UNECE
United Nations Economic for Europe

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6th Western Balkan Workshop on Trade Facilitation, Single Window and Data Sharing

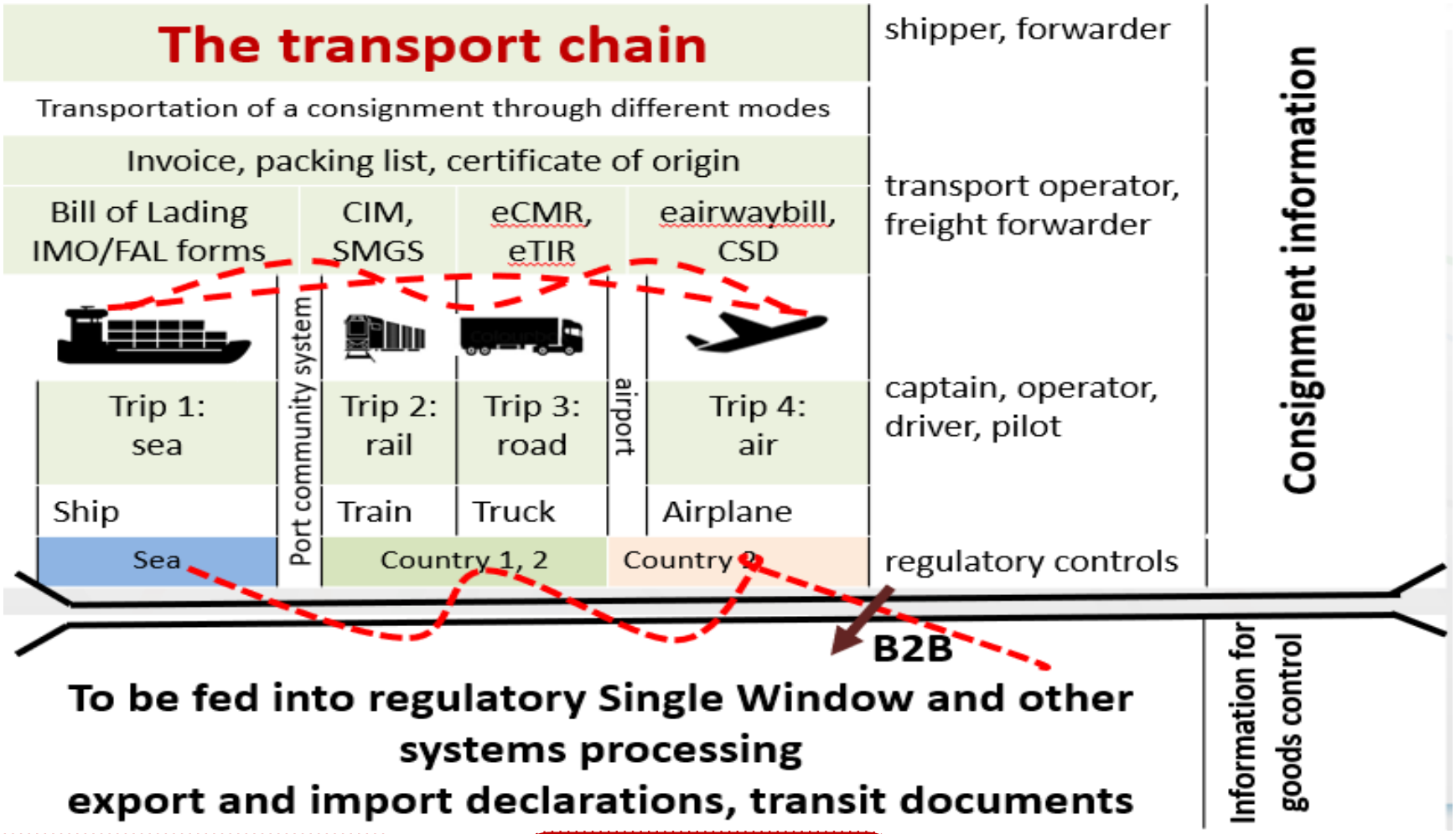
TRADE FACILITATION AND DIGITALIZATION OF MULTIMODAL DATA AND DOCUMENT EXCHANGE USING UN STANDARDS IN ELECTRONIC CORRIDORS

Our goal - link developers of the international (UN) standards for multimodal data and document exchange in the supply chain with practitioners implementing digitalization in the regions

Mario Apostolov, Regional Advisor
Economic Cooperation and Trade Division, UNECE

Problem: fragmentation of digitalization efforts in the international supply chain

Solution: Seamless multimodal supply chain based on UN standards



Upgrading existing and developing data exchange standards for key documents accompanying cargo in different modes of transport

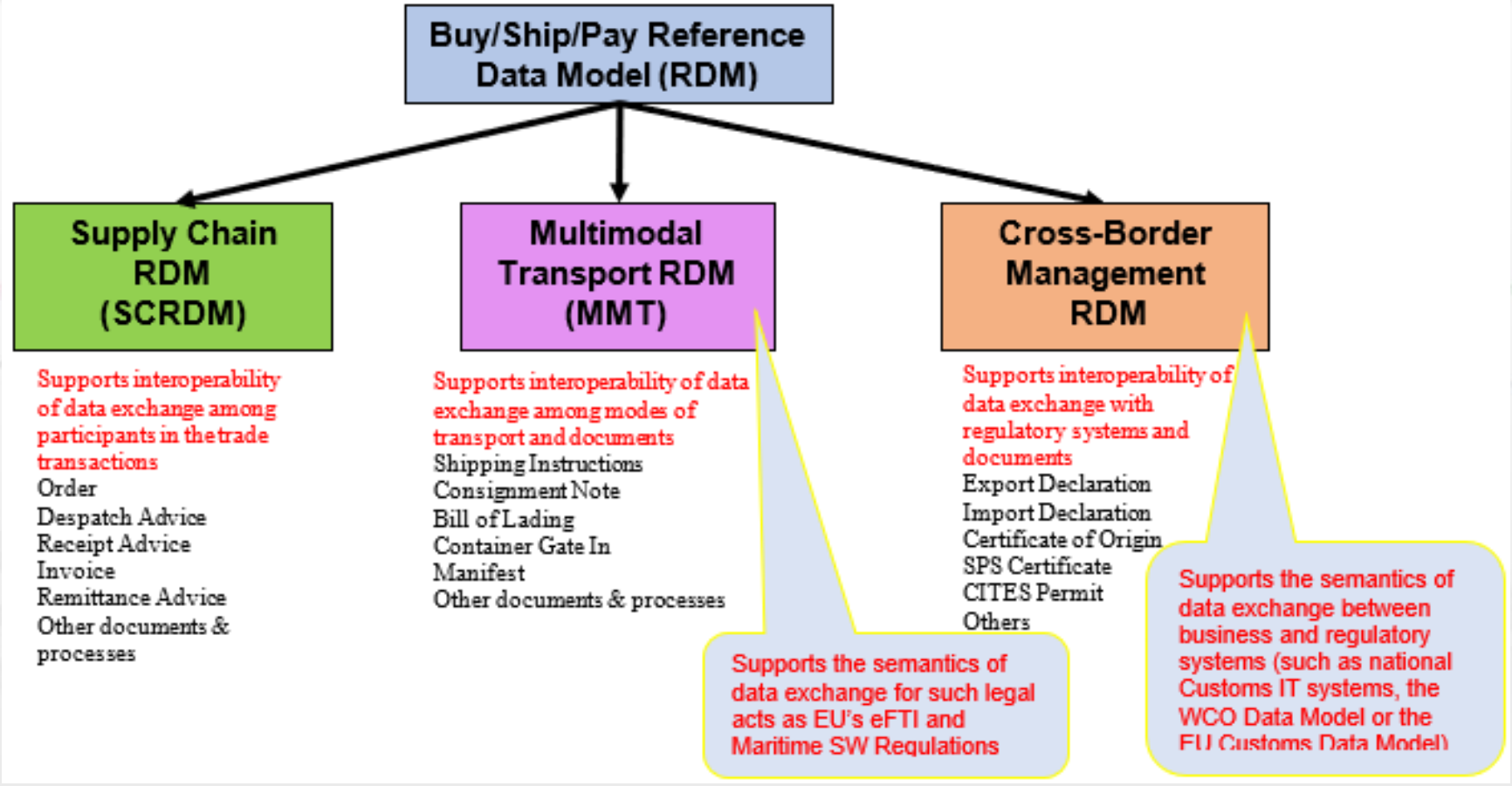
Based on UN/CEFACT Multimodal Transport Reference Data Model

Pilot applications: e.g. in a digital multimodal transport corridor or documents (FIATA B/L, air cargo, IWT)

Ready standards or standards under preparation	Key documents accompanying goods (B2B)
1. Standardized data exchanges (executive guide; business requirement specification; business name structure; subset; CCL structure; XLS guideline structure; XSD schema; UML diagram; HTML index, using as a model the e-CMR standard) www.unece.org/uncefact/mainstandards.html, already prepared for the following documents: • eCMR • Cross Industry Invoice • Cross Industry Delivery • Cross Industry Catalogue • Cross Industry Quotation • Cross Industry Remittance Advice • Cross Industry Scheduling • Cross Industry Ordering Process • Material Safety Data Sheet Details (MSDS) • Contract Financial Execution Management • Market Research Information • Verified Gross Mass (VERMAS) documents • International Forwarding and Transfer documents • Smart container information • A number of agricultural certificates, accounting and other documents These standards you can find at www.unece.org/trade/uncefact/mainstandards.html	**3. Standardized data exchanges to support cross-modal cargo transfers** • Inland water transport contract document: IWT "Bill of Lading"; CMNI consignment note; etc. • Maritime waybill. • CIM/SMGS and SMGS Consignment Note; • CIM/SMGS Wagon List (+ Commercial Act, etc.) • eCERT (sanitary-phytosanitary certificates and basis for other certificates): aligned to the Buy-Ship-Pay Reference Data Model
2. Standardized data exchanges published in October 2020, making information already in the MMT-RDM more easily discoverable • Provisional booking • Firm booking • Booking confirmation • Shipping instructions • Waybill • Status report • Status request • Packing list • RASFF (Rapid Alert for Security of Food and Feed) (published at www.unttc.org and www.unece.org/trade/uncefact/mainstandards.html)	**4. Air cargo and dangerous goods documents:** • airwaybill, • dangerous goods declaration, & • consignment security declaration FIATA multimodal Bill of Lading +

Common foundation for all multimodal data & e-docs based on UN/CEFACT standards & reference data models – Stakeholder agencies retain control over their documents and legal frameworks. **EU's eFTI Regulation uses MMT RDM**

Standards and family of reference data models for interoperability in the supply chain



In the digitalization of transport information:

- Multimodal solutions are better than modal ones,
- Global solutions are better than local ones.

We do not replace existing standards, like the IATA eAirwaybill.
Data mapping to MMT RDM provides interoperability

Single Window building algorithm in 5 stages (data exchange) – embed SW interoperability

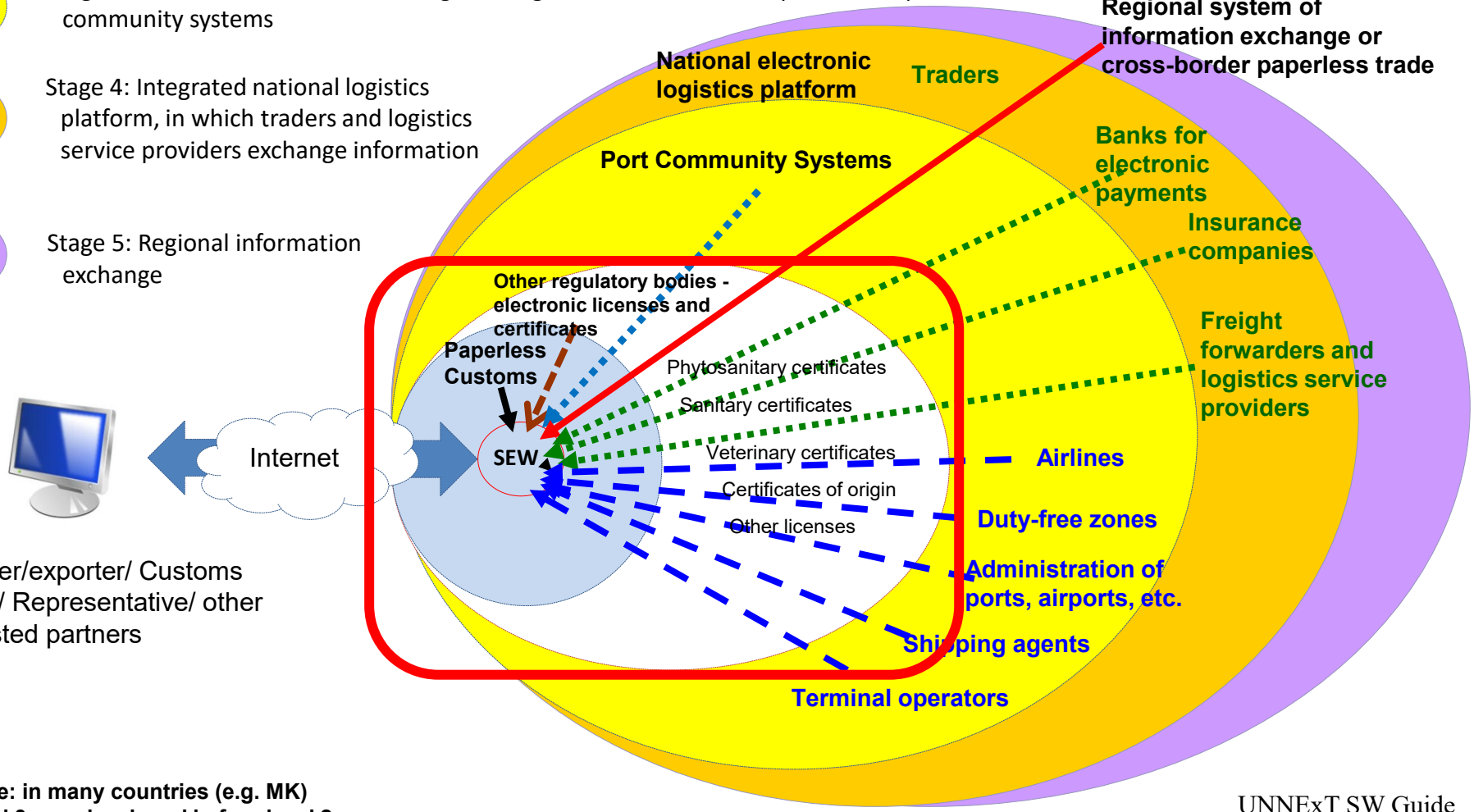
Stage 1: Paperless Customs + electronic payment of Customs duties + electronic container packing list + risk management

Stage 2: Connection to the IT systems of other regulatory agencies (link of paperless Customs to other documents – electronic certificates and licenses)

Stage 3: Electronic document exchange among various stakeholders, port and airport community systems

Stage 4: Integrated national logistics platform, in which traders and logistics service providers exchange information

Stage 5: Regional information exchange



Note: in many countries (e.g. MK) level 3 was developed before level 2

TFA: Art.10.1 Formalities and Documentation Requirements
Art.10.4 Single Window (definition = UN/CEFACT Rec.33)

1.1 With a view to minimizing the incidence and complexity of import, export, and transit formalities and to decreasing and simplifying… documentation requirements, taking into account the legitimate policy objectives…, each Member shall review such formalities and documentation requirements and ensure that such formalities and documentation requirements are…

Art 10.4 Single Window

4.1. Members shall endeavour to establish or maintain a single window, enabling traders to submit documentation and/or data requirements for importation, exportation, or transit of goods through a single entry point to the participating authorities or agencies. After the examination by the participating authorities or agencies of the documentation and/or data, the results shall be notified to the applicants through the single window in a timely manner.

4.2. ..

4.3 Members shall notify to the Committee the details of operation of the single window.

4.4 Members shall, to the extent possible and practical, use information technology to support the single window.

(These are the same elements of the definition of Rec. 33.)

regulatory functions

Rec.36: Interoperability & its 4 pillars

SW uses

- international standards for trade data and document exchange
- data harmonization
- alignment with international standards

Interoperability on different levels:

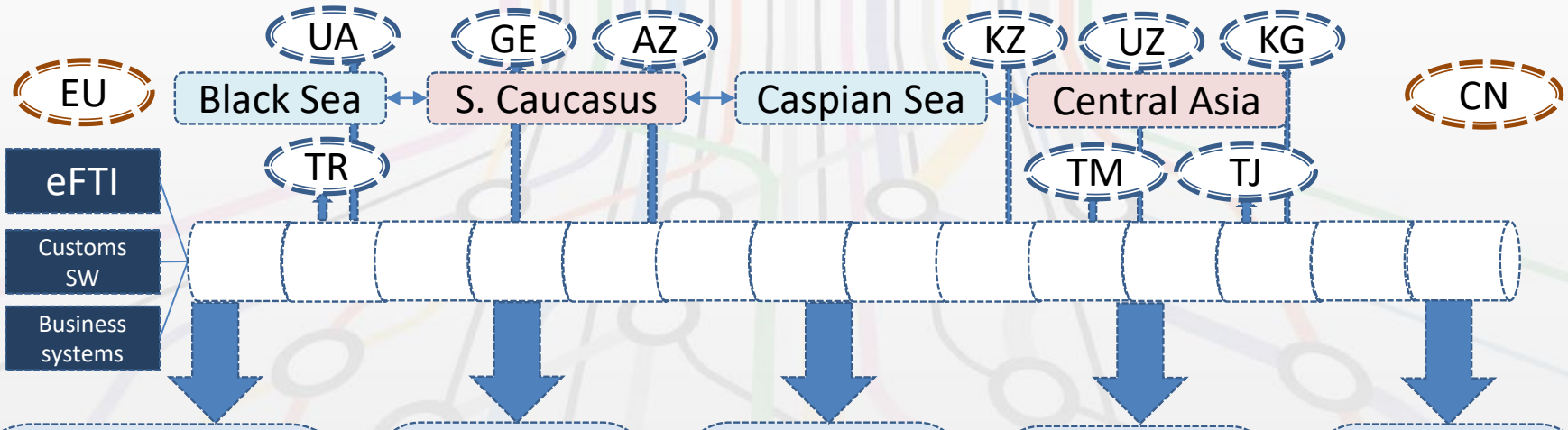
- semantics
- business processes
- message syntax (IT systems)
- legal systems

Legal basis for exchange with other SW systems to be created in each SW

A governance structure to be established for SW interoperability

Move from document-based to process/data-based approach

Information chain in a digital corridor



EU multimodal

EU eFTI Regulation

All info on cargo on rail, road, air, inland water modes inside the EU to be multimodal and electronic

Maritime SW Regulation
Common transit Conv.
NCTS

Road

CMR Convention

eCMR

TIR Convention
eTIR

Rail

COTIF & OSJD conventions, URL

CIM/SMGS, SMGS, CIM & URL consignment notes

Maritime

IMO FAL Hague Visby Rules

Non-negotiable and negotiable Bill of Lading, IMO FAL documents

Air

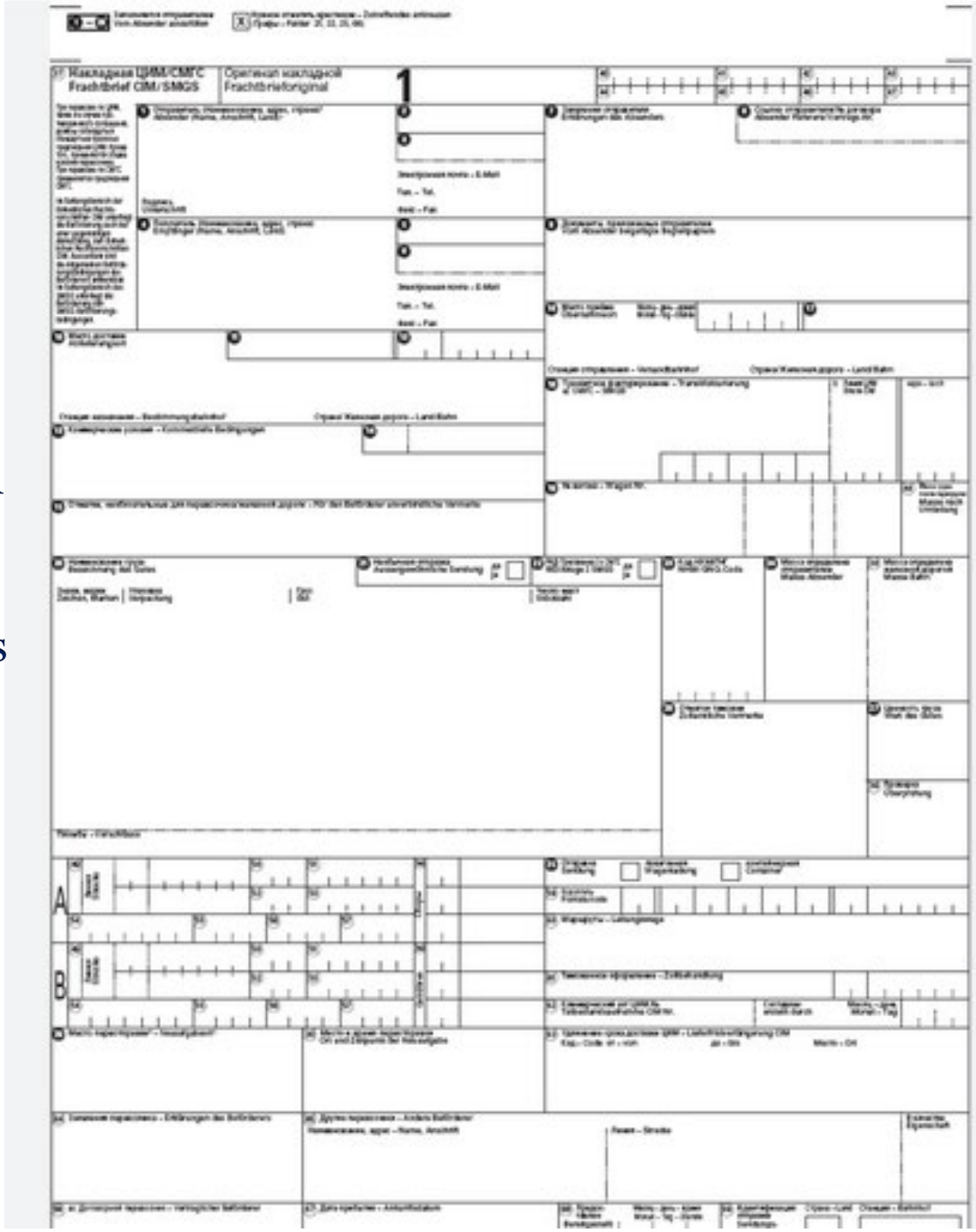
Montreal and Warsaw Conventions

e-Airwaybill
Dangerous Goods Decl.,
Consignment Security Declaration

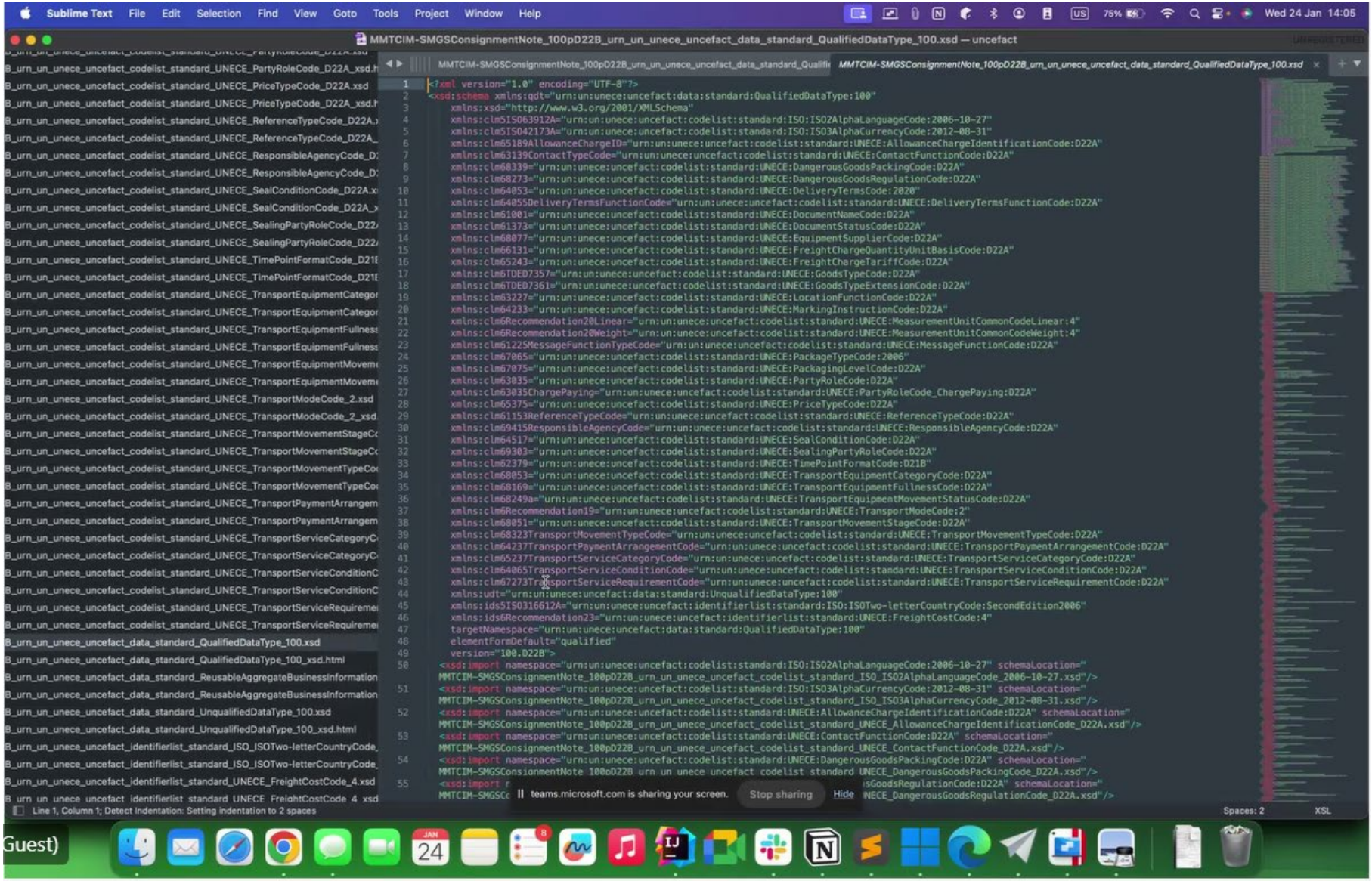
Alignment of data in the modal dangerous goods declarations to the UN/CEFACT MMT RDM.

Railway consignment note pilot project

- Pilot project on digitalization of the CIM/SMGS railway consignment note in the Trans-Caspian Corridor with TRACECA and other partners
- MoU signed by 5 railway agencies (KZ-AZ-GE-UA-TR) to digitalize the CIM/SMGS using UN/CEFACT standards at UNECE's seminar in May 2023
- Prototype eCIM/SMGS being developed
- This is pilot testing: more to come



Pilot project: CIM/SMGS prototype code



Railway documents and data

Basic data mappings

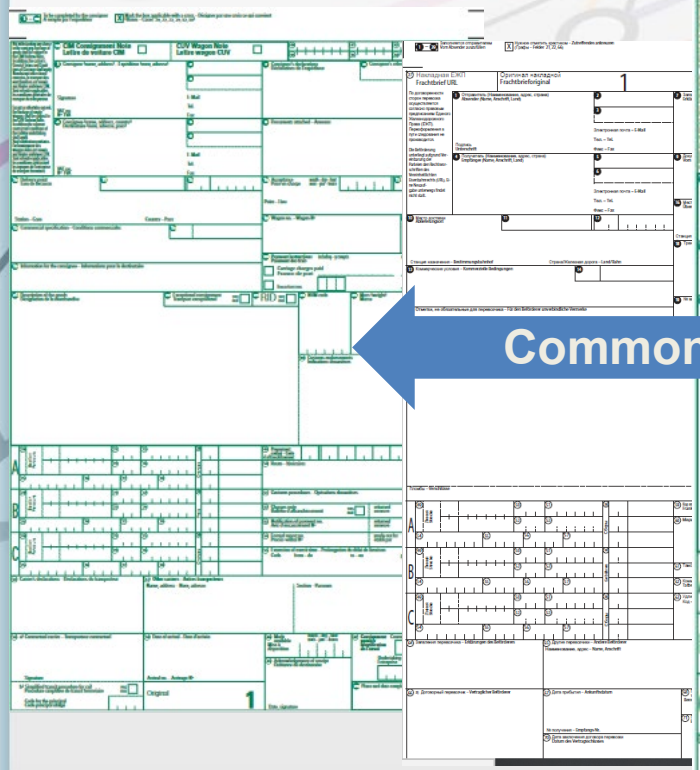
CIM

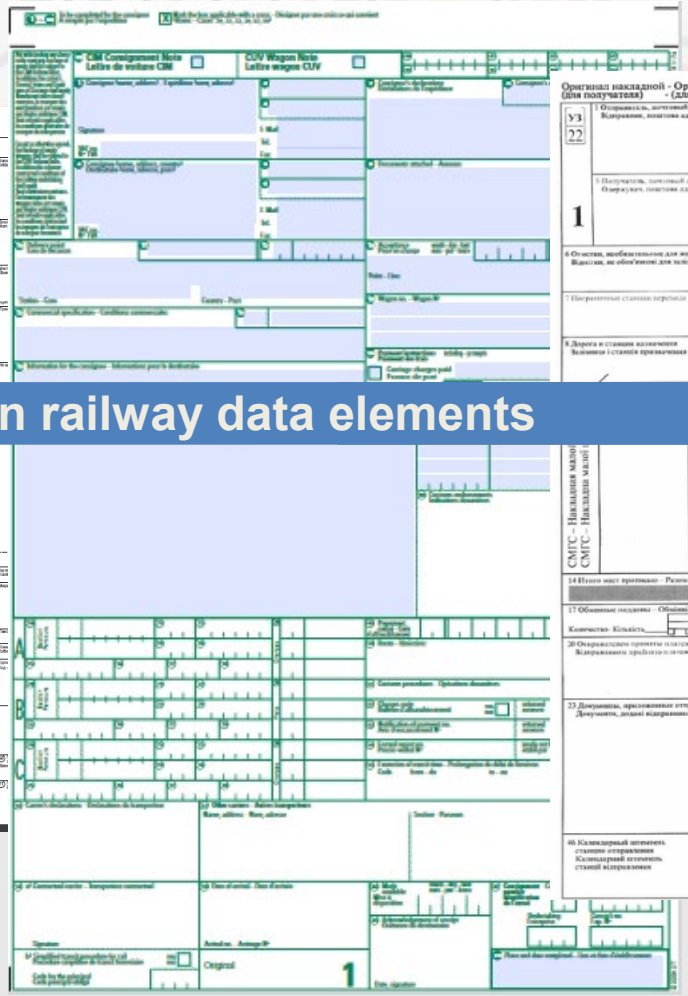
URL

CIM/SMGS

SMGS

EDIFACT





Common railway data elements

IFTMIN

Example message

No.	Tag	Example
01	UNA	UNA:+.? ' UNA:+,? '
02	UNB	UNB+UNOC:3+NO0987654321:30+708008890++CONSIGNOR++1++1'
03	UNH	UNH+1234+IFTMIN:D:04A:UN:BIG14'
04	BGM	BGM+610+70123451234567898+1'
05	CTA	CTA+BK+:EDI dep./ Eva HW'
06	COM	COM+eva.hw@bring.com:EM'
07	DTM	DTM+137:20100810:102'
08	DTM	DTM+234:20100810:102'
09	MOA	MOA+22:4530:NOK'
10	FTX	FTX+PRD+++1020:X'
11	FTX	FTX+SSR+++1076:ME01NO'
		+TRR+++DAVA'
		DEL+++Call 911 before delive
		TX+AAR+++0022'
15	CNT	CNT+11:9:PCE'
16	GDS	GDS+11'
	SG2	
17	TOD	TOD+5+CC'
	SG2	
18	TOD	TOD+6++EXW:INCOTERMS2010'
19	LOC	LOC+1+3000::139:Drammen+NO'
	SG3	
20	RFF	RFF+CMR:70701020000000034'
	SG3	
21	RFF	RFF+IV:867'
22	DTM	DTM+171:20100923:102'
	SG8	
23	TDT	TDT+20++3++BCS::87'
24	TSR	TSR+ALY'
	SG9	
25	LOC	LOC+202+1000::87:Bring Logistics
	SG11	
26	NAD	NAD+CZ+10009999999::87++Bring IK etg.+OSLO++0001+NO'
27	LOC	LOC+202+20000::87'
	SG12	

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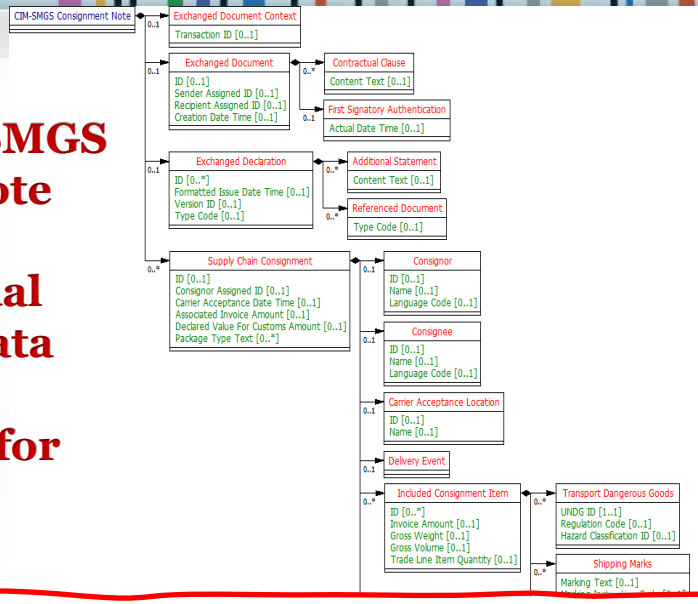
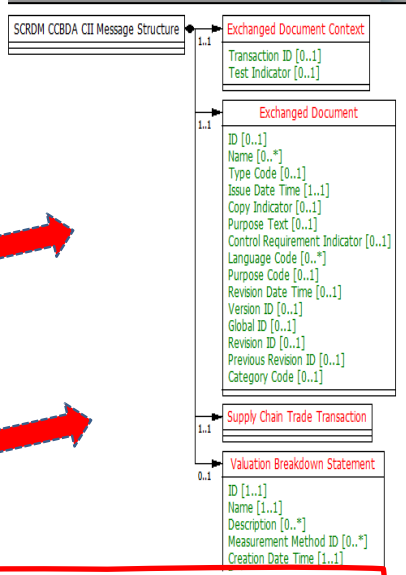
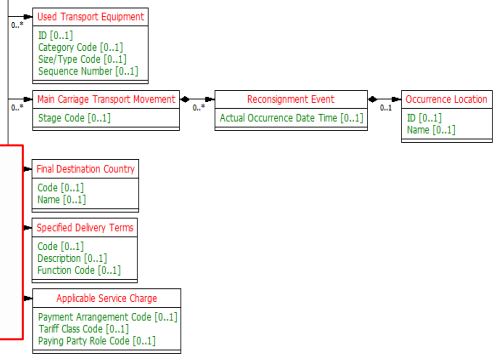
For example: the CIM-SMGS railway consignment note referenced to the UN/CEFACT Multi-Modal Transport Reference Data Model, according to the prepared XML schema for CIM-SMGS





Transport data and documents can and are exchanged between modes and with other sectors

Standards for CIM/SMGS wagon list finalized



https://service.unece.org/trade/uncefact/publication/Transport and Logistics/CIM-SMGS Consignment Note/HTML/001.htm

Online platforms play the role of "market makers". Functions:

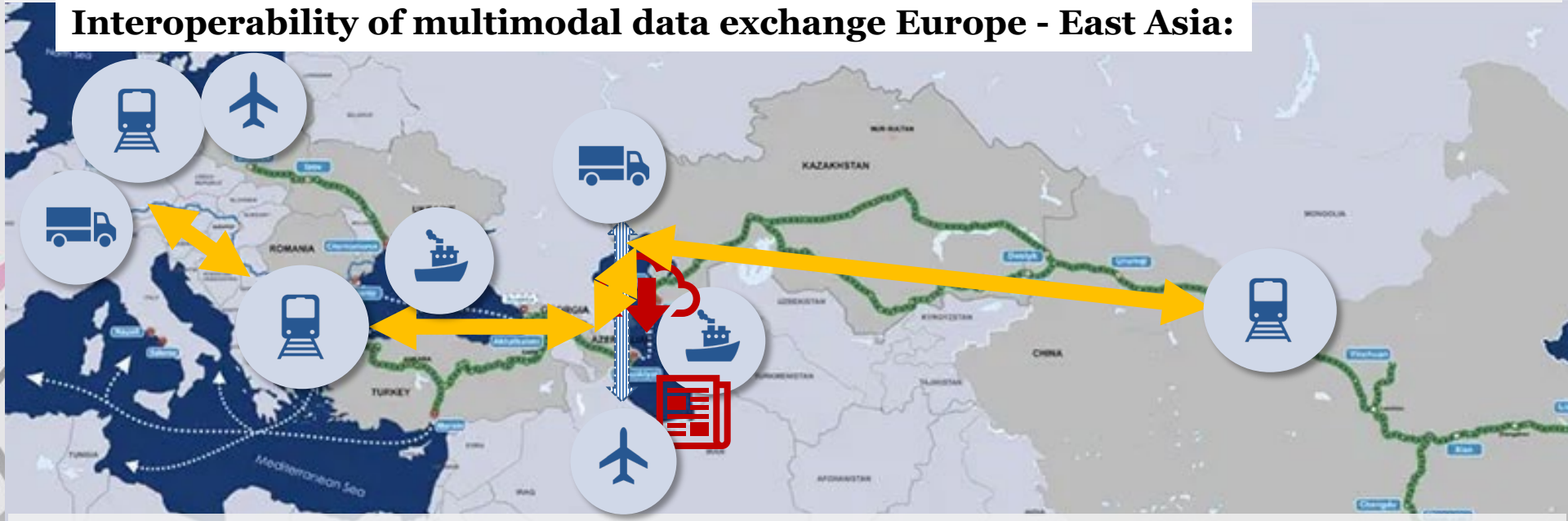
- Develop and offer digital solutions aligned with international standards
- Match supply with demand, facilitating and structuring online interactions and transactions (OECD).
- Develop and exploit large network externalities (offering services even on a global scale).
- Acting as "catalysts" of digitalization, transform retail and wholesale trade marketplaces and whole industries (incl. transport and food services) and B2B transactions.
- Online platforms surged during the COVID-19 pandemic: experience to build on.

EU eFTI Regulation adopted in 2020

- In 5 years (by end 2025, 2026), all information on cargo transported by road, rail, inland water, and air inside EU should be electronic and multimodal. Link to Maritime Single Window Regulation
- All economic operators should be able to submit to regulatory agencies required info in multimodal standard form
- Public-private Digital Transport and Logistics Forum (DTLF) established as advisory body on implementing eFTI: it recommended use of global UN/CEFACT standards as key reference for interoperability
- EU now supports the creation of a standard eFTI legal-based data set, combined for all modes and based on UN/CEFACT standards and MMT RDM

Information sharing: EU eFTI + SPECA Roadmap + W. Balkans (?): using UN/CEFACT standards as reference for multimodal interoperability

Interoperability of multimodal data exchange Europe - East Asia:



- **Regulatory framework: agreement**
- **EU eFTI Regulation uses UN/CEFACT MTM RDM for interoperability**
- **Technological neutrality: for EDI, XML, JSON API, blockchain**
- **All parties are invited to cooperate and use the standards**
- **Move from document exchange to data sharing (as in eFTI)**
- **Link to normative: eFTI & EU Customs Single Window Regulations: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32020R1056; https://eur-lex.europa.eu/eli/reg/2022/2399/oj**

SPECA ROADMAP FOR THE DIGITALIZATION OF MULTIMODAL DATA AND DOCUMENT EXCHANGE ALONG THE TRANS-CASPIAN TRANSPORT CORRIDOR, USING UNITED NATIONS LEGAL INSTRUMENTS AND STANDARDS

https://unece.org/speca/speca-digitalization-roadmap

SPECA Summit in Baku adopted it 24 Nov.2023

https://www.euronews.com/video/2023/12/01/speca-central-asia-reaffirms-its-key-role-in-international-transport

Vision statement: **From 2027 onwards, economic operators and all competent authorities in the SPECA participating countries will start to use electronic freight transport data from economic operators in line with relevant United Nations legal instruments and standards, including the UN/CEFACT package of standards. Data will be interoperable between sectors and the relevant modes of transport along the trans-Caspian transport corridor, with a view to increasing the efficiency of data exchange and the movement of goods across borders.**

IMPLEMENTING THE DIGITALIZATION ROADMAP IN THE TRANS-CASPIAN TRANSPORT CORRIDOR

Governments will create an enabling environment to realize the vision, together with UNECE and others:

2024

- **Customs, economic operators and national guarantee associations start practical operation of the eTIR system;**
- **Governments and business will take part in digitalizing B2B supply chain data exchange based on UN/CEFACT stndds**

2025

- **Customs, economic operators and national guarantee associations will use eTIR;**
- **Operators will participate in pilot projects using the UN/CEFACT standards: port community systems and others**

2026

- **Economic operators use electronic data exchange on documents accompanying goods using UN/CEFACT standards;**
- **Customs authorities and economic operators may use eCMR with the use of the UN/CEFACT standards;**
- **Economic operators participate in the pilot projects on the operational supply chain data exchange.**

2027

- **Economic operators and authorities to use rail data exchange based on the Unified Railway Law and UN/CEFACT**
- **Economic operators may use digital air cargo documents with application of the UN/CEFACT standards;**
- **Economic operators in all countries may use the operational supply chain data exchange.**

2028

- **New action plan to be agreed**

- **The SPECA Governments will convene meetings of experts to elaborate on the implementation details.**
- **The implementation of this Roadmap will have a strong capacity-building component,**
- **The SPECA Governments recognize the significant value added of the implementation of this Roadmap, will work with UNECE to mobilize the resources and cooperate with development partners.**

Planned capacity-building activities

- 22-23 February 2024 – SPECA side event at the UNECE Inland Transport Committee, Geneva
- 29 March 2024 – national seminar in Tashkent for Uzbekistan
- 3 April 2024 – 19th session of the SPECA WG on Trade and regional training in Samarkand, Uzbekistan
- 11-12 June 2024 – regional seminar in Aktau, Kazakhstan

Development partners are welcome for cooperation on the implementation of the Roadmap.

We are doing an analysis of the legal aspects of digitalizing multimodal data and document exchange. We can cooperate with CLDP on that.

Thanks!
Further Information

Standards and reports available on UNTTC.org project and UN/CEFACT pages.

On the project web site (unttc.org), we upload information on the standards and tools at https://unttc.org/stream/electronic-trade-and-transport-documents-and-data

A streamlined web presentation of the UN/CEFACT standards can be found at https://unece.org/trade/uncefact/standards

Information on the UN/CEFACT projects: https://uncefact.unece.org/display/uncefactpublic/Transport+Modal+Views+of+MMT

Mario Apostolov, Regional Advisor
UNECE Economic Cooperation and Trade Division:
mario.apostolov@un.org,
Tel. +41 22 9171134 or +41 79 2790936