



## D6.4.1

# Legal study and recommendations of the use of data in inter-modal transport

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## LIST OF ABBREVIATIONS

A	Activity
AB	Advisory Board
B2A	Business to Administration
B2B	Business to Business
B2G	Business to Government
EC	European Commission
EDI	Electronic Data Interchange
EDP	Electronic Data Processing
eFTI	electronic Freight transport information
ERTICO	European Road Transport Telematics Implementation Coordination Organisation – Intelligent Transport Systems & Services Europe
ETA	Expected Time of Arrival
ETL	Extract, transform, load is the general procedure of copying data from one or more sources into a destination system which represents the data differently from the source(s) or in a different context than the source(s).
EU	European Union
FEDerATED	Develop tangible and future (federative platform) proof data sharing practices in transport and logistics with the direct participation of Member States and the involvement of the business.

FENIX	European FEderated Network of Information eXchange in Logistics
FESTA	Field opErational teSt supporT Action
FOT	Field Operational Tests
FR	France
IDS	International Data Spaces
INEA	Innovation and Networks Executive Agency
IoT	Internet of Things
ITS	Intelligent Transport Systems
ITSS	C-ITS Station
GA	General Assembly
4PL	Fourth Party Logistics
5PL	Fifth Party Logistics

# 1. INTRODUCTION

## 1.1 Purpose of the document

The document presents a study of the existing regulatory framework with regards to multimodal transport as well as a review of the use of digital means for transport documents creation and exchange. This study is the first step in task A6.4 which focuses on the overall regulatory framework and will address issues regarding policy and recommendations.

The document intends to show the existing pluralism of transport conventions, the existing and on-going EU initiatives as well as whether these transport conventions already include provisions related to digital transformation efforts in the transport sector.

This complicated environment sets the scene within which FENIX aims to establish a Federated Network for Information Exchange which will enable further digitization in the sector.

## 1.2 Contractual References

FENIX stands for “A European **F**ederated **N**etwork of **I**nformation **eX**change in Logistics”. FENIX is an action 2018-EU-TM-0077-S under the Grant Agreement number INEA/CEF/TRAN/M2018/1793401 and the project duration is 36 months, effective from 01 April 2019 until 31 March 2022. It is a contract with the Innovation and Networks Executive Agency (INEA) under the powers delegated by the European Commission.

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### **1.3 Structure of the report**

The report initially presents the intended approach within Task A6.4 (Chapter 2) while the following Chapters 3-5 focus on the existing regulatory framework for multimodal transport.

Chapters 6-8 review the situation with regards to the use of digitalization of transport related information and respective provisions in international conventions or known gaps.

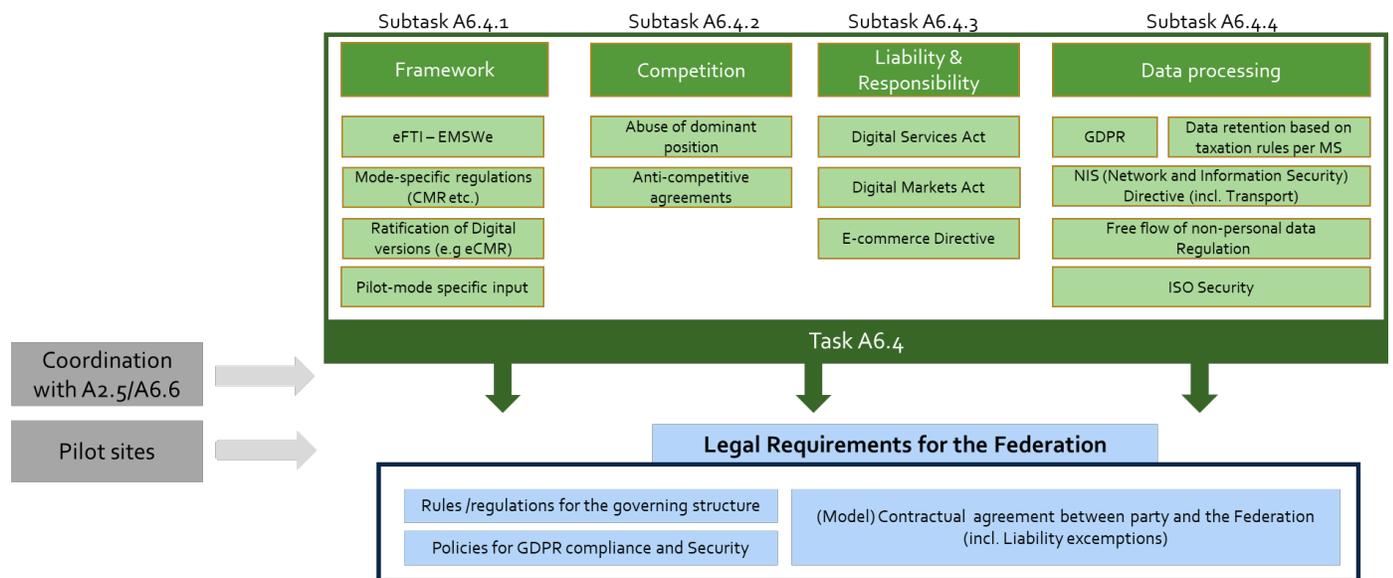
Chapter 9 highlights the conclusions of the study as well as the next steps in our approach for Task A6.4.

## 2. Activity A6.4 Overview

The Activity A6.4 of FENIX project focuses on Policy and Recommendations and includes four different subtopics (subtasks).

- T6.4.1: Inter-modal use of data
- T6.4.2: Multi-modal transport digital systems and market regulation
- T6.4.3: Responsibility and liability allocation in multi-modal transport digital systems
- T6.4.4: Data processing in multi-modal transport digital systems

The figure below presents this overall approach for Task A6.4 as well as the highlights of each subtask.



The combined input – in close cooperation with Task A2.5 and Task A6.6 – are then expected to form a set of so-called “Legal Requirements for the Federation” which comprises of three pillars:

- A set of specific rules for the governing structure of the Federation
- Possible policies regarding GDPR and Security compliance
- A draft agreement between a new member and the Federation

These will be included in a set of documents as described below:

- Draft Statutes of the Governing structure: In close corporation with Task A2.5 and Task A6.6 and following the discussion with all the consortium members, the structure of the Governing structure will be established and the specific rules regarding the governance will form the Draft Statutes for the FENIX Governing Structure
- Contractual Agreement (Accession Contract) between a new member and the federation: This model agreements will include all specific terms and conditions and specific articles regarding liability issues and data use and processing (as these have been conclude by the individual studies in subtasks A6.4.2-4).

### 3. Pluralism of Transport Conventions

#### 3.1 Carriage by Road: The CMR Convention

The CMR Convention is a United Nations convention that was signed in Geneva on 19 May 1956 with the aim of providing a uniform legal framework for national and international road transport.<sup>1</sup> This Convention has been ratified by most European states, as well as several other countries. It relates to various legal issues concerning transportation of cargo by road. Transport companies, drivers and those receiving shipments use a CMR consignment note, which presents information about the shipped goods and the transporting and receiving parties.

The field of application of this Convention is defined in Article 1 which provides that the Convention shall apply to every contract for the carriage of goods by road in vehicles for reward, when the place of taking over of the goods and the place designated for delivery, as specified in the contract, are situated in two different countries, of which at least one is a contracting country, irrespective of the place of residence and the nationality of the parties.

It also applies in multimodal transport, as provided for in Article 2, according to which where the vehicle containing the goods has carried over part of the journey by sea, rail, inland waterways or air, and, except where the provisions of article 14 are applicable, the goods are not unloaded from the vehicle, the CMR Convention applies to the whole of the carriage.

Regarding the conclusion of the carriage contract, article 4 provides that it is confirmed by the making out of a consignment note. The absence, irregularity or loss of the consignment note, however, does not affect the existence or the validity of the contract of carriage which remains subject to the provisions of this convention. Furthermore, article 5 provides for the formalities of the consignment note, while its content is described in article 6. **The sender bears responsibility for expenses, loss and damage caused** because of inaccuracy or inadequacy of the information included in the consignment note, according to article 7.

According to the rule of article 9, the consignment note constitutes prima facie evidence of the making of the contract of carriage, the conditions of the contract and the receipt of the goods by the carrier. If the

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<sup>1</sup> Convention on the Contract for the International Carriage of Goods by Road, Geneva, 19 May 1956.

consignment note contains no specific reservations by the carrier, it shall be presumed, unless the contrary is proven that the goods and their packaging appeared to be in good condition when the carrier took them over and that the number of packages, their marks and numbers corresponded with the statements in the consignment note.

The liability of the carrier is defined in chapter IV. The basic rule is that the carrier is liable for the total or partial loss of the goods and for damage thereto occurring between the time when he takes over the goods and the time of delivery, as well as for any delay in delivery. The liability regime imposed on the part of the carrier is strict liability. However, para. 2 provides that he is relieved of liability if the loss, damage or delay was caused by the wrongful act or neglect of the claimant, by the instructions of the claimant given otherwise than as the result of a wrongful act or neglect on the part of the carrier, by inherent vice of the goods or through circumstances which the carrier could not avoid and the consequences of which he was unable to prevent. The burden of proving that the loss, damage or delay was due to wrongful act or neglect of the claimant rests upon the carrier, according to article 18 para. 1.

### **3.2 The e-CMR**

In 27 May 2008, an additional protocol to the CMR-convention was signed, which provides for the use of an updated electronic consignment note – eCMR.<sup>2</sup> This was entered into force in June 2011 and it has been ratified by 29 countries. The e-protocol provides a legal framework and standards for the use of electronic means to record the CMR consignment note. The latter which contains information on transfers of goods, transport companies and recipient countries and was concluded in paper form, obtains digital format, and this allows the e-CMR invoices to be combined with other services such as customs declaration or fleet management services. The digital consignment note will become mandatory in 2026.

The electronic consignment note is defined in article 1 as the consignment note issued by electronic communication by the carrier, the sender or any other party interested in the performance of a contract of carriage to which the Convention applies, including particulars logically associated with the electronic communication by attachments or otherwise linked to the electronic communication contemporaneously with or subsequent to its issue, so as to become part of the electronic consignment note.

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<sup>2</sup> ADDITIONAL PROTOCOL TO THE CONVENTION ON THE CONTRACT FOR THE INTERNATIONAL CARRIAGE OF GOODS BY ROAD (CMR) CONCERNING THE ELECTRONIC CONSIGNMENT NOTE, <https://unece.org/DAM/trans/conventn/e-CMRe.pdf>

The scope of the introduction of the e-consignment note is to be equivalent to the consignment note referred to in the CMR Convention and therefore have the same evidentiary value and produce the same effects as that consignment note (article 2 para. 2).

The e-consignment note is presumed valid, under article 3, if it is authenticated by the parties to the contract of carriage by means of a reliable electronic signature. The requirements are that the electronic signature: (a) is uniquely linked to the signatory, (b) is capable of identifying the signatory, (c) is created using means that the signatory can maintain under his sole control and, (d) is linked to the data to which it relates in such a manner that any subsequent change of the data is detectable.

The e-consignment note must contain the same information as the consignment note in paper form, while the integrity of this information must be guaranteed. This means that the information remains complete and unaltered, apart from any addition or change which arises in the normal course of communication, storage and display.

To implement the e-consignment note, the parties interested in the performance of the contract of carriage shall agree on the procedures and their implementation, according to article 5. This includes: (a) the method for the issuance and the delivery of the electronic consignment note to the entitled party, (b) an assurance that the electronic consignment note retains its integrity, (c) the manner in which the party entitled to the rights arising out of the electronic consignment note is able to demonstrate that entitlement, (d) the way in which confirmation is given that delivery to the consignee has been effected, (e) the procedures for supplementing or amending the electronic consignment note, and (f) the procedures for the possible replacement of the electronic consignment note by a consignment note issued by different means.

Finally, the e-consignment note is accompanied by documents which the carrier must provide to the sender at his request, i.e. a receipt for the goods and all information necessary for identifying the shipment, and for access to the electronic consignment note in accordance with article 6.

### **3.3 Carriage by Air**

#### **The Montreal Convention**

The Convention for the Unification of Certain Rules for International Carriage by Air, i.e. Montreal Convention 1999 (MC99), establishes airline liability in the case of death or injury to passengers, as well as in cases of delay, damage or loss of baggage and cargo. It unifies all of the different international treaty regimes covering airline liability that had developed haphazardly since 1929. MC99 is designed to be a single, universal treaty to govern airline liability around the world. It replaces the Warsaw Convention, i.e. the Convention for the Unification of certain rules relating to international carriage by air, the international convention regulating liability for international carriage of persons, luggages, or goods performed by aircraft for reward, originally signed in 1929 in Warsaw and amended in 1955 at The Hague and in 1971 in Guatemala.

In detail, the Montreal Convention 1999 (“MC99”) establishes a modern compensatory regime in respect of passengers who suffer death or injury caused by an accident during international carriage by air. It also provides a simplified liability regime for baggage and air cargo where it facilitates the use of electronic documents of carriage in place of paper. It was designed to replace the Warsaw Convention system that had developed haphazardly since 1929 with a single, modern and universal liability regime.

It applies to all international carriage of persons, baggage or cargo performed by aircraft for reward, and equally to gratuitous carriage by aircraft performed by an air transport undertaking. A carriage performed by several successive carriers is deemed to be one undivided carriage if it has been regarded by the parties as a single operation, whether it had been agreed upon under the form of a single contract or of a series of contracts, and it does not lose its international character merely because one contract or a series of contracts are to be performed entirely within the territory of the same State.

In respect of carriage of passengers, an individual or collective document of carriage is delivered while, in respect of the carriage of cargo, an air waybill is delivered. The air waybill or the cargo receipt shall include: (a) an indication of the places of departure and destination, (b) if the places of departure and destination are within the territory of a single State Party, one or more agreed stopping places being within the territory of another State, an indication of at least one of such stopping place(s), and (c) an indication of the weight of the consignment.

MC99 introduces a strict liability regime for the carrier. In accordance with Article 17, the carrier is liable for damage sustained in case of death or bodily injury of a passenger only upon condition that the accident which caused the death or injury took place on board the aircraft or in the course of any of the operations of embarking or disembarking. Furthermore, the carrier is liable for damage sustained in case of

destruction or loss of, or of damage to, checked baggage only upon condition that the event which caused the destruction, loss or damage took place on board the aircraft or during any period within which the carrier was in the charge of checked baggage. The latter is also liable for damage sustained in the event of the destruction or loss of or damage to the cargo only upon condition that the event which caused the damage sustained took place during the carriage by air. **Under Article 19 he is liable for damage occasioned by delay in the carriage by air of passengers, baggage or cargo.** However, Article 20 provides certain exoneration grounds.

Most important, the Convention establishes limits of liability regarding delay, baggage and cargo in Article 22. In particular: a) in the case of damage caused by delay in the carriage of persons, the liability of the carrier for each passenger is limited to 4,150 **SDR**, b) in the case of damage caused by delay in the carriage of persons, the liability of the carrier for each passenger is limited to 4,150 **SDR** unless the passenger has made, at the time when the checked baggage was handed over to the carrier, a special declaration of interest in delivery at destination and has paid a supplementary sum if the case so requires, c) in the carriage of cargo, the liability of the carrier in the case of destruction, loss, damage or delay is limited to a sum of 17 **SDR** per kilogram, unless the consignor has made, at the time when the package was handed over to the carrier, a special declaration of interest in delivery at destination and has paid a supplementary sum if the case so requires.

### **3.4 Budapest Convention on the Contract for the Carriage of Goods by Inland Waterway (CMNI)<sup>3</sup>**

The Budapest convention was adopted by the diplomatic conference organised jointly by the Central Commission for the Navigation of the Rhine and the Danube Commission in collaboration with the United Nations Economic Commission for Europe, and entered into force on 1 April 2005.

The convention is intended to harmonize contractual and navigational standards on inland waterways in European countries. Article 29 of the Budapest convention contains provisions on the choice of law by the

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<sup>3</sup> Adopted by the Diplomatic Conference Organized Jointly by CCNR, the Danube Commission and UN/ECE, held in Budapest from 25 September to 3 October 2000.

parties to a contract of carriage falling under the convention. These provisions affect the rules laid down in the Rome I regulation, which came into force on 24 July 2008 and applies in situations involving a conflict of laws and to contractual obligations in civil and commercial matters.

Its field of application is defined in Article 2 (1), which states that it is applicable to any contract of carriage according to which the port of loading or the place of taking over of the goods and the port of discharge or the place of delivery of the goods are located in two different States of which at least one is a State Party to this Convention. If the contract stipulates a choice of several ports of discharge or places of delivery, the port of discharge or the place of delivery to which the goods have actually been delivered shall determine the choice.

Para. 2 of this article clarifies that the Convention is applicable if the purpose of the contract of carriage is the carriage of goods, without transshipment, both on inland waterways and in waters to which maritime regulations apply, under the conditions set out in paragraph 1, unless: (a) a maritime bill of lading has been issued in accordance with the maritime law applicable, or (b) the distance to be travelled in waters to which maritime regulations apply is the greater.

The rights and obligations of parties are established in chapter II, while in chapter III the transport documents are laid down. According to article 11 (1), for each carriage of goods governed by the Convention the carrier shall issue a transport document. A bill of lading shall only be issued if the shipper so requests and if it has been so agreed before the goods were loaded or before they were taken over for carriage. The transport document must be signed in handwriting but can also be signed by electronic means.

The liability for loss of the carrier is laid down in article 16 which provides that the latter: "shall be liable for loss resulting from loss or damage to the goods caused between the time when he took them over for carriage and the time of their delivery, or resulting from delay in delivery, unless he can show that the loss was due to circumstances which a diligent carrier could not have prevented and the consequences of which he could not have averted."

### 3.5 Carriage by railway - COTIF

The Convention concerning International Carriage by Rail (COTIF) was adopted in 1980 – and was amended subsequently<sup>4</sup> - with the aim of creating a unified legal system for direct international carriage of passengers, baggage and goods by rail between member states. It contains two appendices: a) CIM applying to the carriage of persons and baggage, and b) CIM applying to the carriage of goods. The Convention established an Intergovernmental organization, the OTIF which has its seat in Berne.

In particular, the CIM lays down rules for the carriage of goods by rail. The contract of carriage comes into existence as soon as the forwarding railway has accepted the goods for carriage together with the consignment note. The consignment note is evidence of the making of the contract. Under the CIM, it is necessary to distinguish two types of consignment, i.e. i) general cargo up to the mass of 5000 kg in the case of which it is not necessary to pay for the entire wagon, ii) a complete wagon load which exploits the entire surface of a rail wagon for a single consignment note. If not agreed otherwise, the loading is assured by the consignor, the unloading by the consignee of the consignment.

The original contract is sent together with the cargo, and therefore, the evidence of the making of the contract is a copy of the consignment note which contains the following information: i) station of destination, ii) names and address of the consignee, iii) description of the goods, iv) mass, v) number of items and type of packaging, vi) the number of the wagon, vii) documents required by customs, if the goods are subject to custom, and viii) the name and address of the consignor.

Payment of charges are indicated in the consignment note with the words “Carriage charges paid. Carriage charges not assumed by the consignor”. Carriage charges not assumed by consignor will be considered as payable by the consignee. The former may make the goods subject to cash on delivery, however, the railway guarantees not to hand over the goods to the consignor before the payment is collected.

The COTIF also lays down the maximum delivery periods, the length of which depends on the distance between the station of loading and the station of destination.

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<sup>4</sup>[https://otif.org/fileadmin/new/3-Reference-Text/3A-COTIF99/COTIF\\_1999\\_01\\_03\\_2019\\_corrected\\_31.07.2019\\_en.pdf](https://otif.org/fileadmin/new/3-Reference-Text/3A-COTIF99/COTIF_1999_01_03_2019_corrected_31.07.2019_en.pdf)

### 3.6 Carriage by water

International carriage by water is governed, among others, by the Hague/Visby rules and the UN Convention on the carriage of Goods by Sea (Hamburg rules).

#### 3.6.1 The Hague/Visby Rules

The Hague/Hague Visby are international rules that apply to the international carriage of goods by sea, which were amended by the Brussels Protocol 1968. The Hague Rules were adopted in 1924, the Hague/Visby Rules in 1968 and 1979 and the Hamburg Rules in 1978. Each international convention in turn attempted to broaden its application in order to avoid lacunae, to encompass all contracts of carriage as well as bills of lading, and to permit incorporation by reference.

The rules aim at unifying some rules relating to consignment notes. Originally, it is a convention dating from the 1920s relating primarily to consignment notes in carriage by sea. Subsequently, it was changed and became a complex body of provisions relating to international carriage by sea. It regulates consignment notes, and also other issues of international carriage, namely the liability of the carrier for damage to the carried goods.

The carrier's main duties are before and at the beginning of the voyage to exercise due diligence to make the ship seaworthy, to properly man, equip and supply the ship, etc. Furthermore, to properly and carefully load, handle, stow, carry, keep, care for, and discharge the goods carried. The carrier or the master or agent of the carrier shall, on demand of the shipper, issue to the shipper a bill of lading. Such a bill of lading shall be prima facie evidence of the receipt by the carrier of the goods. Proof to the contrary cannot be admissible when the bill of lading has been transferred to a third party acting in good faith.

The carrier's duties are not strict but require only a reasonable standard of professionalism and care. Article IV allows the carrier a wide range of situations exempting them from liability on a cargo claim. These exemptions include destruction or damage to the cargo caused by fire, perils of the sea, Act of God, and act of war. The carrier is exempted from liability for "neglect or default of the master ... in the navigation or in the management of the ship". This provision is considered unfair to the shipper, and both the later Hamburg Rules (which require contracting states to denounce the Hague-Visby Rules) and Rotterdam Rules refuse exemption for negligent navigation and management.

Also, whereas the Hague-Visby Rules require a ship to be seaworthy only "before and at the beginning" of the voyage, under the Rotterdam Rules the carrier will have to keep the ship seaworthy throughout the

voyage (although this new duty will be to a reasonable standard that is subject to the circumstances of being at sea).

By contrast, the shipper has fewer obligations (mostly implicit), namely: (i) to pay freight, (ii) to pack the goods sufficiently for the journey, (iii) to describe the goods honestly and accurately, (iv) not to ship dangerous cargoes (unless agreed by both parties), and (v) to have the goods ready for shipment as agreed, (q.v. "Notice of readiness to load". None of these shippers' obligations are enforceable under the Rules, instead they would give rise to a normal action in contract.

### 3.6.2 Hamburg rules

The above Convention was replaced by the UN Convention on the Carriage of Goods by Sea of 1978, that is, the Hamburg rules<sup>5</sup>, which is an international convention adopted within the framework of the UN. The convention builds on the previous convention but contains some additional provisions relating to the liability of the carrier for the goods. With respect to the preceding regulation, it achieves a better balance between the rights and duties of the parties to the contracts for the carriage of goods by sea.

This UN convention governs the carriage of any type of goods, including the carriage of live animals and cargo placed on board of a ship. The document is framed very widely with respect to its scope of application. It applies not only to all contracts for the carriage of goods between the ports of the signatory states but also to carriage on the basis of a consignment note issued in a signatory state.

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<sup>5</sup> [https://uncitral.un.org/en/texts/transportgoods/conventions/hamburg\\_rules](https://uncitral.un.org/en/texts/transportgoods/conventions/hamburg_rules)

## 4. EU Initiatives

The EU Commission has drafted a “Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system”<sup>6</sup> –, which proposes a number of measures to be taken for a sustainable transport in the future in line with the following objectives:

- Improving the energy efficiency performance of vehicles across all modes. Developing and deploying sustainable fuels and propulsion systems.
- Optimizing the performance of multimodal logistic chains, including by making greater use of inherently more resource-efficient modes, where other technological innovations may be insufficient (e.g. long distance freight).
- Using transport and infrastructure more efficiently through use of improved traffic management and information systems (e.g. ITS, SESAR, ERTMS, SafeSeaNet, RIS), advanced logistic and market measures.

A new initiative is the National Single Window which has emerged as a result of policy regulations such as Directive 2010/65.<sup>7</sup> The purpose of the Directive was to simplify and harmonise the administrative procedures applied to maritime transport by making the electronic transmission of information standard and by rationalizing reporting formalities. Directive 2010/65/EU was repealed by Regulation (EU) 2019/1239 on a European Maritime Single Window environment as of 15 August 2025. The new regulation establishes a framework for a technologically neutral and interoperable European Maritime Single Window environment (EMSWe) with harmonized interfaces to facilitate the electronic transmission of information in relation to reporting obligations for ships arriving at, staying in and departing from EU ports.

The National Single Window is defined as the legal and technical framework for the electronic transmission of information in relation to reporting obligations for port calls in the Union, which consists of a network of maritime National Single Windows with harmonized reporting interfaces and includes data exchanges via SafeSeaNet and other relevant systems as well as common services for user registry and access management, addressing ship identification, location codes and information on dangerous and polluting goods and on health (Article 2 Nr. 1).

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<sup>6</sup> Directive 2010/65/EU on reporting formalities for ships arriving in and/or departing from ports of the Member States and repealing Directive 2002/6/EC, COM(2011)0144.

<sup>7</sup> L 283/1, 29.10.2020.

The main obligation of Member States is to establish a maritime National Single Window through which, all information necessary for the fulfilment of reporting obligations shall be provided once, by means of and in compliance with the EMSWe data set, using the harmonized reporting interface module and the graphical user interface as set out in Article 6 and, where applicable, other reporting means as set out in Article 7, for the purpose of making this information available to the relevant authorities of the Member States to the extent necessary to allow those authorities to perform their respective functions.

Currently, the implementation of Single Windows focuses mostly on Maritime Single Windows as required by the Regulation. However, this Regulation applies solely to the reporting formalities applicable to maritime transport for ships arriving in and ships departing from ports situated in EU Member States.

## 5. Rotterdam Rules

The UN adopted on 11 December 2008 the maritime Convention on International Carriage of Goods Wholly or Partly by Sea (the Rotterdam Rules)<sup>8</sup>. This is considered as an alternative to EU initiatives, as it introduced a different system to solve the issues arising in multimodal transport.<sup>9</sup>

The basic objective of the Rotterdam Rules is to regulate international carriage of goods by sea and 'multimodal carriage when the carriage has a sea leg'. It applies to contracts in which a carrier, against the payment of freight, undertakes to carry goods from one place to another. It covers contracts for carriage by sea and also for carriage by other modes of transport in addition to the sea carriage. The Rotterdam Rules provide a legal framework that takes into account the many technological and commercial developments that have occurred in maritime transport since the adoption of those earlier conventions, including the growth of containerization, the desire for door-to-door carriage under a single contract, and the development of electronic transport documents. The Convention provides shippers and carriers with a binding and balanced universal regime to support the operation of maritime contracts of carriage that may involve other modes of transport.

The modified network liability system applicable to multimodal contracts of carriage provides a combination of the different unimodal liability systems on carriage by road, rail, air and inland waterway and the liability system of the Rotterdam Rules. The carrier's liability will vary according to where in the multimodal chain the damage, loss or event causing delay occurred. The main principle is that the mode-specific liability system will apply also under a multimodal contract of carriage. However, due to the fact that the period of responsibility of the carrier under the Rotterdam Rules is extended to include the place of receipt to the place of delivery, both the Rotterdam Rules and different unimodal liability regimes may be applicable simultaneously and lead to conflicts of conventions. Also, the unimodal conventions have an extended scope of application and are applicable to what might be seen as traditional maritime carriage.

The Rotterdam Rules adopt a mixed contract approach. It is presumed that there might be conflicts between the new convention and the existing unimodal conventions. This can be seen as a recognition of

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<sup>8</sup> United Nations Convention on International Carriage of Goods Wholly or Partly by Sea (the Rotterdam Rules) (formally adopted by UN General Assembly December 2008, annexed to General Assembly Resolution 63/122).

<sup>9</sup> On multimodal transport see M Hoeks Multimodal Transport Law: The Law Applicable to the Multimodal Contract for the Carriage of Goods (Kluwer The Netherlands 2010) at 19-22.

multimodal contracts as mixed contracts to which the unimodal legal regime of the particular mode where the damage, loss or delay is located will be applicable. Thus, the Rotterdam rules do not apply, in accordance with article 26 which mentions that:

*When loss of or damage to goods, or an event or circumstance causing a delay in their delivery, occurs during the carrier's period of responsibility but solely before their loading onto the ship or solely after their discharge from the ship, the provisions of this Convention do not prevail over those provisions of another international instrument that, at the time of such loss, damage or event or circumstance causing delay: (a) Pursuant to the provisions of such international instrument would have applied to all or any of the carrier's activities if the shipper had made a separate and direct contract with the carrier in respect of the particular stage of carriage where the loss of, or damage to goods, or an event or circumstance causing delay in their delivery occurred; (b) Specifically provide for the carrier's liability, limitation of liability, or time for suit; and (c) Cannot be departed from by contract either at all or to the detriment of the shipper under that instrument.*

The case of collision with unimodal conventions in multimodal transport is described in article 82. Article 82 deals with the relationship between the Rotterdam Rules and other international conventions regulating carriage by air, road, rail or inland waterway, as far as the relevant conventions are in force at the time the Rotterdam Rules enter into force. At first glance it seems that Article 82 is a general conflict provision and that nothing in the Rotterdam Rules affects the application of any unimodal convention regarding the liability of the carrier for loss of or damage to the goods. However, this is not the case. The general step back rule is only applicable to conflicts with the international conventions on carriage of goods by air such as the Montreal Convention (see Article 82(a)). In all other cases the step back clause is restricted to certain situations mentioned in Article 82(b)-(d).

Furthermore, pursuant to Article 82(a), the Rotterdam Rules step back from any conflict with any convention governing the carriage of goods by air 'to the extent that it may apply to any part of the contract of carriage'. So, e.g., the Montreal Convention applies to all international carriage of cargo by aircraft for reward (Article 1). In particular, Article 18(1) states that the carrier is liable for damage to cargo and delay of cargo when the event which caused the damage or delay took place 'during the carriage by air'. According to Article 18(3) this means the period during which the cargo is 'in the charge of the carrier'. Regarding combined or multimodal carriage, Article 38(1) states that '... the Convention shall, subject to paragraph 4 of Article 18, apply only to the carriage of air'. Thus, the Montreal Convention is accordingly

applicable to other modes of transport either within the airport area or, for example, as part of a door-to-door agreement, or when the carrier, by himself, substitutes the mode of transport. This means that the Montreal Convention might be applicable in situations when the air carriage includes a sea leg, a situation when the Rotterdam Rules might also apply. In such cases the Rotterdam Rules will not affect the application of 'any convention governing the carriage of goods by air' (Article 82(a)).

Regarding road carriage, however, the situation is far from predictable. The conflict between the Rotterdam Rules and the CMR is regulated by Article 82(b) which limits the situation to one where the goods '... remain loaded on a road cargo vehicle carried on board a ship'. The same wording is used in CMR Article 2, which states that the Convention is applicable to lost, damaged or delayed goods 'carried over part of the journey by sea . . . [when] . . . the goods are not unloaded from the vehicle', in other words, the same 'piggyback' situation as mentioned in the Rotterdam Rules. In this situation Article 82 provides that the CMR will prevail as far as it is applicable. So far the system seems quite predictable.

There are also problems regarding conflict of conventions regulating carriage by rail. According to Article 82(c) the Rotterdam Rules step back from conflict with the convention regulating international carriage by rail, the COTIF-CIM, as far as it applies to 'the carriage of goods by sea as a supplement to the carriage of rail'. This is the same expression as used in CIM Article 1 paragraph 4 as a precondition for applying CIM on a sea leg of a multimodal contract including a rail and a sea leg. Deciding on what is supplementary might be controversial and, in some situations, lead to unpredictability regarding the applicable legal regime.

Article 82(d), the last of the 'conflict of convention' provisions of the Rotterdam Rules, is a provision on potential conflict with any convention applicable to inland waterways which applies to carriage of goods without trans-shipment both by inland waterways and sea. The relevant convention here is the CMNI, in force from 1 April 2005. Parties to this convention are mainly from the EU. According to Article 2(2) the CMNI is applicable if the purpose of the contract is the carriage of goods, without trans-shipment, both on inland waterway and in waters to which maritime regulations apply, unless 'a maritime bill of lading has been issued in accordance with the marine law applicable' (Article 2(2)(a)) or 'the distance to be travelled in waters to which maritime regulations apply is the greater' (Article 2(2)(b)).

## **6. EU Regulation 2020/1056 on electronic freight transport information**

The eFTI Regulation provides a harmonized EU framework for business to authority electronic exchange of freight transport information.<sup>10</sup> This Regulation: (a) lays down the conditions based on which competent authorities are required to accept regulatory information when that information is made available electronically by the economic operators concerned; (b) lays down rules on the provision of services related to making regulatory information available electronically by the economic operators concerned to competent authorities.

This does not cover, however, the B2B relations between transport undertakings and the federated organization, nor the liability of the platform. Thus, the liability of the platform as intermediary of information is covered by Directive 2000/31 (E-Commerce Directive).

In our view, the eFTI regulation should be complemented by an EU legal act that would regulate the electronic exchange of freight transport information also between transport undertakings and other entities.

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<sup>10</sup> REGULATION (EU) 2020/1056 of 15 July 2020 on electronic freight transport information, L 249/33.

## 7. Use and Acceptance of digital data in current versions of conventions

Transport documents play a central role in freight transport. In particular, consignment notes, waybills, bills of lading are documents constitute the contract of carriage between senders and transporters as regards certain goods, and they accompany these goods as they move, gathering signatures and keeping a paper trail of the logistics transfer. The change from paper to electronic format for transport documents offers many advantages, as it improves efficiency, reliability and cost-effectiveness of freight transport operations. However, this is dependent on the adoption by stakeholders, which is not always the case.

In a 2018 document it was documented that, in spite of several initiatives, in the past years to digitalize transport documents in each transport mode, the large majority of freight transport operations within the EU still involve the use of paper documents.<sup>11</sup> This, however, results in unnecessary administrative burden and costs for both private (particularly SMEs) and public stakeholders, and inefficiencies in the entire transport and logistics chains.<sup>12</sup>

New versions of international conventions are making the transition to electronic environment.

According to the document, two main factors/drivers hamper the wider use of electronic transport documents:

- (1) The limited recognition of the legal equivalence of electronic transport documents by the Member States and/or their acceptance by the public authorities (and major private stakeholders such as banks and insurance companies)<sup>13</sup>.
- (2) The development of multiple and non-interoperable mode-specific and/or country-specific "models" or "standards" for IT solutions for electronic transport documents, which hinders the direct/automatic transfer of the cargo related data when the cargo changes mode of transport or a border is crossed.

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<sup>11</sup> Electronic documents for freight transport, Ref. Ares(2017)2546864 - 18/05/2017.

<sup>12</sup> Digital Single Market Strategy, 2015, pp. 82-84.

<sup>13</sup> The limited acceptance of the electronic transport documents by banks and insurance companies has been indicated by some of the stakeholders surveyed in the context of the [Digital Transport and Logistics Forum](#). However, whether this constitutes a major barrier to the wider use of the electronic format for transport documents needs to be established during the process of impact assessment.

## **7.1 The case of e-CMR**

As was described in Chapter 3.2, e-CMR an additional protocol to the CMR-convention was signed, which provides for the use of an updated electronic consignment note – eCMR.

The e-consignment note is presumed valid, under article 3, if it is authenticated by the parties to the contract of carriage by means of a reliable electronic signature. The requirements are that the electronic signature: (a) is uniquely linked to the signatory, (b) is capable of identifying the signatory, (c) is created using means that the signatory can maintain under his sole control, and (d) is linked to the data to which it relates in such a manner that any subsequent change of the data is detectable.

## **7.2 Electronic Bill of Lading**

The Hague-Visby Rules – standards for international carriage of goods by sea last updated in 1979 doesn't have clear instruction regarding whether an electronic document yields the same legal power as the paper document. The Hamburg and the Rotterdam rules appeared later to create a more modern framework. But while the former didn't add any clarity, the latter has not come into effect at all lacking the needed number of ratifying countries. This means that for now, the outdated Hague-Visby rules dominate the market.

The solutions offered today are not an electronic bill of lading, at least they're not recognized as such by the law. These solutions are multilateral agreements in which all members adhere to a set of rules, basically treating the electronic bills as legal documents and agreeing to not challenge their validity. Compared to EDI, these solutions, at last, provide the possibility of fully paperless trade.

In the current electronic Bill of Lading implementations, the term "fully paperless trade" is used.

Roughly, it means that the system should comply with the following conditions:

- Document creation should be completely electronic.
- Approval of the documents should happen via digital channels.
- Communication with banks should be completely electronic as well.
- The process of transmitting documents through the end-to-end supply chain should happen digitally.

### 7.3 Other international Conventions

The Uniform Rules Concerning the Contract of International Carriage of Goods by Rail (CIM) which are attached as Appendix B to the COTIF also provide for the electronic consignment note. More particularly, Article 6 § 9 states that:

The consignment note and its duplicate may be established in the form of electronic data registration which can be transformed into legible written symbols. The procedure used for the registration and treatment of data must be equivalent from the functional point of view, particularly so far as concerns the evidential value of the consignment note represented by those data.

Although this provision is not elaborated as is the case with the e-CMR, but still, it forms the basis for the electronic transmission of the consignment note.

The Budapest convention, also, provides in article 11 (2) for the making of the transport document by any other mechanical or electronic means, if this is not prohibited by the law of the State where the transport document was issued.

The Montreal Convention (MC99) which entered into force in 2003 permits the use of electronic air waybills (e-AWBs) and other documents of carriage, without affecting the carrier's liability limits defined in the Convention. Therefore, MC99 is considered a pre-requisite for paperless air cargo initiatives such as e-freight.

According to the Impact assessment study of the eFTI Regulation:

The international conventions relevant for this analysis are primarily those governing the regime applicable to the international contracts of carriage in the different transport modes. These conventions establish, separately for each transport mode, the legal equivalence of the electronic contract of carriage to that of the paper-based document.

These conventions enable the use of the electronic contract of carriage but, except for the protocol to the CMR convention, the application of their provisions on electronic documents is conditional on the existence of specific national rules. In practice, they apply only if the national legislation of the State under which the contract was concluded allows the use of the electronic means for the conclusion or evidence of a transport contract. The e-CMR protocol, regulating the electronic road consignment note, does not

include such clause and it is directly applicable if the respective State is a party to the protocol. Participation in the e-CMR protocol is however relatively modest, though growing.

Acceptance by national courts of the electronic means for business-to-administration regulatory information conveyance, and of transport contracts in particular, depends on specific provisions in national legislation on the type of evidence admissible in legal proceedings in courts. In most Member States the contract of carriage does not need to be in paper to be enforced by national courts; and while in some States even oral contracts of carriage would be enforceable, in several of them the national legislation establishes specific conditions for the probative value of contracts concluded electronically. At the same time, acceptance of a document as admissible evidence in courts of law is generally not regulated in detail in most Member States. As a result, most Member States' national courts have discretion on whether to accept or not electronic transport documents as evidence of a contract of carriage.

Similarly, all mode-specific international conventions link the validity (i.e. legal equivalence to the paper format) of the electronically supported contract of carriage to the fulfilment of certain general requirements. Yet these requirements vary significantly between the different conventions. They range from single reference to the manner in which the necessary signatures are performed – “stamped, in symbols or made by any other mechanical or electronic means” (Article 6, CMNI) or just “stamped” (Article 11, Montreal Convention) – to more general reference to the information representation – “electronic data registration which can be transformed in legible written forms” (Article 6, CIM) – to a larger set of more specific requirements such as how the consignment note shall be authenticated, its integrity ensured, and how to deal with additional cargo and transport documents supplementing the note (Articles 3 to 6, e-CMR Protocol). However, none of the conventions provide further guidance on specific options for the technical implementation of these requirements. This is left for the interpretation of the parties concerned resulting in a variety of implementation approaches and specific/non-interoperable technical solutions for electronic transport contracts, mostly along sectoral lines, both by the private sector and the authorities.

## **8. Identified gaps between current conventions and the use of digital platforms for the submission and use of transport documents**

International transport conventions are not adopting a unanimous approach as far as the use of the electronic form in transport is concerned. This certainly creates hurdles in the functioning of the FENIX platform, which essentially transmits electronic information between parties in a carriage contract.

The FENIX platform on the other hand must satisfy the requirements of the e-consignment in the e-CMR, which means that the platform should transmit e-consignment notes that must contain the same information as the consignment note in paper form.

In order to be consistent with the requirements in an electronic environment, the platform must require that providers comply with the Contractual agreement between party and the Federation that will be available in the platform.

It should be also noted that amendments on transport Conventions should take place on international and not just EU level.

Certainly, the implementation of the National Window scheme advocated by Directive 2010/65/EU by EU Member States will facilitate the use of IT in international transport.

## 9. Conclusion

The above legal instruments regulate the liability of the carrier in the event of damage, loss or delay, and not the liability of an integrated platform for multimodal transport, as this issue had not emerged until the recent initiatives.

Therefore, the issue of liability of an integrated platform for multimodal transport will be dealt with by the e-commerce directive which regulates the liability of intermediary service providers (this item will be further analyzed within Deliverable D6.4.3 on Liability and Responsibility) and partly also by the international conventions regulating Transport.

In particular, the CMR Convention provides in article 7 for the liability of the sender in case of inaccuracy or inadequacy of the information included in the consignment note, and this rule can be applied regarding the liability of the platform. The liability of digital signature certification providers is regulated in the eIDAS Regulation<sup>14</sup>, which applies as well in cases where the authentication of the electronic consignment note has failed.

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<sup>14</sup> Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC

## 10. Annex I - Applied regulatory framework for multimodal transport in the different pilot sites of FENIX

The table below includes information about the applied regulatory framework for multimodal transport in the pilot sites.

The goal is to also include information regarding any national legislation with regards to the use of electronic means for transport documents.

Pilot case Name	Involved EU members states / non-EU countries	Modes of transport included	Applicable international conventions for transport	The national legislation of the State under which a transport contract is concluded allows the use of the electronic means for the conclusion or evidence of a transport contract
PS SK				
PS AT				
PS BE (1)				
PS BE (2)				
PS FR				
PS DE				
PS EL	GR	Rail, Truck, Maritime (port related activities)	Visby Hague rules, COTIF, CMR	No specific national legislation exists. e-CMR has not been ratified in Greece.

PS IT (1)				
PS IT (2)				
PS NL				
PS ES				