

TRADE

Digitalization of air cargo transport information as part of interoperability for multimodal data and document exchange, using UN/CEFACT standards and Multimodal Transport Reference Data Model

UNDA project in response to COVID-19 crisis

ICAO seminar, 25 Aug. 2021



Mario Apostolov, Regional Advisor
Economic Cooperation and Trade Division, UNECE
Presentation prepared with Steve Hill, UN/CEFACT expert

Modal Specific MMT DRM-based Customizations



✓ Maritime



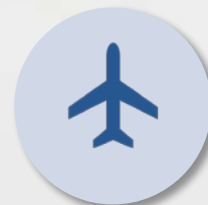
✓ Road



✓ Inland
Waterway



✓ Rail



Air

✓ Draft standards developed (AWB, DGD, CSD)

✓ Artefacts for Bureau approval

unttc.org web site



UNTTC

Transport and trade connectivity in the age of pandemics

- About
- Partners
- Highlights
- Contact

Working together to better respond to pandemics through resilient supply chains, transport and trade.



Contactless solutions

It aims at minimizing physical contact among people in cross-border supply chains by facilitating the flow of goods without spreading the virus.

eTIR International System application / Interagency multidisciplinary Advisory Group

Electronic trade and transport documents and data

Supporting the implementation of automated road and rail solutions

Support to implementing best practices in TF in times of crisis and epidemic



Seamless connectivity

It focuses on eliminating obstacles to cross-border trade and transport operations arising from the COVID-19 crisis.

UNCTAD/ ASYCUDA Guidelines

Cross-border processes performance management – ASYPM

Facilitate Humanitarian aid flows through efficient and managed coordination – ASYREC

Key international commercial law implications

National TF Committee coordination: general

National TF Committees coordination: best practices in times of crisis and epidemic

National TF Committees: ECE

TRAINS online NTM portal & training

Analysis of NTMs introduced as part of the broader COVID-19 containment effort



Collaborative solutions

It seeks to strengthen regional and sectoral cooperation to facilitate joint actions and solutions in responding to the COVID-19 pandemic.

Asia Pacific Region

Africa Region

West Asia Region

Latin America and the Caribbean Region

Europe and Central Asia Region

Regional Trade Facilitation coordination

Port resilience against invisible threats

Maritime Supply Chain Resilience Tracker and KPIs

Search

Documents

Dnieper – Danube Corridor Pilot Dataset Alignment to International Standards and Data Models and Documents Implementation Prototypes for Use in Eastern Europe

Fulfilling the recommendations of the 2019 and 2020 UNECE "Odessa" seminars to support the development of digital multimodal transport corridors, with a view to increasing the harmonization and standardization of data exchange in international transport, trade and logistics to encourage electronic data exchange and thereby to reduce person-to-person contacts during the COVID-19 crisis and in the post-pandemic recovery, using relevant UN/CEFACT standards, a pilot project under the overall UN Development Account project "Transport and Trade Connectivity in the Age of Pandemic: United Nations solutions for contactless, seamless and collaborative transport and trade produced the following results:

- Analysis of data and documents transported via the Dnieper – Danube route (as a pilot implementation project);
- Development of electronic document equivalents for Inland Water Transport using the DAVID forms of the Danube Commission for inland waterways;
- Analysis of the feasibility of using API in this corridor;
- Test for interoperability.

The aim is to foster the harmonization of electronic data sharing using global (UN/CEFACT) standards for transport, trade and logistics, and to prepare standards for e-documents based on the UN/CEFACT semantic standards and reference data models. The focus will be on the development of electronic document equivalents for the documents mentioned above, using UN/CEFACT tools in the countries developing a digital multimodal transport corridor.



Phytosanitary Certificate Standard Package

The Phytosanitary Certificate Standard Package was developed as part of the United Nations response to the challenges of the COVID-19 pandemic under the United Nations multi-agency project "Transport and Trade Connectivity in the Age of Pandemic: UN solutions for contactless, seamless and collaborative transport and trade".

This electronic document equivalent Standard Package consists of the following elements:

- UML Diagram
- XSD Schema
- Guideline Structure
- HTML



Activities

Tenth International Seminar on Trade and Transport Facilitation: Multimodal Transport Data Exchange, Digital Transport Corridors, and Trade Facilitation

27 - 29 Apr 2020

UNECA
United Nations Economic Commission for Africa

UNECE
United Nations Economic Commission for Europe

News

17 March 2021



Road freight in ASEAN: New COVID-19 Response and

Third Technical Cooperation Workshop for the Western Balkans: Single Window and Data Sharing in the Western Balkans

27 - 28 Oct 2020

UN/CEFACT Streamlined Standards

Supply Chain Management

Supply Chain Reference Data Model (SCRDM)

Cross Industry Invoice

- [BRS](#)
- [RSM](#)
- [Cross Industry Common Requirements BRS](#)
- [e-Invoice Executive Guide English](#) [French](#) [Russian](#)
- [XSD Schema](#)
- [UML Diagram](#)
- [HTML index](#)

Cross Industry Delivery

Cross Industry Catalogue

Cross Industry Quotation

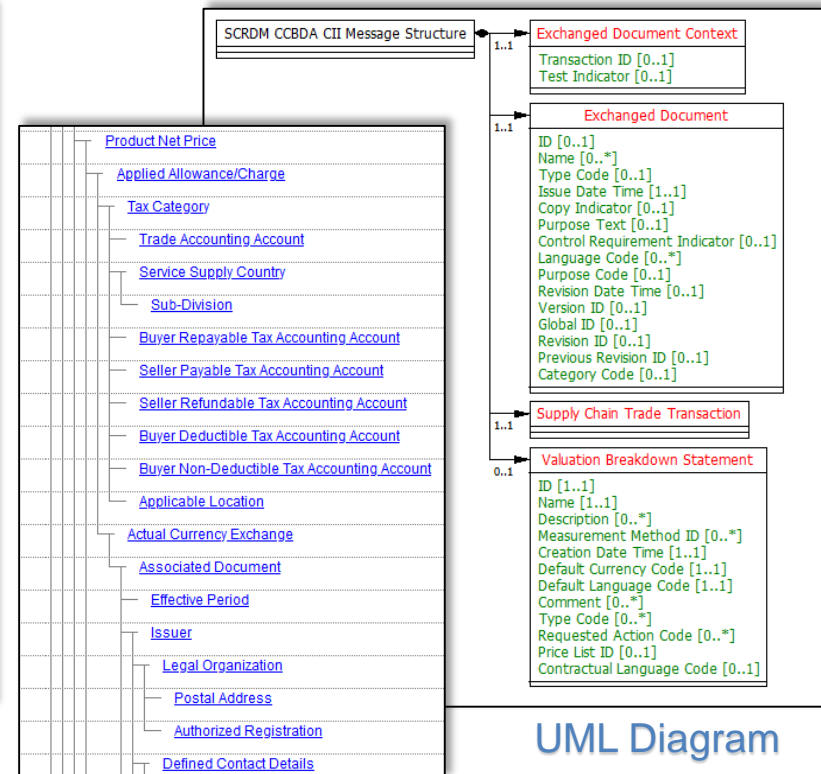
Cross Industry Remittance Advice

Cross Industry Scheduling

Cross Industry Ordering Process

Cross Industry Export Packing List

[UN/CEFACT Streamlined Standards page](#)



[UML Diagram](#)

[Message structure \(on HTML index\)](#)



Air

Project outline

Documents/dataset mappings to MMT RDM:

1. Air Waybill (AWB)
2. Dangerous Goods Declaration (DGD)
3. Consignment Security Declaration (CSD)

Plan:

Two phases

1. Standards – Drafts Done
2. Implementations – In progress

Now:

- Draft Standards Reviewed by Experts
- Baselined and Artefacts Produced
- Ready for Bureau Approval (pre-publishing)

1. Standards:

Follows UN/CEFACT MMT RDM

- Business Requirements Specifications (BRS)
- Core Component Library (CCL) Structure
- Dataset alignment with other 'document' objects
- XLS guideline structure
- XSD schema
- UML diagrams
- HTML index
- JSON-LD schema
(future development across UN/CEFACT)

2. Pilots:

In collaboration with ICAO



- Identify/outreach to candidate 'corridors'
- Engage . Educate . Assist – with deployments



Air

Core Mappings

AWB

DGD

CSD

SHIPPER'S DECLARATION FOR DANGEROUS GOODS

(Provide at least two copies to the airline.)

Shipper	Air Waybill No.
Consignee	Page of Pages
TRANSPORT DETAILS	WARNING
PASSENGER AND CARGO AIRCRAFT	Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the penalties. In circumstances, the consolidator, a forwarder, or an IATA cargo agent.
AIRPORT OF DESTINATION:	NON-RADIOACTIVE / RADIOACTIVE
NATURE AND QUANTITY OF DANGEROUS GOODS	
Dangerous Goods Identification	
UN or ID No.	Quantity and Type of Packing
Proper Shipping Name	Packing Inst.
Class or Division	Authorization
Packing Group	
Subsidiary Risk	
ADDITIONAL HANDLING INFORMATION:	
"Prior arrangements as required by IATA Dangerous Goods Regulations 1.3.3.1 have been made." Prepared according to ICAO/IATA.	
24hr. Emergency Contact No.	
I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked, labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national government regulations.	Name/Title of Signatory
	Place and Date
	Signature (see WARNING above)
FOR RADIOACTIVE MATERIAL SHIPMENT ACCEPTABLE FOR PASSENGER AIRCRAFT: THE SHIPMENT CONTAINS RADIOACTIVE MATERIAL INTENDED FOR USE IN OR INCIDENT TO RESEARCH, MEDICAL DIAGNOSIS, OR TREATMENT.	

STAPLE DOCUMENTS ABOVE PERFORMANCE

Air Waybill

Issued by: _____

Shipper's Name and Address: _____ Shipper's account number: _____

Consignee's Name and Address: _____ Consignee's account number: _____

Issuing Carrier's Agent Name and City: _____ Accounting Information: _____

Agent's IATA Code: _____ Account No.: _____

Point of Departure (State of first Carrier) and requested Routing: _____ Reference Number: _____ Optional Shipping Information: _____

To	By first Carrier	Routing and Destination	Is	By	Is	Currency	Declared Value for Carriage	Declared Value for Customs
Point of destination	Flight/Class	Commodity	Permissible	Flight/Class	Permissible	Amount of Insurance	INSURANCE (if carrier offers insurance, and such insurance is requested)	

No. of Pieces	Gross Weight	Net Weight	Net Class	Chargeable Weight	Rate	Charge	Total	Nature and Quantity of Goods (incl. Shippers or Values)
Prepaid				Weight Charge		Collect		Other Charges
Prepaid				Valuative Charge		Collect		Other Charges
Prepaid				Tax		Collect		Other Charges
Prepaid				Total other Charges Due Agent		Collect		Other Charges
Prepaid				Total other Charges Due Carrier		Collect		Other Charges
Prepaid				Total prepaid		Total collect		Other Charges
Prepaid				Currency Conversion Rates		No charges in Decl. Currency		Other Charges
Prepaid				For Carrier's Use only at Destination		Changes at Destination		Other Charges

Signature of Shipper or the Agent: _____

Signature of issuing Carrier or its Agent: _____

Consignment Security Declaration

Regulated Entity Category (RA, KC or AO) and Identifier (of the regulated party issuing the security status): _____ Unique Consignment Identifier (if AWB format is non-reversible): _____

Contents of Consignment

Consolidation

Origin: _____ Destination: _____ Transfer/transit points (if known): _____

Security Status: _____

Reasons for issuing the Security Status	Screening Method (codes)	Grounds for Exemption (codes)
Received from (codes)		

Security Status received by: _____ Security Status issued on: _____

Name of Person or Employee ID: _____ Date (dd/mm/yyyy): _____ Time (BB) _____

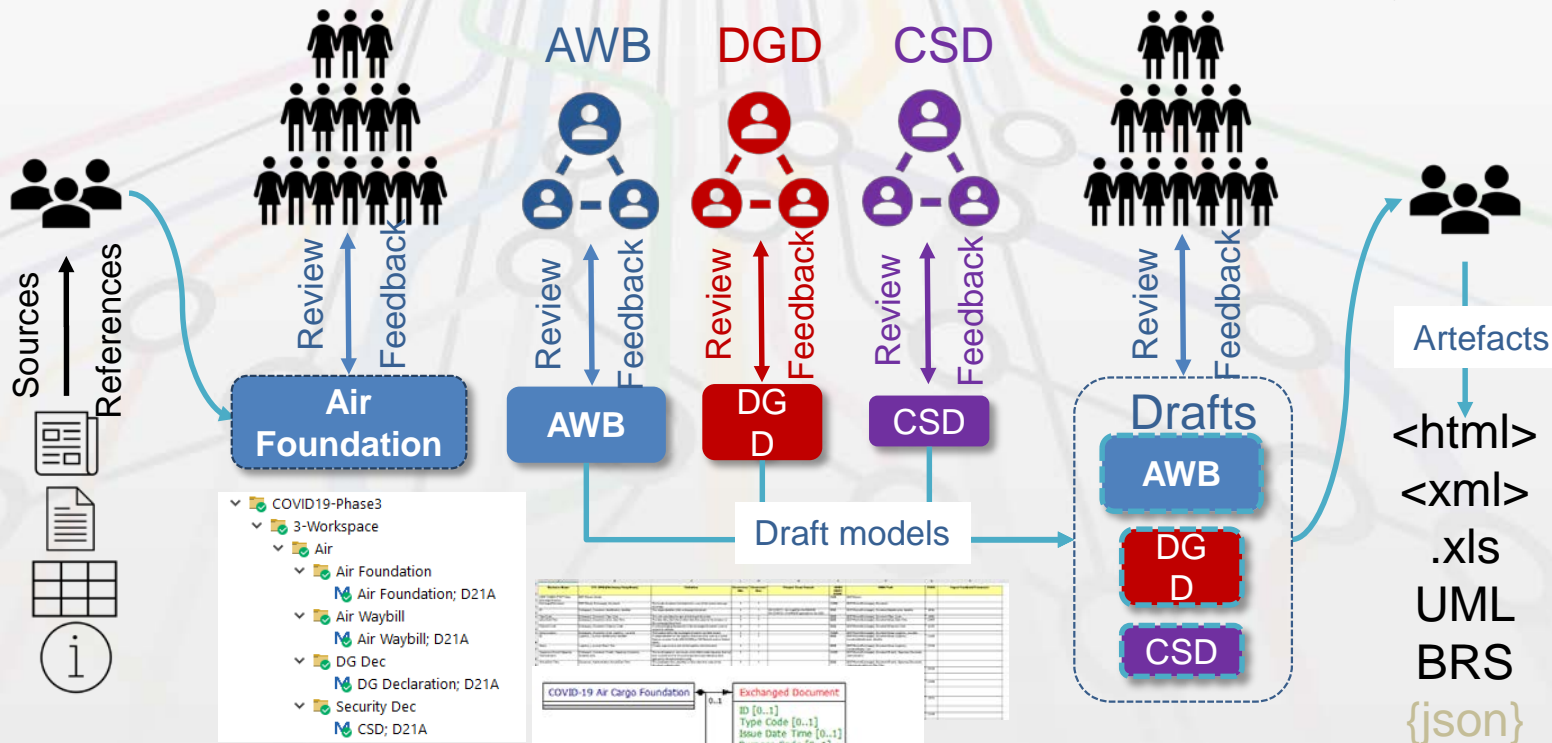
Regulated Entity Category (RA/KC or AO) and Identifier (of any regulated party who has accepted the security status given to a consignment by another regulated party): _____

Additional Security Information: _____

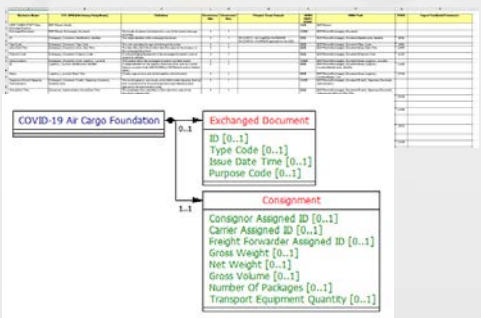
Air Foundation Common Data Elements

Standards Development Process

Project Group All Experts Expert Focus Groups All Experts Project Group



- COVID19-Phase3
 - 3-Workspace
 - Air
 - Air Foundation
 - Air Foundation; D21A
 - Air Waybill
 - Air Waybill; D21A
 - DG Dec
 - DG Declaration; D21A
 - Security Dec
 - CSD; D21A



- ✓ Artefacts finalization
- ✓ Bureau approval
- ✓ Publish on sites: **UNTTC & UN/CEFACT**

Dangerous Goods Declaration

DGD

- Air DGD one of several DG projects underway
 - UNECE Transport Div: Road/Rail/Inland Waterway
 - Maritime IMO
- Data Model mainly supported requirements
- One of the more complex & specialized models
- Some data elements - specific to Air transport
- Several new elements e.g. Radioactive
- Air DG applies Road requirements for Truck Flights
- Possible future mapping between DG models

SHIPPER'S DECLARATION FOR DANGEROUS GOODS (Provide at least two copies to the airline.)

Shipper		Air Waybill No.		
		Page of Pages		
		Shipper's Reference No. (optional)		
Consignee				
WARNING: This Declaration must comply in all respects with the applicable Dangerous Goods Regulations, which may be in breach of the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consolidator, a forwarder, or an IATA cargo agent.				
TRANSPORT DETAILS		This shipment is within the limitations prescribed for: (delete non-applicable)		Airport of Departure:
PASSENGER AND CARGO AIRCRAFT	CARGO AIRCRAFT ONLY	NON-RADIOACTIVE		RADIOACTIVE
NATURE AND QUANTITY OF DANGEROUS GOODS				
Dangerous Goods Identification				
Packing				
Packing test				
Authorization				
ADDITIONAL HANDLING INFORMATION: "Prior arrangements required by IATA Dangerous Goods Regulations 1.3.3.1 have been made."				
24hr. Emergency Contact No.				
I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked, labeled, and placarded in accordance with the applicable regulations.		Name/Title of Signatory		
Place and Date				
FOR RADIOACTIVE MATERIAL SHIPMENT ACCEPTABLE FOR PASSENGER AIRCRAFT: THE SHIPMENT CONTAINS RADIOACTIVE MATERIAL INTENDED FOR USE IN OR INCIDENT TO RESEARCH, MEDICAL DIAGNOSIS, OR TREATMENT.				

Consignment Security Declaration

CSD

- Declared security status of a consignment
- New:
 - Document type for UN/CEFACT
 - Security status, screening types, exemptions
- Reuse of elements from Data Pipeline (PDES)
- Requirements specified via ICAO:
 - Annex 17 of the Chicago Convention
 - Aviation Security Manual Doc 8973 [restricted]
- Data can be included within AWB
- CSD not yet used for other modes of transport
- Potential for Road use for Truck Flights

Consignment Security Declaration			
Regulated Entity Category (RA, KC or AO) and Identifier (of the regulated party issuing the security status)		Unique Consignment Identifier (if AWB format is non-aviation)	
Contents of Consignment			
<input type="checkbox"/> Consolidation			
Origin	Destination	Transfer/Transit points (if known)	
Security Status	Reasons for issuing the Security Status		
	Received from (code)	Screening Method (codes)	Grounds for Exemption (codes)
Screening Method(s) (if applicable)			
Security Status Issued by		Security Status Issued on	
Name of Person or Employee ID		Date (ddmmyy)	Time (HH)
Regulated Entity Category (RA, KC or AO) and Identifier (of any regulated party who has accepted the security status given to a consignment by another regulated party)			
Additional Security Information			

Further Information

All documents are and will be made available on UNTTTC.org and UN/CEFACT Project 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>

Please join the work

Implementation of the standards and the UNDA project for rebuilding better after the pandemic:

- Invitation to implement the standards and develop and implement pilot projects

UN/CEFACT: experts are welcome to join the work of UN/CEFACT after registration:

- <https://uncefact.unece.org/display/uncefactpublic/UNCEFACT+Expert+Registration>
- All deliverables of UN/CEFACT are available free of charge on the website: <https://unece.org/trade/uncefact>
- All UN Member States are welcome to participate in the approval process

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