article·8.¶

Request for modification: Contractual agreement needs to be **more precise or to be eliminated**.

Data receivers are justified by being contractually legitimate stakeholders in the end-to-end transport of the flow of goods. They need to plan and execute their part in the end-to-end SC. The contracts are between two or more stakeholders and the right to share the data received should allow the transfer to upstream or downstream contractually involved stakeholders or telematic applications.

TSI Telematics (Act) – Intermodal terminals shall grant public access on train traffic data but not on Train Composition Data and working timetables

Act 5.1

(1) → Infrastructure· managers· and· operators· of· rail· service· facilities· shall· grant· public· access·to·and·the·right·to·use·for·operational·and·non-commercial·purposes,·both·free· of·charge,·the·following·data·through·a·common·European·telematics·application:¶

(a) → working·timetable;¶

(b) → train·traffic·data;¶

(c) → train·composition·data·received·from·railway·undertakings.¶

Current situation:

1. Intermodal terminals do not (directly) receive TCM and are currently not equipped to share it.
2. ITOs as freight customer generate consignment note and send it to Lead RU
3. ITOs share the information with the arrival terminals.

TCM: Train Composition Message, ITO: Intermodal Transport Operator, RU: Railway Undertaking

Why are intermodal terminals asked to give data access to train composition data if they generally do not modify the train composition?

RUs or Shunting Yards are better positioned to be the single source of truth for train composition data sharing and working timetables.

To be challenged: public access of freight-related data on a common European telematics application

TSI Telematics (Act) = common central repository & reference data

Article 9 (Act)

Article 9

Common central repository and reference data

(1) → The Agency shall make publicly available through its website, and offer for use, a common central repository as the single source of common European rail data, containing:

(a) → Metadata and associated specific data catalogue elements, the specifications of which are defined in the Annex as a subset of the ERA Ontology, defining the content and the structure of the data shared pursuant to this Regulation;

(b) → a list of certification authorities for public key infrastructure (PKI) recognised by the Agency;

(c) → common reference data referred to in Article 10, managed by the Agency;

(d) → a link to access the source of freight specific reference data, managed by the rail sector.

Reference data

- publicly available **AND free of charge**
- Location codes – which ones ? PLCs only ? SLCs ? What about the SLCs on freight terminals managed by UIRR ?
- ERA technical documents should be updated and ready

TSI Telematics (Annex – chapter 2) – specifications of the rights of receiving data for the telematics stakeholders and freight customers

2. → CAPACITY·MANAGEMENT,·TRAIN·PREPARATION,·AND·TRAFFIC·MANAGEMENT¶

(1) → Data· sharing· relating· to· capacity· management,· train· preparation,· and· traffic· management,·shall·be·achieved·through·a·common·interface·or·a·web·application·in·accordance·with·Article·15·and·point·1.7.¶

(2) → Telematics·stakeholders·involved·in·a·transport·service·and·freight·customers·shall·have· the· right· to· receive· or· access· free· of· charge,· and· use,· upon· request· or·subscription,·data·relating·to·the·trains·part·of·that·rail·service·in·relation·to·capacity·management,· train· preparation,· and· traffic· management.· When· requested· or·subscribed· data· are· available· pursuant· to· Article· 4· and· 5· this· obligation· shall· be·considered·to·have·been·fulfilled.¶

TSI Telematics (Annex) - all messages are technically transferrable (prepared & tested within the EDICT project)

2.6.1. *General*

(1) The following messages shall be in accordance with the specifications referenced in Appendix C index [2]:

– 'Train Running Information',

– 'Train Running Forecast',

– 'Train Delay Cause',

– 'Train Running Interruption'.

(2) Infrastructure managers and operators of rail service facilities in relation and limited to the segments of each rail transport service which is operated on their network, and where relevant other data holder:

(a) shall send to railway undertakings in relation to the rail transport services they operate,

(b) shall send to the common European telematics application referred to in Article 5,

(c) may, in addition, send bilaterally to relevant telematics stakeholders pursuant to Article 4,

the messages referred to in point (1) containing train traffic data.

(4) In the case of combined transport where the operator of rail service facilities may be responsible to load or unload a set of wagons, it shall send to the lead railway undertaking a 'Train Running Information' message with appropriate train location status providing for train closure to inform that the loaded or unloaded set of wagons parked at reporting point is ready for movement without prejudice to the safety of the load in accordance with OPE TSI.

- **TRI** (EDICT solution: Intermodal Terminal sends notification of train closure (loading) with status code 14 and 16 for train arrival (unloading) to substitute current 'Train Ready' obligation)

Prepared data exchange of:

- **TRF** (e.g. ETD)
- **TDCM** (only on wagon set level)
- **TRIM** (only on wagon set level)

Wagon status message exchange for Intermodal Terminal Operators & ITOs not mandatory required

Annex 3.2.1.2

(2) (b) the lead railway undertaking shall send a 'wagon status' message to the following telematics stakeholders provided they are involved in that transport service:

– operators of rail service facilities,

– freight customers, as referred to in the contract of carriage.

(4) Operators of rail service facilities shall monitor, in a centralised manner at the level of each rail service facility or grouping of rail service facilities, the actual location and status of freight wagons and their shipments within their facilities. They shall send 'wagon status' messages to the following telematics stakeholders provided they are involved in the transport service:

– the lead railway undertaking,

– intermodal transport operators.

- Why do Intermodal Terminal Operators and Intermodal Terminals need to receive individual wagon status and monitor individual wagons?
- Why is the Intermodal Terminal location for a wagon set not sufficient?

Recommendation: Wagon status information sharing for intermodal transport should be **optional**. Information shared with freight customers should be dominantly via train running information to avoid inconsistency risks.

Current status: Intermodal Terminals do not receive wagon status messages as they only need the wagon set

TSI Telematics (Annex): new Intermodal Loading Unit Reference Database

Article 3.3.3 (Annex)

3.3.3. Intermodal Loading Unit Reference Database

(1) Under the coordination of the Agency, keepers of intermodal loading unit~~(s)~~ ('ILUs keepers') shall cooperate to establish, manage and maintain common and centralised reference databases for intermodal loading unit ('ILU') in accordance with points (3) to (5) below, and the specifications referenced in Appendix C index [1] and [2].

(2) ILUs keepers shall be responsible for populating and maintaining quality data in the databases referred to in point (1). To that end, ILU keepers shall ensure that data shared is up to date and reflect accurately the status of associated processes the ILU may be subject to in accordance with applicable legislations.

(3) Reference data shall be ~~be~~ made public through the database~~(s)~~ referred to in point (1) and shall include:

(a) the identification of ILUs in accordance with the specifications referenced in Appendix C index [4]. It shall include all type of semi-trailers.

(b) the ILU type (container, swap body or semi-trailer) and its compatibility with wagons and routes in accordance with the specifications referenced in Appendix C index [4],

(c) relevant loading characteristics as weights and dimensions.

(4) To minimise the volume of data sharing for operational purposes and to increase the efficiency of intermodal loading units movements referred to in point 3.2.2, the database~~s~~ referred to in point (1) shall allow easy and fair access to the ILU reference data to any identified service provider involved in the transport service and authorised in accordance with relevant commercial arrangement between involved parties, including in particular operators of service facilities and associated shunting operators, intermodal transport operator, and railway undertakings.

(5) Reference data shared in accordance with point (3) shall be grouped as follows:

(a) Administrative data:

Intermodal loading unit reference data relating to the certification of ILUs and their registration in accordance with the technical specifications referenced in Appendix C index [4].

(b) Design data:

Intermodal loading unit reference data relating to the technical characteristics of intermodal loading units in particular data required by operators of service facilities and railway undertakings for the train preparation in accordance with point 2.5 and the movement of intermodal loading units in accordance with point 3.2.2.

ILU Reference Database

- 'under the coordination of ERA' – what will be its exact role?
- UIRR & BIC: registers are in place as specified in the current draft ERA/TD/2023-01/CCT – version 1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&
A

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Sales Manager

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CEF funding opportunities and conclusions

Eric Feyen
Technical Director

New CEF2 proposal on data sharing in a door-to-door perspective

- **Coordination**: UIRR – the voice of intermodal freight transport in Europe
- **Consortium** (about 15 partners): LSPs, Intermodal Operators, Terminal Operators, Railway Undertakings and Infrastructure Managers
- **Background**: overall market situation of intermodal rail, policy and digital context
- **Objective:** interoperable data exchange with all intermodal stakeholders with a particular attention to freight terminals (SMEs) – TSI Telematics compliance

Interest to join: please let us know !

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Thank you for your participation

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