UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

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

BUSINESS REQUIREMENTS SPECIFICATION
(BRS)

INTERNATIONAL FORWARDING AND TRANSPORT MESSAGES
STATUS REPORT/REQUEST

FINAL AFTER PUBLIC REVIEW

Approved: UN/CEFACT Bureau on 19 October 2020

Version: 1.0

Table of Contents

Document History

Phase	Status	Date Last Modified
Draft development	Initial	12-JUL 2020

Figure 1: Waybill Document History

Change Log

Date of Change	Version	Summary of Changes
July 2020	0.1	Initial Creation

July 2020	0.2	Following Internal review on call, updating the document to use the BRS template for T&L and to circulate on Cue.
July 2020	0.3	Revisions of the Use Case, Scope and Choreography
July 2020	0.4	Finalised formatting and remaining structure and Editorial

Figure 2: Document Change Log

1.0 Preamble

The tracking of a consignment, goods or transport equipment is imperative to a success of a supply chain operation, accurate and timely status updates allow the Consignor and Consignee to plan and manage the flow and timing, identifying exceptions early on so that risk and disruption can be minimised.

The status reporting processes can cover ad-hoc reporting (request) or contractual reporting (subscription).

2.0 References

- UN/CEFACT Multi Modal Transport Reference Data Model (UN/CEFACT – SHIP/MMT-RDM
-)
- UN/CEFACT Buy-Ship-Pay Reference Data Model BSP-RDM Version 1.0 (2019)
- International Forwarding and Transport Version 1.0 BRS of (2008)
- UN/EDIFACT messages (IFTM**, IFTSTA, IFTSTQ)
- ITIGG Global Guidelines for the IFTM** P&R messages
- ITIGG Global Guidelines for the IFTSTA/Q P&R messages
- UN/CEFACT Whitepaper on Data Pipeline v1 (2018)
- Smart Containers - Real-time Smart Container data for supply chain excellence Version 1 (2019)

3.0 Objective

The objective of this document is to outline the Status Reporting and Tracking of a consignment between the Transport Service Buyer and the Transport Service Provider providing updates to interested parties such as Notify Party, Consignor and Consignee.

The exchange of data in a standardized format reduces the integration effort between parties and ensures that the necessary data is placed into the relevant section on a waybill without misinterpretation and is presented in the exact way to

adhere to any local, financial, regulatory or business requirement without modification or re-entry.

The use of electronic status reporting messages enables all parties to access the latest tracking information.

This BRS is a subset of the International Forwarding and Transport BRS (2020)

4.0 Scope

4.1 Description

This BRS aims to develop a subset of the MMT RDM which is aligned to the global guideline for the UN/EDIFACT IFTSTA and IFTSTQ message structure, supporting digitalization in Transport and Logistics whilst remaining data syntax agnostic.

4.2 Context

Context Category	Description
Business Process	Tracking in the transport and logistics BUY-SHIP-PAY / Logistics / Transport / CheckStatusInformation
Product Classification	All
Industry Classification	All
Geopolitical	Global
Official Constraints	None
Business Process Role	Transport Service Buyer and Transport Service Provider
Supporting Role	Status Provider, Status Requestor
System Capabilities	No Limitations

Figure 3: Context Categories for Tracking

5.0 Business Requirements Elaboration

5.1 Business Requirements List

During the movement of goods throughout the supply chain the consignment and transport equipment undergo a status change at various waypoints, these are reported using the status message. The current status of the transport equipment or Consignment may be requested by a party linked to the Consignment or the Transport Equipment itself such as the Notify Party, Consignor or Consignee.

There are event driven status events used in classical track and trace where a key waypoint in the Transport Movement triggers a status update at various levels;

Status changes at Transport Equipment level could be for example;

- Goods Loaded for Transport
- Arrived at a Port of Loading
- Goods Departed the Port of Discharge
- Goods Delivered
- Empty Transport Equipment Returned (Restituted)

Status changes at Transport Means level could be for example;

- Vessel/Vehicle/Flight Departed
- Vessel/Vehicle/Flight Arrived

Status changes at Consignment level could contain all of the above that are applicable to the identified Consignment, which may cover multiple Transport Equipment and their current status.

Status changes at piece level (product) can also be reported, this could include the change between transport equipment or means of transport in multi modal transport movements or consolidated shipments.

These tracking messages could be;
- Subscribed to and provided as events take place in the Transport Movement
- Provided upon request using a Status Request message
- As an exception or exceptional event occurs

Status messages are usually provided to an identified party or role attached to the consignment i.e. Consignor, Consignee, Freight Forwarder or Notify Party. However, with the increasing usage of mechanisms such as API's to request and retrieve status event updates, in many cases the linking of a party to a consignment is not publicly accessible information that may be used and relied upon to automate ongoing processes.

Number	Business Requirement Statement	Business Transaction Name
A.1	Provide a status update regarding The physical movement of consignment, goods or equipment during the transport movement.	Tracking Status Message
A.2	Request a status update of the physical movement of a consignment, goods, or equipment during the transport movement.	Tracking Status Message Request

Figure 4: Business Requirement List

Number	Data Requirement Statement
B1	The Tracking message should provide interoperability with the UN/CEFACT Multi-Modal Transport Reference Data Model (MMT RDM)

Figure 5: Data Requirement Statement Template

5.2 Definition of Business Terms

The main terms are defined in the MMT RDM; the Status Reporting/Request is fully compliant with all of these definitions. The Status Reporting/Request makes reference to the following additional terms:

Term	Definition
Transport Service Buyer (Consignor or Forwarder)	The buyer of transport services as stipulated in a Transport Service Contract.
Transport Service Provider (Carrier or Forwarder)	The provider i.e. seller of transport services as stipulated in a Transport Service Contract.
Freight Forwarder	The party undertaking the forwarding of goods by provision of transport, logistics, associated formalities services etc.
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.
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).
Means of Transport	Particular aircraft, vehicle, vessel or other device used for the transport of goods or persons.

Figure 6: Definition of Terms

5.3 Business Requirements View

5.3.1 Overall Business Use Case, Partner View and Conceptual Model

The Transport Service Buyer requires status updates of the consignment, goods or equipment during the Transport Movement. This enables the planning of the associated processes such as booking a delivery time at the Delivery Place, or to react to exceptions which may occur. The use of 'Control Towers' and increasing demand for supply chain visibility increases the external pressure on the Transport Movement to provide granular status updates at key milestones.

Modern supply chains now require more data to improve efficiency in regard to automating processes and capturing data. For attested waypoints to trigger payments, many events are generated from within the Transport Movement and provided in the form of Tracking Messages.

The Transport Service Provider is often tasked with updating many parties and maintaining numerous data links which can become an onerous task. The provision of these data links in a standardized and harmonized way reduces the effort and investment to deliver updates.

It is recognized that whilst many roles may have an interest in the tracking message updates, the key roles to the transport contract are the Transport Service Buyer and Transport Service Provider for the purposes of this document.
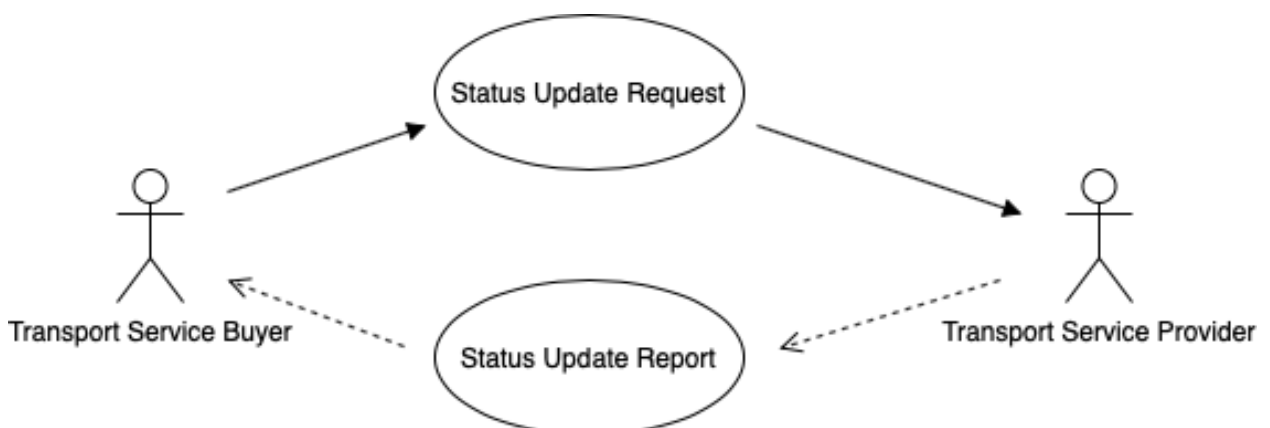

Figure 7: Overall Process Use Case Diagram

The following diagram describes the relationships between the highest-level Business Information Entities which are reused across the UN/CEFACT Buy/Ship/Pay, SCRDM and MMT Reference Data Models.

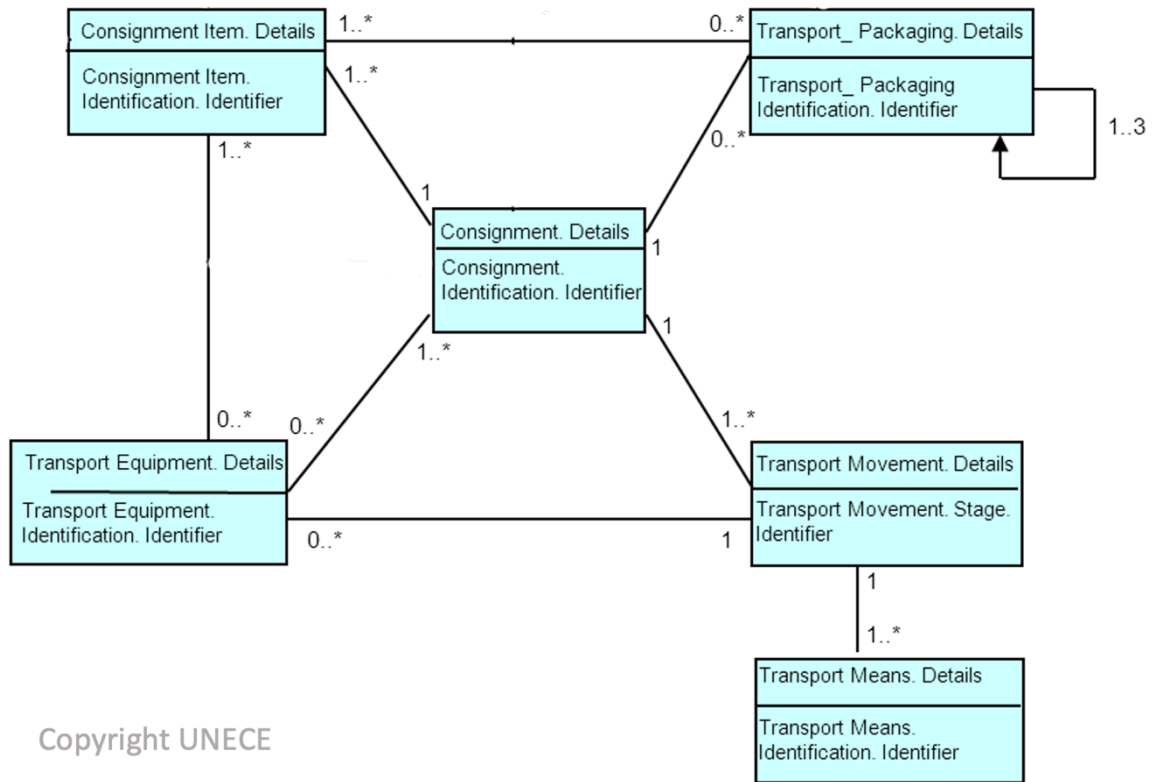The Tracking Messages utilise some of these entities and relationships in the model.

Figure 8a: MMT High Level Entity Model

Figure 8b and 8c refer to the canonical data model, at consignment and transport equipment level. Further details of which can be found in the MMT library publication.
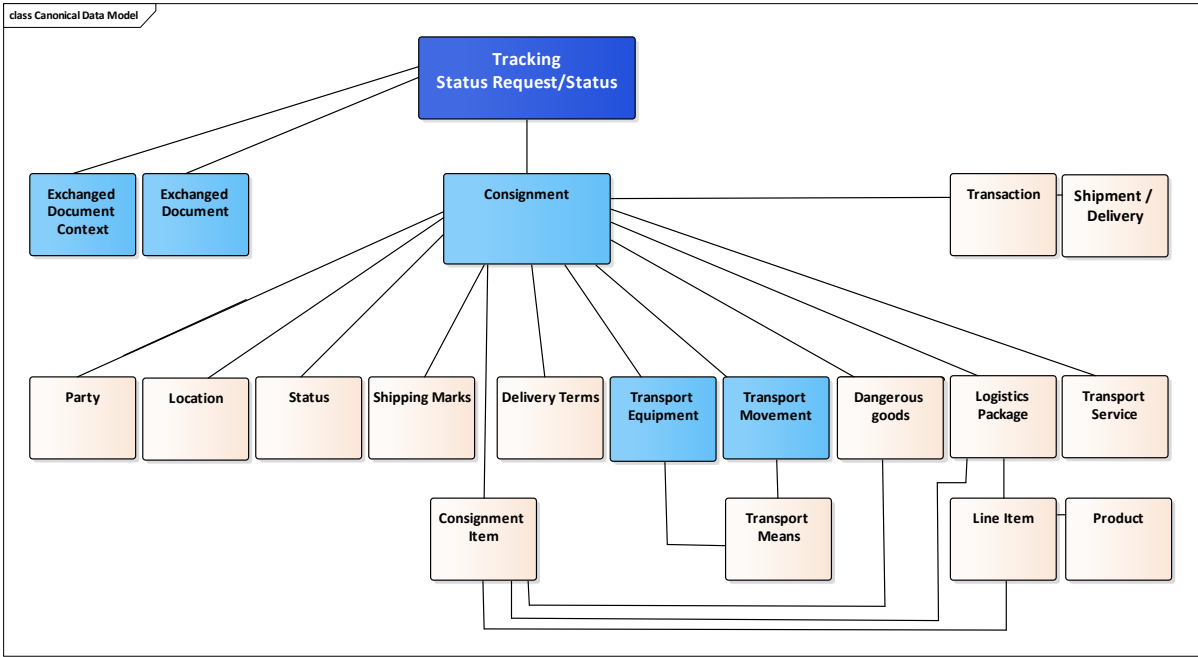
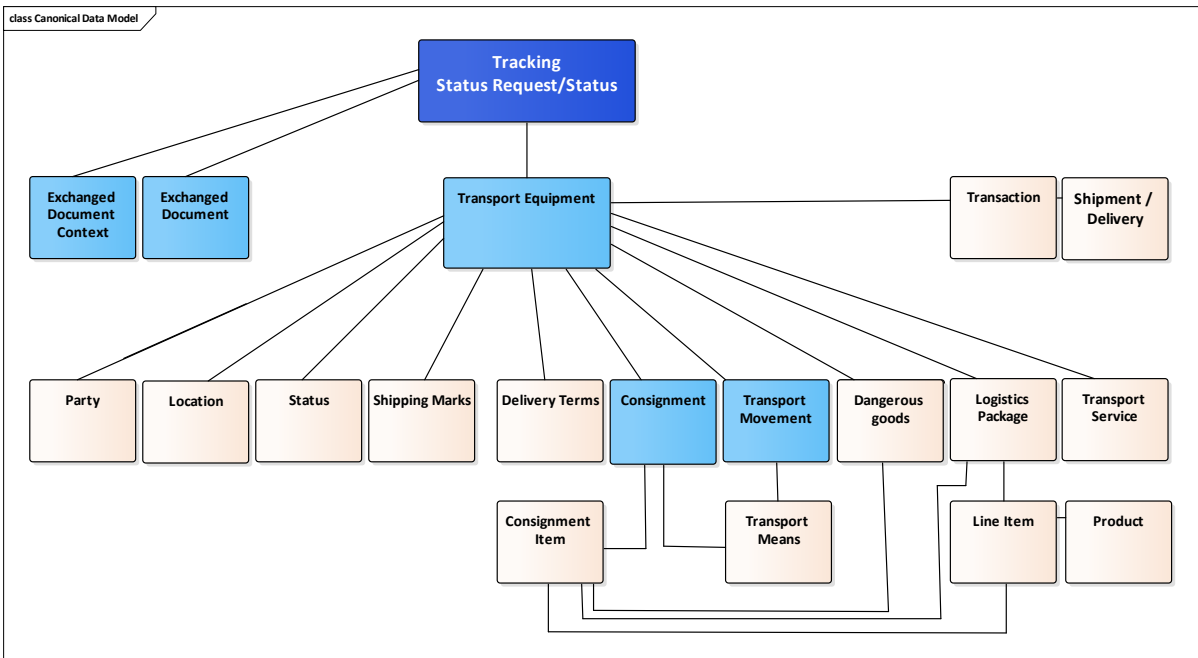*Figure 8b: Canonical Data Model – Status Reporting at Consignment*

Figure 8c: Canonical Data Model – Status Reporting at Transport Equipment

5.3.2 Tracking Status Message (A1)

A.1 Tracking Status Message	
General	
Name	Tracking Status Message
Description	Provide a status update regarding the physical movement of Consignment, Goods or Transport Equipment during the Transport Movement.
Details	
Classified to Business Areas and Process Areas	Business Area: Multi-Modal Transport Process Area: Ship
Participant and Interests	Transport Service Buyer, Transport Service Provider, Notify Party (if not Transport Service Buyer)
Stakeholders their Interests	Consignor, Consignee, Freight Forwarder
References	
Start / End Characteristics	
Pre Conditions	● A Transport Contract exists between the Transport Service Buyer and the Transport Service Provider. ● The Transport Service Provider has agreed to pick-up or receive, move and deliver the consignment. ● The Transport Service Provider has received a request for a status update for the Consignment, Transport Equipment or Goods. ● The Transport Service Buyer is subscribed to events that they are associated to for Consignment, Transport Equipment or Goods.
Post Conditions	● The Consignment is completed, in that the Goods have been delivered and any Transport Equipment is returned. ● All requested statuses of the Consignment during its movement have been reported.
Begins When	The Consignment starts its transport journey, this could include the despatch of empty equipment to the Loading Place.

Ends When	The Consignment is complete, goods have been delivered and any Transport Equipment is returned to the Transport Service Provider.
Exceptions	● The Consignment booking is cancelled. ● Events cannot be reported or produced electronically at the waypoint that an event is expected.

Figure 9: Tracking Status Message Use Case

5.3.3 Tracking Status Message Request (A2)

A.2 Tracking Status Message Request	
General	
Name	Tracking Status Message Request
Description	Request a status update of the physical movement of a Consignment, Goods, or Transport Equipment during the Transport Movement. A tracking message request may be ad-hoc or used to subscribe the Transport Service Buyer to the remainder of the waypoints in the Transport Movement.
Details	
Classified to Business Areas and Process Areas	Business Area: **Multi-Modal Transport** Process Area: **Ship**
Participant and Interests	Transport Service Buyer, Transport Service Provider, Notify Party (if not Transport Service Buyer)
Stakeholders their Interests	Consignor, Consignee, Freight Forwarder
References	
Start / End Characteristics	
Pre Conditions	● A Transport Contract exists between the Transport Service Buyer and the Transport Service Provider. ● The Transport Service Provider has agreed to pick-up or receive, move and deliver the consignment. ● The Transport Service Provider has received a request for status update for Consignment, Transport

	Equipment or Goods
Post Conditions	- The Tracking Message Status Update is provided to the Transport Service Buyer - The consignment is completed, in that the goods have been delivered and any transport equipment returned. - All requested statuses of the consignment during its movement have been reported.
Begins When	The Transport Service Buyer requests a status update for consignment, transport equipment or goods.
Ends When	The Consignment is complete, goods have been delivered and any Transport Equipment is returned to the Transport Service Provider.
Exceptions	- The Consignment booking is cancelled - Events cannot be reported or produced electronically at the waypoint that an event is expected

Figure 10: Tracking Status Message Request Use Case

5.4 Business Choreography View

5.4.1 Business Transaction View – Transactions and Authorized Roles

This document covers the intended use of the status reporting/request message, to provide clear and structured data to enable a transport service provider to report on the current or historical event messages that have taken place in the Transport Movement. This is to inform the Transport Service Buyer of actual, estimated and exception events that have occurred, to show the realized movement where it may have differed to the planned movement.

Business Transaction Worksheet	
General	
Name	Tracking
Description	The Transport Service Provider updates the Transport Service Buyer of key waypoints that have occurred in the Transport Movement of a Consignment, Transport Equipment or Goods.
Details	
Requesting Role	Transport Service Buyer

Responding Role	Transport Service Provider
Requesting Activity	Status Update Request
Responding Activity	Provide Status Update
Is Included in (Name of Business Collaboration)	Transport Contract between Transport Service Buyer and Transport Service Provider
Start / End Characteristics	
Affected Business Entities	Tracking Status Message
Pre-condition	Tracking Status Requested
Post-condition	Tracking Status Provided
Begins When	Transport Buyer subscribed to ongoing notifications OR requests a specific update
Ends When	Consignment is completed by delivery of goods
Exceptions	None
Business Transaction Activity Details	
Business Transaction Pattern	Request Response
Requestor's Side	
Requesting Role	Transport Service Buyer
Requesting Business Action Name	Tracking Status Message Request
Requesting Information Envelope Name	Tracking Status Request Message
Responder's Side	
Responding Role	Transport Service Provider
Responding Business Action	Tracking Status Message
Responding Information Envelope Name	Tracking Status Message

Figure 11: Business Transaction Use Case Worksheet
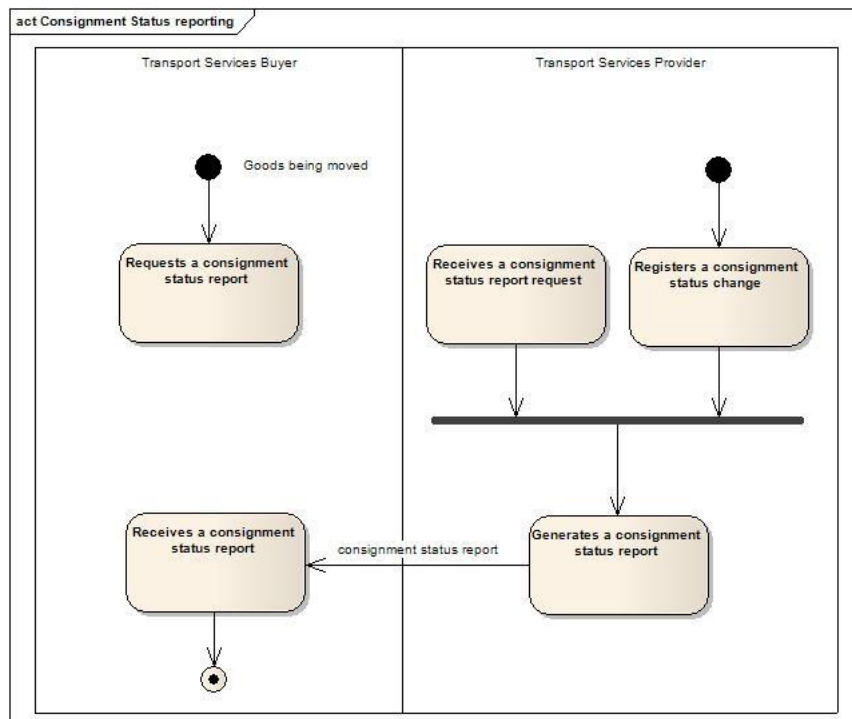
This is described in the following activity diagram:

Figure 12: Business Transaction Activity Diagram