The eCMR as verifiable credential

40th UN/CEFACT Forum Geneva + Online
The Future of Digital Standards for Sustainable Supply Chains
12 May 2023
Rudy.Hemeleers@51biz.lu
Agenda

1. Focus on the road consignment note within global multimodal supply chains
2. Towards an Internet of Logistics
3. Decentralized FEDeRATED architecture and verifiable credentials
4. EU-Gate LL17 and Duets
5. OneAPP for Authorities
6. Going forward
The importance of a consignment note

- Agreement between the sender and the transport service provider
- Record receipt of goods by carrier, proof of delivery
- Basis for invoicing
- Demonstrate compliance of transport to national and EU regulations (eFTI: 2025H2)
- Supporting document Customs & other border control regulations
- Demonstrate intra-community deliveries (VAT)

### Exemplaire pour l'expéditeur • Exemplaar voor abander • Exemplar für Absender

<table>
<thead>
<tr>
<th>LETTRE DE VOITURE • VRACHTBRIEF • FRACHTBRIEF</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exécutée en commissionnaire (nom, adresse, etc.) • Aender of commissionaar (naam, adres, etc.) • Absender oder Spediteur (Name, Anschrift, Staat)</td>
<td>Pionira Consignor Gerard Meciersstraan 85 Lommel 3920 BE</td>
</tr>
<tr>
<td>Destinataire (nom, adresse, etc.) • Bestemmingsbestemmer (naam, adres, etc.) • Ziehend (Name, Anschrift, Staat)</td>
<td>Pionira Recipient Kappelstraat 154 BE-8020 Oostkamp</td>
</tr>
<tr>
<td>Expédié par le transporteur (nom, adresse, etc.) • Verzonden door de vervoerder (naam, adres, etc.) • Versand übersendet durch (Name, Anschrift, Staat)</td>
<td>Pionira Main carrier Transporteurstraat 14 BE-8000 Brugge V865</td>
</tr>
<tr>
<td>Livraison (lieu, date, etc.) • Levering (plaats, datum, etc.) • Lieferung (Ort, Datum, Uhrzeit)</td>
<td>Lieferservice L80-154 Lommel 3920 BE-8020 Oostkamp</td>
</tr>
<tr>
<td>Livraison (lieu, date, etc.) • Levering (plaats, datum, etc.) • Lieferung (Ort, Datum, Uhrzeit)</td>
<td>Pionira Treatment operator Slagstraat 45 BE-1000 Brussel</td>
</tr>
<tr>
<td>• Frais de transport • Transportgebonden kosten • Transportgebärbare Kosten</td>
<td>30/09/2022 13:03 13:03</td>
</tr>
</tbody>
</table>
Business Opportunity

€ 13,11

Paper CMR
€ 22,83
- € 8,95
- € 11,56
- € 2,32

e-CMR
€ 9,72
- € 2,51
- € 6,04
- € 1,16

Belgian e-CMR Survey (2019)
link to analysis of survey
Data is shared at the source

- EU Harmonized regulation and data sharing infrastructure
- Logistics service providers, shippers and public administrations share transport information in a trusted secure environment
- Seamless integration within multimodal supply chains
Towards an internet of logistics

- Shipper Forwarder
- Road
- Port of Loading
- Inland Water Transport
- Port of Unloading/Loading
- Maritime Transport
- Road
- Destination

- ERP TMS
- e-CMR
- PCS
- e-CMNI, eBL EuRIS
- PCS
- eBL
- e-CMR
- ERP

Data sharing infrastructure

- Harmonized authorisation
- Common data definitions
- Real-time access at source
- No duplication of data

- Single connection
- Single authentication

- eTSS Site (Government Access Point)
- Infrastructure managers
- (Border control, customs)
- Security and safety
- Road control
- Environment
- VAT control

- e-Sells
- IoT
- Smart
- BlockChain
- Third-party applications
- Track & Trace, ETA
- Synchronize invoice

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Digital twins share events

Shipper, Forwarder
- Shipment
- Request Quote
- Booking
- Shipping Instructions
- Loading List

Carrier
- Itinerary
- Quote
- Booking Confirmation
- Goods Receipt
- DEP / ETA
- Proof of Delivery
- Invoice

Data

Lifecycle
Two EU priorities

1. Harmonize regulation
   - EU 2020/1056 eFTI Regulation

2. Harmonize data integration
   - EU Federated Network of Platforms

These 2 EU priorities have been defined by the EU Digital Transport and Logistics Forum, a group of about 120 digital experts advising the European Commission on its strategy towards a digital and green Europe.
EU-Gate OneAPP/API for Authorities

- FEDeRATED Living Lab 17
- Create common understanding
- Real-world multi-modal reference supply chains
- Data is access at the source
- Linked data, Unique ID
- Information model provides interoperability
- Grow with eFTI and FEDeRATED
- Sandbox EU Reference architecture
Towards an EU FEDeRATED platform
Participants agree on
1. Interoperable semantics
2. API Endpoints, Service Registry
3. Trust, IAM, VC within a decentralised architecture
4. Index and search mechanism
LL17 reference use cases

Roses for Valentine

Beer and Wine to Barcelona

Multimodal transport of Waste
Duets

Context data model

Logistics Object – business information entities, derived from the UN/CEFACT data types, that have unique decentralized identifiers (DID) compliant with W3C spec.

Event driven interoperability

Simple and holistic event model

Booking

Loading

Authority

Transfer Transshipment

Delivery

- Request for transport service
- Offer for transport service
- Response to the offer
- Consignment note first sign
- Consignment note second sign

- Ready for loading
- Loading started
- Doors closed
- Proof of receiving
- Departure from the yard

- Import clearance
- Doors opened
- Goods delivered
- Proof of delivery
- Departure from the yard

eFTI Compliant Architecture

Network of Logistics

B2B

National eFTI Gate (AP)

API

eFTI platform

Semantic Interfaces

Access Point (Node)

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In summary

1. Data is shared at the source
2. Use the same data, process and architecture for commercial, transport and border compliance.
3. API and Interoperable semantics
4. Decentralised architecture, verifiable credentials
INVITATION TO JOIN US
EU DATA LOGISTICS FESTIVAL - BRUSSELS - 30 NOVEMBER 2023

LET'S MEET AT THE FEDeRATED FINAL EVENT
Stanhope hotel, 9 rue du Commerce, 1000 Brussels
09.00 hrs - 18.00 hrs

The FEDeRATED project is co-financed by the European Commission Connecting Europe Facility (CEF)

30 November 2023

Register here