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**Economic Commission for Europe**

Inland Transport Committee

**Group of Experts on Operationalization of eCMR**

**Sixth session**

Geneva, 5–7 July 2023

Item 3(c) of the provisional agenda

**Good practices from other digitalization initiatives**

**Summary of presentations**

**Note by the secretariat**

This document summarizes the presentations that were given from the first to fifth sessions of GE.22. All of the presentations may be found on the UNECE website.<sup>1</sup>

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<sup>1</sup> [https://unece.org/info/events/unece-meetings-and-events?f%5B0%5D=area%3A219&f%5B1%5D=program%3A196&end\\_date=2023-06-21&sort\\_bef\\_combine=field\\_event\\_date\\_range\\_DESC](https://unece.org/info/events/unece-meetings-and-events?f%5B0%5D=area%3A219&f%5B1%5D=program%3A196&end_date=2023-06-21&sort_bef_combine=field_event_date_range_DESC)

## Session One

### **Hellenic Federation of Road Transport (OFAE): National Pilot Project Greece**

1. This pilot in Greece took place within the framework of AEOLIX project between 2017 and 2019. The latter also included Romania, Serbia, Germany, Czech Republic and IRU.
2. The methodology involved the use of questionnaires to stakeholders, training on site and/or remotely, and live tests. The quantitative findings were a 83% reduction in average time spent during the issuance of a consignment note, a 89% reduction in average time spent during the consignment note signature process, a 87% reduction in average time spent overall during administrative work/document handling, and a 95% reduction in average driver's waiting time. Qualitative findings included improved traceability during transport operations, real time exchange of information, increased level of services and customer satisfaction, user friendly platform, faster invoicing/improved cash flow and access to real time information.
3. Main challenges included lack of legal framework, geographical expansion for international transport, application interoperability, enforcement in the EU, data ownership/protection and network availability.
4. Project conclusions were that all participants in the national pilot were satisfied and claimed readiness to adopt digital consignment notes. Acceleration of legal procedures is needed.

### **Slovenia: eCMR pilot project**

5. This pilot was comprised of two projects: a national pilot project that took place in March 2019 between Slovenia and Zagreb in Croatia which involved only the Customs administration in Croatia, and an international pilot project in November 2020 between Slovenia and Türkiye. The latter involved the Customs Authorities of Slovenia and included the Turkish Union of Chambers and Commodity. Technical support was provided by Slovenia Logistics Association which is the creator of the Transbook platform where eCMR documents in PDF files may be created using the UNECE standard data model and are compliant with eIDAS, EU regulation for electronic identification. Transbook also provides B2A support and stores electronic documents in cloud. There is on demand accessibility for controlling authorities.
6. Conclusions included the need for common access in case a B2A approach is adopted, and therefore the introduction or existence of legislation/regulation for B2A usage. Further, the architectural solution for B2A must be interoperable with other solutions (eg eFTI environment). It was also noted that within the EU, countries are regulated by eFTI regulation and therefore a close cooperation between the EU and the UNECE was recommended.

### **Uzbekistan: role of CMR for customs authorities of Uzbekistan**

7. This presentation provided background on and the legal basis for the use of CMR for customs within the Central Asian region. Reference was made to article 18b of Uzbekistan's Customs code. Customs authorities use consignment notes in the following three ways:
8. As a document giving general information on the consignor, carrier, consignee, weight, value, code and name of the goods, vehicle, and other information required for customs clearance;
9. As a document identifying the consignment; and
10. As a document showing the customs clearance of other countries.
11. The case was made for the necessity for digitalization so that customs authorities can obtain a provisional electronic document, conduct risk analysis, prevent fraud, reducing

human factors, advance traffic flow management, preserve ecology and increase transparency.

### **ERTICO-ITS Europe: A European Federated Network of Information Exchange in Future Logistics (FENIX)**

12. This presentation provided information on the AEOLIX pilot as well as the European Federated Network of Information Exchange in Future Logistics (FENIX) which was the successful outcome of the AEOLIX pilot.

13. The high level architectural view of AEOLIX involved a platform/connectivity engine, toolkit and dashboard. The connectivity engine was responsible for providing the connectivity and interoperability services and supporting data exchanges between organizations and services. These included (1) connecting the end-user with its many business partners and systems in their networks (2) allowing for interoperability and governance services, information exchange and partner/system interactions and data sharing management rules. Examples of services offered in the AEOLIX toolkit were e-CMR, routing, planning services for road and intermodal service, ETA service, CO2 monitoring, dangerous goods transport management and more. The services could be used via the AEOLIX connectivity engine by applications, services and sensors. The AEOLIX dashboard was the portal to the AEOLIX platform which manages and enables access to end to end logistics visibility by sharing data of the logistics partners.

14. The eCMR service which is being offered as part of the FENIX network enables a driver to present a digital CMR which may be signed on glass/as per today on paper or three new ways: by QR code, behind desk (driver completes delivery details, driver waits in truck, customs signs from own PC after inspection), and by absence (customer pre-approves sign by absence method, delivery photos and geotags are binding proof of delivery).

15. The objective of FENIX is to enable B2A (Business to Administration) and B2B (Business to Business) data exchange and sharing by transport and logistics operators. Its design principles and governance are three fold: decentralization, an ecosystem of data and services, and trustworthiness and data sovereignty. Details were provided on these aspects.

16. The decentralized approach is not a single, central system that mandates one way of operating for everything. Instead it is a framework. It is a networked collection of platforms that join together and understand each other, based on common rules. The FENIX architecture does not rely on a centralized platform or software approach, all trusted and certified platforms that are part of the federation are considered nodes of the network and always retain their internal control.

17. An ecosystem of data and services refers to the composition of platforms, data assets and services available for secured consumption or sharing via the federated network. The ecosystem enables data sharing between individual platforms created by means of common protocols for supporting data sharing services (platforms interoperability). Stakeholders can communicate with their platform provider of choice, who are held to relevant trust, security and performance standards by the authorities and FENIX specifications and coordinate with the rest of the network.

18. Trust is essential for digital services, and logistics actors will not embrace digital services if their data is not protected. FENIX provides guidelines to ensure trustworthiness between the federated platforms and to support data sovereignty. Data sovereignty meaning maintaining authority and control of data within jurisdictional boundaries. Together with other security aspects, such as secure communication between nodes of the network, data sovereignty is essential for data security. FENIX federates platforms, it does not grant access to each platform.

19. The steps involved include (1) becoming a member of the FENIX federation (2) getting available resources from other FENIX members (3) requesting access to make use of available resources (4) being authorized to make use of a resource and (5) sending/receiving data through the FENIX connector.

## **European Commission: the EU Regulation 2020/1056 on electronic freight transport information (eFTI)**

20. This presentation covered the key elements and potential implementation architecture of the eFTI regulation which entered into force in August 2020 and is to be fully applied by EU member States from August 2025 onwards.

21. The scope of the eFTI regulation is freight transport in the EU hinterland (rail, road, inland waterways, aviation). All competent authorities in all EU member States are obliged to accept information electronically and to use the same requirements/technical specifications for acceptance. Economic operators have the option to present information electronically or to use paper. If the former, then there is an obligation to use certified eFTI platforms or service providers. There are common requirements for service providers and platforms and a one stop shop certification that is valid EU wide for relevant third parties.

22. Under articles 5 and 7, authorities are to accept cargo transport information that is made available electronically by operators in accordance with certain defined requirements, apply harmonized rules for access to, and verification of, the information made available electronically by operators, and use a common data set and subsets, corresponding to the information requirements in the respective EU and member State legislation, for the electronic processing of information.

23. Under article 4, if choosing to present information electronically, operators are to make information available to the authorities by means of certified eFTI platforms in machine-readable format via a unique identification link and if requested, in human-readable format.

24. Under article 9, to be certified, eFTI platforms need to comply with certain functional requirements to ensure, among others, data authenticity, integrity and cybersecurity. Under article 10, service providers interested in operating an eFTI platform and in offering operators information processing services, including access to authorities, will also need to comply with a number of set requirements and receive certification.

25. Under articles 11 and 12, the certification of eFTI platforms and service providers are to be performed by independent bodies accredited by competent bodies in the EU member states on the basis of the requirements set out in the regulation and subsequent implementation specifications.

26. There are a number of potential implementation scenarios. The first is a fully decentralized architecture where the potentially thousands of economic operators and eFTI service providers interact directly with the competent authorities of every EU member State through access points. A second scenario anticipates that the interactions between economic operators and eFTI service providers and competent authorities would occur through one national authority access point per EU member State. A third scenarios anticipates that the interactions between economic operators and eFTI service providers and competent authorities would occur through one national authority access point per EU member State, and further, that interactions across EU member States would be restricted to one national authority interacting with another national authority.

27. eFTI architectural principles include data being shared at source; data sovereignty; decentralized approach, common rules of interaction; trust, non-repudiation by default; security, appropriate authentication; access and rights; once-only; open specifications and standards, interoperability; technology independence; easy deployment, integration and transition; and support a transition period.

### **Session Three**

#### **FIATA: Implementing the electronic multimodal FIATA bill of lading**

28. This presentation introduced the International Federation of Freight-Forwarders Associations (FIATA) and its standard trade documents. The latest being the negotiable

FIATA multimodal transport bill of lading (eFBL) which was officially launched in May 2022. The eFBL data standard is based on UN/CEFACT semantic to ensure the data exchanged can be understood in the same way by all actors of the supply chain.

29. The process to issue and validate eFBLs is as follows: a user sends eFBL data which is used to produce and register an eFBL. At this point, a link is made with a FIATA identity provider, and the FBL is saved. After this, the user may print, send and send the FBL data to the receiver which may be printed by both user and receiver. The receiver may also check the validity of the eFBL through the FIATA website and APIs.

30. To ensure trust and security, all documents are registered on an immutable ledger and all stakeholders can verify documents at anytime by scanning the QR code or uploading the document on FIATA's verification page, giving them access to the document audit trail.

## **Session Four**

### **FIATA: Differences in the uses of CMRs between regions**

31. This presentation elaborated on the differences in the uses of CMRs between regions.

32. In western Europe, the CMR is mainly used as a proof of delivery only. Therefore it often contains minimal and basic information. Drivers tend to carry a number of pre-stamped CMRs which are completed by hand. They are often illegible.

33. CMRs which are completed by shippers may or may not be generated by computer and these are then stamped by drivers. Often these have more information and are clearer/legible. Others are prepared by the freight forwarder or shipper and emailed to the load site for completion. It was noted that drivers do not always carry stamps.

34. In FSU countries, the CMR becomes not just proof of delivery but is used by Customs authorities as a more complete document. The information shown needs to include commodity tariff numbers, with weight broken down by tariff numbers, details of the final customs terminal etc. The CMR may also be checked and stamped on route. They are unlikely to be completed by the drivers manually as they would not usually have all the information required. The CMR is often prepared either by the freight forwarder or the driver's office on instructions by the forwarder.

### **Turkiye: e-permit project**

35. This presentation provided an overview of Turkiye's e-permit which was launched in October 2022 and undertaken in collaboration with Azerbaijan and Uzbekistan. It is part of Turkiye's U-Net transport automation system where stakeholders are registered and connected, and online applications and transactions may be made safely, cost-effectively, simply and efficiently.

36. The e-permit system is a decentralized structure based on a bilateral system (Turkiye-Uzbekistan, Turkiye-Azerbaijan, Azerbaijan-Uzbekistan) of exchanging serial numbers/data electronically.

37. Under part one (internal application procedure), an application for an e-permit is made through Turkiye's e-Government gateway (e-Devlet) from headquarters or offices rather than at border gates. Data is entered, and the document automatically checked from the Customs database. After an e-permit is created, data/e-permit is sent to the other side online, and drivers can also get an online version of the permits on their mobile phones or tablets with serial numbers/barcodes. Countries may decide on their domestic permit distribution system however the data of the permits should be available online, and there should be integration between transport and Customs authorities for controls/inspections.

38. Under part two (integration of systems), there is web based integration (security through public/private keys) and open source services are available. The quota/number of e-permits (serial numbers) is defined by the other country. When the company applies for an

e-permit based on the serial number/quota, the e-permit will be created and data sent to the other country online in real time integration. There are two options: the first is for a permit that is valid for a round trip, and the second is for multi-entries.

39. Under part three (inspection), when a truck arrives, the e-permit and its plate number are checked and the validity of the permit is confirmed based on the serial number/bar code. Following confirmation, entry of the truck is completed and it continues its journey. The same e-permit can be used for exit from the country.

### **Ukraine: e-TTN pilot project**

40. This presentation provided an overview of the development of Ukraine's e-TTN which is an information system for the registration and accounting of road transport related data. E-TTN is estimated to lead to 740.9 million UAH in annual savings for businesses with up to a 90% time reduction for document delivery and saving 5,745 trees.

41. Presently, the e-TTN pilot is limited to the transportation of spirits and alcohol, and the components of the e-TTN system include the State Tax Service Register, CDB (central database?) and the Inspectors of the State Service of Ukraine for Transport Safety. Transport providers and transport participants (ie consignor, carrier and consignee) as well as the representative of the controlling body at the excise warehouse are the other relevant stakeholders.

42. The e-TTN lifecycle includes the creation and signing of an e-TTN, e-TTN registration at the point of planning, e-TTN supplementation and signing, e-TTN updating at the point of pick up, e-TTN addition and signature, e-TTN updating at the point of arrival, and finally e-TTN addition and signature (which is optional) also at the point of arrival. This lifecycle can also be modified to include a phase of intermediate storage.

43. In terms of roles of e-TTN participants, the main stakeholders (ie customer, consignor, carrier and consignee) are constantly participating with the right to sign documents while additional stakeholders (ie freight forwarder and intermediate storage) have the ability to participate in transportation with the right to sign documents. In addition, other stakeholders such as third parties have the ability to participate in transportation with the right to view documents.

44. The introduction of the e-TTN simplifies the process of document workflow on the one hand, while restricting the changes made to a signed document on the other hand. For this purpose, adjustment acts amending a e-TTN are provided for. These include the act of refusal to load, adjustment, reloading, resealing, storage delivery and pick up, consignee change, cargo disagreement and force completion/stop.

## **Session Five**

### **CITES: Electronic permits/certificates**

45. This presentation provided information on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the electronic permit system being implemented. CITES regulates international trade in specimens of species of wild fauna and flora listed in its Appendices on the basis of a system of permits and certificates which are issued only when certain conditions are met, and which must be presented when leaving and entering a country.

46. There are four stages in a phased implementation of electronic permits. At the first electronic permit stage, permits are requested and issued, CITES trade data is managed and stored, and there is inspection/risk assessment and payments for the permits. At the second electronic control stage, there is permit information exchange with Customs, and risk management and validation at export. At the third electronic report stage, national permit data is automatically submitted from countries to the CITES secretariat. At the final

electronic exchange stage, the electronic permit information exchange (EPIX) generates statistics and CITES reports, and there is cross border traceability of CITES permits.

47. As at April 2023, fourteen contracting parties have some form of eCITES, and there are more than forty countries planning to implement eCITES. The CITES Secretariat has issued an Implementation Framework (General guidance for project implementation), Guidelines and Specifications for EPIX of CITES permits and certificates, and API checklist. The CITES Secretariat has also collaborated with UNCTAD to develop an ASYCUDA eCITES solution which is optional for contracting parties which are also free to develop their own epermit solutions.

### **OTIF: Digital consignment note under the CIM UR**

48. This presentation introduced the Intergovernmental Organization for International Carriage by Rail (OTIF) and provided an overview of the Convention concerning International Carriage by Rail (COTIF) and the Uniform Rules concerning COTIF (CIM UR).

49. There are similarities between the CIM UR and CMR. For example, in the contract of carriage under the CIM UR, the carrier shall undertake to carry the goods for reward to the place of destination and deliver them there to the consignee and the contract of carriage must be confirmed by a consignment note. The absence, irregularity or loss of the consignment note does not affect the existence or validity of the contract. The CIM consignment note has only evidential value and does not affect the existence of the contract, and is prima facie evidence of the conclusion and conditions of the contract of carriage and the taking over of the goods by the carrier. It is slightly different from the CMR in that the CIM consignment note is obligatory for customs purposes where the carriage takes place in the EU or the territory on which the common transit procedure is applied.

50. The CIM UR expressly provides a legal basis for the electronic consignment note based on the principle of functional equivalence, but no detailed requirements are stipulated. The question therefore arises as to whether they are sufficient and effectual to ensure uniform interpretation and application in all OTIF member States.

51. With this in mind, the OTIF Secretariat initiated a survey concerning electronic railway transport documents. The survey revealed a very uneven situation on the use of electronic transport documents in national and international rail transport. In general, it was observed that in most member States, there was a strong trend towards the transition from paper to electronic documents only, or in parallel with paper documents in national rail transport. In international rail transport, paper transport documents were used exclusively in a number of member States, with large differences in the parallel use of paper and electronic transport documents among the responding member States. However, the exclusive use of electronic transport documents was negligible in international rail transport.

52. Following this, the OTIF Secretariat prepared an inception paper to provide the necessary background information and analysis to assess the suitability of the regulation of the international contract of carriage of goods under the CIM UR for paperless transport. A meeting was also organized for 19 April 2023 to discuss the matter.