The Multimodal Transport Reference Data Model (MMT RDM) and other semantic standards of the UN Centre for Trade Facilitation and Electronic Business (UN/CEFACT) used in the implementation of the EU eFTI (electronic Freight Transport Information) and eMSWE (maritime Single Window) legislation

Sixth Technical Cooperation Workshop for the Western Balkans – Skopje 8/9 Feb 2024

Sue Probert
UN/CEFACT Chair

Agenda

- UN/CEFACT Mandate and Objectives
- UN/CEFACT Focus & Deliverables
- UN/CEFACT Collaborative Semantic Harmonization
- International Supply Chain Reference Data Models
- How regulations shape UN/CEFACT standards and are supported to assist trade facilitation

UN/CEFACT Mandate & Objectives

MANDATE

to develop and facilitate the use of global standards for electronic business, trade facilitation, and related areas.

OBJECTIVES

enhance international trade efficiency and effectiveness

contribute to the advancement of the Sustainable Development Goals

Development of Standards

Harmonization & Interoperability

Capacity Building

Advocacy for Best Practices

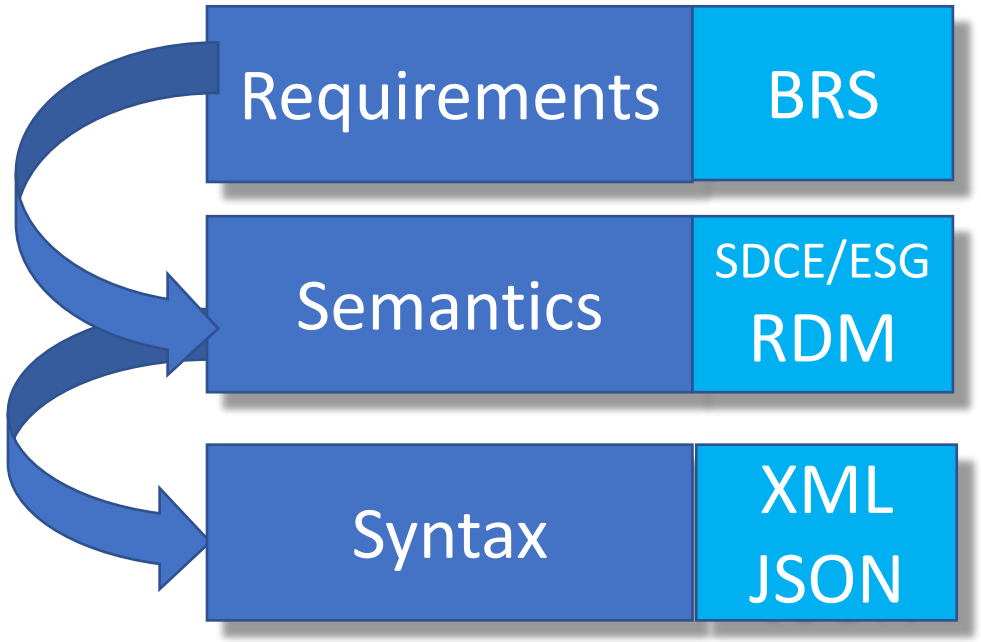
Collaboration & Cooperation

UN/CEFACT Focus: Develop Data Exchange Standards

- To streamline international trade documentation processes through digitalization, reducing paperwork and administrative burdens
- To enhance traceability in cross-border supply chains
- To mitigate and improve risk management and resilience, ensuring business continuity.
- To support semantic harmonization across the data requirements of trade, transport and regulatory processes.
- To enable measuring, comparing, and reducing carbon emissions throughout the supply chain.

UN/CEFACT eBusiness Standards Delivrebles

1	REFERENCE DATA MODELS
2	DESIGNED FOR CROSS INDUSTRY USE
3	GLOBAL SCOPE
4	FOR SME & LARGE ENTERPRISES
5	BASED ON MERITS OF OTHER STANDARDS
6	SUPPORTS TRACEABILITY
7	SUPPORTS TRANSPARENCY
8	STANDARDIZED DATA STRUCTURES
9	STANDARDIZED CODE LISTS
10	TECHNOLOGY INDEPENDENT



BRS : Business Requirement Specification
SDCE : Sustainable Development and Circular Economy Reference Data Model
XML, JSON : Syntax formats of the data exchange structures

UN/CEFACT: Collaborative Standards Harmonization

UNECE

UN / CEFACT

Partnership Agreement signed

between the International Maritime Organization (IMO), the World Customs Organization (WCO), the United Nations Economic Commission for Europe (UNECE) and the International Organization for Standardization (ISO) to harmonize data model for IMO **Convention on Facilitation of International Maritime Traffic (FAL)**

Public-Private partnership

1600+ volunteer experts

DG MOVE

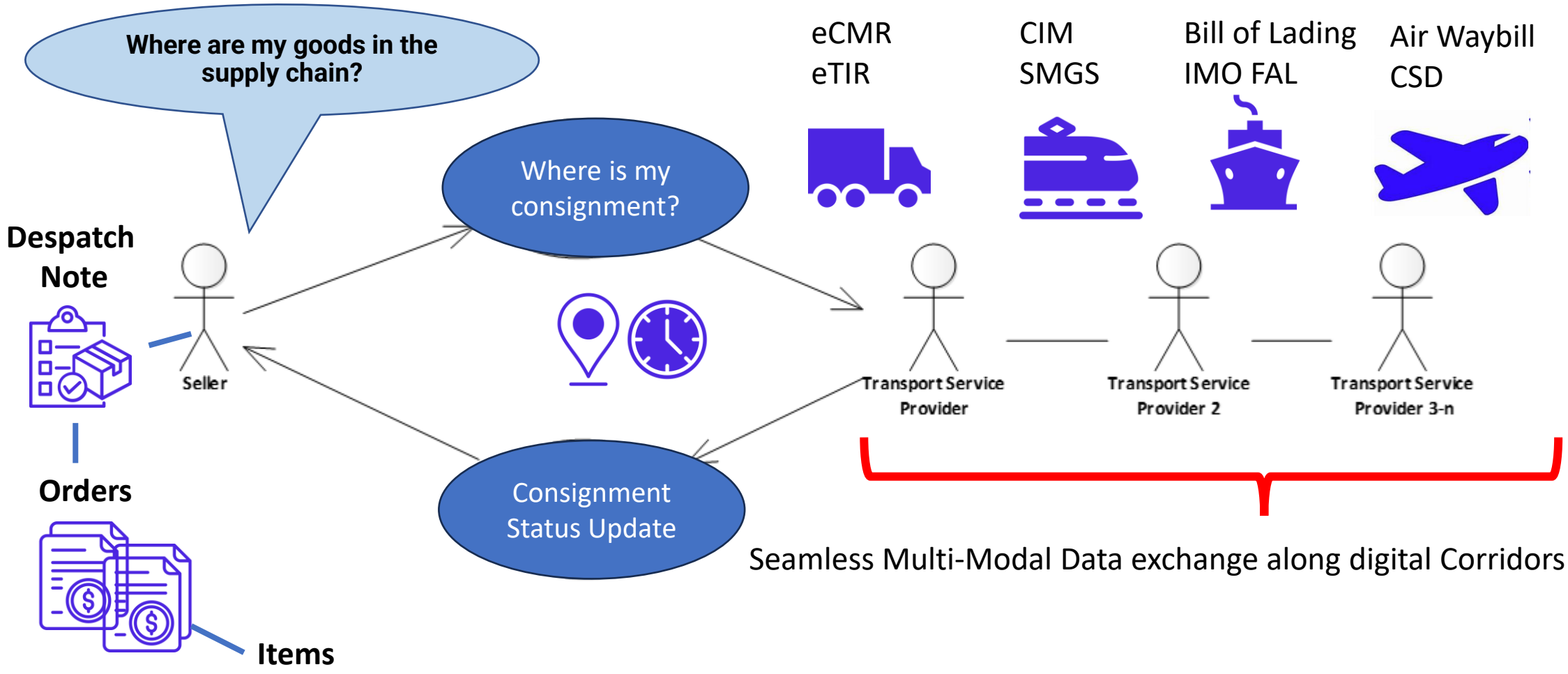
adopted our standards **as a basis** for two EU regulations **eFTI & EMSW**

- EC
- DG-MOVE
- DG-TAXUD
- DG-MARE
- DG-INTPA
- DG-DIGIT
- EEC
- OECD

- DCSA
- GS1
- IPCSA
- PROTECT
- FIATA
- SMDG

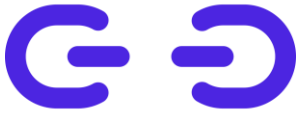
- WCO
- IATA
- ISO
- IEC
- ITU
- WTO
- ITC

UN/CEFACT Focus: Semantic Standards Bridging Cross-Industry and Multimodal Transport Chains



Seamless Multi-Modal Data exchange along digital Corridors

UN/CEFACT Focus: Semantic Standards Bridging Trade & Transport Views



The **disconnect** between trade and transport data for the goods being transported using different modes of transport.
e.g., Tracing the goods offer evidences of the place of origin of the products supporting Single Window goals.

Stakeholders involved in trade and transportation of goods **use terms and definitions in different ways**.
e.g., consignments versus trade deliveries (trade shipments)

UN/CEFACT Focus: Semantic Anchors

Shipment (Trade Delivery)

A shipment is an identifiable collection of one or more Trade Items (available to be) transported together from the Seller (Original Consignor/Shipper) to the Buyer (Final/Ultimate Consignee):

A Shipment can only be destined for **one Buyer**

A Shipment can be made up of some or all Trade Items **from one or more Sales Orders**

A Shipment can have only one Customs UCR

A shipment may form part or all of a Consignment or may be transported in different Consignments.

Consignment

A consignment is a separately identifiable collection of Consignment Items (available to be) transported from one Consignor to one Consignee via one or more modes of transport as specified in one single transport service contractual document:

A Consignment can only have one Transport Service Buyer

A Consignment can only have one Transport Service Provider

A Consignment can only have **one Consignor**

A Consignment can only have **one Consignee**

The Transport Service Buyer can be either the Consignor or the Consignee

A Consignment is made up of **one or more Consignment Items**

A Consignment can be made up of some or all Trade Items (aggregated into Consignment Items) from one or more Shipments

UN/CEFACT evolution/revolution – Semantic Reference Data Models

- The support for information sharing, such as enabled by data pipelines, with the timely capture of quality data from original data sources ensuring supply chain visibility
- Reduction of administrative burden by efficient reuse of data shared within the BUY SHIP PAY domain model
- Standardized data exchange structures, based on common Master data exchange structure and independent of exchange syntax
- Common basis for implementing in chosen data exchange syntax(es)

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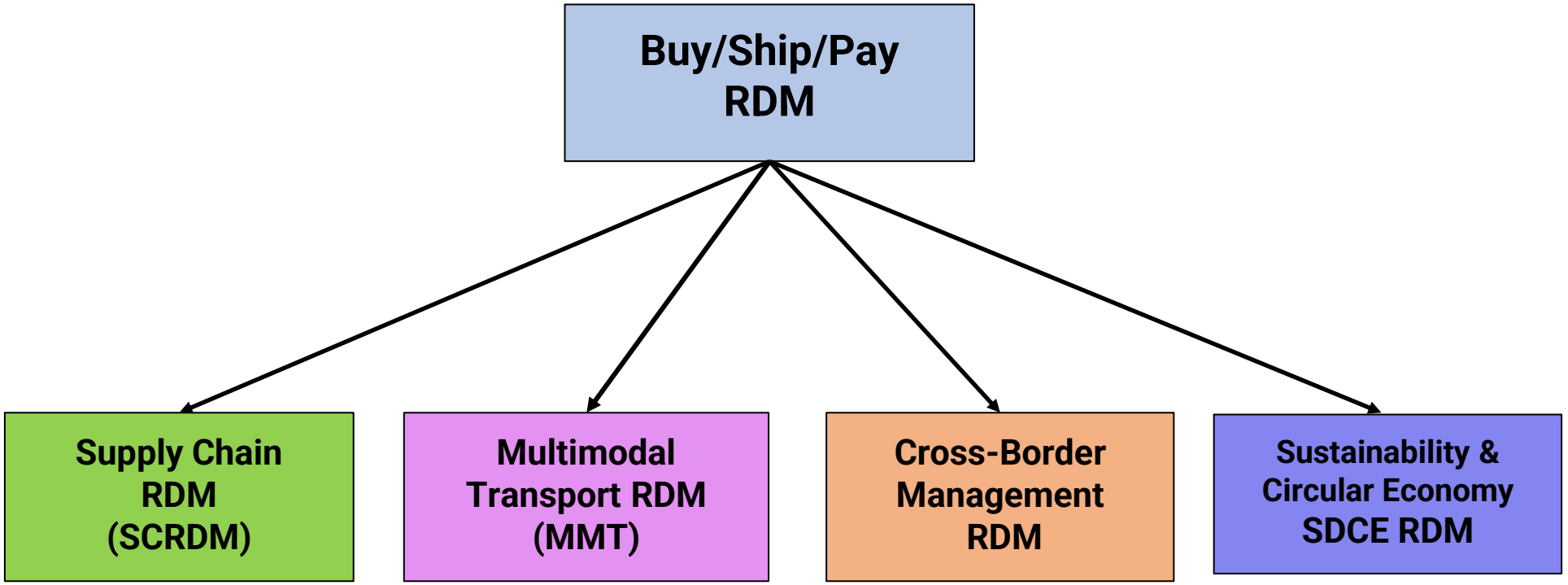
UN/CEFACT Reference Data Model Family



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Regulations are taken into account

Initial Contributions

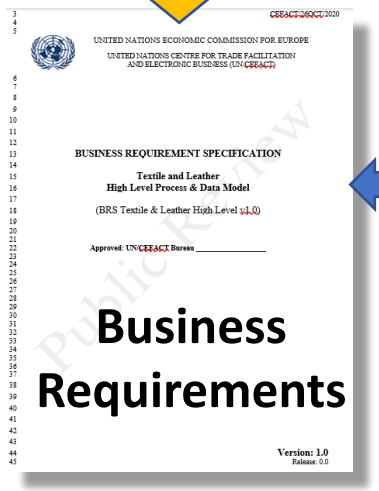
Relevant Regulations

Policy Recommendations

Business Process Analysis

Workshops, experts feedback

Business **R**equirement **S**pecifications for …


UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

UNITED NATIONS CENTRE FOR TRADE FACILITATION AND ELECTRONIC BUSINESS (UN CEFACT)

BUSINESS REQUIREMENT SPECIFICATION

Textile and Leather
High Level Process & Data Model

(BRS Textile & Leather High Level v1.0)

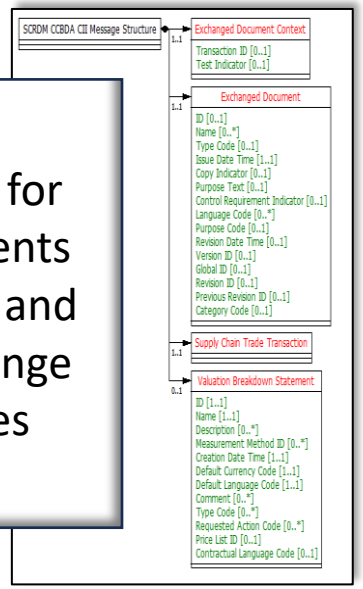
Approved: UN/CEFACT Bureau _____

Business Requirements

Version: 1.0

Published

Standards for data elements definitions and data exchange structures



Regulations are translated into data exchange requirements

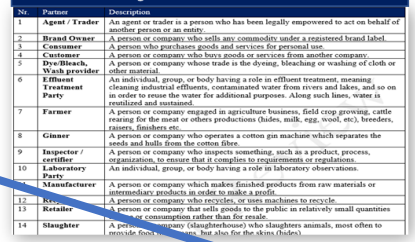
Regulations

eCMR
eFTI
EMSWe
eCERT (sanitary-phytosanitary certificates)
CITES

Pilots

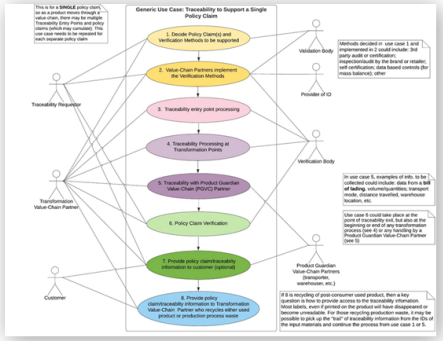
ECE/ESCAP SPECA Digital Corridor by

Functional & data requirements

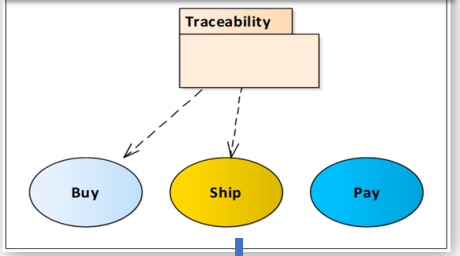


No	Partner	Description
1	**Agent / Trader**	An agent or trader is a person who has been legally empowered to act on behalf of another person or an entity.
2	**Brand Owner**	A person or company who sells any commodity under a registered brand label.
3	**Consumer**	A person who purchases goods and services for personal use.
4	**Customer**	A person or company who buys goods or services from another company.
5	**Dye/Bleach, Wash provider**	A person or company whose trade is the dyeing, bleaching or washing of cloth or other material.
6	**Effluent Treatment Party**	An individual, group, or body having a role in effluent treatment, meaning cleaning industrial effluents, contaminated water from rivers and lakes, and so on in order to reuse the water for additional purposes. Along such lines, water is reutilized and sustained.
7	**Farmer**	A person or company engaged in agriculture business, field crop growing, cattle rearing for the meat or others productions (hides, milk, egg, wool, etc), breeders, raisers, finishers etc.
8	**Ginner**	A person or company who operates a cotton gin machine which separates the seeds and hulls from the cotton fibre.
9	**Inspector / certifier**	A person or company who inspects something, such as a product, process, organization, to ensure that it complies to requirements or regulations.
10	**Laboratory Party**	An individual, group, or body having a role in laboratory observations.
11	**Manufacturer**	A person or company which makes finished products from raw materials or intermediary products in order to make a profit.
12	**Rec...**	A person or company who recycles, or uses machines to recycle.
13	**Retailer**	A person or company that sells goods to the public in relatively small quantities for use or consumption rather than for resale.
14	**Slaughter**	A person or company (slaughterhouse) who slaughters animals, most often to provide food... but also for the skins (hides)

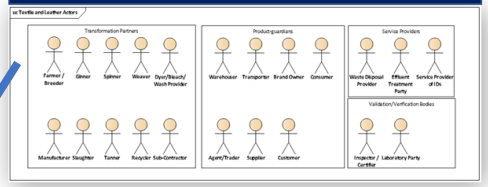
Process diagrams



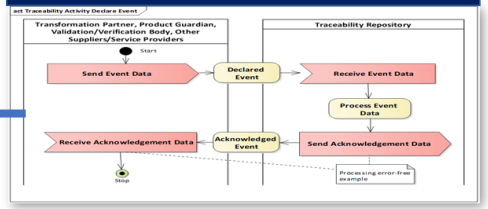
Scope



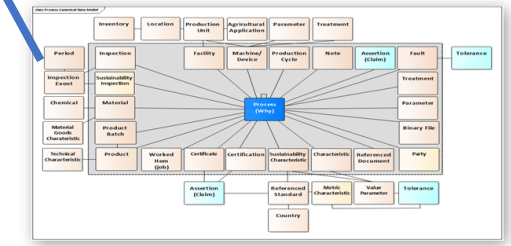
Actors involved



Data exchanges



Data structures



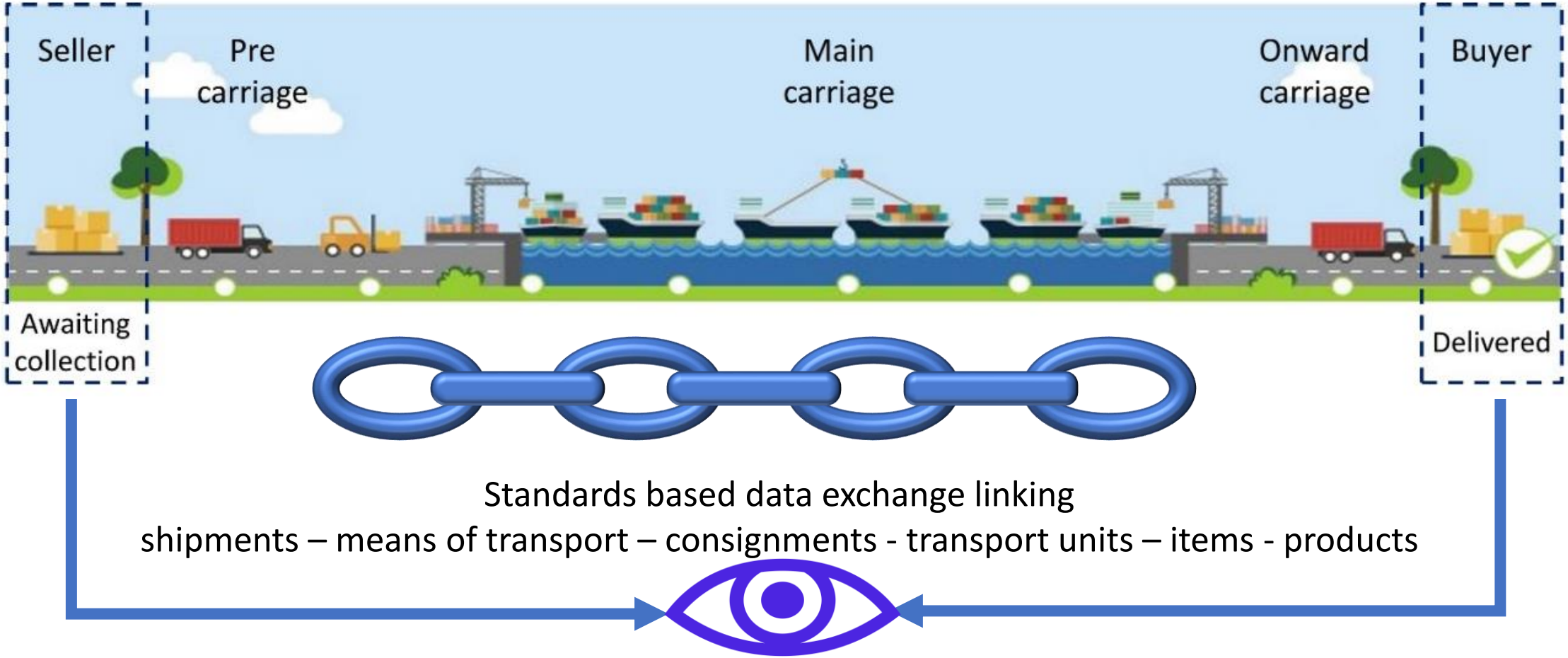
Business Requirement Specification

Data definitions

Term	Description
abattoir (slaughterhouse)	<place> where animals are sent for slaughter at end of life
agent trader	<organisation> buys and sells material at different stages of production and may conduct a small operation on the material that does not chemically alter it
aniline leather	<material> leather whose natural *grain* is clearly visible either without a surface coating or with a non-pigmented surface coating NB1. The thickness of non-pigmented surface coating is usually less than or equal to 0.01 mm
basification	<process> mild alkali treatment to ensure completion of *tanning* e.g. treating the mineral tanned stock with a view to forming a large aggregate of metallic compounds and enabling reactive groups of *skins* to complex with tanning material.
Bate	<material> enzymes mixed with an inert carrier used to selectively remove unwanted constituents of *hides* and *skins*.
Acid bate	bate that has optimum activity in the pH range of 3 to 5
alkaline bate	bate that has optimum activity in the pH range of 8 to 8.5
bating	the process of removing unwanted interfibrillary proteins by treating the *hides* and *skins* with bates to obtain soft and pliable leather with a smooth grain surface
beam	<equipment> convex wooden slab sloping downward from about waist height over which a hide is placed for unhairing, trimming off excess flesh and ragged edges and *scudding* by hand knife
brand agent	<organisation> buys and sells finished leather on behalf of brands without any transformation of material

Test and enhance

UN/CEFACT Focus: Unifying Global, Cross-Industry, Cross-Border & Multimodal Supply Chains



Standards based data exchange linking
shipments – means of transport – consignments - transport units – items - products

Holistic focus for a better visibility and communication for enhanced synchro-modality and collaboration

CBM RDM Project Purpose

Provide a Regulatory Reference Data Model based on the UN/CEFACT Buy/Ship/Pay Reference Data Model to:

- Assist cross-border agencies to link international supply chain B2B data to national or regional cross-border management data requirements
- Support pipeline data submission from trusted traders
- Complement harmoniously the existing RDMs for trade and transport

Considering:

- Trading Partner Collaboration
- Data Harmonisation and Rationalisation
- Alignment to Cross-Border Agency Regulations and Standards
- Semantic Mappings B2B B2G G2B G2G

https://uncefact.unece.org/display/uncefactpublic/Cross-Border+Management+Reference+Data+Model

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Key Single Window Semantic Aspects

- Public side and Government side speak different languages or, at least, different dialects
  - Affects names and definitions
  - Affects data quality
- Partnership approach using harmonised names and definitions will offer increased quality and mutually beneficial facilitation
- Pipeline provision of data in trusted trader programs
- Primary and Secondary data views
- Managing moving targets

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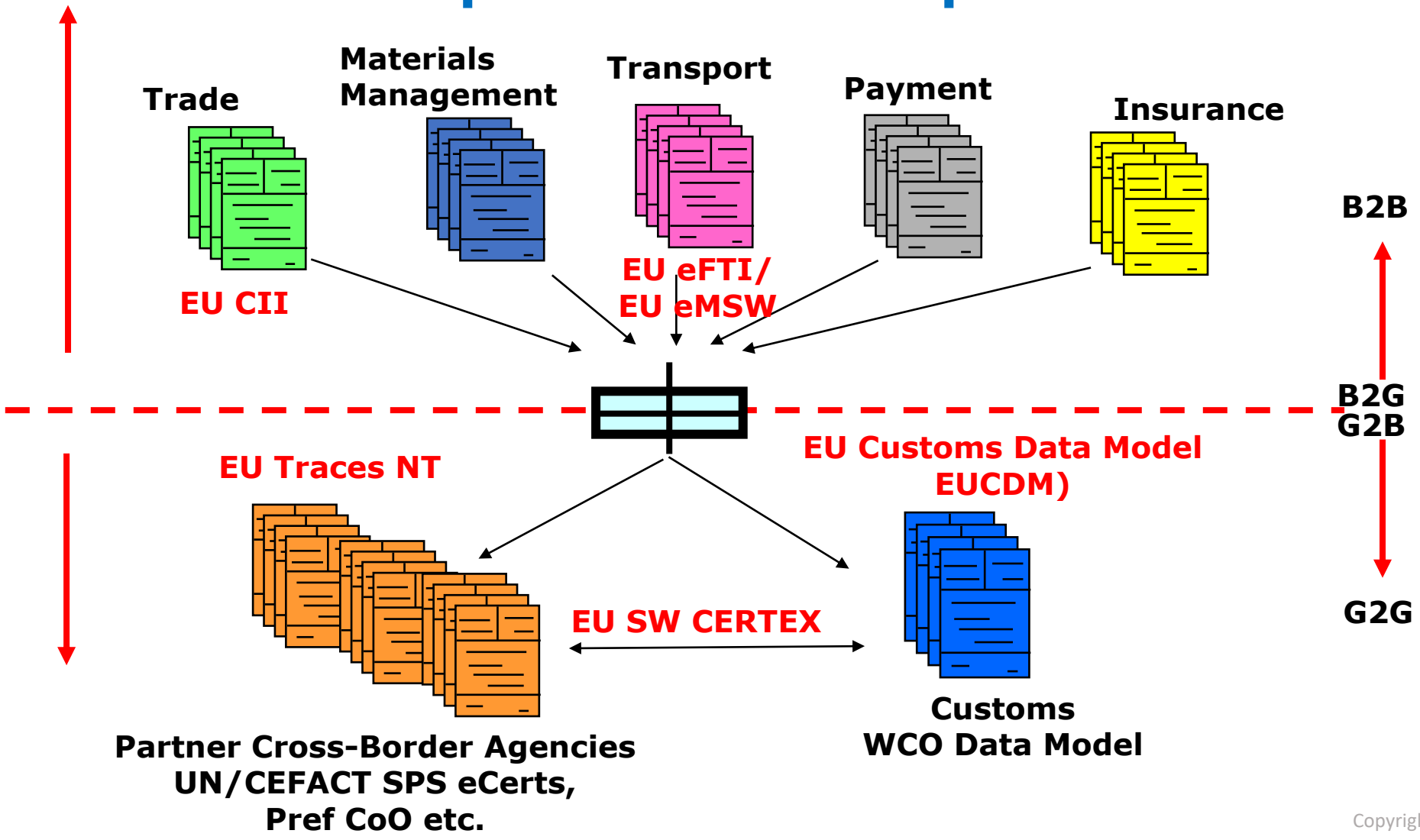
UN/CEFACT Buy/Ship/Pay Reference Data Models Single Windows Document Families – European Union Perspective



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For further Information

- All UNECE and UN/CEFACT Recommendations, codes, standards and publications are available for free on our website at:
- www.unece.org/cefact/
- Experts are always welcome to join our standards development and trade facilitation projects

UN/CEFACT Secretariat

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