

UN/CEFACT Online Forum April 2021

Core Component (UN/CCL) Library Maintenance, Validation and **UN/CEFACT Reference Data** Models









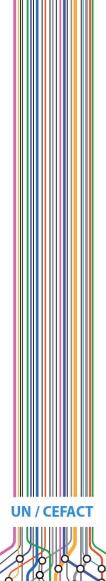
UN/CEFACT Key Outputs

- Business Standards
 - Process Models
 - Reference Data Models
 - Semantic Libraries (UNTDED, Core Component Library (CCL) and **UN/EDIFACT** Directories)
- Trade Facilitation Recommendations
- Technical Specifications

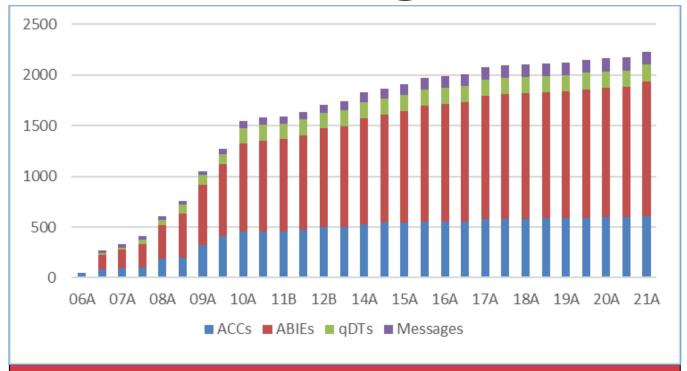








CCL Progress



Business Information Entities (BIEs)

Reuses of Object Class Library in different business Contexts (D21A ~ 1330 BIEs)

Semantic Foundation - Core Component (CCs)

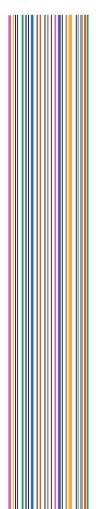
Object Class Library (D21A ~600 CCs)







UNICE UN/CEFACT Core Component Library Status



Latest Version D21A

- 1330 Aggregated Business Entities (ABIEs) in total
- Only 160 ABIEs needed to cover the business processes of international supply chains (Buy/Ship/Pay)

CCL includes components which support UN/CEFACT Domain Business Standards in the areas of:

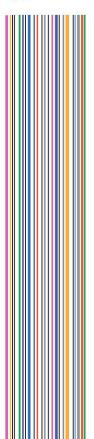
- Cross Industry Supply Chain
- Multimodal Transport & Logistics
- Agricultural eCert, Animal Passports, eLabs & FLUX Fisheries
- Sustainability and circular economy component structures
- Cross-border management







CCL Production



The following steps apply to all requests for changes to the Core Component Library:

- Change request submitted from a project team
- Technical assessment by an editor
- Semantic assessment by a team including submitter(s)
- Harmonization
- Update of CCL
- Validation of updated library and schema
 - Quality Assurance
 - Formal Validation
- Publication



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CCL Production

- Technical and semantic assessments are based on published checklists
- Domain experts are needed for semantic assessment of the business need and solution
- Harmonization includes:
 - comparison of the change to the existing library to determine if it is indeed 'new' and not semantically equivalent to something that already exists
 - any changes to the submission are agreed upon by the submitter and by the appropriate domain team(s)









CCL Production

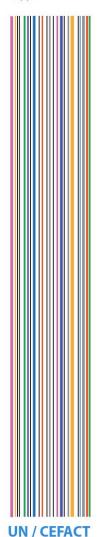
- Quality Assurance (including of any syntax solutions)
 - By library team
 - By the submitters
- Validation
 - By experts in the libraries, in the domains involved, in any syntax solutions produced, and in the publication of the particular libraries.
- Publication
 - Libraries are submitted to the UN/CEFACT Secretariat for publication.







UN/CEFACT Core Components Library (CCL)



IDR A	Unique UN assigned ID	ABIE/ BBIE/ ASBIE/ACC/B CC/ASCC/DT/ CC/SC	Dictionary Entry Name (auto generated)			**	Definition Mandatory	Working comments a	nd instructions	Publication comme	ments Object Class Term	Object Class Term	Property Term	Representation Term		Associated Ob	ect Class	Business Term(s)	Usage Rule(s)	Occurrence Min	Occurrence Max		
UNI	10005046	BCC	Trade Agreer	ment. Produ	ct Availability. Co	de	A code specifying product availability according to this trade agreement.				Trad	de Agreement	Product Availability	Code	-					0	unbounded		
UNG	0005052	BCC	Trade Agreement, Product Unit Measure, Code Trade Agreement, Product Ordenable, Indicator		A code specifying a product unit measure, such as kilogram or litre, for this trade agreement.					Trade Agreement	Product Unit Measure	Code						0	unbounded				
UNG	0005047	всс			The indication of whether or not the product can be ordered according to this trade agreement.				Trade Agreement		Product Orderable Indicator							0	1				
	0005048	BCC	Trade Agreement, Product Reorderable, Indicator Trade Agreement, Product Made To Order, Indicator			ndicator	The indication of whether or not the product can be reordered according to this trade agreement.	act can be reordered according				de Agreement	Product Reorderable Indicator							0	1		
	10005053	800		ADD/CH G/DEP/W DR	Unique UN Assigned ID	ABIE/ BBIE/ ASBIE/ACC/B CC/ASCC/DT/ CC/SC	Dictionary Entry Na (auto generated		Defir Mand		orking comme	ents and instructions	Publication con	nments	Object Class Term	Qualifier(s)	Object Class Te	m Property Term Qualifier(s)	Property Terr	Datatyp	e Qualifier(s)	Representation Term	_
UNI	0005053	BCC	Trade Agr		Library Maintenance Only	START HERE Press Enter	Keep the rows toge Adjust selected rows wi	ther th Ctrl-a	Enable macro	o's with Ctri-e	Ор	ptional	Optional		Optional for	BEE	Mandatory	Optional for BBIE, ASBIE	Mandatory for BBIE, ASBIE, BCC,	Optio Each se	nal for BBIE parated by an	Mandatory for BBIE and BCC	-
UNC	0005050	BCC	Trade Agr		UN01007486	ASBIE	Trade_Product Warranty. Providing.	Trade_Party	The party providing product warranty.	g this trade					Trade		oduct Warranty		Providing	diserrica	v and a space		
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		всс	Trade Agr		UN01004679	ABIE	Trade_ Product Details		Any tangible output produced by huma effort or by a nature	an or mechanical					Trade	Pr	oduct						
UNC	10008753	BCC	Trade Agras		UN01004680	BBIE	Trade_Product. Identification. Identifi		trade purposes. A unique identifier	r for this trade					Trade	Pr	oduct		Identification			Identifier	-
UNC	10008758	BCC	Trade Agr52		UN01004681		Trade_Product. Global_Identification		product. A unique global ide						Trade		oduct	Global	Identification			identifier	
UNC	10002087	ASCC	Trade Agr		UN01004682		Trade_Product, Seller Assigned_Ide		trade product.						Trade		oduct	Seller Assigned	Identification			Identifier	
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https://www.unece.org/cefact/codesfortrade/unccl/ccl_index.html







Basis for Semantic Interoperability

Agreed and Harmonised

- Party and Role Definitions
- Semantic Anchors
- Message Structures
- Contextualised Code Subsets
- Contextualised Business Rules







Semantic Anchors



Shipment

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 – 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)







RDM Data Exchange Structure Relationships

- C Buy Ship Pay Master **
 - > C Exchanged Document Context
 - Exchanged Document
 - © 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







How CCL growth is managed

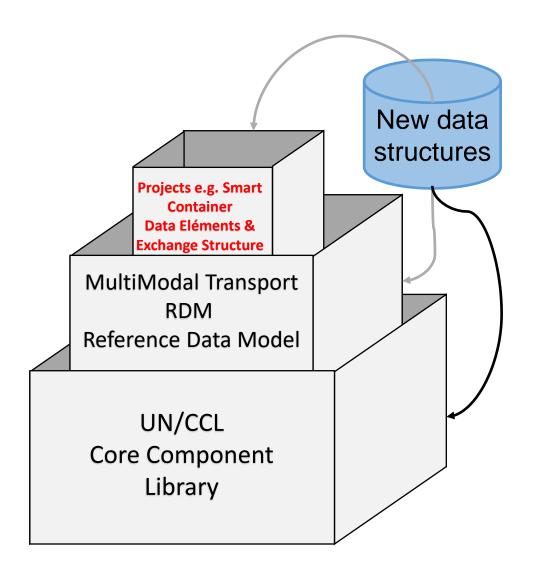


Library Maintenance Team responsible for

 Cross-Domain Harmonisation

Project Teams responsible for

 Contextualised RDM development, CCL submissions and customised subset exchange structures





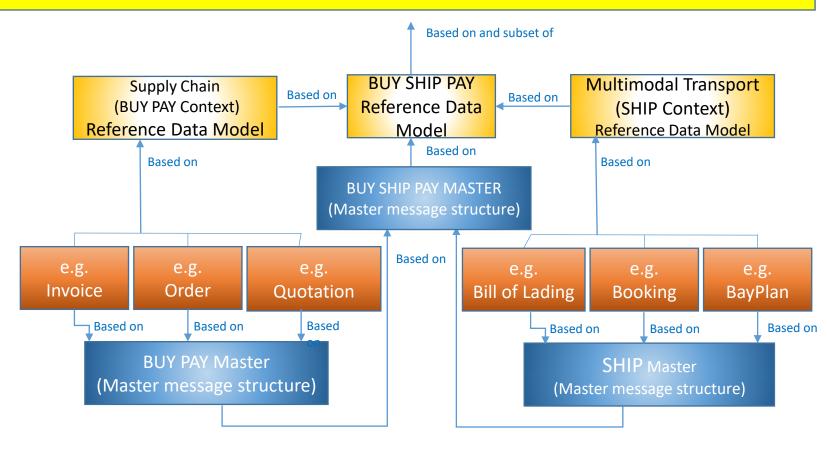






Building semantic models using a common library

UN/CEFACT Core Component Library (CCL)





UN / CEFACT



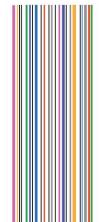
CoreComponent2BusinessInformationEntity



Example Person Core Component

80 Attributes

17 reuses as **Business Information Entities**



UN / CEFACT

A Alternate Language Code

27 Associations incl.

A Alternate Language Proficiency Code

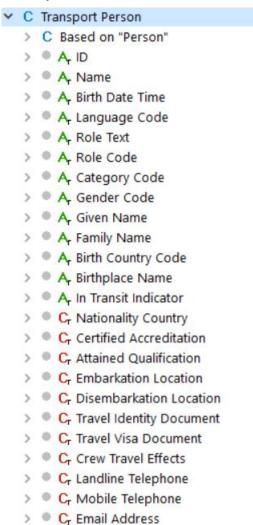
- A Social Security Number Release Authorization C

- C Fax
- > C Information Address
 - C Alias Person
 - C Filiation Person
- > C Specified Event
 - C Person Financial Situation



C Main/ABIE/AAA Chart Of Accounts Person. Details C Main/ABIE/AAA Journal Person. Details C Main/ABIE/AAA Report Person, Details C Main/ABIE/AAA Wrap Person, Details C Main/ABIE/Authoritative Signatory Person. Details C Main/ABIE/Contact Person. Details C Main/ABIE/Guest Person. Details C Main/ABIE/Inspection Person. Details C Main/ABIE/Operator Person. Details C Main/ABIE/Payment Person. Details C Main/ABIE/Project Person. Details C Main/ABIE/Representative Person. Details C Main/ABIE/Reserving Person. Details C Main/ABIE/Responsible Person. Details C Main/ABIE/SPS Person. Details C Main/ABIE/TMW Person. Details C Main/ABIE/Transport Person. Details

Reuse example: Transport Person for IMO FAL

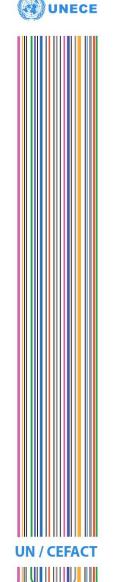


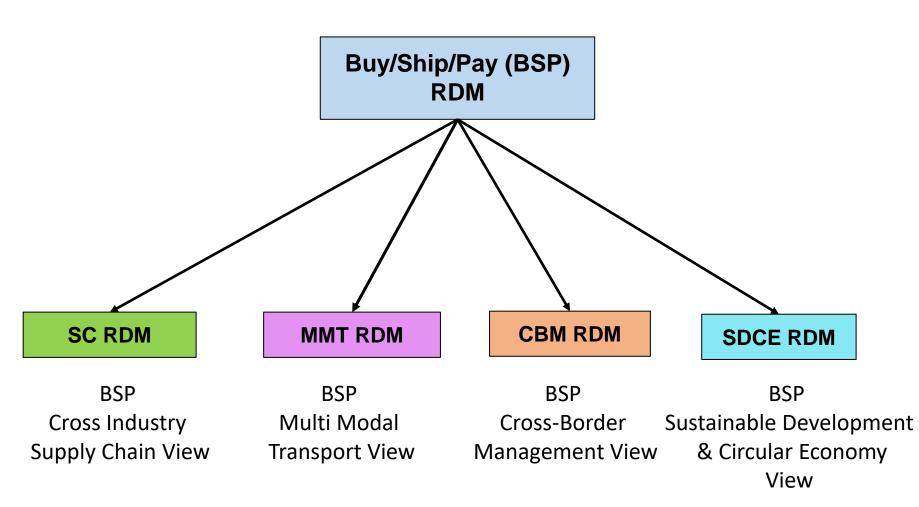




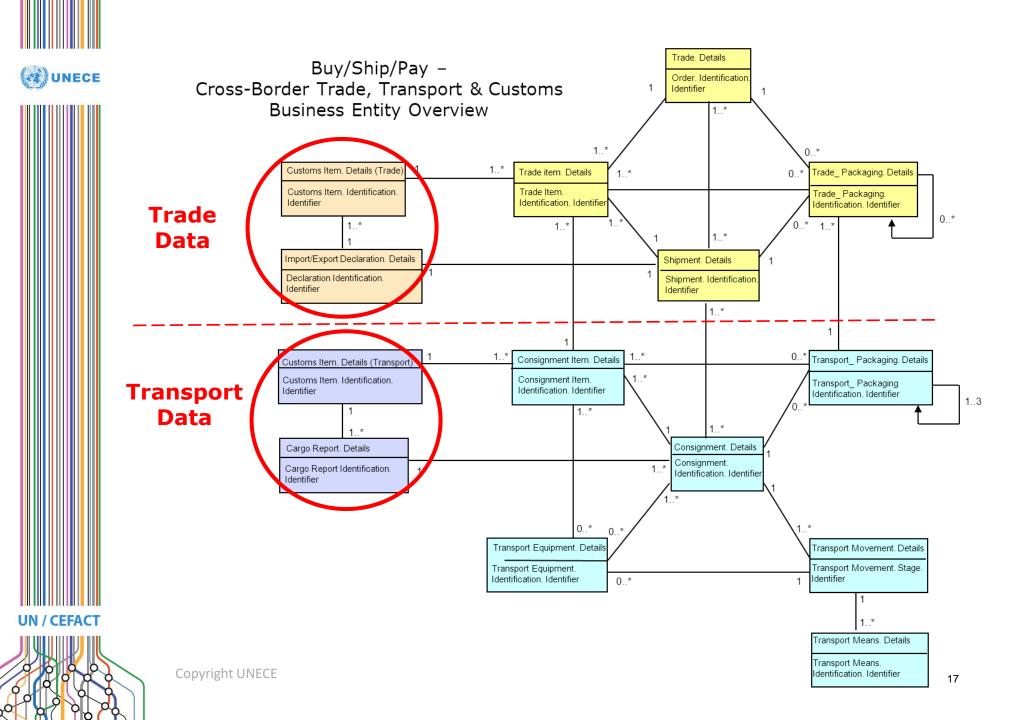


UN/CEFACT International Supply Chain Reference Data Model Family - Future



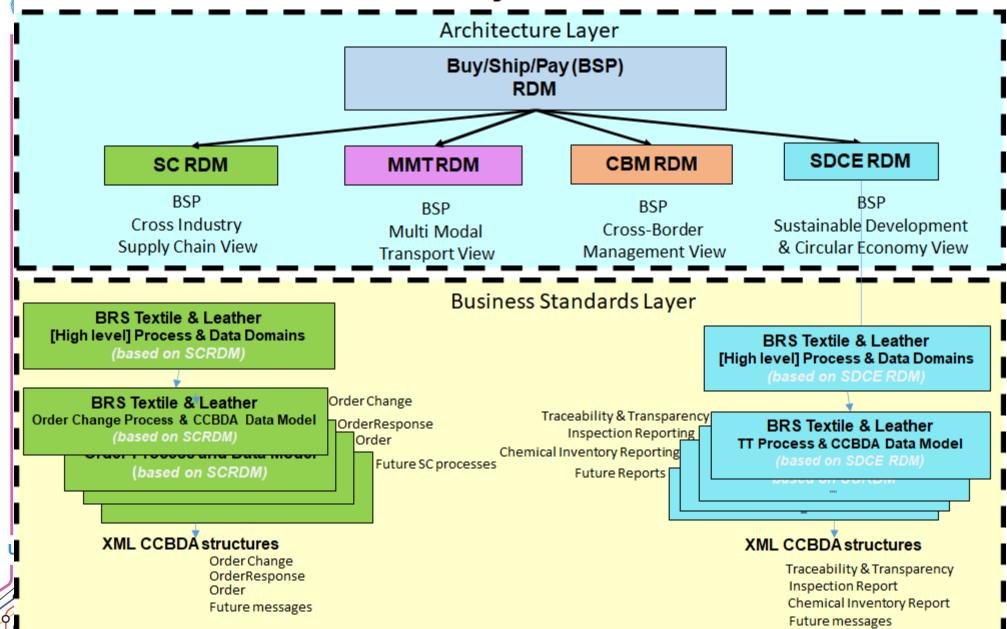






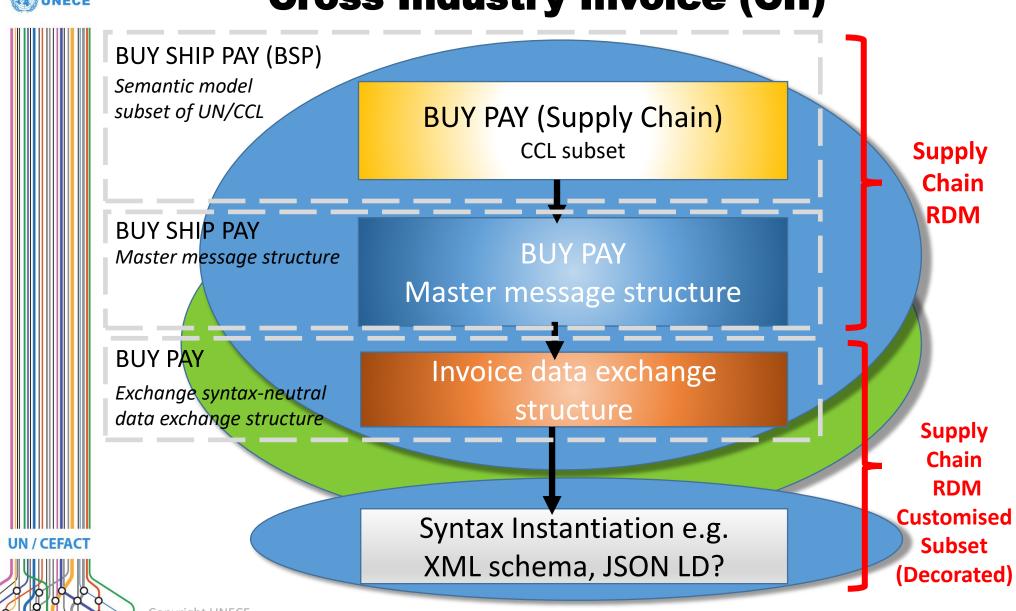
UN/CEFACT International Supply Chain Reference Data Model Family - Future

MC YBC &



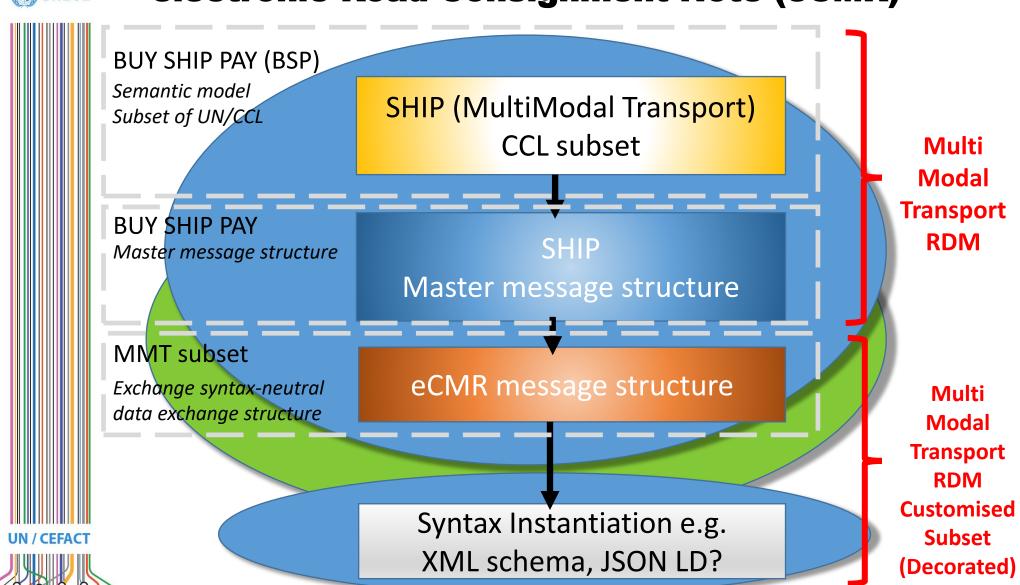


UN/CEFACT Publication Trade Example: Cross Industry Invoice (CII)





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







Thank You

- 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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