

Third Technical Cooperation Workshop for the Western Balkans

Single Window and Cross-Border Reference Data
Model Project

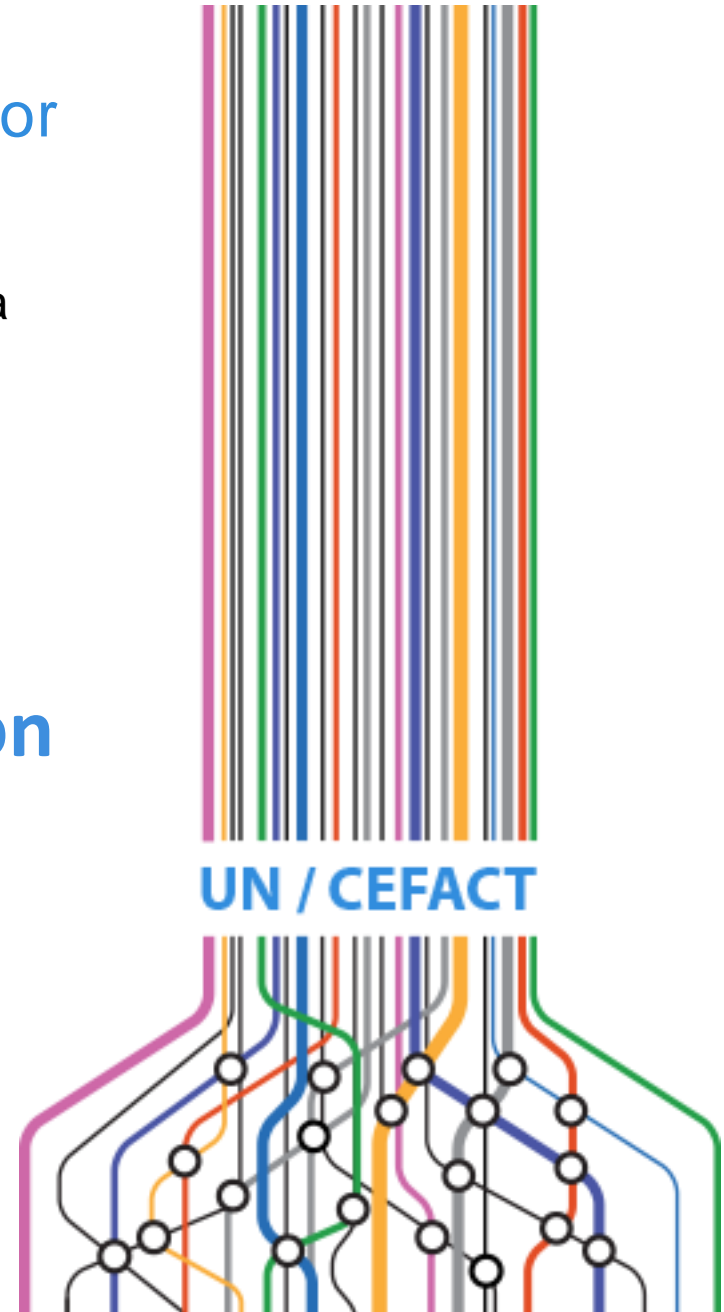
October 27/28 2020

International Standards for Global Trade Data Harmonisation

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Chair, UN/CEFACT

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UN/CEFACT

Objectives

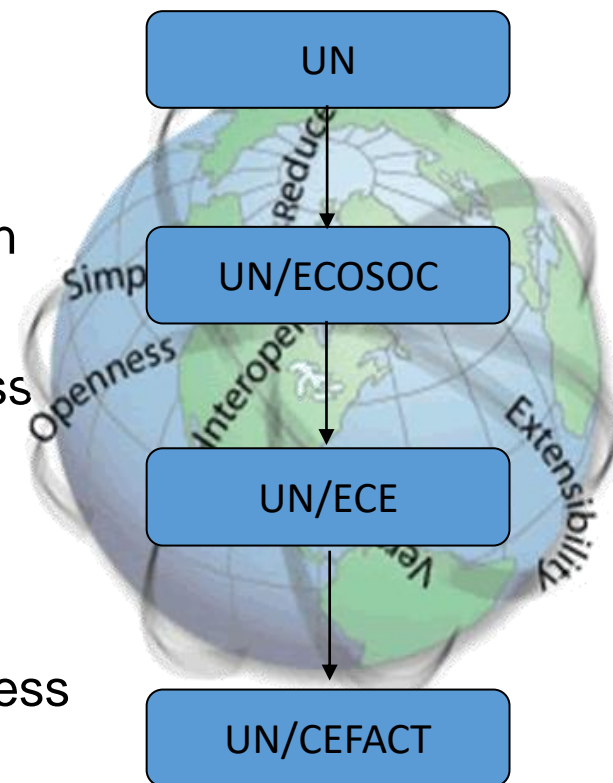
- Simple, transparent and effective processes for global business
- Efficient and automated exchange of information

Outputs

- Global Trade Facilitation and Electronic Business Recommendations and Standards

Means

- Public Private Sector Partnership
 - over 400 experts from government and business
- Experts meet via internet every week plus two **Face-to-Face** Forums per year



Global Remit



UN/CEFACT Key Outputs

- Internationally developed and agreed Trade Facilitation Recommendations
- Internationally developed and agreed Business Standards
- UNTDED (ISO 7372)
- Reference Data Models (Buy/Ship/Pay)
- Continually Maintained Libraries
 - UN Core Component Library (CCL)
 - UN/EDIFACT directories
 - UN/XML Schemas
 - Globally applicable Code Sets (UNCL)



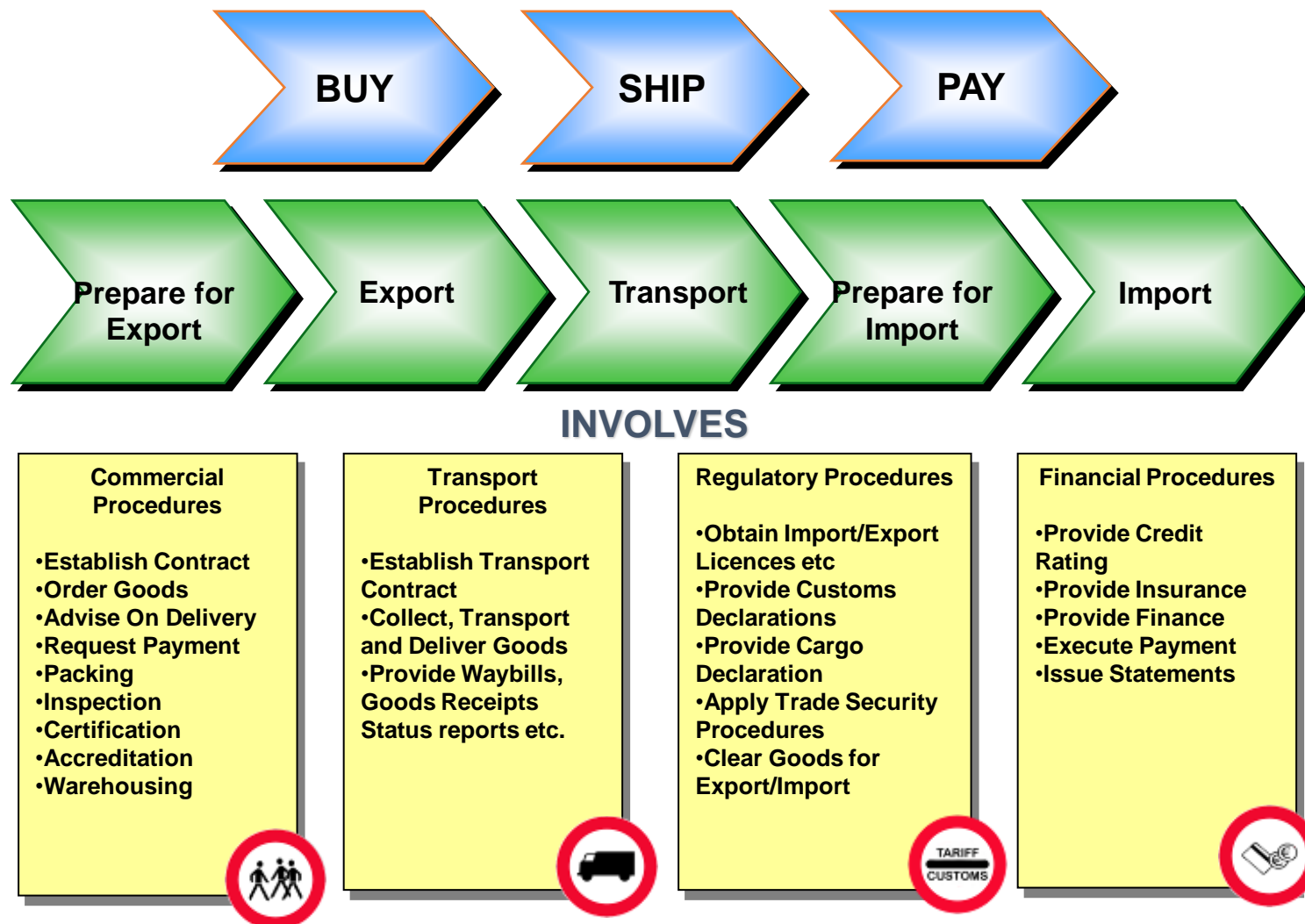
Single Window Recommendations

- Rec 33 – Single Window Recommendation (**updated 2020**)
- Rec 34 – Data Simplification and Standardization for International Trade
- Rec 35 – Establishing a legal framework for international trade Single Window
- Rec 36 – Single Window Interoperability
- Rec 37 – Single Submission Portal (SSP)
- Technical Note on terminology for Single Window and other electronic platforms

Work in progress:

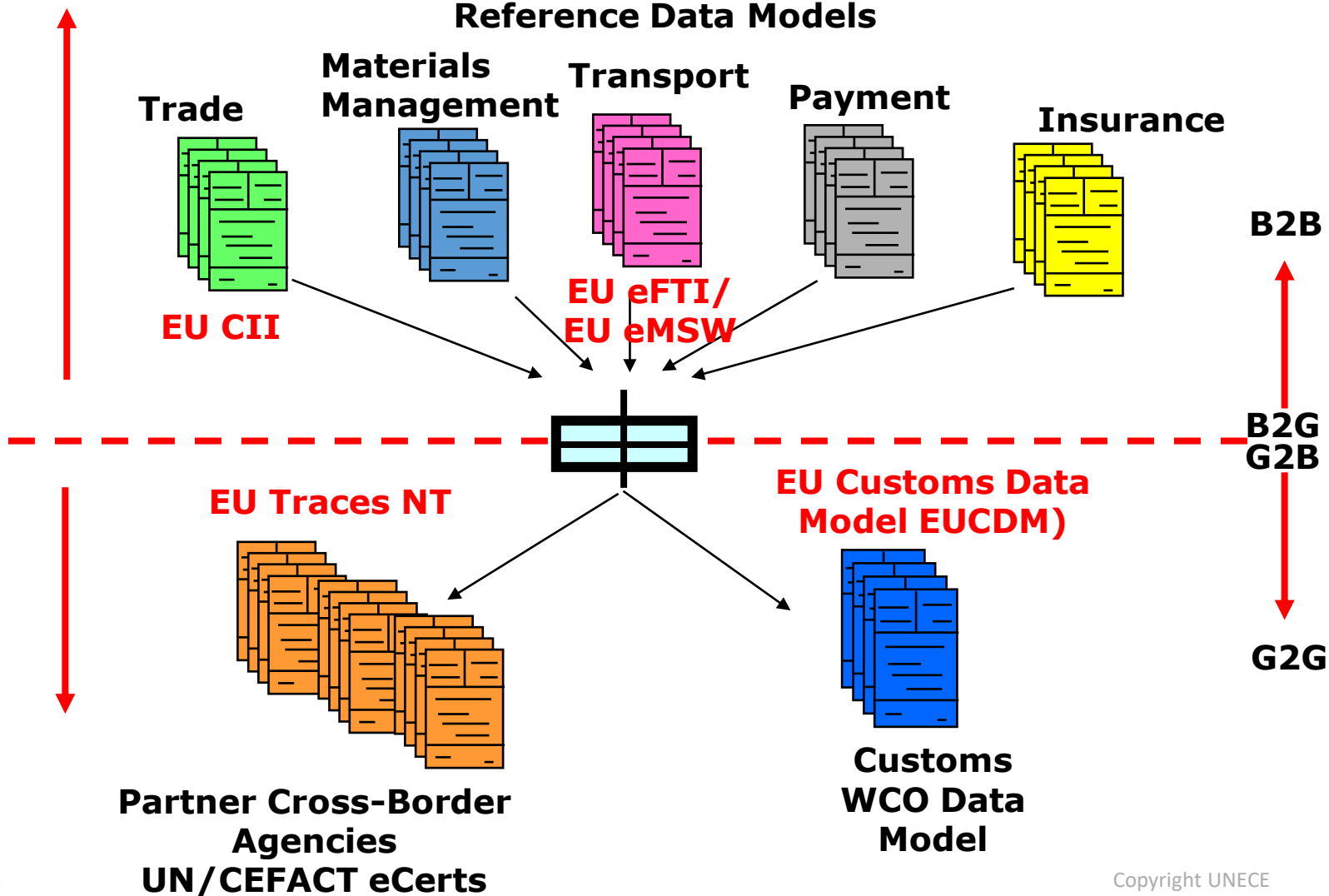
- Recommendation Project on Trade Information Portals (TIP)
- Recommendation Project on Core Principles of Single Window Operations

UN/CEFACT International Supply Chain Process Model



Single Windows Document Families – European Union Perspective

UN/CEFACT Buy/Ship/Pay
Reference Data Models





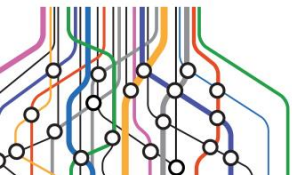
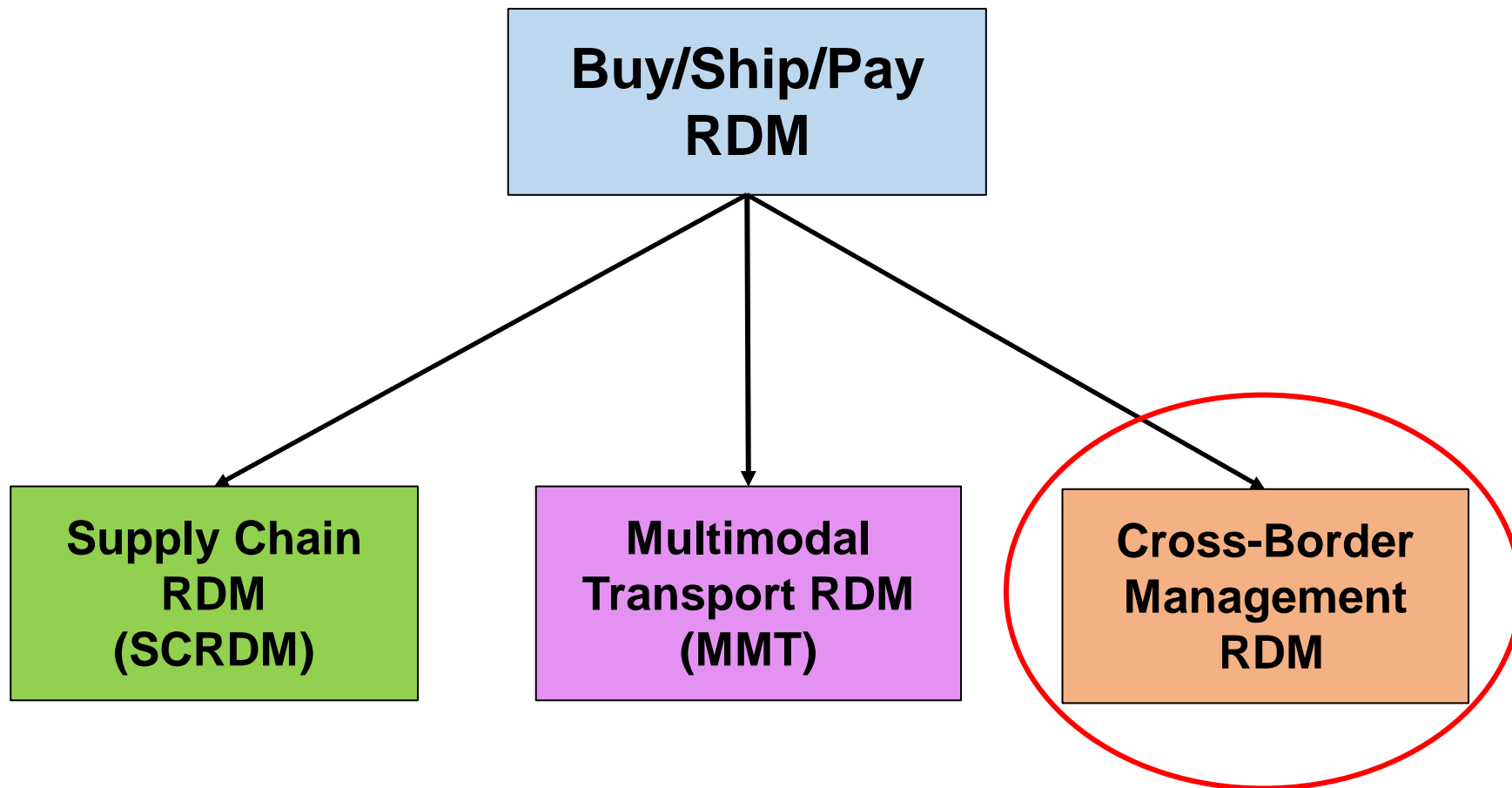
UN/CEFACT evolution/revolution – Reference Data Models

Benefits of UN/CEFACT Semantic 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)



UN/CEFACT International Supply Chain Reference Data Model Family





Global Trade – Semantic Anchors

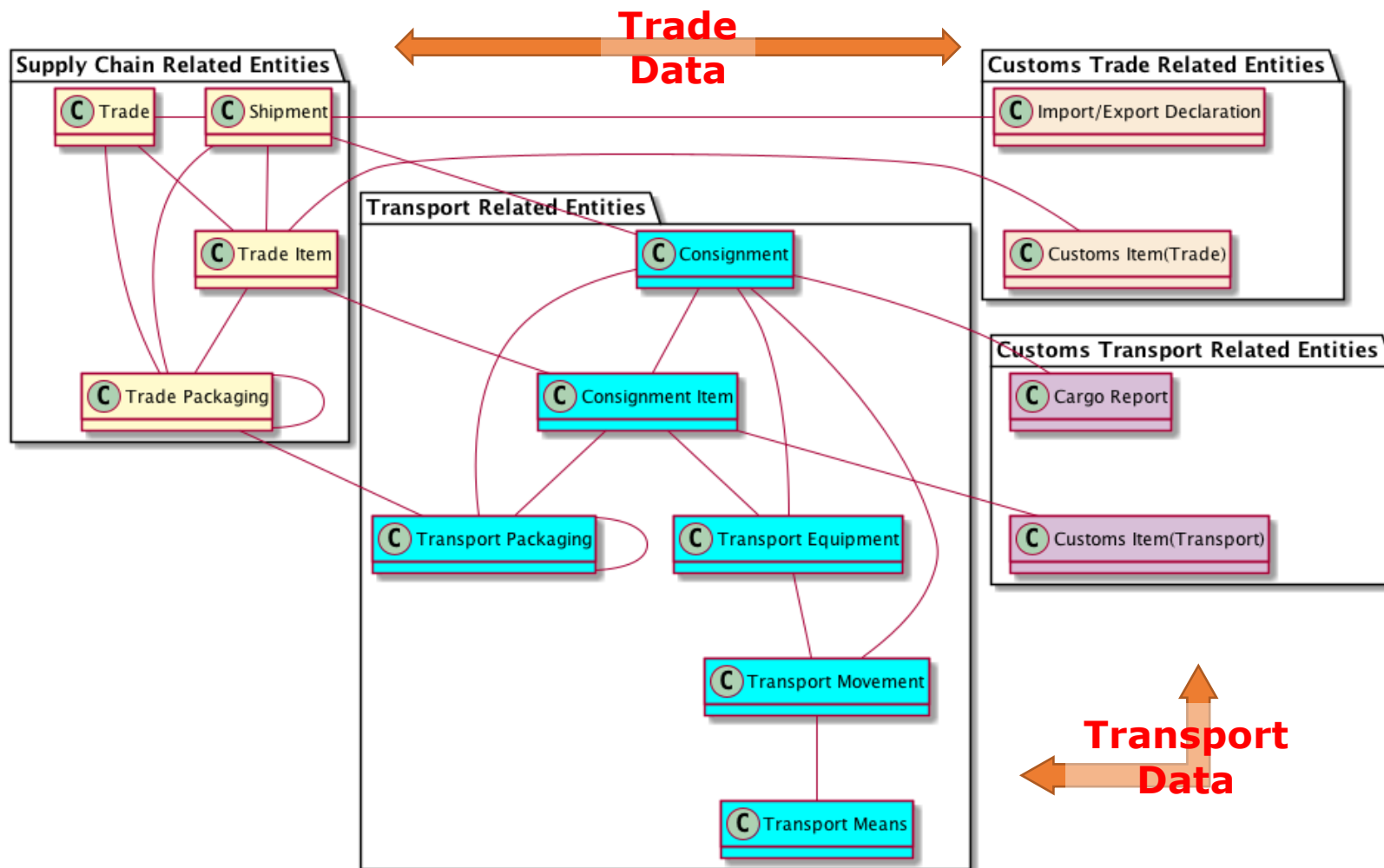
Shipment (Trade Delivery)

- 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

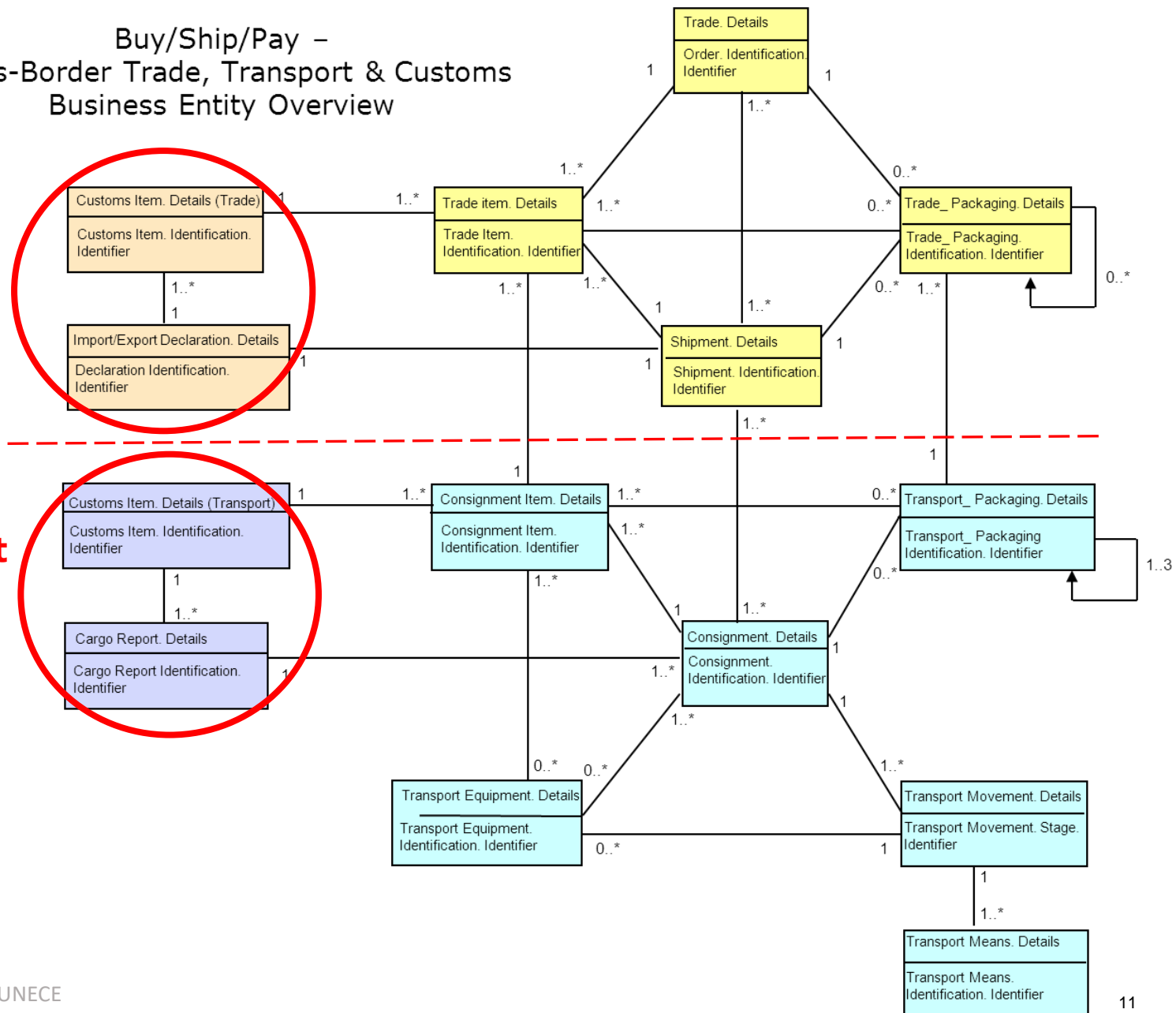
- A consignment is a separately identifiable collection of Consignment Items (available to be) transported from one Consignor to one Consignee via one or more modes of transport as specified in one single transport service contractual document:
 - A Consignment can only have one Transport Service Buyer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

High Level Business Entities and how they relate to each other



Buy/Ship/Pay Reference Data Model

Trade Data





RDM Data Exchange Structure Relationships

▼ C Buy Ship Pay Master ^{shr}

- > ● C Exchanged Document Context
- > ● C Exchanged Document
- > ● C Exchanged Declaration
- > ● C Logistics Transport Movement
- > ● C Supply Chain Consignment
- > ● C Logistics Transport Equipment
- > ● C Transport Service
- > ● C Trade Settlement Payment
- > ● C Supply Chain Trade Transaction
- > ● C Valuation Breakdown Statement
- > ● C Financing Request Document
- > ● C Financing Summary

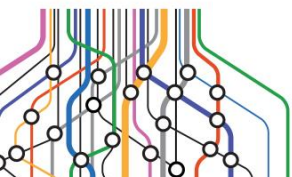
} Exchange Header

} Regulatory Header

} BUY

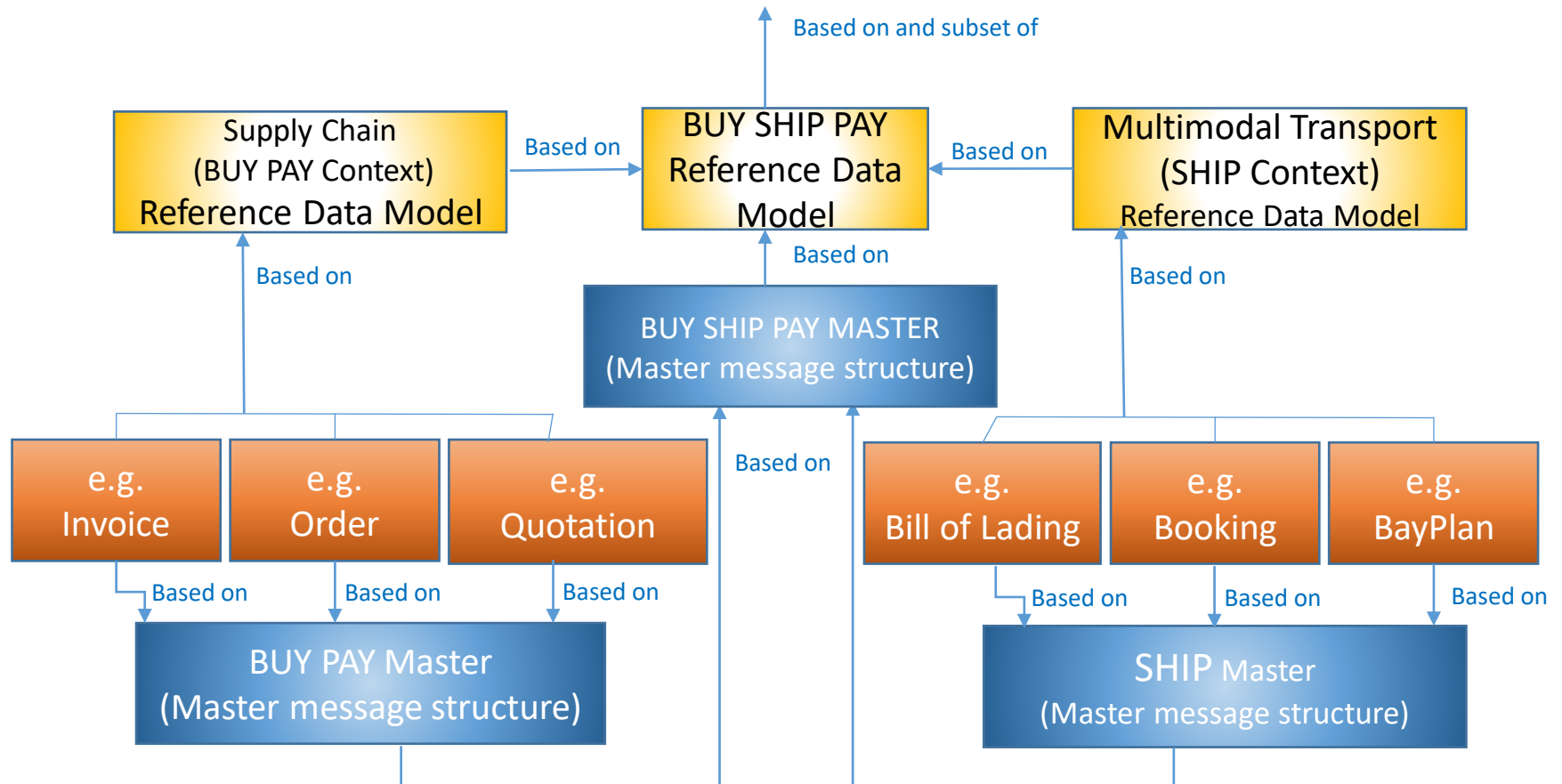
} SHIP

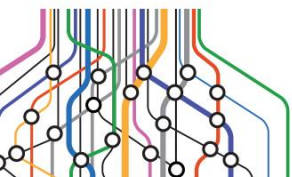
} PAY



Building semantic models using a common library

UN/CEFACT Core Component Library (CCL)





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

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



CBM RDM Project Objectives

- UN/CEFACT Reference Data Models (RDMs) provide a comprehensive subset of the UN/CCL and Code Lists.
- Many Agencies use data which originate in well established B2B data exchanges comprehensively modelled in the
 - Buy-Ship-Pay (BSP RDM) which is the top level;
 - Supply Chain Management (SC RDM);
 - Multimodal Transport (MMT RDM).

The CBM RDM will:

- **Link** the BSP RDM, SC RDM and MMT RDM with **existing customs standards** based on the developing (EUCDM) standard, built on base of components the UN Core Component Library (UN/CCL).
- **Create a subset of the BSP RDM** showing the shared aspects between the international supply chain and transport-logistics chains and the cross-border agency driven data models such as EUCDM

CBM RDM Project Deliverables and Status

3. Project deliverables and 4. Exit Criteria

Required (check all that apply)

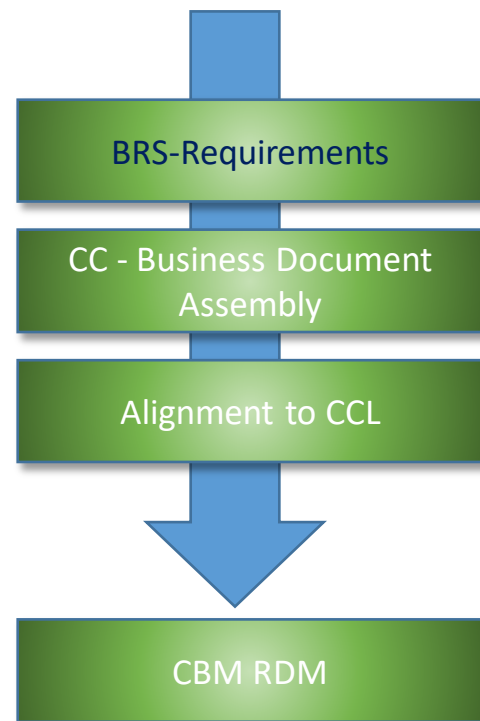
Please note that the Bureau may reassess and change a deliverable after its completion at its discretion.

	Project deliverables	Exit Criteria
<input type="checkbox"/>	Policy Recommendation	Public Review logs demonstrating all comments have been satisfactorily resolved;
<input checked="" type="checkbox"/>	Business Requirement Specification	Final document ready for publication.
<input type="checkbox"/>	Technical Specification	
<input type="checkbox"/>	White Paper	
<input type="checkbox"/>	Green Paper	
<input type="checkbox"/>	Requirement Specification Mapping	
<input checked="" type="checkbox"/>	Core Component Business Document Assembly	Final document ready for publication.
<input type="checkbox"/>	Guidelines	
<input type="checkbox"/>	Executive Guide	
<input type="checkbox"/>	Brochure	
<input checked="" type="checkbox"/>	Entries/alignment to the Core Component Library	
<input checked="" type="checkbox"/>	XML Schema	Final deliverable ready for publication.
<input type="checkbox"/>	UN/EDIFACT message	
<input type="checkbox"/>	Internal UN/CEFACT Document	Final document ready for Bureau approval.
<input checked="" type="checkbox"/>	Other (specify): a new RDM structure in the library	Final deliverable ready for publication.

11. Milestones (repeat for each deliverable, if different)

The following are draft milestones of the project.

	ODP Stage	Expected Completion Date
Yes	Project Inception	1 month
Yes / No	Requirements gathering	<input checked="" type="checkbox"/> 1 month <input type="checkbox"/> 3 months (Very quick)
Yes	Draft development	<input type="checkbox"/> 6 months (Quick) <input checked="" type="checkbox"/> 12 months (Normal) <input type="checkbox"/> 18 months (Normal) <input type="checkbox"/> 24 months (Long)
Yes / No	Public Draft Review	<input checked="" type="checkbox"/> 2 months
Yes	Project Exit	1 month





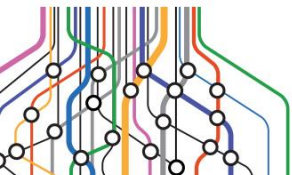
Please join the project

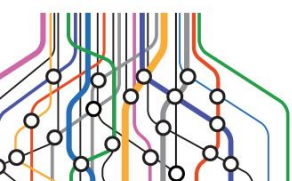
[This Photo](#) by Unknown Author is licensed under [CC BY-ND](#)

Site: <https://uncefact.unece.org/display/uncefactpublic/Cross-Border+>

[Management+Reference+Data+Model](#)

Project Leader: zpalaskas@gmail.com








DG TAXUD – EUCDM

- The EUCDM is the **data model** for Customs trans-European systems such as NCTS (new computerized transit system), AES (automated export system), ICS (Import Control System) and for Member States national systems.
- Aims to provide a technical instrument and **source of information** for the different IT systems that are used for data processing by customs in the EU.
- The backbone of the EUCDM is the **data provided by traders to customs authorities** by means of the different declarations and notifications
- Requirements of data and formats and codes are defined in Annex B of the UCC-DA and of the UCC-IA respectively.
 - DECLARATIONS, NOTIFICATIONS and PROOF OF THE CUSTOMS STATUS OF UNION GOODS
- Also EUCDM will be integrating data elements for the exchange of **data between customs authorities**, as well as those provided for in UCC-DA and UCC-IA Annex A.
 - APPLICATIONS and DECISIONS
- The EUCDM has a global importance and achieves this by mapping **to WCO to be fully compatible** and to link data elements in the WCO Data Model so to reliably and unambiguously relate Customs needs and Economic Operators data.







The EU Union Customs Code (UCC) and EUCDM

The Union Customs Code (UCC) entered into force on 1 May 2016 and is a key element of the ongoing actions to modernise EU customs.








- The Union Customs Code aims at a paperless and fully automated customs union.
- The EU Customs Data Model (EUCDM) implements **UCC Annex B and Annex A and Annex 12**

 UCC Legal Annex 12
 UCC Legal Annex 12 Explanation-Guide
 UCC Legal Annex 12 Explanation-Mapping
 UCC Legal Annex 12_Codes

**Common Data Requirements for
the Registration of Economic
Operators and other Persons**

 UCC Legal Annex A
 UCC Legal Annex A Column-Mapping
 UCC Legal Annex A Explanation-Guide
 UCC Legal Annex A Explanation-Mapping
 UCC Legal Annex A Guidance
 UCC Legal Annex A_Codes

**Common Data Requirements for
Applications and Decisions**

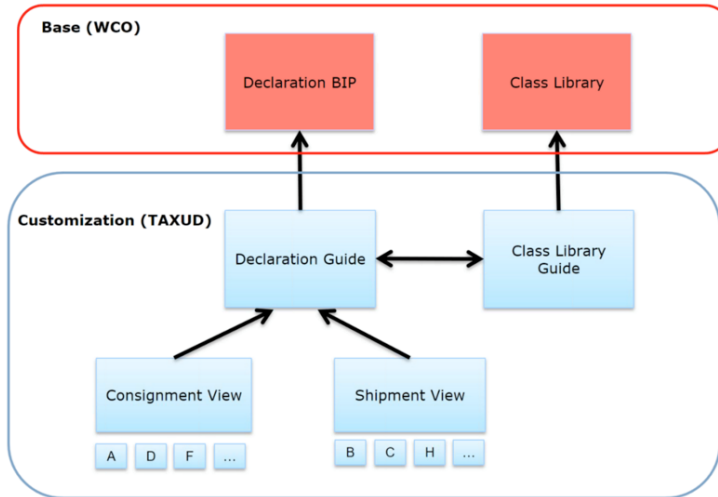
 UCC Legal Annex B
 UCC Legal Annex B Column-Mapping
 UCC Legal Annex B Explanation-Guide
 UCC Legal Annex B Explanation-Mapping
 UCC Legal Annex B Guidance
 UCC Legal Annex B Mapping
 UCC Legal Annex B_Codes

**Common Data Requirements for
Declarations, Notifications and Proof
of the Customs Status of Union Goods**

- EU Customs data model is published and can be downloaded as html or in GEFEG FX format

EUCDM analysis process and repository

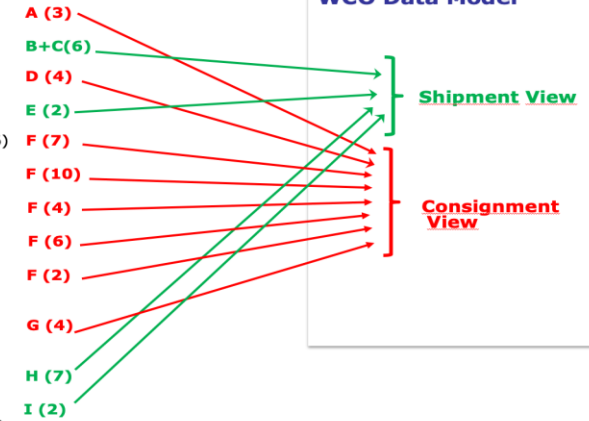
1



UCC Procedures (57)

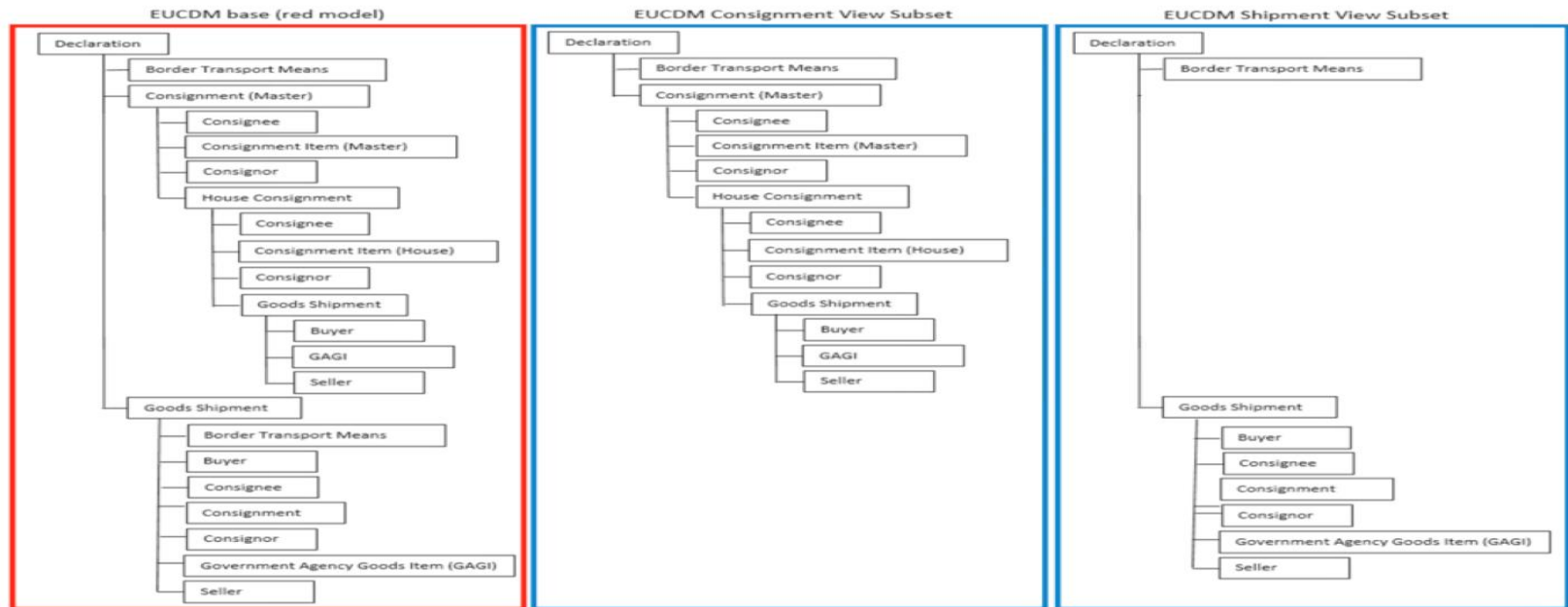
Exit
Export
Transit
Proof of Union Status of goods
Entry maritime transport (F10-F16)
Entry air transport (F20-F29)
Express consignments (F30-F33)
Postal traffic (F40-F45)
Road and Rail Traffic (F50-F51)
Arrival Notification, Presentation Notification, Temporary Storage
Import
Import (Simplified Declaration; Entry into the Declarant's Records)

WCO Data Model



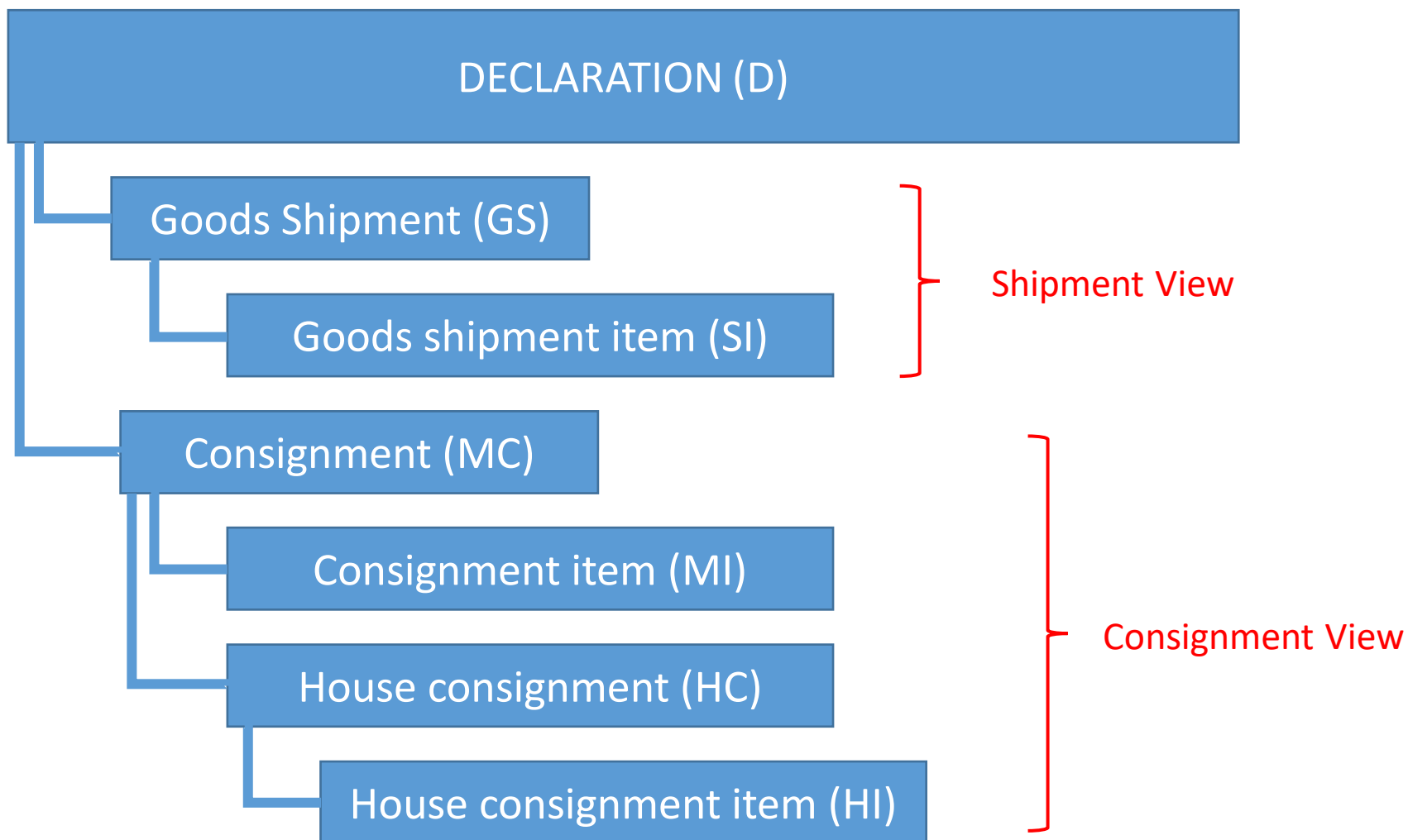
2

3





EUCDM 6.0 Data Modelling Levels





EUCDM (v6.0 draft) – UCC Annex B



EUCDM V6.0 Draft design

as of 2020-09-28

Information

About

Download

UCC Annex B

Source text

Data element view

Overview

Usage

Data set view

Structure

UCC Annex A

UCC Annex 12-01

UCC Annex 21 S1+S2

EEZ Receipt Declaration

Archive

Annex B

STRUCTURE

Transit Procedures

Select column

Annex B > Data set view > Structure > D1

Annex B D1

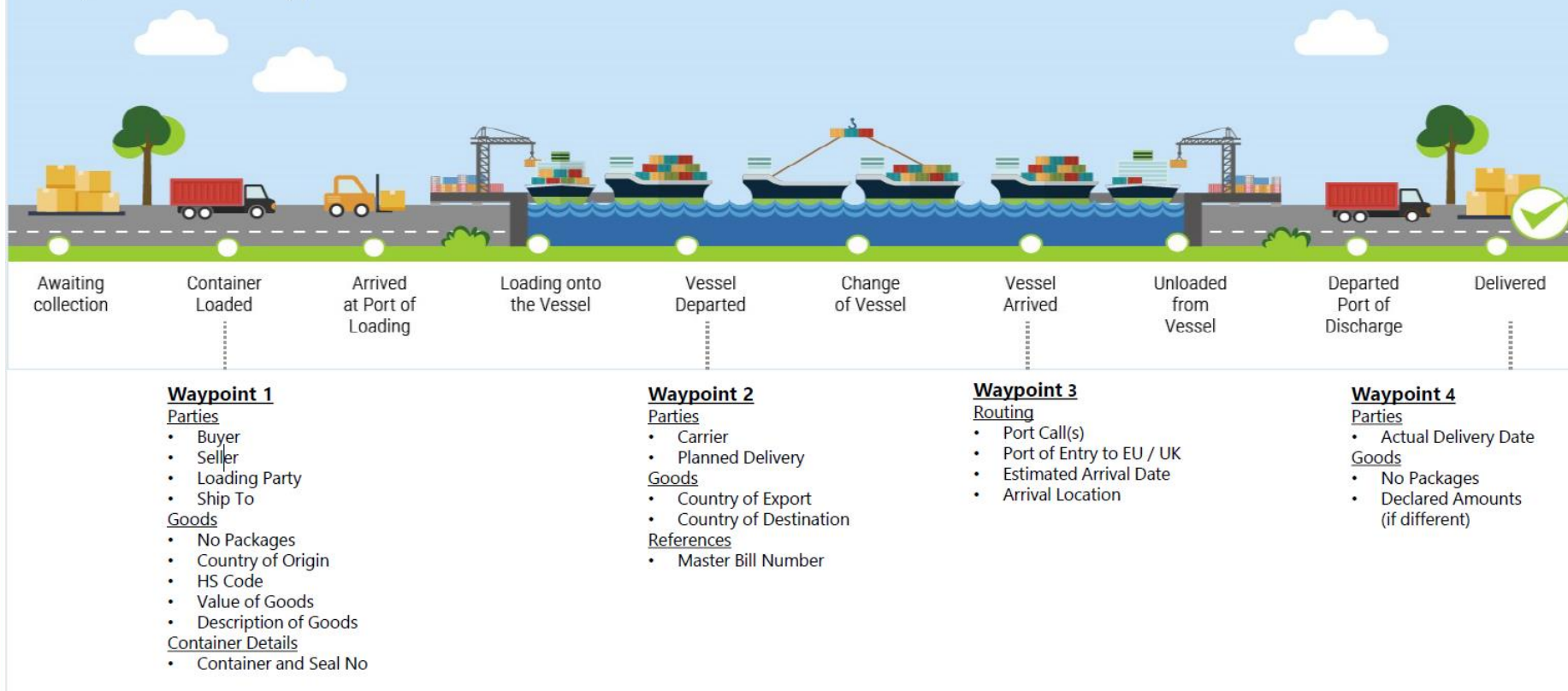
Special procedure — transit declaration

Articles 5(12), 162, 210, 226 and 227 of the Code

Name	Format	Ref ID6	Ref ID5	Ref XML Name	WCO Name	WCO XML Tag
LRN	an..22	12 09 001 000		LRN	Declaration	
Additional declaration type	a1	11 02 001 000	1/2	AdditionalDeclarationType	Functional reference number	FunctionalReferenceID
Representative		13 06 000 000	3/19	representative	Document name, coded	TypeCode
Identification number	an..17	13 06 017 000	3/20	representativeIdentificationNumber	Agent	
Status	n1	13 06 030 000	3/21	representativeStatus	Agent, coded	ID
Active border transport means		19 08 000 000	7/14	activebordertransportmeans	Agent status, coded	FunctionCode
Identification number	an..35	19 08 017 000		activebordertransportmeansIdentificationNumber	Border/TransportMeans	
Type of identification	n2	19 08 061 000		activebordertransportmeansTypeofIdentification	Identification of means of transport crossing the border, coded	ID
Nationality	a2	19 08 062 000	7/15	activebordertransportmeansNationality	Type of identification of means of transport crossing the border, coded	IdentificationTypeCode
Mode of transport at the border	n1	19 03 001 000	7/4	modeoftransportattheborder	Nationality of means of transport crossing the border, coded	RegistrationNationalityCode
Container indicator		19 01 000 000	7/2	containerindicator	Mode of transport crossing the border, coded	ModeCode
Container indicator	n1	19 01 001 000		ContainerIndicator	Master Consignment	
Supporting document		12 03 000 000	2/3	supportingdocument	Container transport code	ContainerCode
Reference number	an..70	12 03 001 000		supportingdocumentReferenceNumber	Additional Document	
Type	an4	12 03 002 000		supportingdocumentType	Additional document reference number	ID
Additional information		12 02 000 000	2/2	additionalinformation	Additional document type, coded	TypeCode
Code	an5	12 02 008 000		additionalinformationCode	Additional information	
Text	an..512	12 02 009 000		additionalinformationText	Additional statement code	StatementCode
Additional supply chain actor		13 14 000 000	3/37	additionalsupplychainactor	Additional statement text	StatementDescription
Identification number	an..17	13 14 017 000		additionalsupplychainactorIdentificationNumber	AEO Mutual Recognition Party	
Role	a..3	13 14 031 000		additionalsupplychainactorRole	AEO mutual recognition party, coded	ID
Supporting document		12 03 000 000	2/3	supportingdocument	Role code	RoleCode
Inland mode of transport	n1	19 04 001 000	7/5	inlandmodeoftransport	Arrival/TransportMeans	
Consignee		13 03 000 000	3/9	consignee	Mode of transport at arrival, coded	ModeCode
Name	an..70	13 03 016 000		consigneeName	Consignee	
Identification number	an..17	13 03 017 000	3/10	consigneeIdentificationNumber	Consignee name	Name
Address		13 03 018 000		consigneeAddress	Consignee, coded	ID
City	an..35	13 03 018 022		consigneeAddressCity	Address	
Country	a2	13 03 018 020		consigneeAddressCountry	City name	City
Street and number	an..70	13 03 018 019		consigneeAddressStreetandnumber	Country, coded	CountryCode
Postcode	an..17	13 03 018 021		consigneeAddressPostcode	Street and number/P.O. Box	Line
Consignor		13 02 000 000	3/7	consignor	Postcode identification	PostcodeID
Name	an..70	13 02 016 000		consignorName	Consignor	
Identification number	an..17	13 02 017 000	3/8	consignorIdentificationNumber	Consignor - name	Name
Address		13 02 018 000		consignorAddress	Consignor, coded	ID
City	an..35	13 02 018 022		consignorAddressCity	Address	
Country	a2	13 02 018 020		consignorAddressCountry	City name	City
Street and number	an..70	13 02 018 019		consignorAddressStreetandnumber	Country, coded	CountryCode
Postcode	an..17	13 02 018 021		consignorAddressPostcode	Street and number/P.O. Box	Line
Communication		13 02 029 000		consignorCommunication	Postcode identification	PostcodeID
Identifier	an..512	13 02 029 015		consignorCommunicationIdentifier	Communication	
				consignorCommunicationIdentifier	Communication number	ID

Pipeline Data Exchange Standard (PDES) Project

Sample movement waypoints

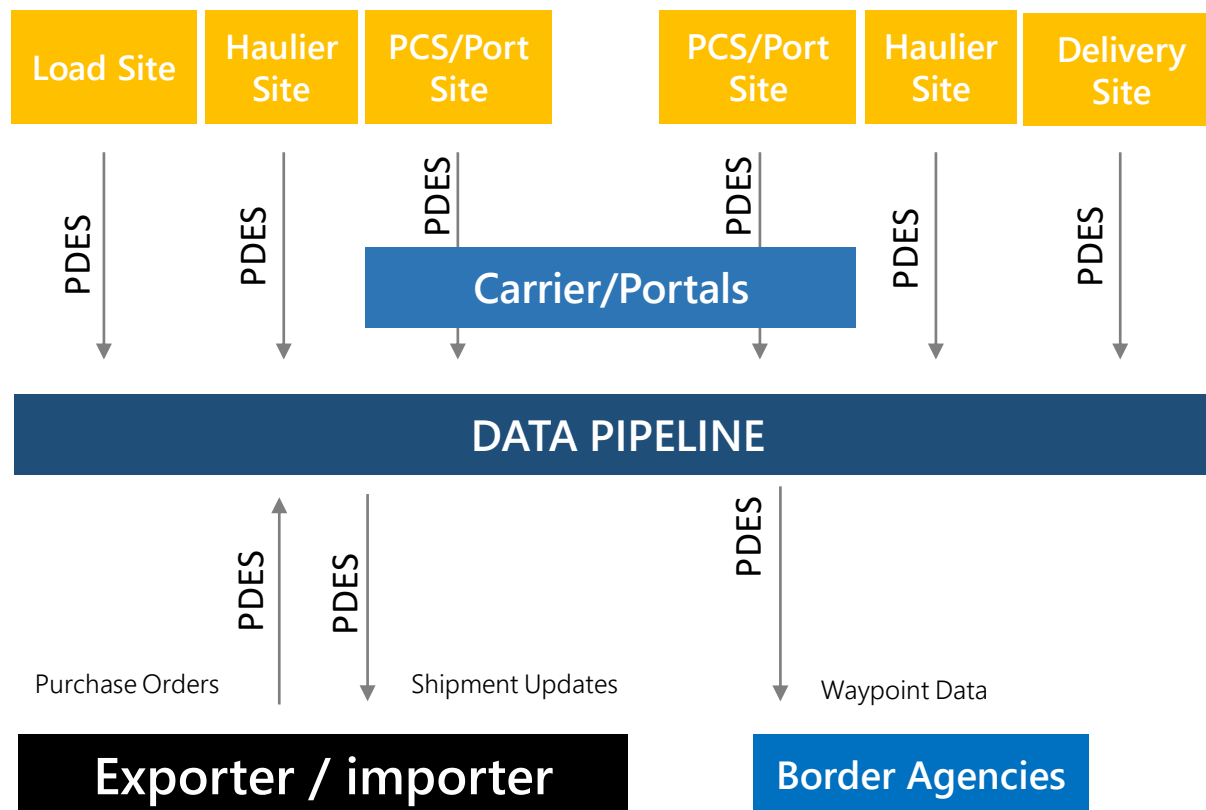


UN/CEFACT PDES Business Standard:

- Published 2019 as subset of Multimodal Transport Reference Data Model (MMT)
- Fully aligned with the EUCDM subset of the WCO DM
- Developed in tandem via EU CORE and EU SELIS Commission supported projects

UN/CEFACT Data Pipeline Exchange Standard (PDES)

Data from
the source
of truth



Principle:

Right data from the **Right** person at the **Right** time



Trade Example: UN/CEFACT Cross Industry Invoice (CII)

BUY SHIP PAY (BSP)

*Semantic model
subset of UN/CCL*

Part of

SEMANTIC MODEL
Supply Chain (BUY PAY)
(subset of BSP)

BUY SHIP PAY

Master message structure

Part of

Supply Chain (BUY PAY)
Master message structure

BUY PAY

*Exchange Syntax-neutral business data
exchange structure*

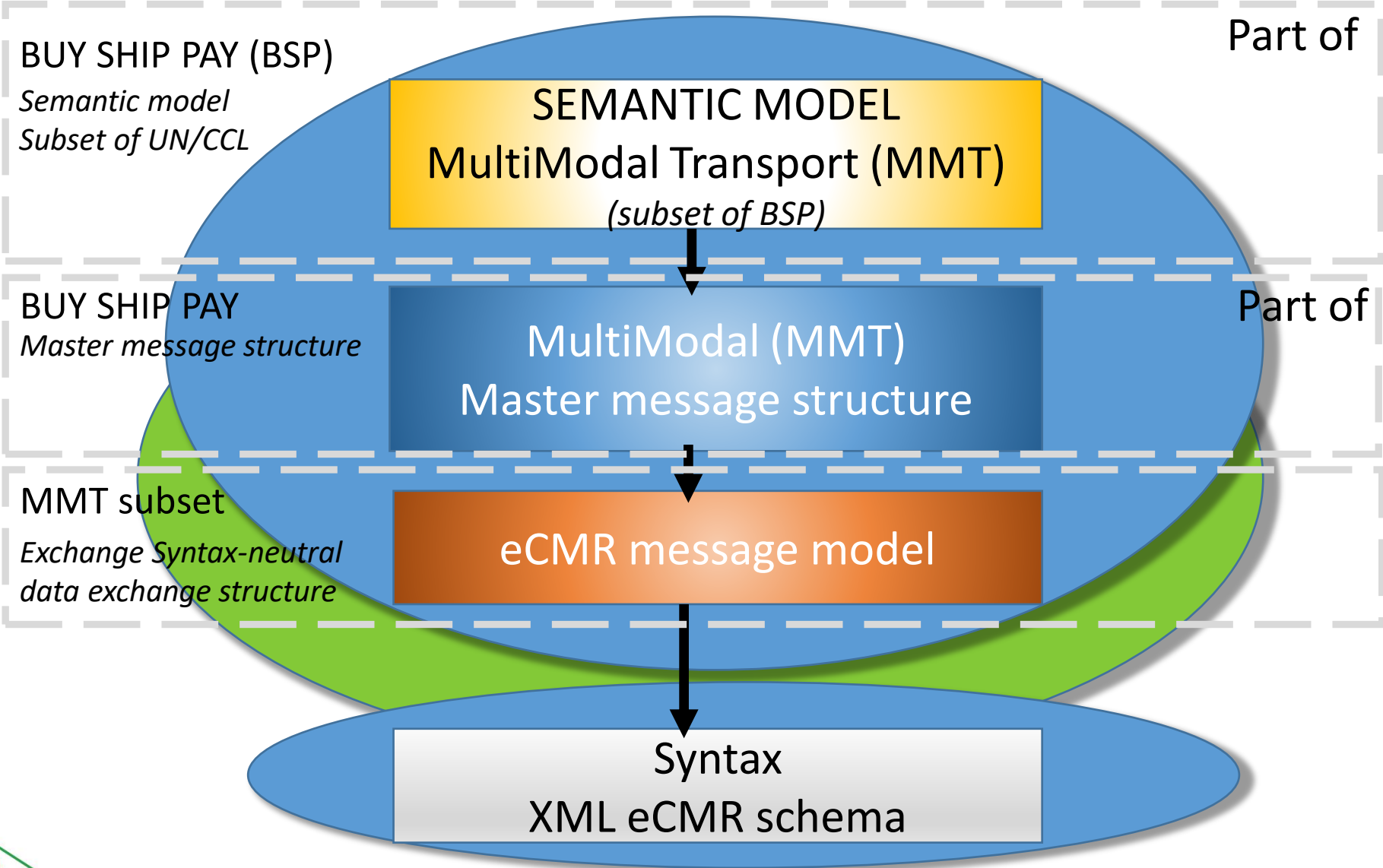
Invoice message model

Syntax

XML Invoice schema

CII
European Invoice
Mandatory Syntax
Implementation

Transport Example: UN/CEFACT electronic Road Consignment Note (eCMR)





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/ and tfig.unece.org
- All experts are welcome to join the standards development work free of charge

UN/CEFACT Secretariat

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