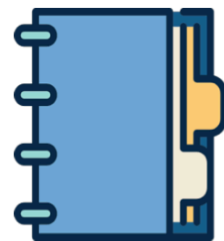


ZISIS PALASKAS

UN/CEFACT CBM RDM PROJECT LEADER

Part 1

Introduction to the
UN/CEFACT Cross-
Border Management
Reference Data Model
(CBM RDM) project



Agenda

CBM RDM and
related EU
Research projects

Part 2

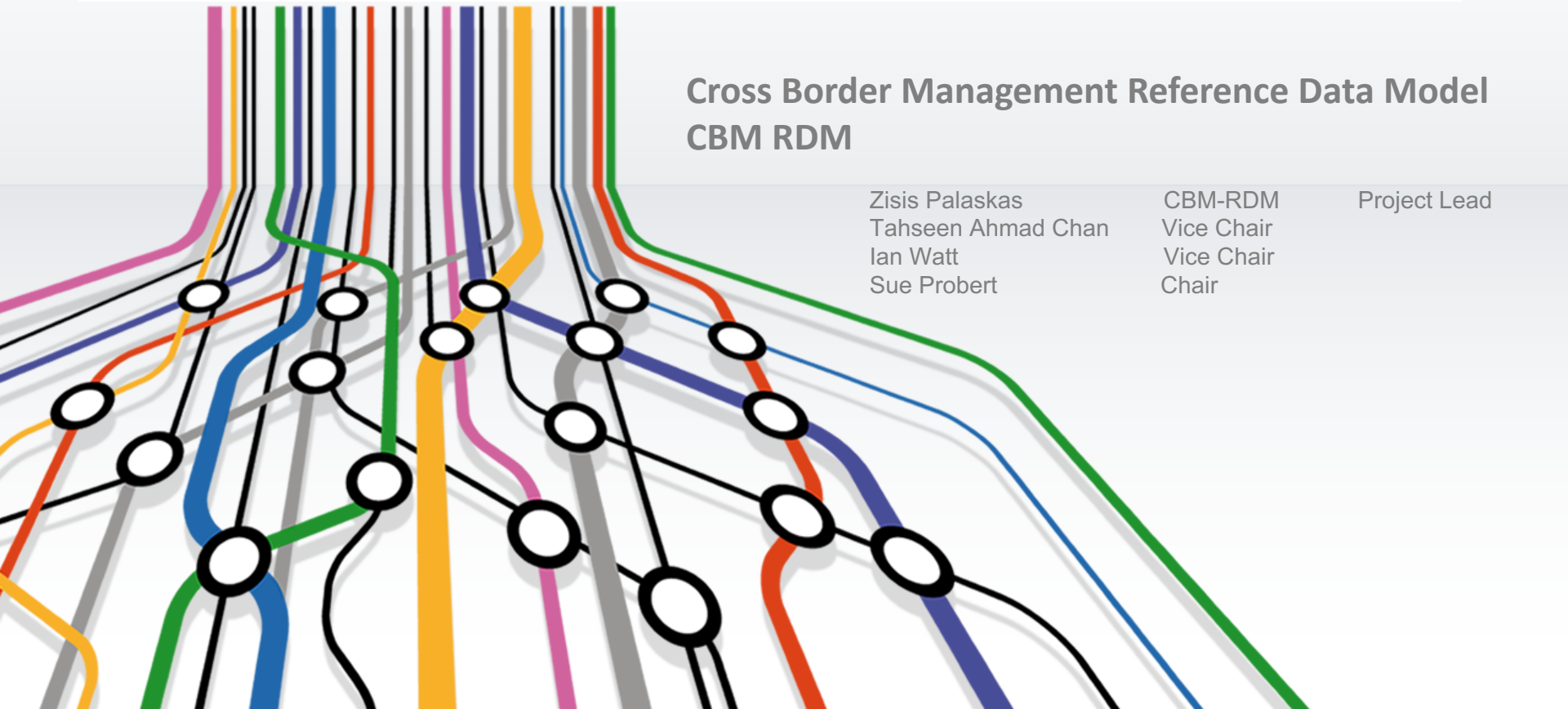
UN/CEFACT CBM RDM: CROSS-BORDER MANAGEMENT Reference Data Model

Cross Border Management Reference Data Model CBM RDM

Zisis Palaskas
Tahseen Ahmad Chan
Ian Watt
Sue Probert

CBM-RDM
Vice Chair
Vice Chair
Chair

Project Lead



CBM RDM Project Purpose

Purpose

Provide a Regulatory Reference Data Model within the UN/CEFACT semantic library to:

- Assist authorities to link this information to the standards of other organizations.
- Complement harmoniously the existing RDMs for trade and transport.



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

CBM-RDM Objectives

Purpose

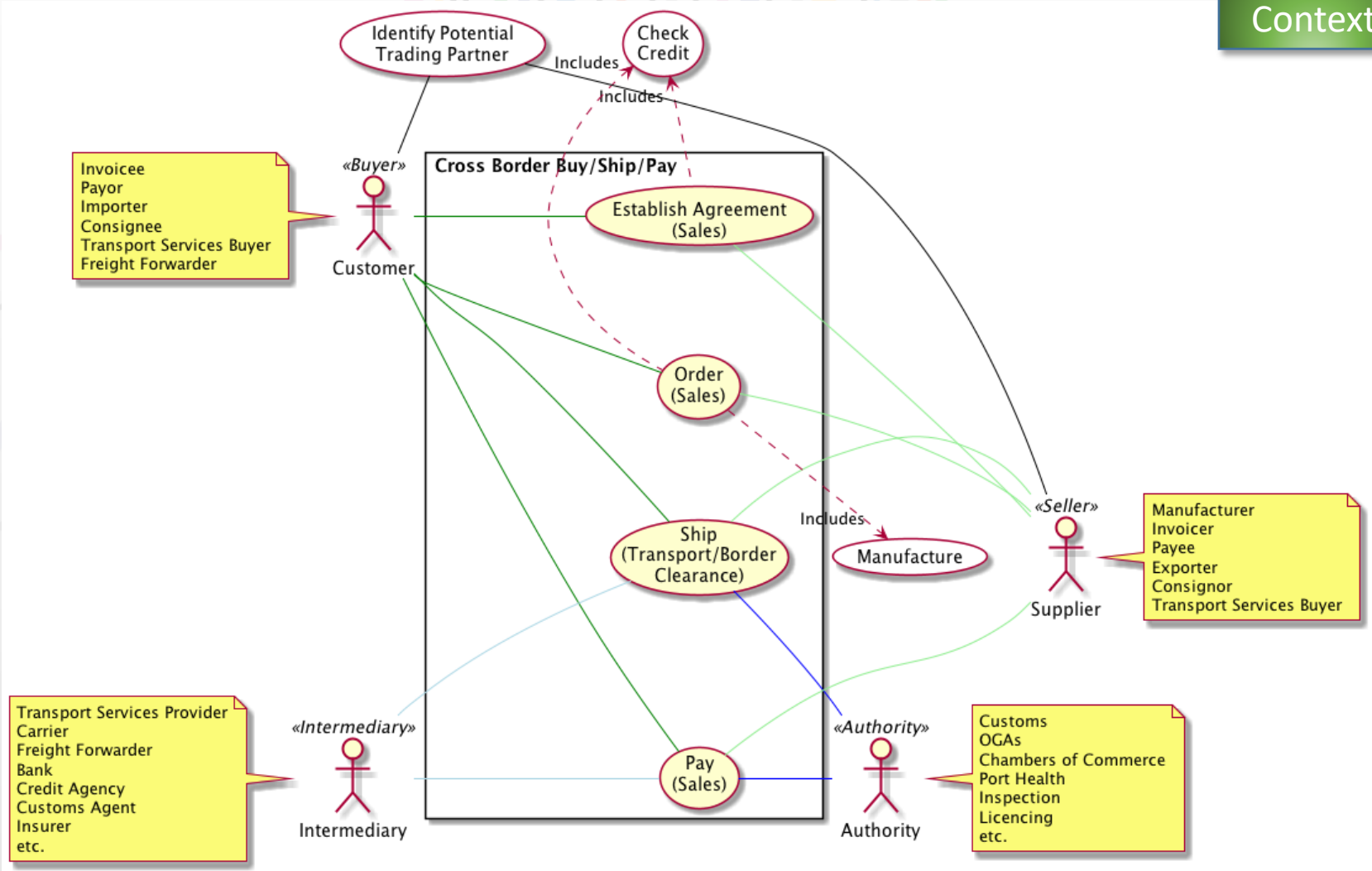
- UN/CEFACT Reference Data Models (RDMs) provide a comprehensive subset of the UN/CCL and Code Lists.
- Many Agencies use data which originate in well established
 - Buy-Ship-Pay (BSP) which is the top level;
 - Supply Chain Management (SCRDM);
 - Multimodal Transport (MMT RDM).

The CBM RDM will:

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

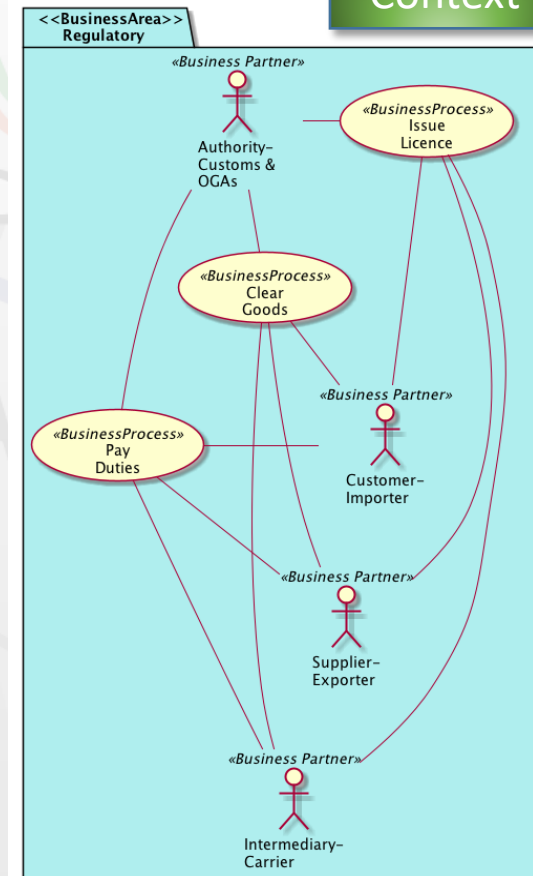
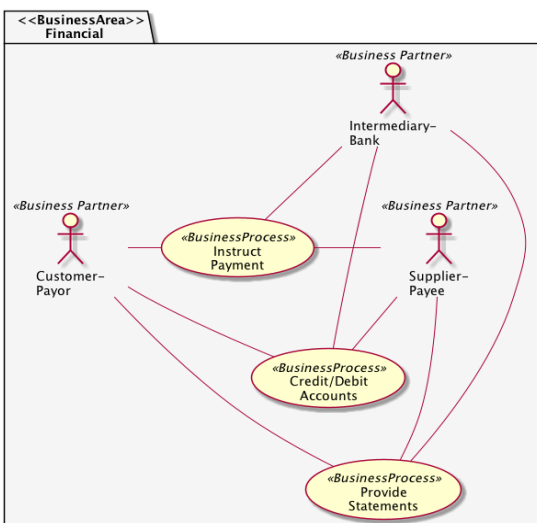
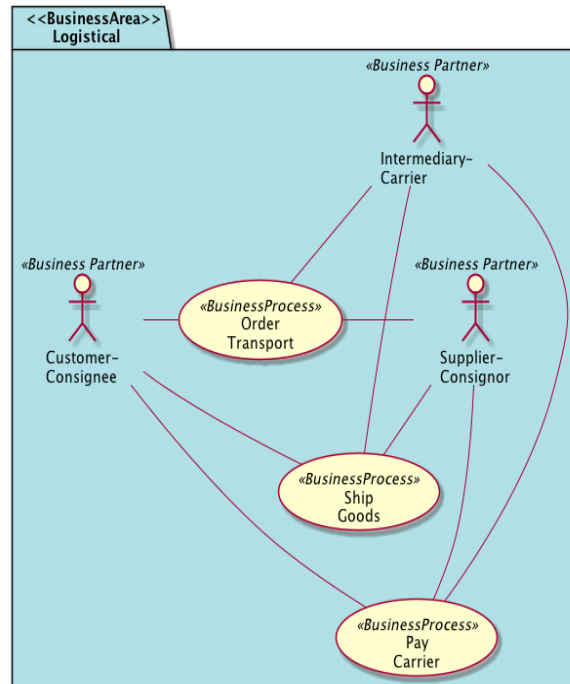
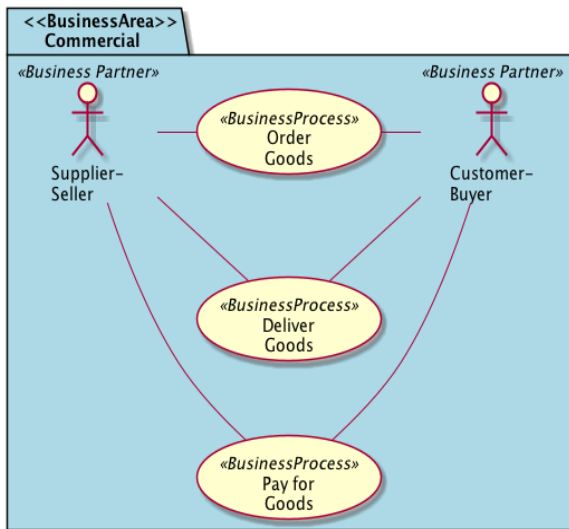
ISCRM model: Basis of RDMs

Context



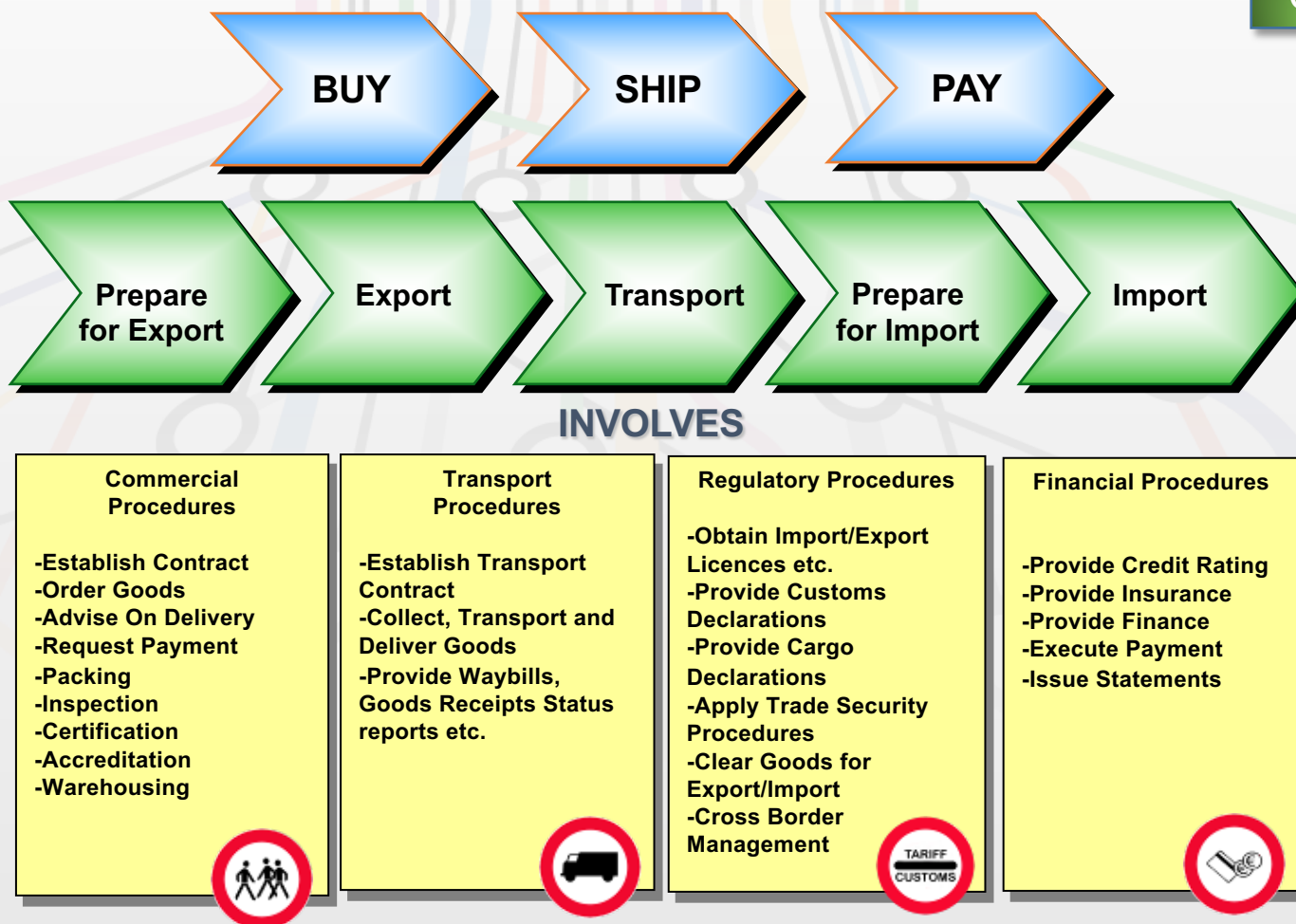
UN/CEFACT BSP model and the ISC procedures

Context



UN/CEFACT International Supply Chain Process Model

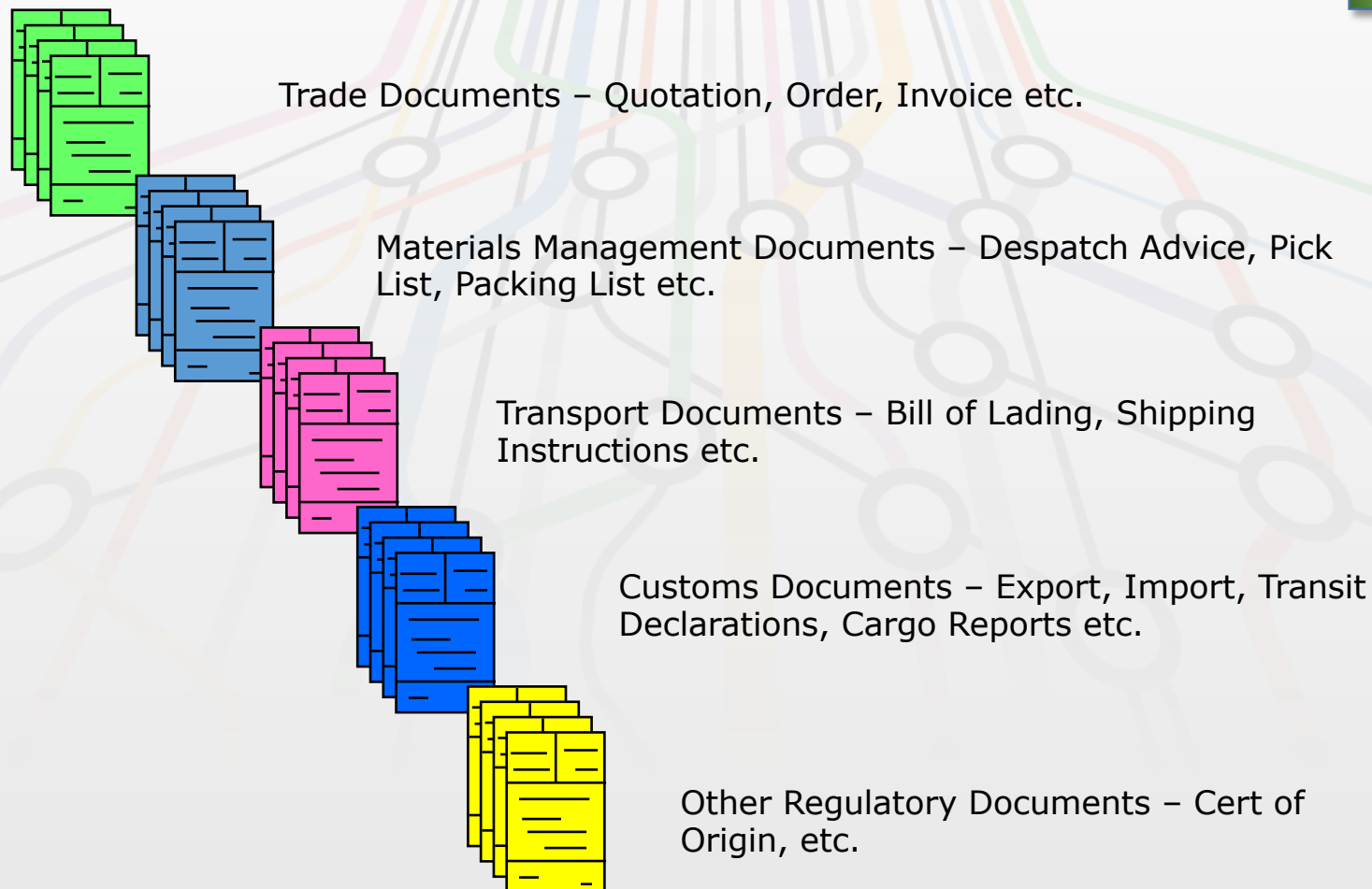
Context



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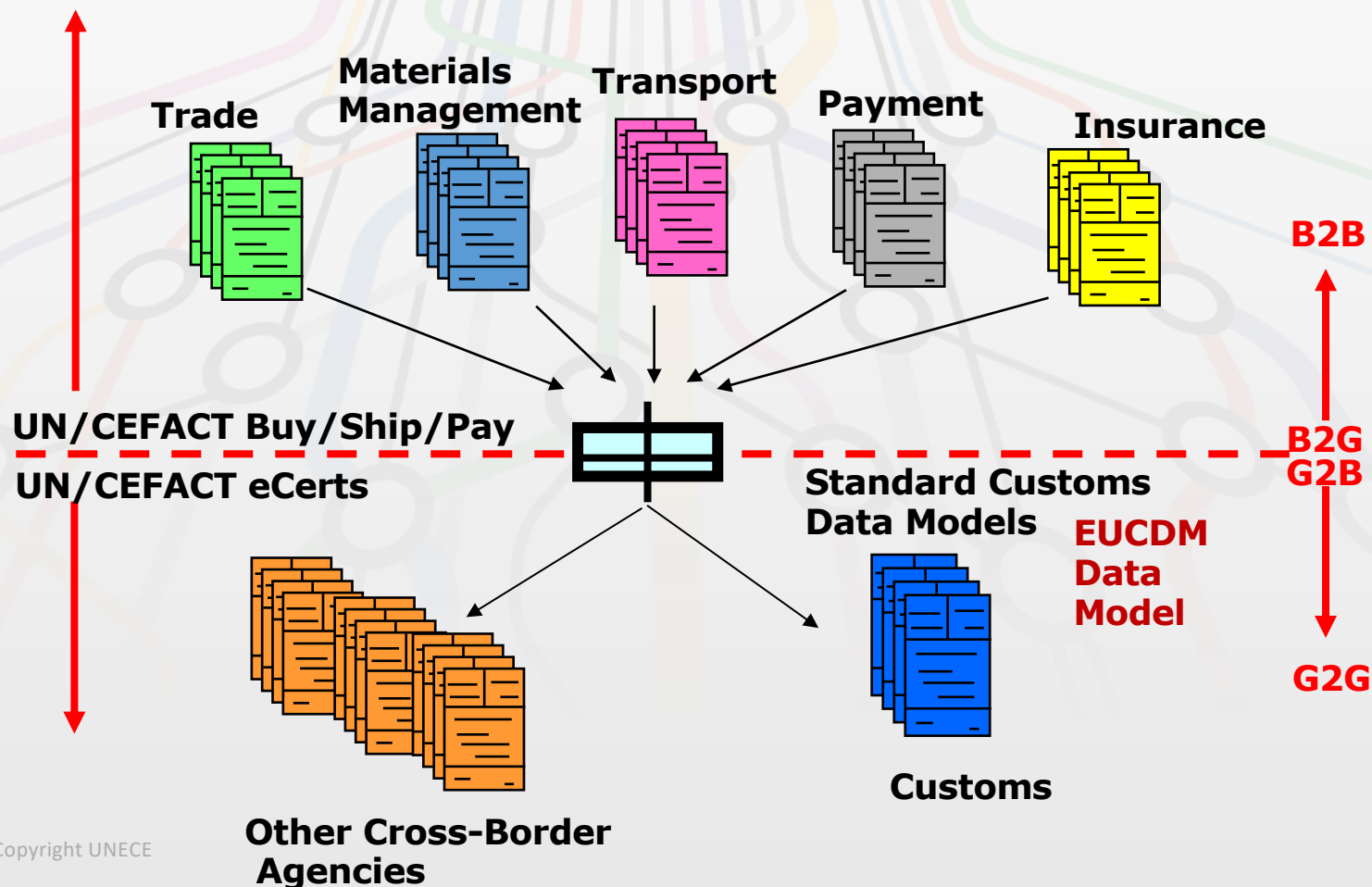
International Supply Chain B2B Data Exchange Families

Context



Document Families - Border Management Challenges

Context



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DG TAXUD – EUCDM




Context

- 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 UCC and EUCDM

The Union Customs Code (UCC) The 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

-  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

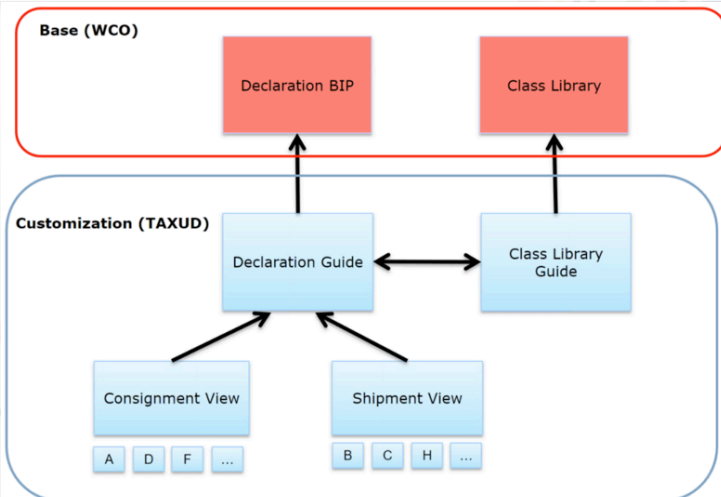
-  UCC Legal Annex B
-  UCC Legal Annex B Column-Mapping
-  UCC Legal Annex B Explanation-Guide
-  UCC Legal Annex B Explanation-Mapping
-  UCC Legal Annex B Guidance
-  UCC Legal Annex B Mapping
-  UCC Legal Annex B_Codes

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

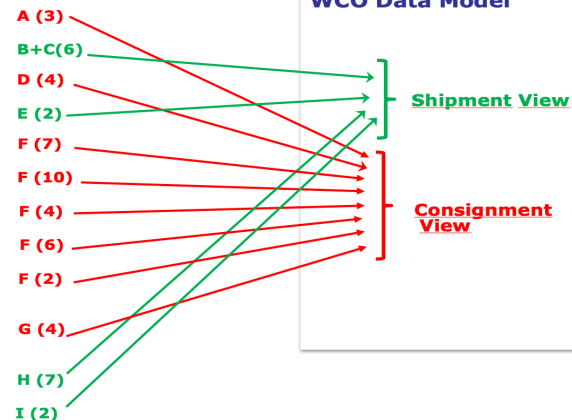
1



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)

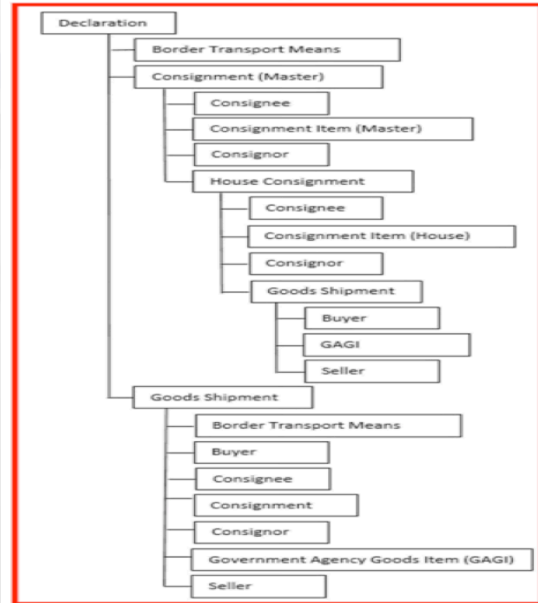
WCO Data Model



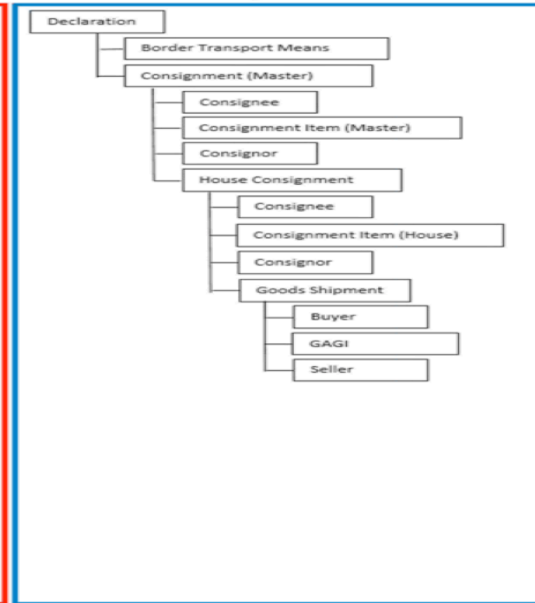
2

3

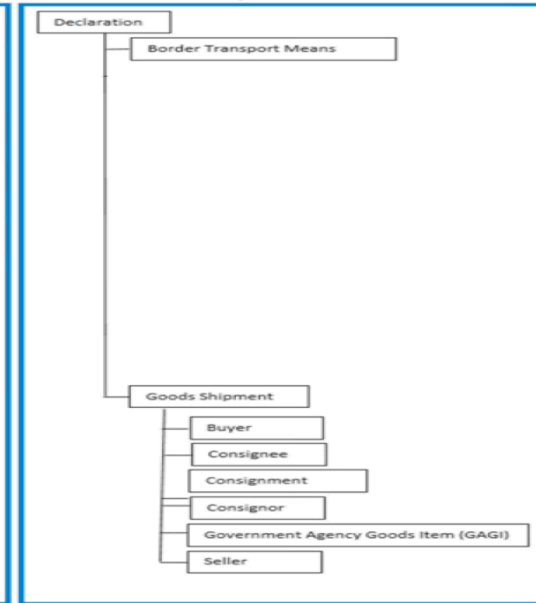
EUCDM base (red model)



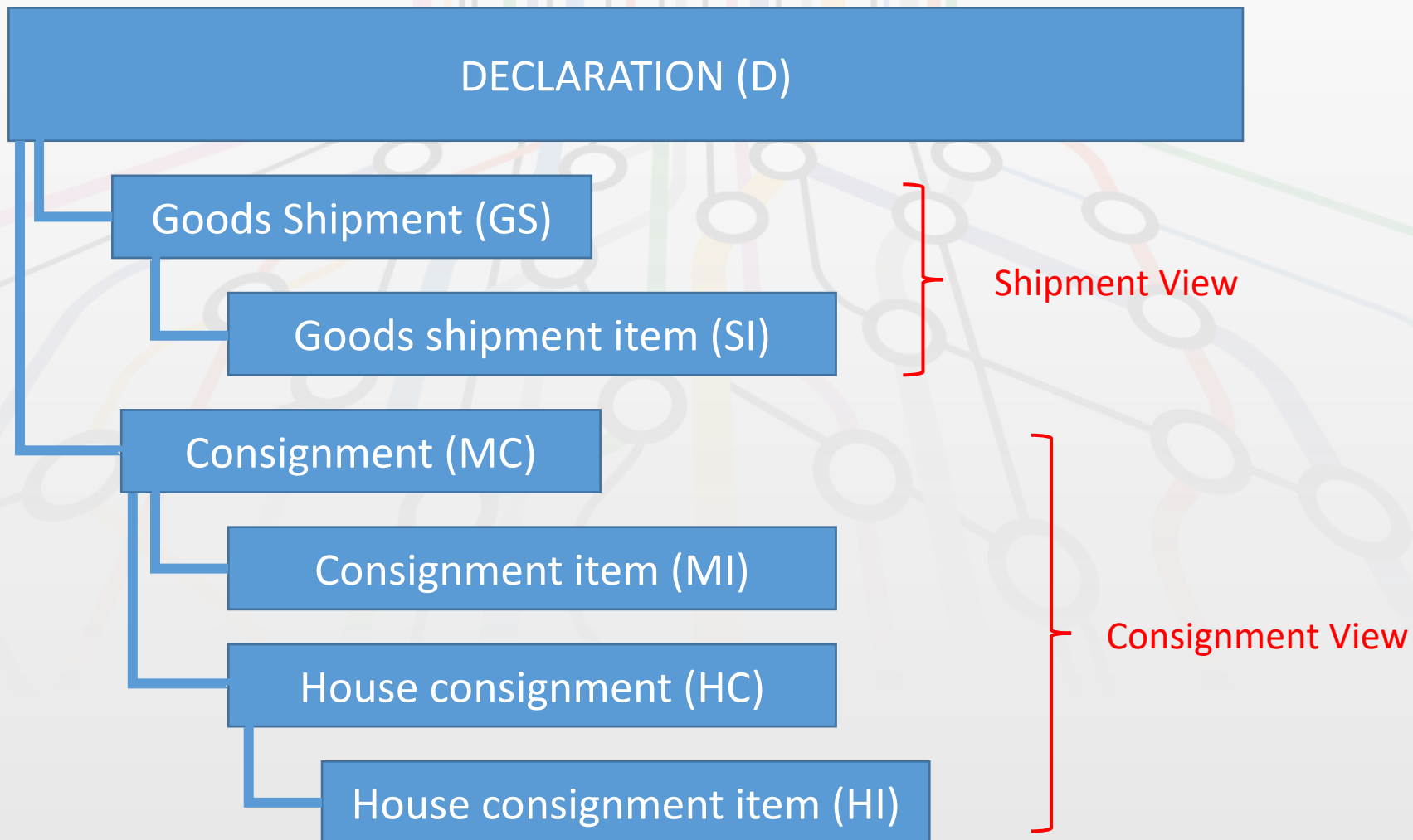
EUCDM Consignment View Subset



EUCDM Shipment View Subset



EUCDM 6.0 modelling



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EUCDM mappings

EUCDM v5.2	EU Customs Data Model (EUCDM) T...	svn.taxud.gefeg.com
EUCDM v5.2		
Introduction		
> Changes		
UCC Annex B		
> Source text		
> Guidance		
> Data element view		
> Data set view		
Structure		
Mapping		
Usage		
UCC Annex A		
> Source text		
> Guidance		
> Data element view		
> Data set view		
UCC Annex 12-01		
> Source text		
> Data element view		
UCC Annex 21 S1+S2		
> Source text		
> Data element view		
> Data set view		
EEZ Receipt Declaration		
> Source text		
> Data element view		
> Data set view		
Archive		
> as of EUCDM 3.0		
Future EUCDM		
> EUCDM 6.0 PoC		
3/9 Consignee street and number	3/9 Consignee street and number	239 <i>Path:</i> Declaration/Consignment/ConsignmentItem/Consignee/Address/line Street and number/P.O. Box <i>Path:</i> Declaration/Consignment/HouseConsignment/ConsignmentItem/Consignee/Address/line
3/9 Consignee street and number	3/9 Consignee street and number	239 Street and number/P.O. Box <i>Path:</i> Declaration/Consignment/Consignee/Address/line
3/9 Consignee street and number	3/9 Consignee street and number	239 Street and number/P.O. Box <i>Path:</i> Declaration/Consignment/HouseConsignment/Consignee/Address/line
3/9 Consignee country code	3/9 Consignee country code	242 Country, coded <i>Path:</i> Declaration/Consignment/ConsignmentItem/Consignee/Address/country
3/9 Consignee country code	3/9 Consignee country code	242 Country, coded <i>Path:</i> Declaration/Consignment/HouseConsignment/ConsignmentItem/Consignee/Address/country
3/9 Consignee country code	3/9 Consignee country code	242 Country, coded <i>Path:</i> Declaration/Consignment/Consignee/Address/country
3/9 Consignee country code	3/9 Consignee country code	242 Country, coded <i>Path:</i> Declaration/Consignment/HouseConsignment/Consignee/Address/country
3/9 Consignee postcode	3/9 Consignee postcode	245 Postcode identification <i>Path:</i> Declaration/Consignment/ConsignmentItem/Consignee/Address/postcode
3/9 Consignee postcode	3/9 Consignee postcode	245 Postcode identification <i>Path:</i> Declaration/Consignment/HouseConsignment/ConsignmentItem/Consignee/Address/postcode
3/9 Consignee postcode	3/9 Consignee postcode	245 Postcode identification <i>Path:</i> Declaration/Consignment/Consignee/Address/postcode
3/9 Consignee postcode	3/9 Consignee postcode	245 Postcode identification <i>Path:</i> Declaration/Consignment/HouseConsignment/Consignee/Address/postcode
3/9 Consignee city	3/9 Consignee city	241 City name <i>Path:</i> Declaration/Consignment/ConsignmentItem/Consignee/Address/cityName
3/9 Consignee city	3/9 Consignee city	241 City name <i>Path:</i> Declaration/Consignment/HouseConsignment/ConsignmentItem/Consignee/Address/cityName
3/9 Consignee city	3/9 Consignee city	241 City name <i>Path:</i> Declaration/Consignment/Consignee/Address/cityName
3/9 Consignee city	3/9 Consignee city	241 City name <i>Path:</i> Declaration/Consignment/HouseConsignment/Consignee/Address/cityName
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3/10 Consignee identification No.	3/10 Consignee identification No.	R015 Consignee, coded <i>Path:</i> Declaration/Consignment/HouseConsignment/ConsignmentItem/Consignee/identification
3/10 Consignee identification No.	3/10 Consignee identification No.	R015 Consignee, coded <i>Path:</i> Declaration/Consignment/Consignee/identification
3/10 Consignee identification No.	3/10 Consignee identification No.	R015 Consignee, coded <i>Path:</i> Declaration/Consignment/HouseConsignment/Consignee/identification
3/18 Declarant identification No.	3/18 Declarant identification No.	R123 Declarant, coded <i>Path:</i> Declaration/Declarant/identification
3/20 Representative identification No.	3/20 Representative identification No.	R004 Agent, coded <i>Path:</i> Declaration/Agent/identification
3/21 Representative status code	3/21 Representative status code	102 Agent status, coded <i>Path:</i> Declaration/Agent/function
3/31 Carrier name	3/31 Carrier name	R011 Carrier - name <i>Path:</i> Declaration/Consignment/Carrier/name
3/31 Carrier street and number	3/31 Carrier street and number	239 Street and number/P.O. Box <i>Path:</i> Declaration/Consignment/Carrier/Address/line
3/31 Carrier country code	3/31 Carrier country code	242 Country, coded <i>Path:</i> Declaration/Consignment/Carrier/Address/country
3/31 Carrier postcode	3/31 Carrier postcode	245 Postcode identification <i>Path:</i> Declaration/Consignment/Carrier/Address/postcode
3/31 Carrier city	3/31 Carrier city	241 City name <i>Path:</i> Declaration/Consignment/Carrier/Address/cityName
3/31 Carrier phone number	3/31 Carrier phone number	240 Communication number <i>Path:</i> Declaration/Consignment/Carrier/Communication/identification
3/31 Carrier phone number	3/31 Carrier phone number	253 Communication number type <i>Path:</i> Declaration/Consignment/Carrier/Communication/type
3/32 Carrier identification No.	3/32 Carrier identification No.	R012 Carrier identification <i>Path:</i> Declaration/Consignment/Carrier/identification
3/37 Additional supply chain actor(s) role code	3/37 Additional supply chain actor(s) role code	R005 Role code <i>Path:</i> Declaration/Consignment/ConsignmentItem/AEOMutualRecognitionParty/role
3/37 Additional supply chain actor(s) role code	3/37 Additional supply chain actor(s) role code	R005 Role code <i>Path:</i> Declaration/Consignment/AEOMutualRecognitionParty/role
3/37 Additional supply chain actor(s) role code	3/37 Additional supply chain actor(s) role code	R005 Role code <i>Path:</i> Declaration/Consignment/HouseConsignment/AEOMutualRecognitionParty/role
3/37 Additional supply chain actor(s) role code	3/37 Additional supply chain actor(s) role code	R005 Role code <i>Path:</i> Declaration/Consignment/HouseConsignment/ConsignmentItem/AEOMutualRecognitionParty/role
3/37 Additional supply chain actor(s) identification no.	3/37 Additional supply chain actor(s) identification no.	R143 AEO mutual recognition party, coded <i>Path:</i> Declaration/Consignment/ConsignmentItem/AEOMutualRecognitionParty/identification
3/37 Additional supply chain actor(s) identification no.	3/37 Additional supply chain actor(s) identification no.	R143 AEO mutual recognition party, coded <i>Path:</i> Declaration/Consignment/HouseConsignment/ConsignmentItem/AEOMutualRecognitionParty/identification
3/37 Additional supply chain actor(s) identification no.	3/37 Additional supply chain actor(s) identification no.	R143 AEO mutual recognition party, coded <i>Path:</i> Declaration/Consignment/AEOMutualRecognitionParty/identification
3/37 Additional supply chain actor(s) identification no.	3/37 Additional supply chain actor(s) identification no.	R143 AEO mutual recognition party, coded <i>Path:</i> Declaration/Consignment/HouseConsignment/AEOMutualRecognitionParty/identification

EUCDM (v6.0 draft) – UCC Annex B

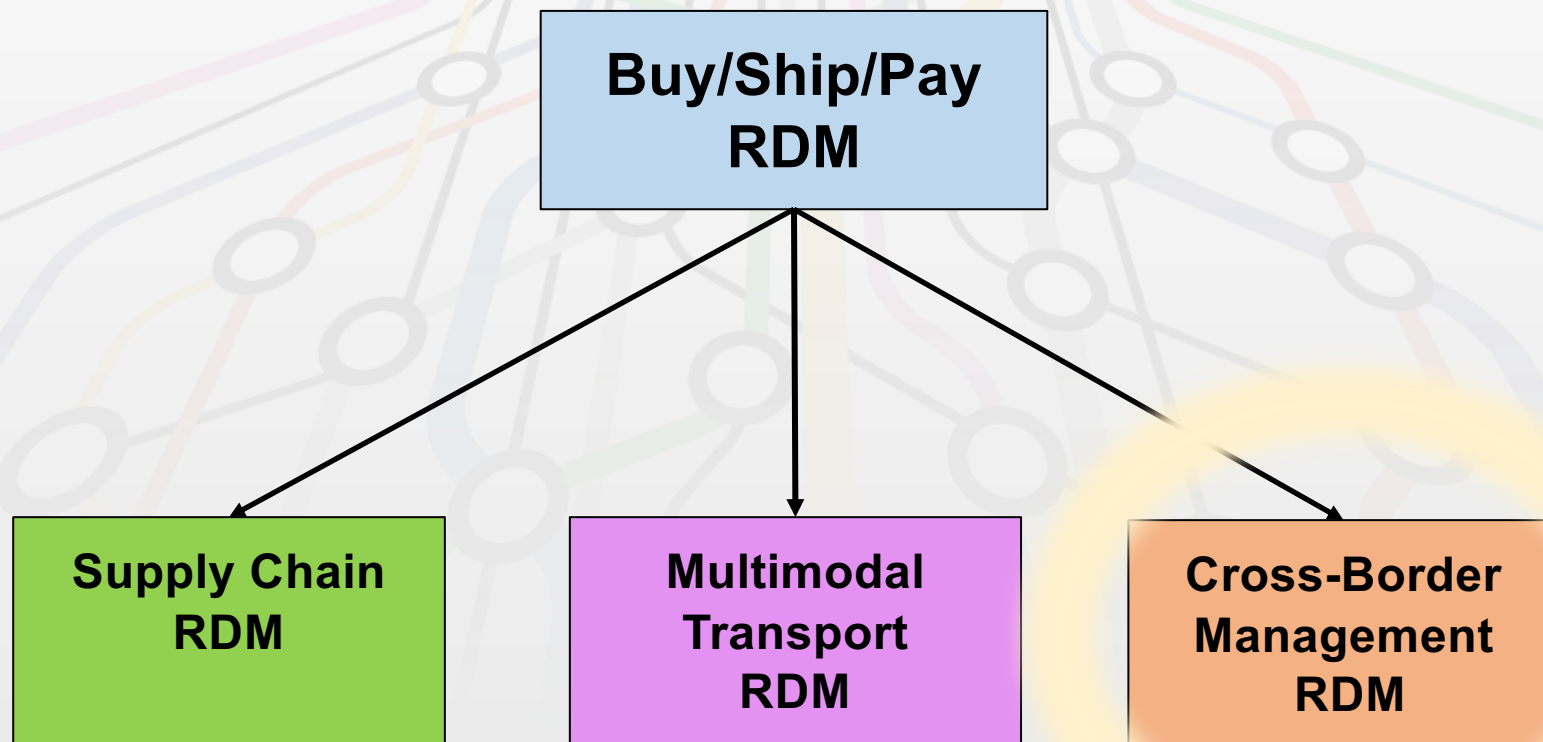
EUCDM V6.0 Draft design as of 2020-09-28		Annex B		STRUCTURE		Transit Procedures		Select column			
Annex B > Data set view > Structure > D1											
Annex B D1 Special procedure — transit declaration <small>Articles 5(1), 162, 210, 226 and 227 of the Code</small>											
Information											
<ul style="list-style-type: none"> About Download 											
UCC Annex B											
<ul style="list-style-type: none"> Source text Data element view Overview Usage Data set view Structure 											
UCC Annex A											
UCC Annex 12-01											
UCC Annex 21 81+82											
EEZ Receipt Declaration											
Archive											
Name	Format	Ref ID6	Ref ID5	Ref XML Name	WCO Name	WCO XML Tag					
LRN	an..22	12 09 001 000		LRN	Declaration Functional reference number	FunctionalReferenceID					
Additional declaration type	a1	11 02 001 000	1/2	Additionaldeclarationtype	Document name, coded	TypeCode					
Representative		13 06 000 000	3/19	representative	Agent						
Identification number	an..17	13 06 017 000	3/20	representativeidentificationnumber	Agent, coded	ID					
Status	n1	13 06 030 000	3/21	representativeStatus	Agent status, coded	FunctionCode					
Active border transport means		19 08 000 000	7/14	activebordertransportmeans	BorderTransportMeans						
Identification number	an..35	19 08 017 000		activebordertransportmeansidentificationnumber	Identification of means of transport crossing the border, coded	ID					
Type of identification	n2	19 08 061 000		activebordertransportmeansTypeofidentification	Type of identification of means of transport crossing the border, coded	IdentificationTypeCode					
Nationality	a2	19 08 062 000	7/15	activebordertransportmeansNationality	Nationality of means of transport crossing the border, coded	RegistrationNationalityCode					
Mode of transport at the border	n1	19 03 001 000	7/4	modeoftransportattheborder	Mode of transport crossing the border, coded	ModeCode					
Container indicator		19 01 000 000	7/2	containerindicator	Master Consignment						
Container indicator	n1	19 01 001 000		Containerindicator	Container transport code	ContainerCode					
Supporting document		12 03 000 000	2/3	supportingdocument	AdditionalDocument						
Reference number	an..70	12 03 001 000		supportingdocumentReferencenumber	Additional document reference number	ID					
Type	an4	12 03 002 000		supportingdocumentType	Additional document type, coded	TypeCode					
Additional information		12 02 000 000	2/2	additionalinformation	AdditionalInformation						
Code	an5	12 02 008 000		additionalinformationCode	Additional statement code	StatementCode					
Text	an..512	12 02 009 000		additionalinformationText	Additional statement text	StatementDescription					
Additional supply chain actor		13 14 000 000	3/37	additionalsupplychainactor	AEMutualRecognitionParty						
Identification number	an..17	13 14 017 000		additionalsupplychainactoridentificationnumber	AEO mutual recognition party, coded	ID					
Role	a..3	13 14 031 000		additionalsupplychainactorRole	Role code	RoleCode					
Supporting document		12 03 000 000	2/3	supportingdocument	ArrivalTransportMeans						
Inland mode of transport	n1	19 04 001 000	7/5	inlandmodeoftransport	Mode of transport at arrival, coded	ModeCode					
Consignee		13 03 000 000	3/9	consignee	Consignee						
Name	an..70	13 03 016 000		consigneeName	Consignee name	Name					
Identification number	an..17	13 03 017 000	3/10	consigneeidentificationnumber	Consignee, coded	ID					
Address		13 03 018 000		consigneeAddress	Address						
City	an..35	13 03 018 022		consigneeAddressCity	City name	City					
Country	a2	13 03 018 020		consigneeAddressCountry	Country, coded	CountryCode					
Street and number	an..70	13 03 018 019		consigneeAddressStreetandnumber	Street and number/P.O. Box	Line					
Postcode	an..17	13 03 018 021		consigneeAddressPostcode	Postcode identification	PostcodeID					
Consignor		13 02 000 000	3/7	consignor	Consignor						
Name	an..70	13 02 016 000		consignorName	Consignor - name	Name					
Identification number	an..17	13 02 017 000	3/8	consignoridentificationnumber	Consignor, coded	ID					
Address		13 02 018 000		consignorAddress	Address						
City	an..35	13 02 018 022		consignorAddressCity	City name	City					
Country	a2	13 02 018 020		consignorAddressCountry	Country, coded	CountryCode					
Street and number	an..70	13 02 018 019		consignorAddressStreetandnumber	Street and number/P.O. Box	Line					
Postcode	an..17	13 02 018 021		consignorAddressPostcode	Postcode identification	PostcodeID					
Communication		13 02 029 000		consignorCommunication	Communication						
Identifier	an..512	13 02 029 015		consignorCommunicationIdentifier	Communication number	ID					

UN/CEFACT Reference Data Models

Benefits of UN/CEFACT Semantic Reference Data Models

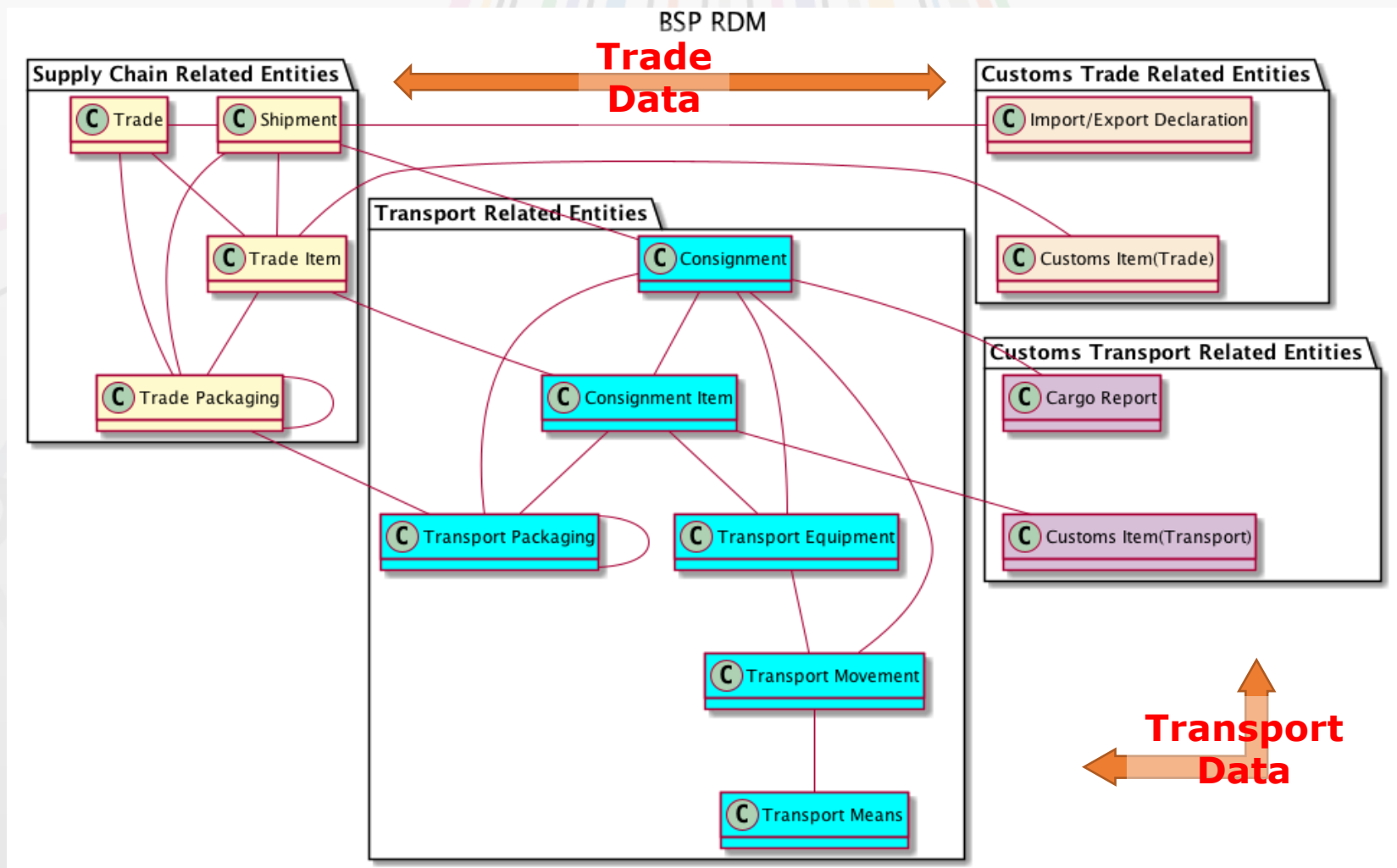
- Subsets of CCL Business Information Entities by Context.
- The support for **information sharing**, such as enabled by data pipelines, with the timely capture of quality data from original data sources ensuring supply chain visibility.
- **Standardized data exchange structures**, based on common master data exchange structure and independent of exchange syntax.
- **Reduction of administrative burden** by efficient reuse of data shared within a contextualized domain model i.e. CBM-RDM.

UN/CEFACT International Supply Chain RDM Family



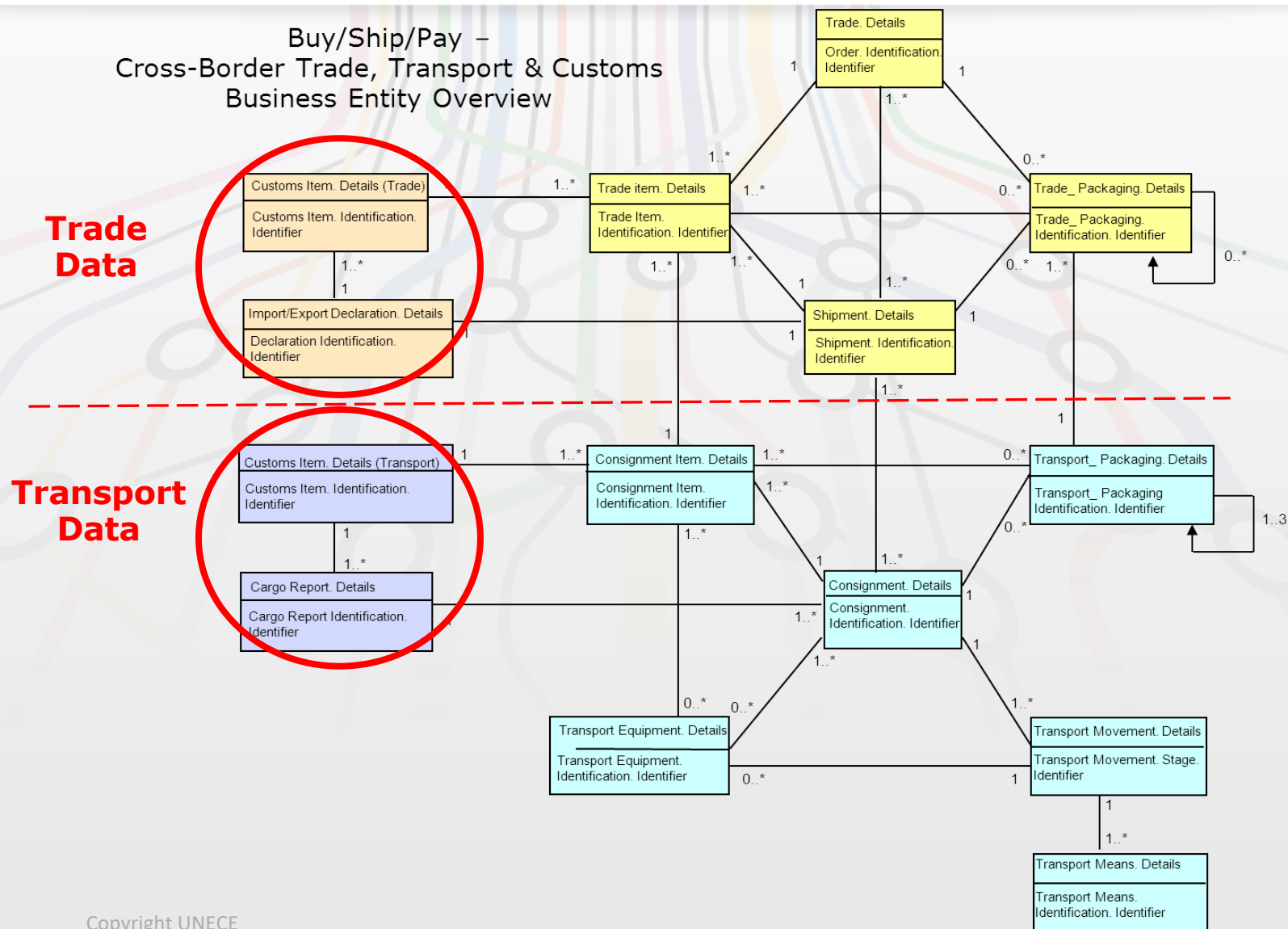
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High Level Business Entities and how they relate



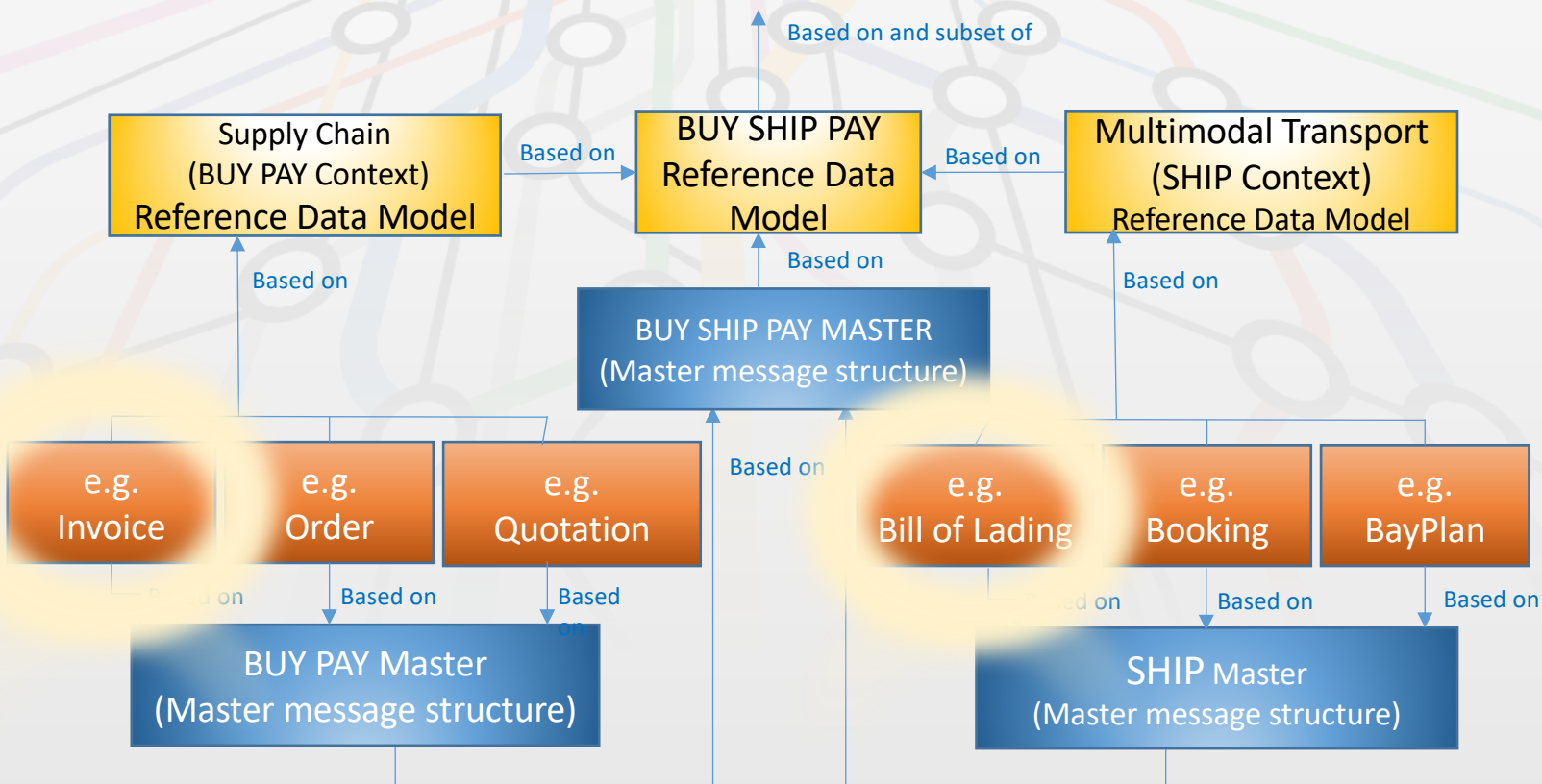
... an alternative view

Buy/Ship/Pay – Cross-Border Trade, Transport & Customs Business Entity Overview



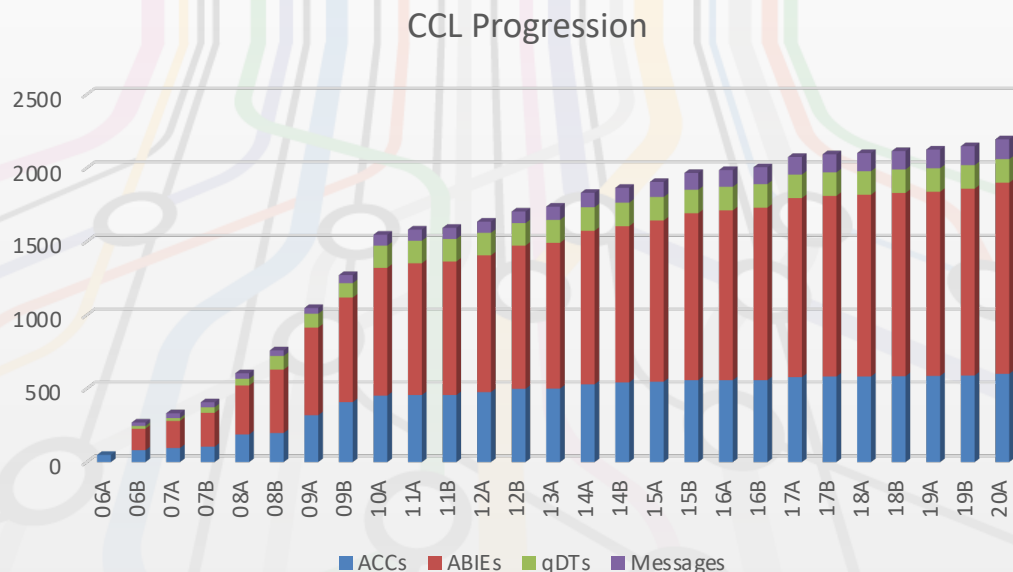
Building semantic models using a common library

UN/CEFACT Core Component Library (CCL)



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UN/CEFACT Core Component Library



Business Information Entities (BIEs)

Reuses of Object Class Library in different business Contexts
 (D20A ~ 1300 BIEs)

Semantic Foundation - Core Component (CCs)

Object Class Library

(D20A ~ 600 CCs)

Project Deliverables and Status

3. Project deliverables and 4. Exit Criteria

Required (check all that apply)

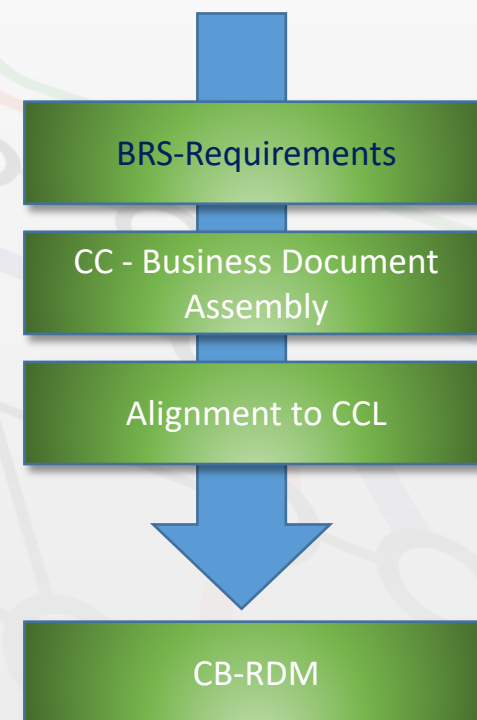
Please note that the Bureau may reassess and change a deliverable after its completion at its discretion.

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

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





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Please join the project

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

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

References

- CBM-RDM Project Proposal
- UN/CEFACT BSP Reference Data Model
- UN/CEFACT Multi-Modal Transport (MMT) Reference Data Model
- UN/CEFACT Supply Chain Reference Data Model (SCRDM)
- International Freight Forwarding BRS
- UN/CEFACT Modelling Methodology (UMM) v2.0
- UN/CEFACT Core Component Technical Specification v2.01 (CCS ISO15000-5)
- UN/CEFACT Core Component Library D20A (Apr 2020)
- United Nations Trade Data Elements Directory 2005 (UNTDED/ISO 7372)
- EUCDM guidance document https://ec.europa.eu/taxation_customs/sites/taxation/files/eucdm_guidance_document_en.pdf
- EUCDM web access to the model <https://svn.taxud.gefeg.com/svn/Documentation/EUCDM/EN/index.htm>

Discussion

