dcsa

DCSA Information Model 2022.2

September 2022

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Version history

Version	Issue	Contributors	Description
1.0	13 February 2020	DCSA	First publication based on the track and trace business requirements
2.0	03 July 2020	DCSA	Second publication to include the operational vessel schedule domain
3.0	08 December 2020	DCSA	Third publication to include the electronic bill of lading domain
3.0.1	11 June 2021	DCSA	Addition to the third publication to reflect changes made due to stream alignment.
3.1	06 July 2021	DCSA	Updated to contain JIT port call domain
3.2	12 July 2021	DCSA	Additional attribute values for T&T2.1
3.3	12 October 2021	DCSA	Updated to contain additional attribute values for T&T 2.2
3.4	21 October 2021	DCSA	Updated to contain additional Timestamps for Just In Time Port Call 1.1
2022.1 Beta 1	29 March 2022	DCSA	Updated to contain Booking 1.0 and EBL 2.0
2022.1 Beta 2	7 July 2022	DCSA	Added internal IDs for linking (SI, TD and TransportCall), fixed the issuer-problem, minor changes
2202.2	15 September 2022	DCSA	Add OVS v3.0 and JIT v1.2 support

Legal disclaimer

1 Introduction

1.1 Preface

DCSA envisions a digitally interconnected container shipping industry. Our mission is to be the de facto standards body for the industry, setting the technological foundation for interoperable IT solutions. Together with our member carriers, DCSA creates vendor-neutral, technology-agnostic standards for IT and non-competitive business practices. By working towards the widespread adoption of these standards, our aim is to move the industry forward in terms of customer experience, efficiency, collaboration, innovation, and respect for the environment.

Please refer to the DCSA website, https://dcsa.org/about/ for more information.

The objective of the DCSA Data and Interface Standard program is to strengthen the container shipping industry's ability to send and receive data across all parties in the industry. Furthermore, it aims to enhance inter-carrier cooperation based on shared requirements and to ensure interoperability by using a shared data language. Ideally, this language will be inspired by existing standards and aligned with the process definitions put forth in the DCSA Industry Blueprint.

The standards published by DCSA are technology agnostic. DCSA does not point to the use of specific vendors' technologies or systems but relies on open-source, shared requirements for the industry that can be used by all parties, regardless of their choice of technology.

This chapter describes the purpose, structure and supporting publications of this document.

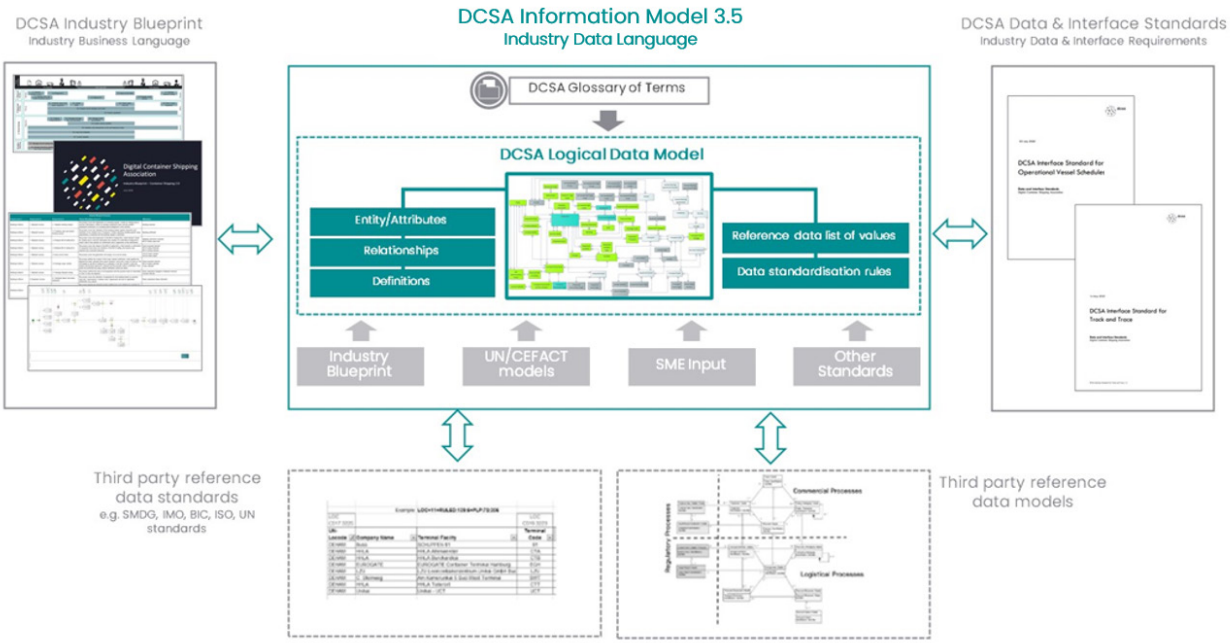
1.2 Purpose

The DCSA Information Model has been created to organise and catalogue the information being generated or consumed in connection with the processes described in the DCSA Industry Blueprint. The information model is also used as a collective term to describe all products that model data needed to meet the interface requirements. The information model includes a diagrammatic representation of selected data entities and their relationships with one another.

By standardising the terms used and documenting the related data, the DCSA Information Model is designed to provide a foundation that can be used in the current interface standardisation work and for future initiatives. DCSA recognises that there is a variety of standards that exist today and endeavours to reuse these resources where appropriate within the context of the container shipping industry. Some of these existing standards are more widely adopted than others, such as the UN/CEFACT Multimodal Transport Reference Data Model (MMT RDM). It is the intention of DCSA to constantly evaluate the DCSA Information Model against this and other standards.

1.3 Overview

The DCSA Information Model has been designed to act as a translator between the information requirements identified by the business processes mapped in the DCSA Industry Blueprint and the



existing standards for describing reference data relevant to the industry. This helps identify what is already available and where any potential gaps exist that need further investigation. This is depicted in Figure 1 along with how the DCSA Information Model interacts with the different elements.

Figure 1: The DCSA Information Model as a translator

1.4 Conformance

All parties in the container shipping industry are encouraged to implement and follow the data and interface requirements outlined and specified in this document. The requirements are linked to the UML version 2.0 diagrams for design requirements as well as the Logical Data Model and data definitions for information requirements, which must be implemented to conform to the agreed standards within the DCSA framework.

1.5 Supporting publications

This document is supported by a range of supplementary publications by DCSA, which will be referenced in the relevant sections. The supporting publications are listed in the table below and they can be found on the DCSA website https://dcsa.org/

Index	Publication	Descriptions
1	DCSA Web glossary of terms	This document promotes alignment of terms across all DCSA stakeholders in the container shipping industry. The glossary is published on the DCSA website in the context of the DCSA Industry Blueprint.
2	DCSA Industry Blueprint 2202.2	This document provides insights into as-is carrier processes. The DCSA Industry Blueprint comprises processes related to the movement of a container/equipment from one location to another, processes that are linked to a shipment/booking, processes that are considered critical for industry digitisation and standardisation efforts, and finally processes that are not considered commercially sensitive or of competitive advantage.
3	DCSA Event Naming Convention 2.2, and Event Structure Definitions 2.2	Throughout the years, track and trace solutions have become a commonly seen service in the container shipping industry. However, due to misalignment of terminology and ways of working, each carrier has designed its own events that have been published on their websites. To align this across the industry, this document provides a naming convention that sets the standard for naming as well as understanding customer-facing track and trace events.
4	DCSA Operational Vessel Schedules Definitions 3.0	This document provides standardised terminology and definitions with respect to communication of operational deep-sea (inter-regional) vessel schedules between Vessel Sharing Agreement (VSA) partners. The purpose is to facilitate standardisation and accuracy in partner communication and hence reduce the pain-points that carriers raised in this area. It is understood that not all VSA's (or carriers) apply ALL processes, but for the sake of completeness, the full process definitions are shared with all members. The purpose is to standardise what and when partners communicate (and to whom) with respect to operational vessel schedules and related exception-management. The definitions and time specifications add context to the vessel schedule process maps that have been circulated separately to members.
5	DCSA Information Model 2022.2 Reading Guide	This document helps to set the context for DCSA initiatives. The reading guide provides insight into the different concepts and methods utilised in the production of the Information Model and suggests ways in which the document can be used.

Index	Publication	Descriptions
6	DCSA Interface Standard for Track and Trace 2.2 and respective Reading Guide	The DCSA Interface Standard for Track and Trace 2.1 has been created to standardise the fundamental information provided across the carrier liner domain through track and trace interfaces. The reading guide provides insight into the different concepts and methods utilised in the production of the Track and Trace Interface Standard and suggests ways in which the document can be used as a foundation for future implementations.
7	DCSA Interface Standard for eBL 2.0 and respective Reading Guide	The DCSA Interface Standard for Shipping Instruction and Transport Document has been created to simplify the exchange of shipment-related information between shipper and carrier (upon booking confirmation) and to support the standardisation of the documentation process. The standard addresses submission of shipping instruction from the shipper to the carrier and issuance of a transport document by the carrier to a shipper. The reading guide provides insight into the container shipping documentation process and specifically addresses the "prepare bill of lading" and "issue bill of lading" processes for specific transport document types (Bill of Lading or Sea Waybill).
8	DCSA Interface Standard for Just In Time Port Call 1.2	The objective of the DCSA Interface Standard for Just In Time Port Call is to strengthen the container shipping industry's ability to send and receive operational port call data across the parties in the industry in a digital way.
9	DCSA Interface Standard for OVS 3.0	The objective of the DCSA Interface Standard for Operational Vessel Schedules 3.0 is to simplify the exchange of information related to vessel schedules between vessel operators.
10	DCSA Interface Standard for the Booking process 1.0	The DCSA Interface Standard for Booking request and Booking confirmation has been created to simplify the exchange of booking-related information between shipper and carrier and to support the standardisation of the documentation process. The standard addresses submission of the booking request from the shipper to the carrier and booking confirmation by the carrier to a shipper. The reading guide provides insight into the container shipping documentation process and specifically addresses the "booking request" and "booking confirmation" processes for transport of general goods.

Table 1: Supporting publications

2 DCSA Information Model 2022.2

This chapter describes the terms and data types used in this document.

2.1 Introduction

The DCSA Information Model 2022.2 refers to the collection of artefacts and products that document and define the reviewed and agreed data standards that must be followed within the DCSA framework. The adoption of the industry standards in the DCSA Information Model 2022.2 will help ensure the ongoing standardisation and optimisation of interoperability and data exchange between the parties in the container shipping industry as well as other stakeholders working within the industry.

As depicted in the diagram below, the DCSA Information Model 2022.2 consists of the following artefacts and products:

- Logical data model: A diagrammatic representation of:
  - Data entities and the data attributes that store details about the entities
  - The relationships that exist between data entities
  - Standardised names of data entities and data attributes, for example, equipment versus container; definitions of the entities and attributes are stored as part of the metadata for the model.
- Standardised lists of data: This is particularly relevant for reference data entities, through which a controlled list of values is recommended to help ensure that the same data are being used within and between organisations.
- Data standardisation rules: When a predetermined data value cannot be offered, the data standardisation rules can help with the generation of consistent data values that can be used.

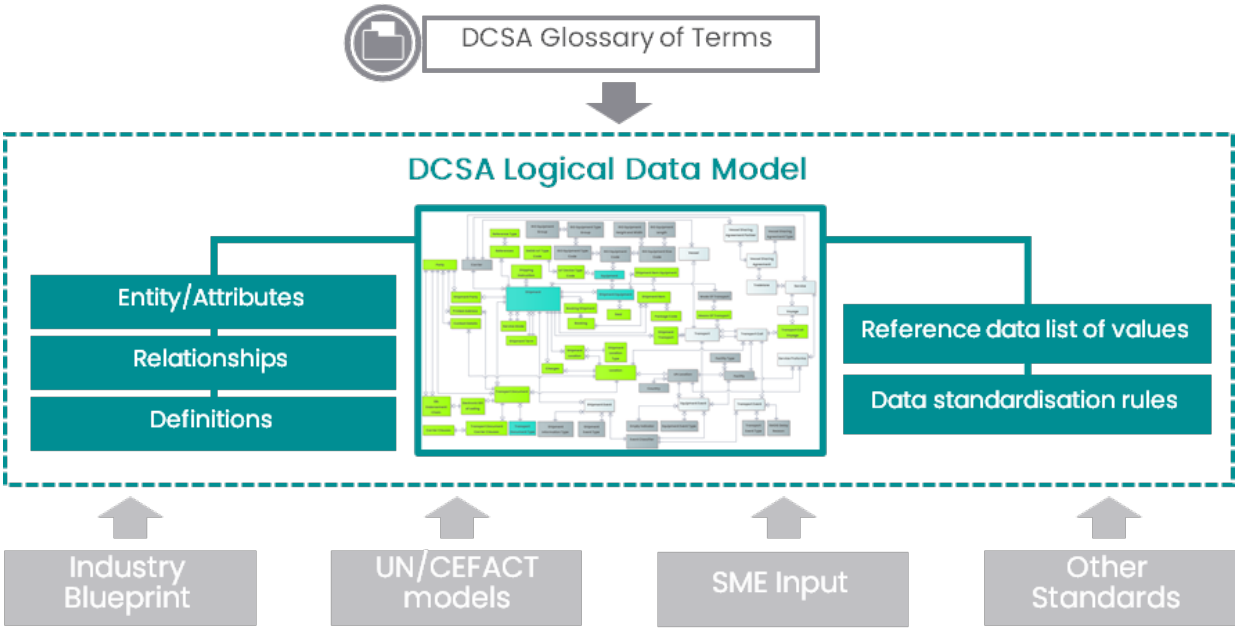


Figure 2: Overview of the contents of the DCSA Information Model

The DCSA Information Model 2022.2 has been designed to support a shared understanding of concepts, terms, and rules within the shipping industry. The principles behind the creation of the model have been to look to the current standards used within the industry and to reuse these standards where appropriate or propose new ones where a usable standard could not be found. The key input for the DCSA Information Model 2022.2 includes:

- DCSA Industry Blueprint: Comprises recommended current-state standards for the processes used in container shipping. The terminology used in the Information Model has primarily been aligned with the DCSA Industry Blueprint terminology.
- DCSA Web glossary of terms: Definitions of terms used across DCSA in an industry-specific language.
- UN/CEFACT models: The Multimodal Transport (MMT) Reference Data Model (RDM) has been used as a key resource to help define and standardise entities within the Logical Data Model.
- SME input: Input from the appointed subject matter experts (SMEs) among the DCSA members.
- Other Standards: DCSA regularly checks which other relevant standards are being used and where possible, will re-use proven standards.

The model deals with industry data at logical and conceptual levels rather than applying physical naming conventions, configured in, for example physical databased. Therefore, the DCSA Information Model must be considered as the container shipping industry's reference data model helping users of the model to understand how data is generated/consumed as a result of the execution of industry processes and how these data can be mapped in a logical way.

2.2 Selected data modelling terms defined

The table below provides a definition of selected terms used throughout this document and provides the reader with insight into the meaning of the term and the origin of the definition. Specific terms and definitions that are indispensable for this document may include alternative or reproduced definitions from existing standards, or they may be referenced as a shared understanding within DCSA.

Term	Definition
Data Entity	An object in a data model (e.g. in The Logical Data Model, *Equipment* is a data entity).
Information Model	The information model refers to a collection of artefacts and products that help define the information that is relevant to the container shipping industry.
Logical Data Model	A graphical way of representing a data architecture without regard to the physical implementation or the database management system involved in storing the data, providing information about the various entities or the relationships between the entities.

Term	Definition
Reference Data	Reference data is data that defines the set of permissible values to be used by the data entities. Reference data is typically a class of data commonly referred to as code tables or look-up tables generally consisting of three attributes: a code, a name, and a description. Reference data may be described as any kind of data that is used to categorise other data.

Table 2: Selected data modelling terms

2.3 The DCSA Information Model data types and formats

For each data attribute, which the Logical Data Model points to, a data type has been selected to provide additional details that have already been identified. An overview of the different data types utilised is presented in the table below. When the data type is selected, the reasoning below is applicable throughout this document.

Data type	Usage rule
Text	The Text data type stores strings in a variable-length field. Data can consist of letters, numbers, and symbols. In cases where there is a maximum number of characters allowed, this will be stated by capturing the maximum numbers of characters allowed, in brackets, e.g. Text(100) is used when the length of the data field can vary, up to a maximum of 100 characters.
Number	The Number data type represents a number, potentially decimal, i.e. with digits after the decimal point.

Data type	Usage rule
DateTime	A DateTime is only meaningful in relation to a specific location. The DateTime attribute should always be specified as UTC or with a UTC Offset to provide context as to which time zone (location) the DateTime relates to. If no UTC-related offset is given, the time is assumed to be in local time. However, this might result in ambiguity and confusion when used across time zones or even within the same time zone if the region observes daylight saving time (DST). If the time is provided in UTC, append a Z directly after the time. Z (also "Zulu" time zone) is the zone designator for UTC±00:00: 'YYYY-MM-DDThh:mm:ssZ'. Negative UTC offsets describe a time zone west of UTC±00:00, where the time is behind UTC. For example, Quito is five hours behind UTC, so the time zone designator is "-05:00". The DateTime '2019-12-31T12:00:00-05:00' and '2019-12-31T17:00:00Z' describe the same point in time in Quito. Positive UTC offsets describe a time zone east of UTC±00:00, where the time is ahead of UTC. For example, Luanda is one hour ahead of UTC, so the time zone designator is "+01:00". The DateTime '2019-12-31T12:00:00+01:00' and '2019-12-31T11:00:00Z' describe the same point in time in Luanda. The plus sign must be used for a positive or zero UTC offset, and a minus sign for a negative UTC offset. Hence the UTC offset -00:00 is not permitted. For London, the time zone designator would be +00:00 (not -00:00), and +01:00 during daylight saving time. DateTime format without UTC-related offset (local time): 'YYYY-MM-DDThh:mm:ss'. DateTime format with UTC Offset: 'YYYY-MM-DDThh:mm:ss±hh:mm'. DateTime format in UTC: 'YYYY-MM-DDThh:mm:ssZ'.
Boolean	The Boolean data type is used to specify a true or false value.

Table 3: Data type overview

2.3.1 Attribute naming conventions

To maintain consistency in the Logical Data Model, certain labels are used repeatedly to make the meaning of these attributes a bit clearer.

Generally, for entities that hold reference data, the following suffixes will be used:

- Code
- Name
- Description

The table below shows a selection of the labels that certain types of attributes use consistently.

Format	Format usage rule
Code	(For reference data entities) A business code used to uniquely identify each row. These codes may be recognisable by the business community and therefore have a business meaning.
Name	(For reference data entities) A short description of what the reference data value is; this is the value that will usually be used in reporting.
Description	(For reference data entities) In cases where an addition explanation may be beneficial, a description may be included.
ID	An identifier used to make the model easier to understand and preserve relationships. These are not real-world business keys but are in some cases intended to be referenced by the interface standards.
DateTime	In the current version of the model, the DateTime suffix and data type is used to denote instances where only a date needs to be captured and where both the date and the time needs to be captured. This is to allow for flexibility, given the variances in how data may be stored by different organisations. If only the date is captured, the time part will consist of zeros for HH:MM:SS (00:00:00). Note: A UTC-related offset should not be specified because these are only meaningful in combination with a time. The date is assumed to be local in relation to the location the date is referring to.

Table 4: Data attribute naming conventions

3 Logical Data Model

The Logical Data Model of the DCSA Information Model 2022.2 is presented at an entity level in the figure below.

The entities in the Logical Data Model can be split into the following two categories:

1. Entities (light grey)
2. Reference data entities (dark grey)

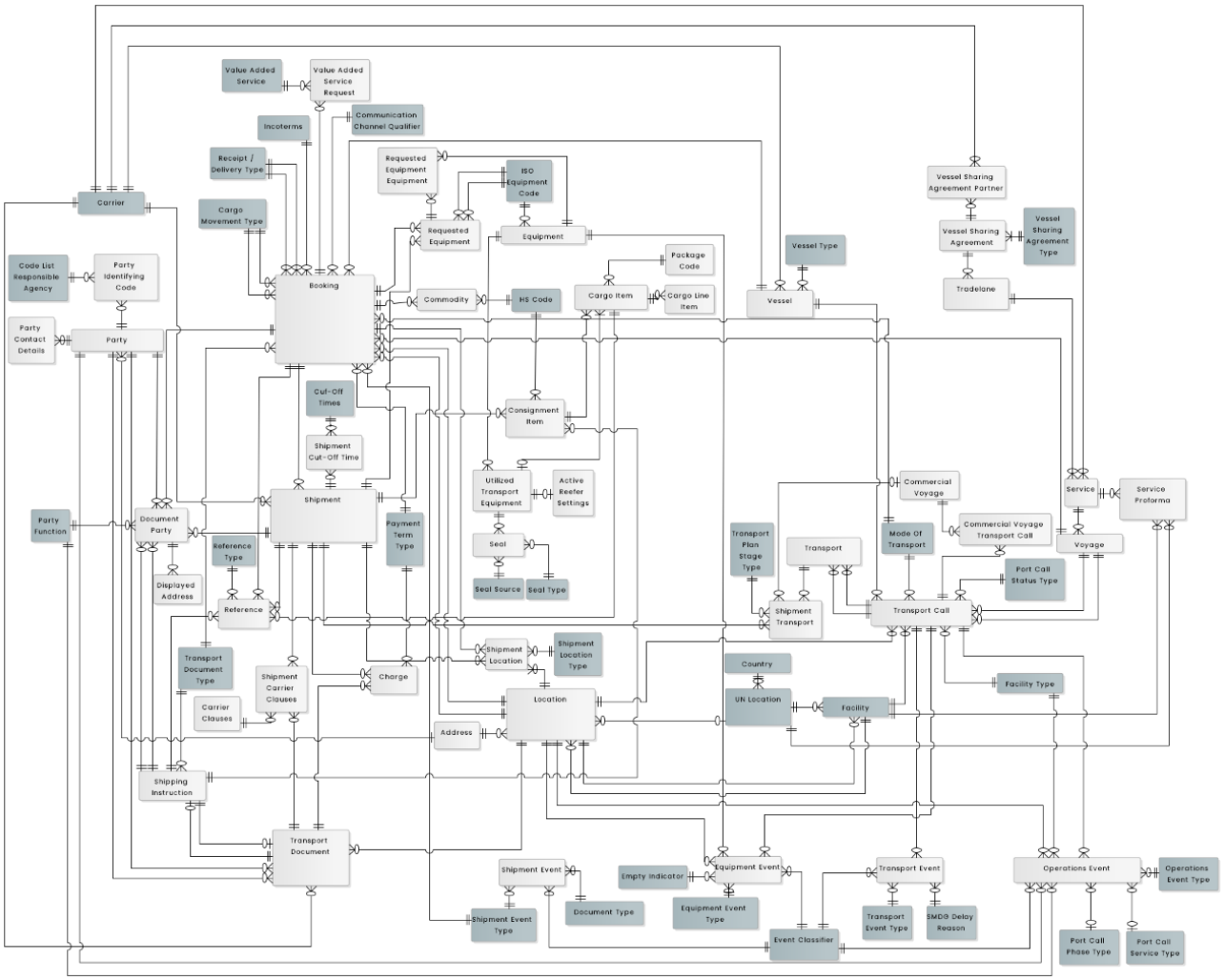


Figure 3: Logical Data Model - overview of data entities

The Logical Data Model details the entities and their relationships with one another. An entity is an object that can have information stored about it, for example, Shipment, Equipment, and Transport. A relation describes the industry data-related rules between two entities.

In many cases, entity data is generated as unique transactional records, for example, a booking whose data cannot be predetermined in the same way that reference data can. However, it is important for DCSA to point to specific formats or conventions that can be followed to avoid duplicated information (for example, two unique instances of equipment with the same reference number) or incompatible data formats (for example, conflicting date formats such as 2 March 2010 written as 02/03/2010 versus 2010-03-02). Regarding reference data, a holistic dataset (list

of values) will be described to ensure that the data is accurate and will yield the same results no matter who uses them. Within each subject area in the subsequent sections, the reference data, which DCSA recommends, will be cited. In cases where a standard already exists, and it has been agreed within DCSA to utilise the standard, it will be referenced; otherwise it will be specified where a new dataset is created.

In general, the Logical Data Model is a work-in-progress model, limited in size by the scope of each release. Therefore, the model will transform and grow over time and, for example, cover more breadth per relevant subject area in subsequent releases.

4 Logical Data Model usage

The DCSA Information Model 2022.2 has been designed to act as a translator between the information requirements identified by the business processes mapped in the DCSA Industry Blueprint, and the existing standards for describing reference data relevant to the industry. The model has been built iteratively, with focus being given to certain parts of the model that are relevant to fulfil track and trace, operational vessel schedule and electronic bill of lading interface requirements. Therefore, certain sections of the model will be more advanced than others, although the model has evolved and will continue to evolve over time. The aim of this section is to highlight the relevant parts of the model that have been developed for specific requirements.

The DCSA Information Model was originally constructed around the requirements for the ability to track and trace a shipment. Afterwards, it was extended to support an interface to share Operational Vessel Schedules (OVS) between vessel sharing agreement (VSA) partners. The model has recently undergone another iteration to support an interface to share bill of lading information electronically between carriers, shippers, and other potential stakeholders in the supply chain. These areas will be described further in their own sections.

4.1 Track and trace (T&T)

The entities that are needed to fulfil the requirements to be able to track and trace a shipment are shown in the figure below.

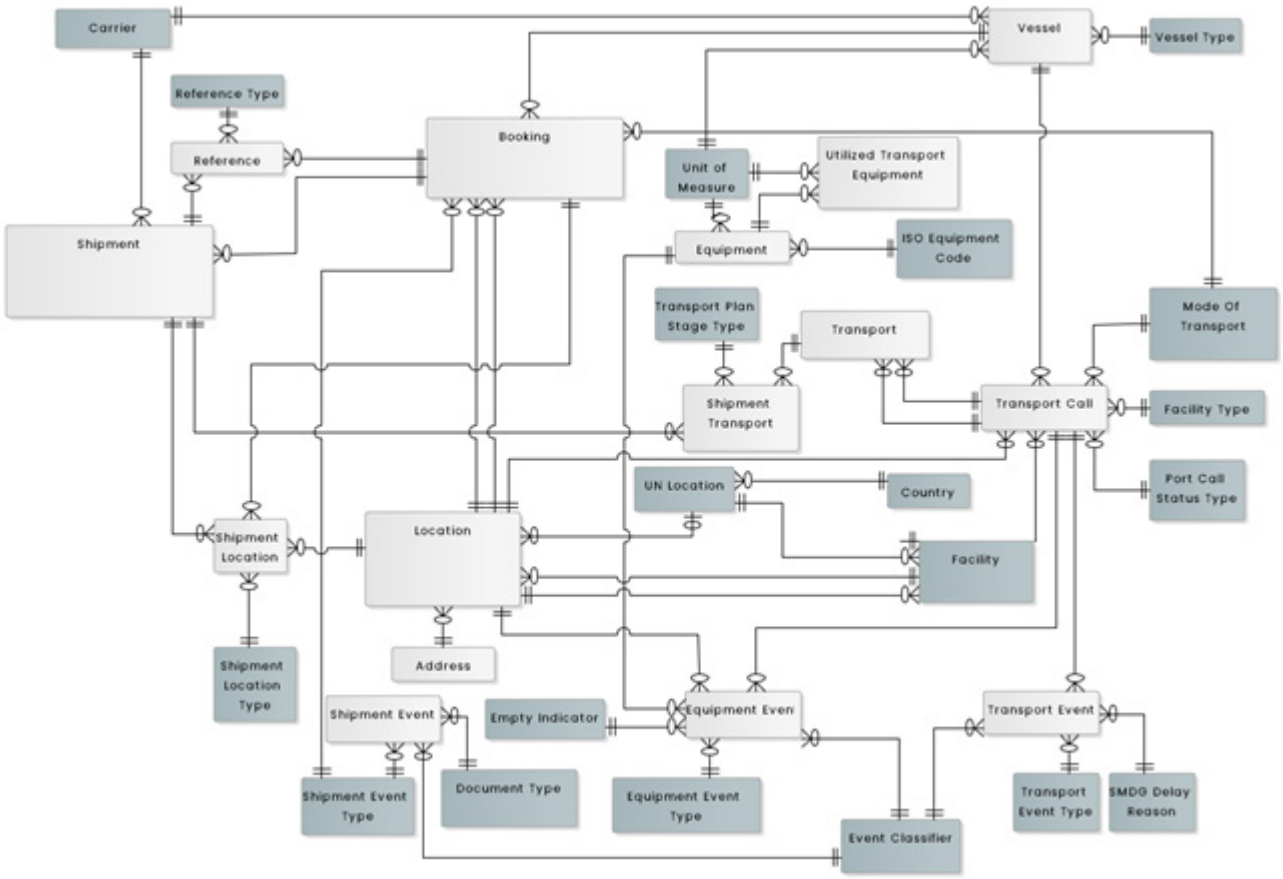


Figure 4: Logical Data Model for track and trace

The objective behind the use case of tracking and tracing a shipment is to identify the equipment and the transportation modes used for moving goods, rather than tracking and tracing the goods themselves or the contents of the equipment used in fulfilling the shipment.

The key entities are:

- Shipment: Uniquely identifies the shipment that needs to be tracked and traced.
- Equipment: Identifies the equipment(s) used to transport the goods belonging to the shipment.
- Transport: Identifies which modes of transport (truck, rail, vessel, or barge) are involved in the shipment.
- The three Event (Transport/Shipment/Equipment) entities: 'Shipment events' describe actions that occurred or have been planned to occur in relation to a booking or transport document, such as the booking confirmation. 'Transport events' describe the movements of the transport instances that are associated with the particular shipment or equipment item. 'Equipment events' describe the movements of an equipment item as part of the freight transportation. The previous sections in this document have outlined these elements.

For tracking and tracing, the primary parties are:

- The sender/receiver (shipper/consignee) of goods wanting to maintain information about the goods being transported. The details of these parties are stored in the Shipment entity.
- The main party contracting the movement of the goods, which, from DCSA's point of view, is the ocean carrier. The Carrier entity stores the details of this party.

4.2 Operational vessel schedules (OVS)

The entities that are needed to fulfil the requirements of sharing operational vessel schedules are shown in the figure below:

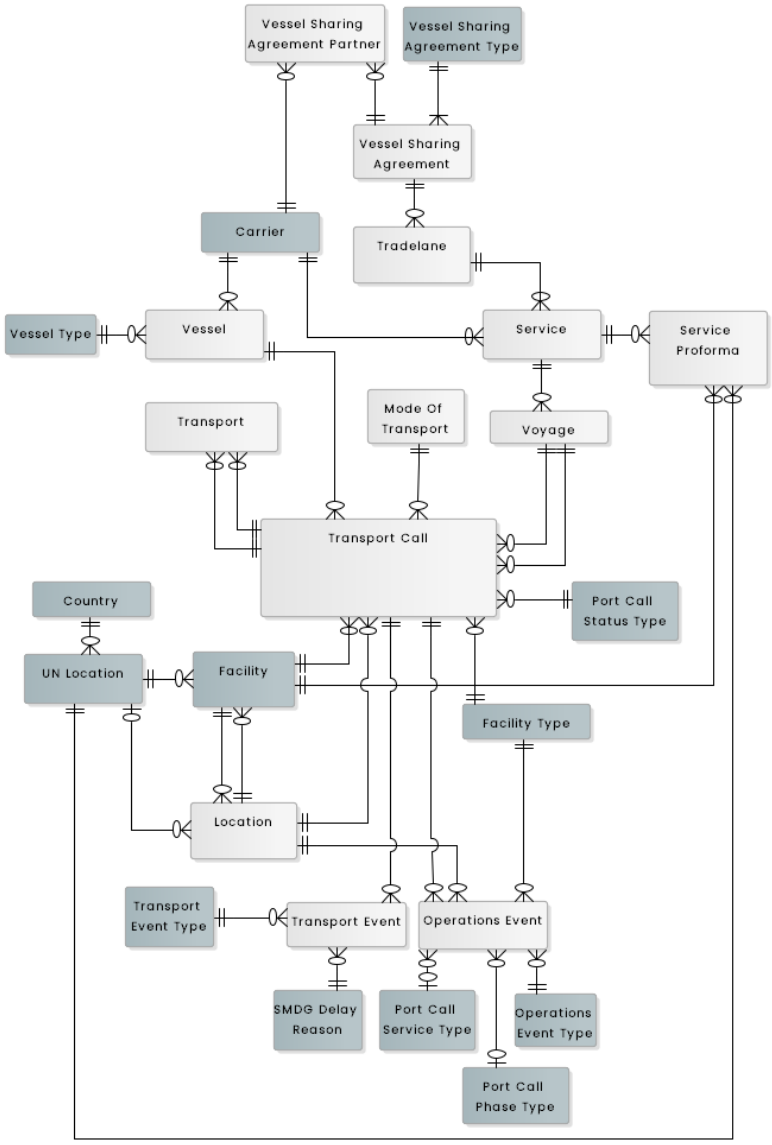


Figure 5: Logical Data Model for operational vessel schedules

In addition to track and trace, the Logical Data Model (LDM) includes a standard of information relevant for operational vessel schedules. The focus is on container liner long-term and coastal schedules, i.e. schedules that have a named vessel assigned to them. Although proforma schedules are not covered by the current release, the LDM has modelled the Service and Service Proforma entities for completeness and additional context, with the expectation that these will be further developed in the future. Hence, the Service Proforma entity simply represents the latest version of the proforma, not accounting for historical amendments. Likewise, VSAs have been modelled with minimal details to simply provide the context for how the operational vessel schedules are ultimately related to existing vessel sharing agreements.

The following are currently not in scope:

- Commercial schedules
- Feeder schedules
- Liner schedules that are not part of VSAs

The model for OVS revolves around vessel-related events. It mainly concerns the vessel operator (how the shipment in practice is transported from the origin to the destination). This customer-provider relationship is naturally expressed through products. The transport plans of the products are modelled by the shipment transport entity which describes how the shipment is routed through the liner network.

The OVS requirements heavily focus on the transport (journey) subject areas. Although for the track and trace requirements, the generic transport entities were sufficient, OVS needs additional details which have been modelled as sub-type entities of Vessel and Voyage.

4.3 eDocumentation

The entities that are needed to fulfil the requirements to encompass the documentation process are shown in the figure below.

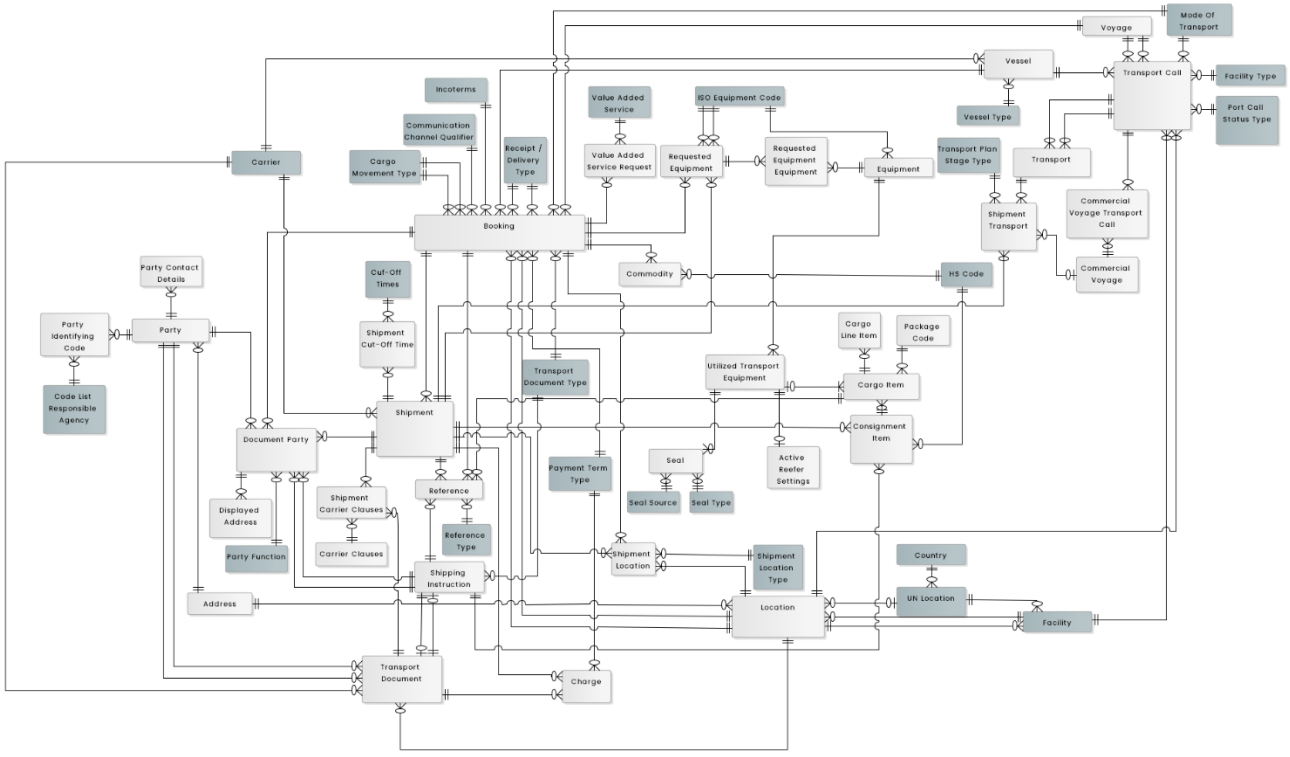
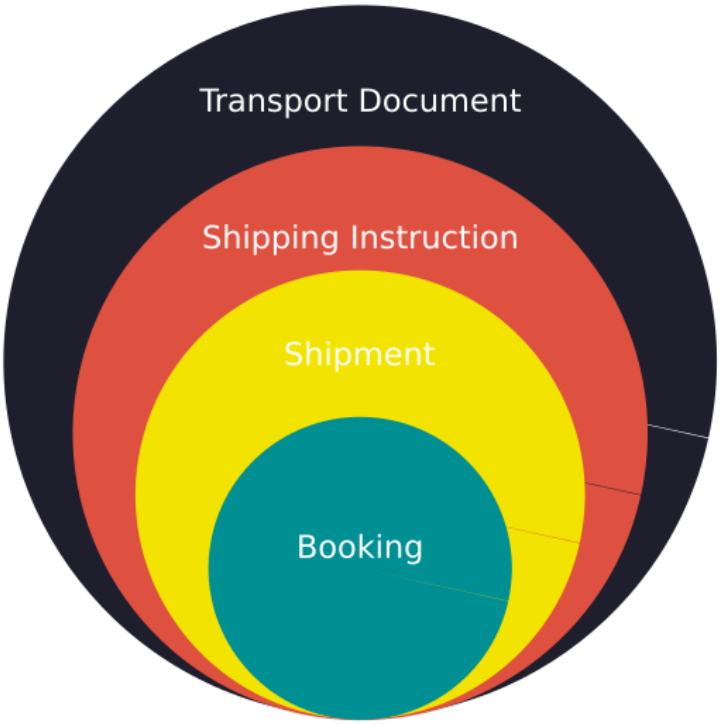


Figure 6: Logical Data Model for eDocumentation

As part of the B/L standardisation initiative several new entities have been added to the IM to encompass the documentation process (including the Booking process). The purpose is to enable the process coverage from booking confirmation to issuance of transport document while capturing all the relevant information details, excluding dangerous goods and out-of-gauge, from both an operational and a documentation perspective.

The IM has been updated to reflect the relationship between booking, shipment, cargo items, shipping instruction and transport document, as well as the physical relation between the container, vessel, and transport plan.

The underlying structure can be described as a layered structure, in which each of the main process steps amounts to adding an additional layer:



- at booking request stage, carried out by the shipper, a Booking is created
- at booking confirmation stage, carried out by the carrier, a Shipment is added, including its transport plan
- at shipping instruction stage, carried out by the shipper, the Shipping Instruction layer is added
- at Transport Document stage, carried out by the carrier, the Transport Document layer is added

Even though the Information Model is not intended to cover business logic, the following consideration should be made: Each of the layers can only be edited in the corresponding process step. For instance, it should not be possible to edit attributes in the Booking entity using the Shipping Instruction endpoint.

Parties have been added to capture shipper, consignee and notify parties on a booking, shipment, and transport document. The model further addresses how individual cargo items are stuffed into containers in relation to the shipping instruction and respective transport documents. A many-to-many relation between shipment and transport document is created through cargo items and shipping instruction. The model encompasses the fact that transport documents, i.e. Seaway Bill and Bill of Lading, can be issued both physical and digitally (eBL) as well as negotiable or non-negotiable.

Lastly, the model now aligns with the UN/CEFACT MMT reference data model in terms of defining shipment in relation to a booking as well as shipment in relation to a transport document (consignment in UN/CEFACT terms).

5 Subject areas in the Logical Data Model

The Logical Data Model is split into subject areas to provide a more focused overview of each part of the model, as illustrated in the figure below. Each subject area consists of one or more data entities and the related reference data.

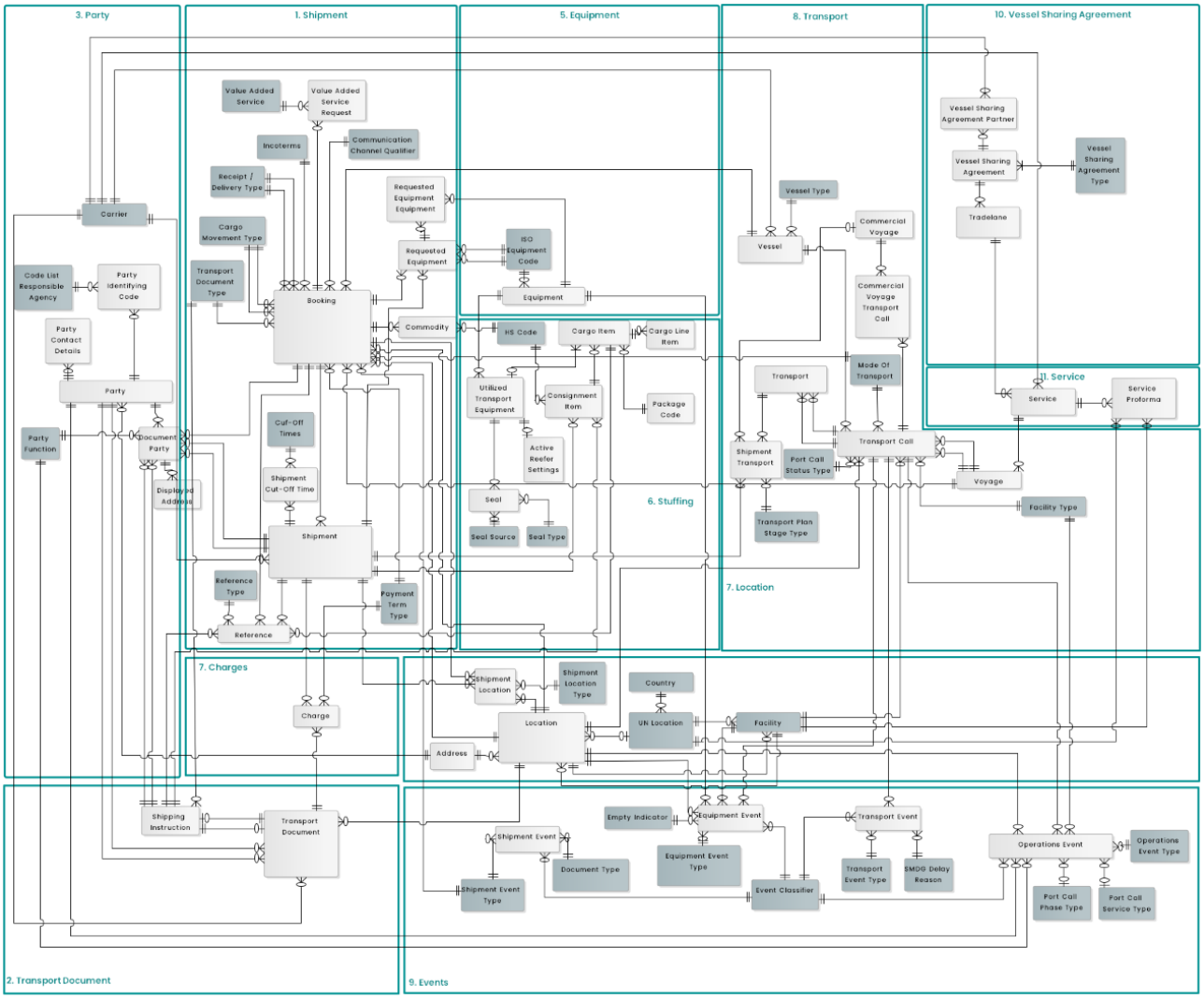


Figure 7: Subject areas in the Logical Data Model

In the following sections, each of the subject areas and their relating data entities and data attributes will be described in the following order:

1. Shipment
2. Transport Document
3. Party
4. Charges
5. Equipment
6. Stuffing
7. Location
8. Transport
9. Events

10. Vessel Sharing Agreement (VSA)
11. Service

Within each subject area, an overview of and insight into the reference data values are provided. Where an existing reference data standard is reused, the source will be stated. Otherwise, an alternative will be specified. All reference data entities will be described in relation to the subject areas that they are part of.

5.1 Shipment

The subject area of Shipment contains fifteen entities: Shipment, Booking, Requested Equipment, Reference Type, References, Receipt / Delivery Type, Cargo Movement Type, Value Added Service, Value Added Service Request, Shipment Cut-Off Times, Cut-Off Times, Incoterms, Payment Term Type, Commodity and Communication Channel Qualifier. The Shipment related entities are shown in Figure 8.

The term shipment has been defined in accordance with the DCSA Industry Blueprint and relates directly to the booking confirmation sent by a carrier to a customer. A shipment is an identifiable collection of one or more Cargo Items (available to be) transported together from the Seller(s) (Original Consignor/ Shipper) to the Buyer(s) (Final/ Ultimate Consignees). A shipment may form a part or all of a transport document (UN/CEFACT' Consignment) or may be transported in different transport documents. As such, the definition of a shipment aligns with the UN/CEFACT MMT reference data model.

The Shipment subject area and its entities will allow for the identification of the shipment that a user may want to track. A shipment must be assigned to one and only one carrier (as defined by the Carrier ID).

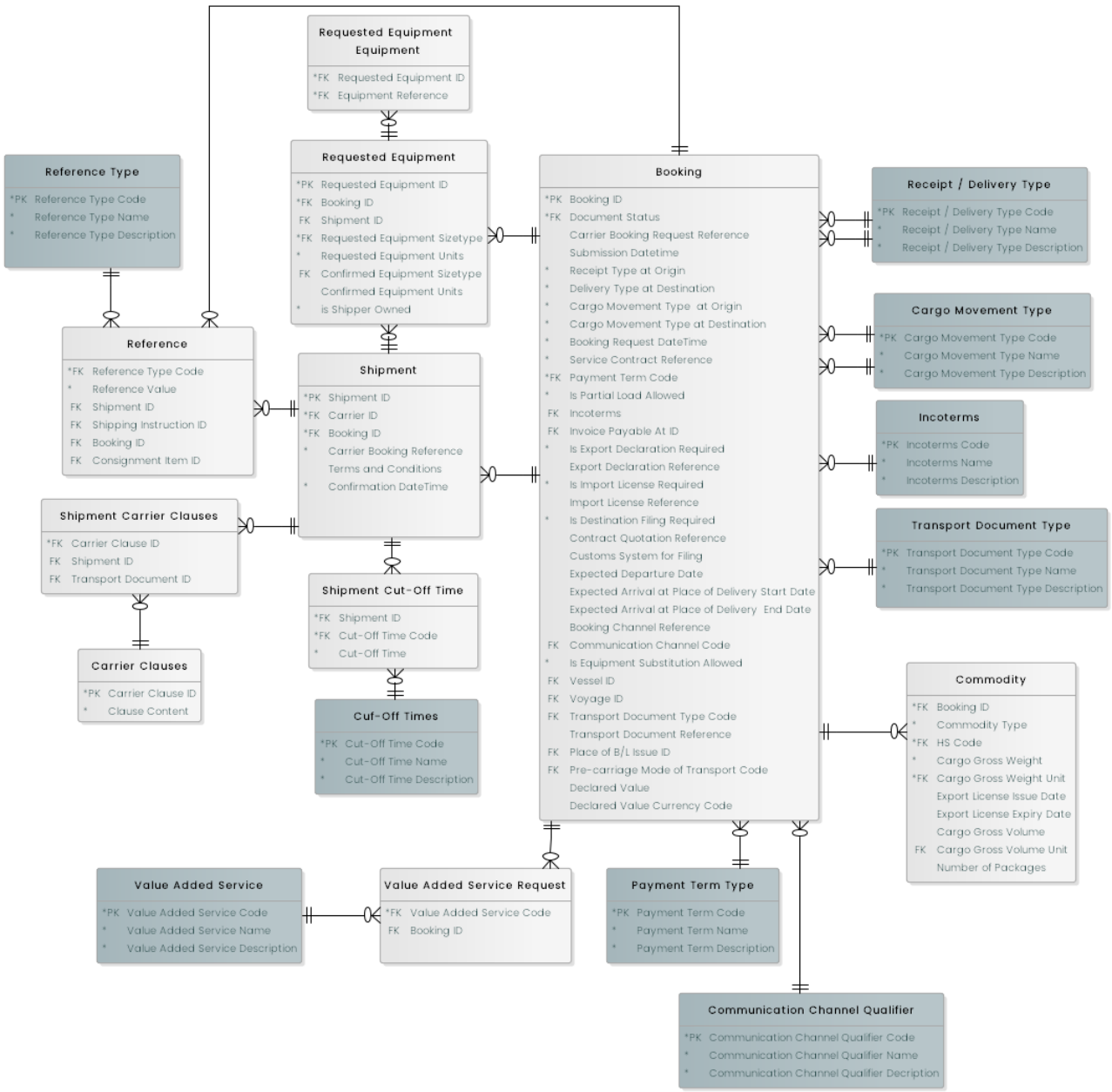


Figure 8: Shipment subject area

The entities within the Shipment subject area are defined and detailed in the following tables.

Shipment entity: an identifiable collection of one or more Cargo Items (available to be) transported together from the Seller(s) (Original Consignor/Shipper), to the Buyer(s) (Final/Ultimate Consignee).

Attribute	Definition	Data type
Shipment ID	The unique identifier for a shipment.	UUID
Booking ID	Links to the Booking connected to this Shipment	UUID
Carrier ID	Links to the carrier entity containing the SCAC and/or the SMDG code to specify the responsible carrier.	UUID
Carrier Booking Reference	A set of unique characters provided by carrier to identify a booking.	Text(35)
Terms and Conditions	Carrier general terms and conditions for this shipment.	Text
Confirmation DateTime	Date and time of booking confirmation	DateTime

Table 5: Shipment entity

Booking entity: A reservation of space and/or equipment for a vessel/voyage and possibly inland transport with a specific origin/destination/equipment type and commodity.

Attribute	Definition	Data type
Booking ID	A unique internal identifier to identify a Booking	UUID
Carrier Booking Request Reference	An Identifier provided as a response to a booking request	Text(100)
Document Status	The status of the document in the process. For possible values see reference table 'Shipment Event Type reference data entity'.	Text(4)
Receipt Type at Origin	Indicates the type of service offered at Origin. Options are defined in the Receipt / Delivery Type entity.	Text(3)

Attribute	Definition	Data type
Delivery Type at Destination	Indicates the type of service offered at Destination. Options are defined in the Receipt / Delivery Type entity.	Text(3)
Cargo Movement Type at Origin	Refers to the Cargo Movement Type at the loading of the cargo into the container. Options are defined in the Cargo Movement Type entity.	Text(3)
Cargo Movement Type at Destination	Refers to the Cargo Movement Type at the unloading of the cargo out of the container. Options are defined in the Cargo Movement Type entity.	Text(3)
Booking Request DateTime	The date and time of the booking request when received.	DateTime
Service Contract Reference	Reference number for agreement between shipper and carrier through which the shipper commits to provide a certain minimum quantity of cargo over a fixed period, and the carrier commits to a certain rate or rate schedule.	Text(30)
Payment Term Code	Indicates whether freight & charges are due for payment before the shipment is effected, practically before the transport document is released to shipper (Prepaid) or before the shipment is finalized meaning cargo released to consignee (Collect).	Text(3)
Is Partial Load Allowed	Indication whether the shipper agrees to load part of the shipment in case where not all of the cargo is delivered within cut-off.	Boolean

Attribute	Definition	Data type
Is Export Declaration Required	Information provided by the shipper whether an export declaration is required for this particular shipment/commodity/destination.	Boolean
Export Declaration Reference	A government document permitting designated goods to be shipped out of the country. Reference number assigned by an issuing authority to an Export License. The export license must be valid at time of departure.	Text(35)
Is Import License Required	Information provided by the shipper whether an import permit or license is required for this particular shipment/commodity/destination.	Boolean
Import License Reference	A certificate, issued by countries exercising import controls, that permits importation of the articles stated in the license. Reference number assigned by an issuing authority to an Import License. The import license number must be valid at time of arrival.	Text(35)
Submission DateTime	Last date and time of updating the Booking	Datetime
Is AMS/ACI Filing Required	Customs filing for US (AMS) or Canadian (ACI) customs	Boolean
Is Destination Filing Required	Indicates whether the shipper will perform the destination customs filing (e.g. AMS/ACI) filing directly or not	Boolean

Attribute	Definition	Data type
Contract / Quotation Reference	Information provided by the shipper to identify whether pricing for the shipment has been agreed via a contract or a quotation reference. Mandatory if service contract (owner) is not provided.	Text(35)
Incoterms	Transport obligations, costs and risks as agreed between buyer and seller.	Text(3)
Invoice Payable At ID	Links to the location where payment will take place by the customer. Usually refers to Basic Ocean Freight alone	UUID
Expected Departure Date	The date when the shipment is expected to be loaded on board a vessel as provided by the shipper or its agent.	Date
Expected Arrival at Place of Delivery Start Date	The start date (provided as a range together with Expected Arrival Date End) for when the shipment is expected to arrive at Place of Delivery	Date
Expected Arrival at Place of Delivery End Date	The end date (provided as a range together with Expected Arrival Date Start) for when the shipment is expected to arrive at Place of Delivery	Date
Transport Document Type Code	Specifies the type of the associated Transport Document (Bill of Lading or Sea Waybill).	Text(3)
Transport Document Reference	The unique identifier of the transport document that the booking concerns	Text(20)

Attribute	Definition	Data type
Booking Channel Reference	Identification number provided by the platform/channel used for booking request/confirmation", ex: Inttra booking reference, or Infor Nexus, other	Text(20)
Communication Channel Code	Specifying which communication channel is to be used for this booking e.g. EM (email), AO (Uniform Resource Location – "API"), EI (EDI)	Text(2)
Is Equipment Substitution Allowed	Indicates if an alternate equipment type can be provided by the carrier.	Boolean
Vessel ID	Identifier for the vessel	UUID
Voyage ID	Identifier for the Voyage the booking links to	UUID
Place of B/L Issue ID	Links to the Location ID to specify where the original transport document (bill of lading) will be issued – this could be the Carrier Office.	UUID
Pre-carriage Mode of Transport Code	The code specifying the mode of transport for the pre carriage	Text(3)
Declared Value	The value of the cargo that the shipper declares to avoid the carrier's limitation of liability and "Ad Valorem" freight, i.e. freight which is calculated based on the value of the goods declared by the shipper.	Number
Declared Value Currency Code	The currency used for the declared value, using the 3-character code defined by ISO 4217.	Text(3)

Table 6: Booking entity

Requested Equipment entity: contains the information of requested versus confirmed number and types of equipment for the shipment.

Attribute	Definition	Data type
Requested Equipment ID	A unique internal identifier to identify a Requested Equipment	UUID
Booking ID	A unique internal identifier to identify a Booking	UUID
Shipment ID	Identifies the associated shipment.	UUID
Requested Equipment Sizetype	Size and type of the requested Equipment for this shipment.	Text(4)
Requested Equipment Units	Number of requested equipments.	Number
Confirmed Equipment Sizetype	Size and type of the allocated Equipment for this shipment.	Text(4)
Confirmed Equipment Units	Number of confirmed equipments.	Number
Is Shipper Owned	Indicator if the container is Shipper Owned (SOC)	Boolean

Table 7: Requested Equipment entity

Requested Equipment Equipment entity: is a many-to-many relation between the Requested Equipment and the Equipment

Attribute	Definition	Data type
Requested Equipment ID	A unique internal identifier to identify a Requested Equipment by	UUID

Attribute	Definition	Data type
Equipment Reference	Identifies the associated equipment (container) to the Requested Equipment.	Text(15)

Table 8: Requested Equipment Equipment entity

Commodity entity: Contains type of goods in the booking, defined by its commodity type, HS code and Cargo Gross Weight.

Attribute	Definition	Data type
Booking ID	A unique internal identifier to identify a Booking by	UUID
Commodity Type	High-level description of goods to be shipped which allow the carrier to confirm acceptance and commercial terms. To be replaced by "description of goods" upon submission of shipping instruction.	Text(550)
HS Code	HS code classifying the commodity for this booking	Text(10)
Cargo Gross Weight	The estimated grand total weight of the cargo and weight per container(s) including packaging items being carried, which can be expressed in imperial or metric terms, as provided by the shipper. Excludes the tare weight of the container(s).	Number
Cargo Gross Weight Unit	The unit of measure of the cargo gross weight; it can be in either Kilograms or Pounds as provided by the shipper.	Text(3)
Cargo Gross Volume	Total volume of all the Commodity	Number
Cargo Gross Volume Unit	The unit of measure which can be expressed in either imperial or metric terms as provided by the shipper.	Text(3)
Number of Packages	Specifies the number of packages associated with this Commodity	Number
Export license issue date	CONDITIONAL. Issue date of the export license applicable to the booking. Mandatory to provide in booking request for specific commodities	Date

Attribute	Definition	Data type
Export license expiry date	CONDITIONAL. Expiry date of the export license applicable to the booking. Mandatory to provide in booking request for specific commodities.	Date

Table 9: Commodity entity

Shipment Cut-Off Time entity: an entity containing the shipment cut-off time attributes concerning the booking.

Attribute	Definition	Data type
Shipment ID	Identifies the associated shipment.	UUID
Cut-Off Time Code	Code for the cut-off time	Text(3)
Cut-Off Time	Actual cut-off time	DateTime

Table 10: Shipment Cut-Off Time entity

Cut-off Time Codes entity: Deadlines involved in the booking process. Cut-off times Code reference data contains the reference data for this table

Attribute	Definition	Data type
Cut-Off Time Code	Code for the cut-off time	Text(3)
Cut-Off Time Name	Name of the cut-off time	Text(100)
Cut-Off Time Description	Description of the cut-off time	Text(250)

Table 11: Cut-off Time Codes entity

Receipt / Delivery Type entity: an entity containing the reference data for the different Receipt / Delivery types. Receipt / Delivery Types reference data contains reference data for this table

Attribute	Definition	Data type
Receipt / Delivery Type Code	Indicates the type of service offered at the origin or destination. Three options are defined by DCSA: CY, SD and CFS.	Text(3)
Receipt / Delivery Type Name	The name of the Receipt / Delivery	Text(50)
Receipt / Delivery Type Description	The description of the service type.	Text(300)

Table 12: Receipt / Delivery Type entity

Cargo Movement Type entity: an entity containing the reference data for the different Cargo Movement Types. Cargo Movement Type reference data contains reference data for this table

Attribute	Definition	Data type
Cargo Movement Type Code	Indicates the Cargo Movement Type for the loading of the cargo into the Container or for the unloading of the cargo out of the Container. Three options are defined by DCSA: FCL, LCL and BB.	Text(3)
Cargo Movement Type Name	The name of the Cargo Movement	Text(50)
Cargo Movement Type Description	The description of the Cargo Movement Type.	Text(300)

Table 13: Cargo Movement Type entity

Transport Document Type entity: contains the reference data for the different transport document types defined by DCSA. Transport Document Type reference data contains reference data for this table

Attribute	Definition	Data type
Transport Document Type Code	The code for the transport document type, e.g. BOL for Bill of Lading.	Text(3)

Attribute	Definition	Data type
Transport Document Type Name	The full names of the document types, e.g. Bill of Lading or Sea Waybill.	Text(20)
Transport Document Type Description	A description of the different document types.	Text(500)

Table 14: Transport Document Type entity

Reference entity: references provided by the shipper or freight forwarder at the time of booking or at the time of providing shipping instruction. Carriers share it back when providing track and trace event updates, some are also printed on the B/L. Customers can use these references to track shipments in their internal systems.

Attribute	Definition	Data type
Reference Type Code	The reference type codes defined by DCSA.	Text(3)
Reference Value	The actual value of the reference.	Text(100)
Shipment ID	The associated Shipment ID for the reference.	UUID
Shipping Instruction ID	The associated Shipping Instruction for the reference.	UUID
Booking ID	A unique internal identifier to identify a Booking by	UUID
Consignment Item ID	A unique internal identifier to identify a Consignment Item	UUID

Table 15: Reference entity

Reference Type entity: an entity containing the reference data for the different reference types. Reference Type reference data contains reference data for this table

Attribute	Definition	Data type
Reference Type Code	The reference type codes defined by DCSA.	Text(3)
Reference Type Name	The readable name for the reference type codes defined by DCSA.	Text(100)
Reference Type Description	A description of the reference type.	Text(200)

Table 16: Reference Type entity

Value Added Service entity: An entity containing the reference data for the value added services. Value Added Service Codes reference data **contains reference data for this table**

Attribute	Definition	Data type
Value Added Service Code	The value added service codes defined by DCSA.	Text(5)
Value Added Service Name	The readable name for the value added service codes defined by DCSA.	Text(100)
Value Added Service Description	A description of the value added service code.	Text(200)

Table 17: Value Added Service entity

Value Added Service Request entity: An entity containing data on requests for value added services.

Attribute	Definition	Data type
Booking ID	A unique internal identifier to identify a Booking by	UUID
Value Added Service Code	The value added service codes defined by DCSA.	Text(5)

Table 18: Value Added Service Request entity

Incoterms entity: Transport obligations, costs and risks as agreed between buyer and seller. Incoterms codes, examples contains reference data for this table

Attribute	Definition	Data type
Incoterms Code	Code for the Incoterms	Text(3)
Incoterms Name	Name of the Incoterms	Text(100)
Incoterms Description	Description of the Incoterms	Text(250)

Table 19: Incoterms entity

Payment Term Type: The terms defining when the payment should be done. Payment Terms reference data contains reference data for this table

Attribute	Definition	Data type
Payment Term Code	Code for the Payment Term (PRE, COL)	Text(3)
Payment Term Name	Name of the payment Term (PrePaid, Collect)	Text(100)
Payment Term Description	Description of the Payment Term	Text(250)

Table 20: Payment Term Type

Communication Channel Qualifier entity: Specifying which communication channel is to be used. Communication Channel Qualifier Codes reference data contains reference data for this table

Attribute	Definition	Data type
Communication Channel Qualifier Code	Code for the Communication Channel Qualifier	Text(2)

Attribute	Definition	Data type
Communication Channel Qualifier Name	Name of the Communication Channel Qualifier	Text(100)
Communication Channel Qualifier Description	Description of the Communication Channel Qualifier	Text(250)

Table 21: Communication Channel Qualifier entity

Shipment Carrier Clauses entity: address the carrier clauses for a shipment.

Attribute	Definition	Data type
Carrier Clause ID	Links to the Carrier Clause ID to specify the clause for a transport document.	UUID
Shipment ID	Identifies the associated shipment.	UUID
Transport Document ID	The unique reference of a transport document.	UUID

Table 22: Shipment Carrier Clauses entity

Carrier Clauses entity: comprises clauses, added by the carrier to the Shipment, which are subject to local rules/guidelines or certain mandatory information required to be shared with the customer. Usually printed below the cargo description.

Attribute	Definition	Data type
Carrier Clause ID	The identifier of a carrier clause.	UUID
Clause Content	The content of the clause.	Text

Table 23: Carrier Clauses entity

5.1.1 Shipment reference data

The figure below shows the reference data entities in the Shipment subject area.

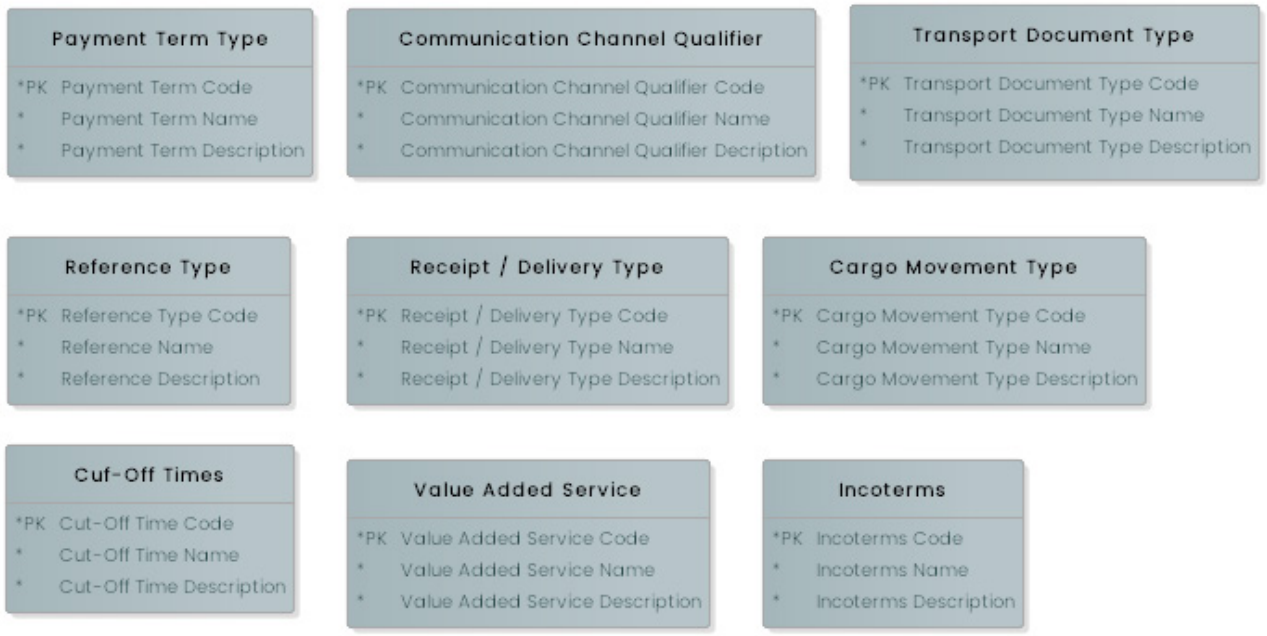


Figure 9: Shipment reference data entities

Cut-off times Code reference data: Codes for the deadlines involved in the booking process. More details can be found here: [DCSA-Information-Model/cutofftimecodes.csv](). This reference data populates Cut-off Time Codes entity

Cut-Off Time Code	Cut-Off Time Name	Cut-Off Time Description
DCO	Documentation cut-off	Document cut-off time for SI
VCO	VGM cut-off	VGM cut-off time for submission
FCO	FCL delivery cut-off	Latest deadline for delivering containers at the terminal gate
LCO	LCL delivery cut-off	Latest deadline for delivering LCL cargo at the container freight station
ECP	Empty container pick-up date and time	Time and date for shipper to pick-up empty container(s)

Cut-Off Time Code	Cut-Off Time Name	Cut-Off Time Description
EFC	Earliest full-container delivery date	Earliest date where containers can be delivered at the terminal gate also called gate-opening
AFD	AMS filing due date	Date when AMS filing should latest be done in the last port of call before visiting the first US port

Table 24: Cut-off times Code reference data

Receipt / Delivery Types reference data contains the receipt/delivery types defined by DCSA. More details can be found here: DCSA-Information-Model/receiptdeliverytypes.csv. This data populates Receipt / Delivery Type entity

Receipt / Delivery Type Code	Receipt / Delivery Type Name	Receipt / Delivery Type Description
CY	Container yard (incl. rail ramp)	Where the carrier takes possession of a fully stuffed container delivered by the customer at the carrier or carrier's appointed supplier's facility or where a container is released to the customer by the carrier.
SD	Store Door	Indicating that the carrier is taking possession of or delivers a fully stuffed container at the customer's appointed premises.
CFS	Container Freight Station	Indicating that the carrier has received the cargo and is responsible for stuffing of the cargo within the container or the customer receives the cargo directly from the container freight station.

Table 25: Receipt / Delivery Types reference data

Cargo Movement Type reference data: contains the cargo movement types defined by DCSA. More details can be found here: DCSA-Information-Model/cargomovementtypes.csv. This data populates Cargo Movement Type entity

Cargo Movement Type Code	Cargo Movement Type Name	Cargo Movement Type Description
FCL	Full Container Load	The shipper/ consignee or its agent or subcontractor is responsible for stuffing or stripping the cargo into or out of the container and bears every responsibility and liability in such respect.
LCL	Less than Container Load	The carrier or its agent or subcontractor is responsible for stuffing or stripping the cargo into or out of the container and bears every responsibility and liability in such respect.
BB	Break Bulk	Indicates that the carrier has received the cargo which is not containerised.

Table 26: Cargo Movement Type reference data

Transport Document Type reference data: contains transport document type codes, names and descriptions. More details can be found here: [DCSA-Information-Model/transportdocumenttypecodes.csv](). This data populates Transport Document Type entity

Transport Document Type Code	Transport Document Type Name	Transport Document Type Description
BOL	Bill of Lading	Contractual document issued to the shipper which confirms the carrier's receipt of the cargo, acknowledging goods being shipped or received for shipment and specifying the terms of delivery (as one of the evidences of the contract of carriage). The Bill of Lading is usually prepared based on shipping instructions, including cargo description, given by the shipper on forms issued by the carrier and is the title to the goods and can be a negotiable document.
SWB	Sea Waybill	A separate specific transport document type which is non-negotiable, does not transfer title, but which evidences the contract of carriage and receipt of the goods. It must be issued to a named consignee and can be both in a physical or digital format. Goods can be released at

Transport Document Type Code	Transport Document Type Name	Transport Document Type Description
		destination without presenting the original sea waybill as proof of ownership.

Table 27: Transport Document Type reference data

The transport document type is requested by the shipper at time of Booking or SI submission and must be one of the above types.

Reference Type reference data: contains the reference types defined by DCSA. These references are assigned by the parties and are not used to identify the parties themselves. More details can be found here: DCSA-Information-Model/referencetypes.csv. This data populates Reference Type entity

Reference Type Code	Reference Type Name	Reference Type Description
FF	Freight Forwarder's Reference	Reference assigned to the shipment by the freight forwarder.
SI	Shipper's Reference	Reference assigned to the shipment by the shipper.
PO	Purchase Order Reference	The PO reference that the shipper or freight forwarder received from the consignee and then shared with the carrier.
CR	Customer's Reference	Reference assigned to the shipment by the customer.
AAO	Consignee's Reference	Reference assigned to the shipment by the consignee.
ECR	Empty container release reference	Unique identifier to enable release of the container from a carrier nominated depot
CSI	Customer shipment ID	Unique Shipment ID for the booking in the Shipper or Forwarder system. Used to identify the booking along with the Booking party.

Reference Type Code	Reference Type Name	Reference Type Description
BPR	Booking party reference number	A unique identifier provided by a booking party in the booking request.
BID	Booking Request ID	The associated booking request ID provided by the shipper.
EQ	Equipment Reference	Reference to the equipment that is associated with document.
RUC	'Registro Único del Contribuyente'	Type of declaration field : RUC / format : NAANNNNNNNNNXXXXXXXXXXXXXXXXXXXXX (in spanish 'Registro Único del Contribuyente' / Tax ID number for any natural or legal person (such as a company) in Peru, ex : 2BR16404287200000000000000000434384)
DUE	Declaração Única de Exportação	Type of declaration field : DU-E / format : YYBRSSSSSSSSS (from the Portuguese, "Declaração Única de Exportação", ex : 22BR000652483)
CER	Canadian Export Reporting System	Export Proof of Report Number issued by Canada customs will be a mandatory requirement for cargo to load on vessels departing from Canadian load ports. This requirement is in line with CBSA's transition from Canadian Automated Export Declaration System (CAED) to Canadian Export Reporting System (CERS). (mandatory for Canada only, no specified format).
AES	Automated Export System	It's the system U.S. exporters use to electronically declare their international exports (mandatory for US only, no specified format

Table 28: Reference Type reference data

Value Added Service Codes reference data: below contains the value added services defined by DCSA. More details can be found here: [DCSA-Information-Model/valueaddedservicecodes.csv.](#) This data populates Value Added Service entity

Value added Service Code	Value Added Service Name	Value Added Service Description
SCON	Smart containers	Smart containers
CINS	Cargo insurance	Cargo insurance
SIOT	Smart IoT devices	Smart IoT devices
CDECL	Customs declaration	Customs Declaration
SGUAR	Shipping guarantee	Shipping guarantee
UPPY	Upfront payment	Upfront payment

Table 29: Value Added Service Codes reference data

Incoterms codes, examples table below contains the Incoterms. More details can be found here: DCSA-Information-Model/incotermscodes.csv. This data populates Incoterms entity

Incoterms Code	Incoterms Name	Incoterms Description
FCA	Free Carrier	The seller delivers the goods, cleared for export, at a named place (possibly including the seller's own premises)
FOB	Free on Board	Under FOB terms the seller bears all costs and risks up to the point the goods are loaded on board the vessel.

Table 30: Incoterms codes, examples

Payment Terms reference data below contains the Payment Terms. More details can be found here: DCSA-Information-Model/paymentterms.csv. This data populates_Payment Term Type

Payment Term Code	Payment Term Name	Payment Term Description
PRE	PrePaid	Fee paid prior to transportation

Payment Term Code	Payment Term Name	Payment Term Description
COL	Collect	Fee paid upon collection of the goods

Table 31: Payment Terms reference data

Communication Channel Qualifier Codes reference data: Communication Channel Qualifier, examples table below contains the Communication Channel Qualifier. See 3155 Edifact codelist Communication Channel Identifier. More details can be found here DCSA-Information-Model/communicationchannelqualifier.csv. This populates Communication Channel Qualifier entity

Communication Channel Qualifier Code	Communication Channel Qualifier Name	Communication Channel Qualifier Description
EI	EDI transmission	Number identifying the service and service user.
EM	Electronic mail	Exchange of mail by electronic means.
AO	API	Uniform Resource Location

Table 32: Communication Channel Qualifier Codes reference data

5.2 Transport Document

The subject area of Transport Document contains three entities: Shipping Instruction, Transport Document and EBL Endorsement Chain. These entities are shown in Figure 10. A shipping instruction is an enrichment to the original booking shared by the shipper to the carrier. The shipping instruction includes cargo items, specified by volume or weight, packages, etc. The information given by the shipper through the shipping instruction is the information required to create and update a transport document. A transport document is a contractual document issued to the shipper which confirms the carrier's receipt of the cargo, acknowledging goods being shipped or received for shipment and specifying the terms of delivery (as one of the evidences of the contract of carriage). The Transport Document is prepared based on shipping instructions, including cargo description, given by the shipper on forms issued by the carrier and is the title to the goods and

can be a negotiable document. It relates directly to the concept of a consignment as published in the UN/CEFACT MMT reference data model.

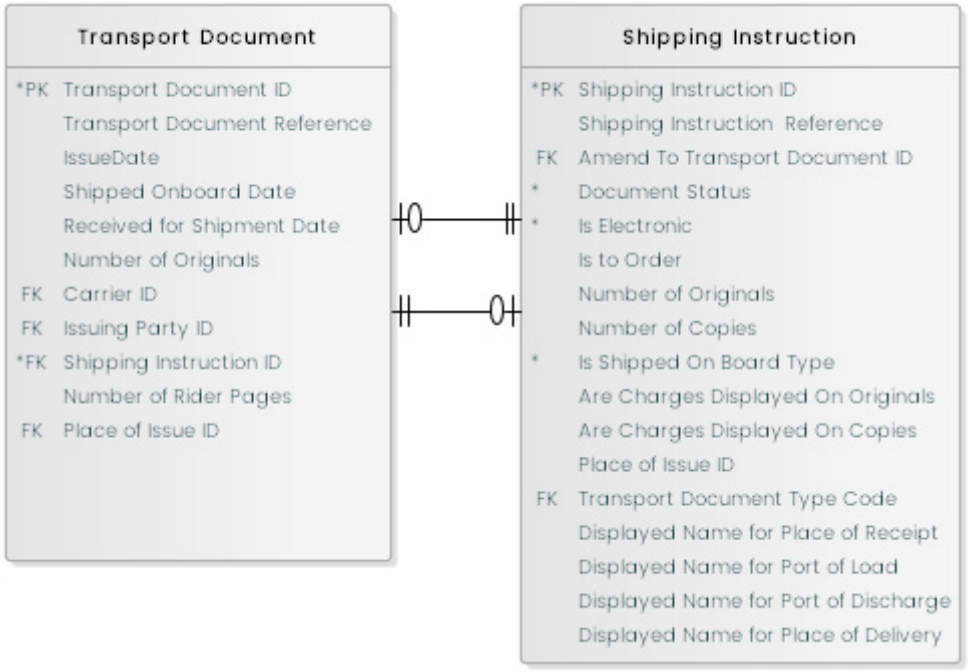


Figure 10: Transport Document subject area

The entities within the Transport Document subject area are defined and detailed in the following tables.

Transport Document entity: relates to the type and key attributes of the contract of carriage.

Attribute	Definition	Data type
Transport Document ID	The unique identifier for a Transport Document.	UUID
IssueDate	Date when the transport document has been issued	Date
Shipped Onboard Date	Date when the last container that is linked to the transport document is physically loaded onboard the vessel indicated on the transport document.	Date
Received for Shipment Date	Date when the last container linked to the transport document is physically in the terminal (customers cleared against the intended vessel).	Date
Transport Document Reference	A unique reference allocated by the shipping line to the transport document and the main number used for the tracking of the status of the shipment.	Text(20)
Carrier ID	Links to the carrier entity containing the SCAC and/or the SMDG code to specify the issuing carrier.	UUID
Issuing Party ID	A link to the Party issuing the Transport Document. The Issuing Party can be an Agent, Carrier or anything represented by a Party	UUID
Shipping Instruction ID	Identifies the associated shipping instruction.	UUID
Number of Rider Pages	The number of additional pages required to contain the goods description on a transport document. Only applicable for physical transport documents.	Number
Number of Originals	Number of originals of the negotiable bill of lading that has been issued to the customer. Only applicable for paper documents.	Number
Place of Issue ID	Links to the Location ID to specify where the original transport document (bill of lading) will be or has been issued.	UUID

Table 33: Transport Document entity

Shipping Instruction entity: an enrichment to the original booking sent by the shipper to the carrier. The shipping instruction includes volume or weight, cargo items, shipping dates, origin, destination, and other special instructions. The information given by the shipper through the shipping instruction is the information required to create a Transport Document.

Attribute	Definition	Data type
Shipping Instruction ID	The unique identifier for a Shipping Instruction	UUID
Shipping Instruction Reference	The identifier for a shipping instruction provided by the carrier.	Text(100)
Amend To Transport Document ID	This field can be used to reference a Transport Document in order to amend changes	UUID
Document Status	The status of the document in the process. For possible values see reference table 'Shipment Event Type reference data entity'.	Text(4)
Is Shipped Onboard Type	Specifies whether the Transport document type is a received for shipment or shipped onboard.	Boolean
Number of Copies	The requested number of copies of the Transport document to be issued by the carrier. Only applicable for physical documents	Number
Number of Originals	Number of originals of the negotiable bill of lading that has been requested by the customer. Only applicable for paper documents.	Number
Is Electronic	An indicator whether the transport document is electronically transferred.	Boolean
Is to Order	Indicates whether the transport document is issued 'to order' or not	Boolean
Are Charges Displayed on Originals	An indicator whether charges are to be displayed on the originals	Boolean

Attribute	Definition	Data type
Are Charges Displayed on Copies	An indicator whether charges are to be displayed on the copies	Boolean
Place of Issue ID	Links to the Location ID to specify where the original transport document (bill of lading) will be issued.	UUID
Transport Document Type Code	Specifies the type of the associated Transport Document (Bill of Lading or Sea Waybill).	Text(3)
Displayed Name for Place of Receipt	How the Place of Receipt should be displayed on the transport document.	Text(250)
Displayed Name for Port of Load	How the Port of Load should be displayed on the transport document.	Text(250)
Displayed Name for Port of Discharge	How the Port of Discharge should be displayed on the transport document.	Text(250)
Displayed Name for Place of Delivery	How the Place of Delivery should be displayed on the transport document.	Text(250)

Table 34: Shipping Instruction entity

5.3 Party

A party refers to a company or legal entity represented on the Transport Document as a party to a shipment. The Party subject area contains eight entities: Party, Party Contact Details, Document

Party, Displayed Address, Party Function, Carrier, Party Code List Responsible Agency and Code List Responsible Agency. These entities are shown in Figure 11.

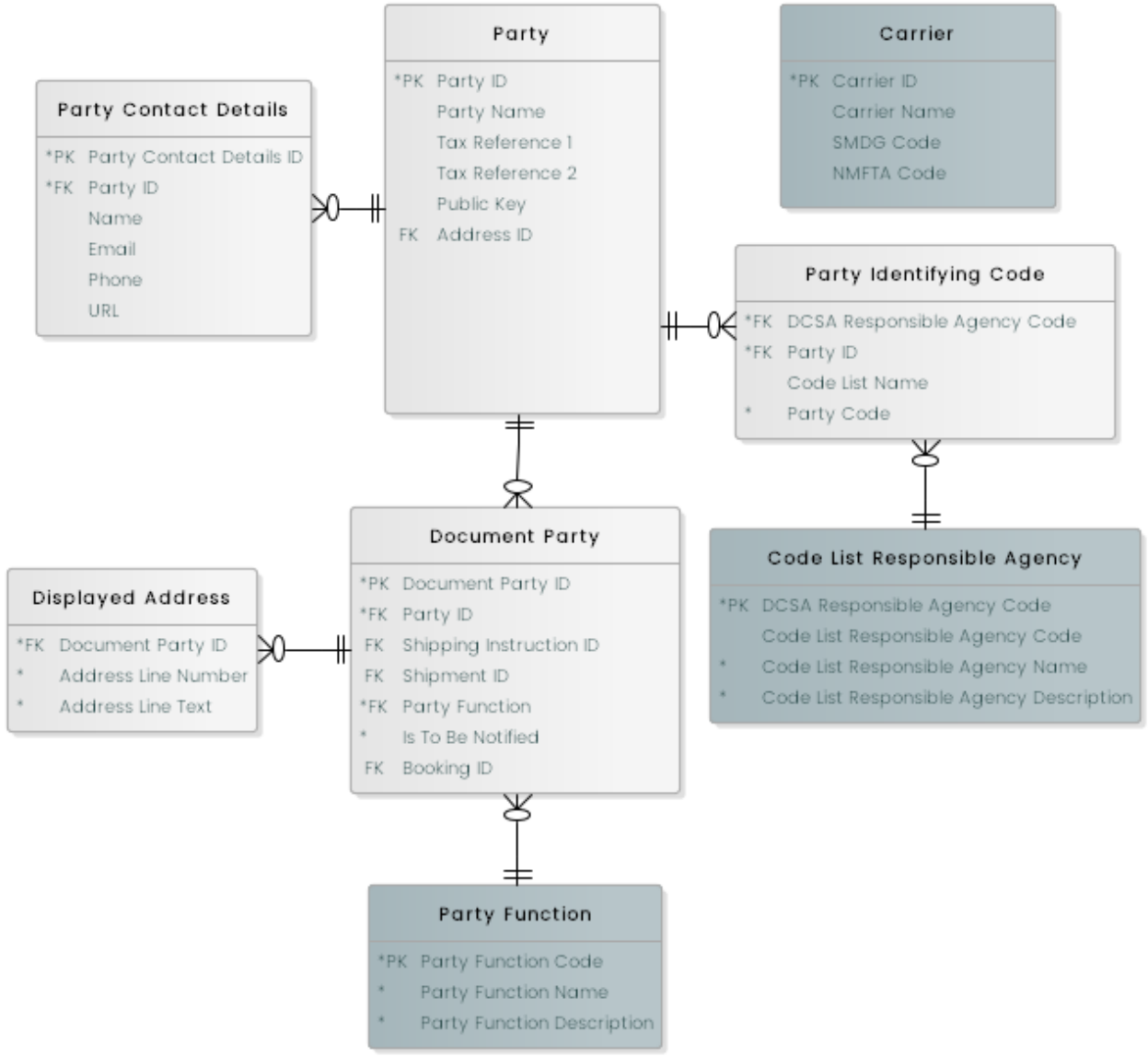


Figure 11: Party subject area

The entities within the Party subject area are defined and detailed in the following tables.

Party entity: refers to a company or a legal entity.

Attribute	Definition	Data type
Party ID	Identifier of a party.	UUID

Attribute	Definition	Data type
Party Name	Name of the party.	Text(100)
Tax Reference 1	The identifying number of the consignee or shipper (Individual or entity) used for tax purposes.	Text(20)
Tax Reference 2	Optional second identifying number of the consignee or shipper (Individual or entity) used for tax purposes.	Text(20)
Public Key	The public key used for a digital signature.	Text(500)
Address ID	The identifier for the address of the Party	UUID

Table 35: Party entity

Party Identifying Code entity: Provides the list of codes identifying the party.

Attribute	Definition	Data type
DCSA Responsible Agency Code	DCSA codes for code list providers	Text(5)
Party ID	Links to a party	UUID
Code List Name	The name of the list, provided by the responsible agency	Text(100)
Party Code	Code to identify the party as provided by the agency	Text(100)

Table 36: Party Identifying Code entity

Code List Responsible Agency entity: Provides the details of the code list provider. Code List Responsible Agency reference data contains reference data for this table

Attribute	Definition	Data type
DCSA Responsible Agency Code	DCSA codes for code list providers	Text(5)
Code List Responsible Agency Code	UN/CEFACT codes for code list providers (e.g. 306 for SMDG)	Text(3)
Code List Responsible Agency Name	Name of the code list provider	Text(100)
Code List Responsible Agency Description	Description of the code list provider	Text(300)

Table 37: Code List Responsible Agency entity

Document Party entity: stores the parties involved in the transport document.

Attribute	Definition	Data type
Document Party ID	Identifier of the document party	UUID
Shipping Instruction ID	The associated shipping instruction for the Document Party. The attribute Shipping Instruction ID cannot be used in parallel with Shipment ID.	UUID
Party ID	Links to a party related to the Document Party.	UUID
Shipment ID	Links to a shipment. The attribute Shipment ID cannot be used in parallel with Shipping Instruction ID.	UUID
Party function	Specifies the role of the party in the context of the given Shipping Instruction.	Text(3)

Attribute	Definition	Data type
Is To Be Notified	Used to decide whether the party will be notified of the arrival of the cargo.	Boolean
Booking ID	A unique internal identifier to identify a Booking by	UUID

Table 38: Document Party entity

Party Contact Details entity: The contact details of the person to contact in relation to changes, notifications etc.

Attribute	Definition	Data type
Party contact details ID	Identifier of the party contact details	UUID
Party ID	Identifier of a party.	UUID
Name	Name of the contact	Text(100)
Email	Email of the contact	Text(100)
Phone	Phone number of the contact	Text(30)
URL	URL of the contact	Text(100)

Table 39: Party Contact Details entity

Displayed address entity: The address of the party to be displayed on the transport document.

Attribute	Definition	Data type
Document Party ID	Identifier of the document party	UUID

Attribute	Definition	Data type
Address Line Number	Sequence number of the address line	Number
Address Line Text	The address line of the address of the party to be displayed on the transport document.	Text(250)

Table 40: Displayed Address entity

Carrier entity: an organisation or government undertaking the transport of goods. The term includes both carriers for hire or reward (also known as common or contract carriers in some countries) and carriers on own account (known as private carriers in some countries). Carrier, examples contains reference data for this table

Attribute	Definition	Data type
Carrier ID	Unique internal identifier for the carrier.	UUID
Carrier Name	The name of the carrier.	Text(100)
SMDG Code	The Liner code provided by SMDG for the Carrier.	Text(3)
NMFTA Code	The Standard Carrier Alpha Code (SCAC) provided by NMFTA for the carrier.	Text(4)

Table 41: Carrier entity

Party Function entity: defines the role of the party in the context of the transport document or the shipment. Party Function reference data contains reference data for this table

Attribute	Definition	Data type
Party Function Code	The party function code is the code to give specific meaning to a party.	Text(3)
Party Function Name	The name of the specific role, e.g. Consignee, Freight Forwarder, etc.	Text(100)
Party Function Description	A description of the party function.	Text(350)

Table 42: Party Function entity

5.3.1 Party reference data

The figure below shows the reference data entities in the Party subject area.

Figure 12: Party reference data entities

Carrier, examples contains examples of the unique Carrier Codes, Carrier Names and the carrier codes provided by the Code List Provider and the Code List Provider.

The Carrier entity has been designed to accommodate reference data from two separately maintained data sets: the SMDG Liner Code List (where the Code List Provider value will be set to "SMDG"), see https://smdg.org/documents/smdg-code-lists/ and the NMFTA SCAC code list (where the Code List Provider value will be set to "NMFTA"), see http://www.seadoor.com.tr/en/scac.php. This data populates Carrier entity

Carrier Id	Carrier Name	SMDG Code	NMFTA Code
383419d0-5559-4b6e-8953-432426fc4f08	CMA CGM	CMA	CMDU
ea0c6956-011a-4f54-928b-fd53a50d103e	Evergreen Marine Corporation	EMC	EGLV
89a7847f-32c9-419a-a536-dc6c90c382fa	Hapag-Lloyd	HLC	HLCU
174cf4f7-fdf0-433a-9dc3-0a71d4e5001d	Hyundai	HMM	HDMU
1fe24b33-1c8a-4a0e-b298-e375510282c9	Maersk	MSK	MAEU
5fa0d3bb-375b-46f0-9817-c93a04747840	Mediterranean Shipping Company	MSC	MSCU
a844c614-cfd7-4106-835b-3fd6abe6ab85	Ocean Network Express Pte. Ltd.	ONE	ONEY

Carrier Id	Carrier Name	SMDG Code	NMFTA Code
cd5cbd62-f446-45be-9904-52b8f4ab2e3d	Yang Ming Line	YML	YMLU
d12dccb3-4461-4293-8880-cd031bd040fd	ZIM Israel Navigation Company	ZIM	ZIMU

Table 43: Carrier, examples

Party Function reference data: contains the DCSA party functions relevant to container shipping, a subset of the UN/EDIFACT Party Functions (https://www.unece.org/trade/untdid/d00a/tred/tred3035.htm) More details can be found here: DCSA-Information-Model/partyfunctioncodes.csv. This data populates Party Function entity

Party Function Code	Party Function Name	Party Function Description
OS	Original shipper.	The original supplier of the goods.
CN	Consignee.	Party to which goods are consigned.
COW	Invoice payer on behalf of the consignor (shipper).	Invoice payer is a third party acting on behalf of the consignor (shipper).
COX	Invoice payer on behalf of the consignee.	Invoice payer is a third party acting on behalf of the consignee.
MS	Document/message issuer/sender	Issuer of a document and/or sender of a message.
N1	First Notify Party.	The first party which is to be notified.
N2	Second Notify Party.	The second party which is to be notified.
NI	Other Notify Party	Other party which is to be notified

Party Function Code	Party Function Name	Party Function Description
DDR	Consignor's freight forwarder	Identification of freight forwarder giving services to the consignor (shipper).
DDS	Consignee's freight forwarder	Identification of freight forwarder giving services to the consignee.
HE	Carrier booking office (transportation office)	The carrier office responsible for processing the booking
SCO (Defined by DCSA)	Service contract owner	The party signing the service contract with the carrier
BA	Booking Agent	Party acting as a booking office for transport and forwarding services.
CA	Carrier	Carrier means any person, organization or government undertaking the transport of goods by any means of transport. The term includes both carriers for hire or reward (known as common or contract carriers in some countries) and carriers on own account (known as private carriers in some countries).
AG	Carrier local agent	
VSL	Vessel	A floating, sea going structure (mother vessels and feeder vessels) with either an internal or external mode of propulsion designed for the transport of cargo and/or passengers. Ocean vessels are uniquely identified by an IMO number consisting of 7 digits, or alternatively by their AIS signal with an MMSI number

Party Function Code	Party Function Name	Party Function Description
ATH	Port Authorities	
PLT	Pilot	The activity of conducting a vessel within restricted waters.
TWG	Towage Service Provider	The party offering the towage services.
LSH	Lashing Service Provider	The party offering the lashing services.
BUK	Bunkering Service Provider	The party offering the bunkering services.
TR	Terminal	A facility for loading, moving or discharging containers. Terminals can be both inland terminals for trucks and rail or port terminals are accessed by vessels and these can contain multiple berths.
EBL	EBL Solution Provider	The solution provider for managing the electronic Bill of Lading
MOR	Mooring Service Provider	The party offering the mooring services.
SLU	Sludge Service Provider	The party offering the Slugde services.
SVP	Other Service Provider	Any other service not covered

Table 44: Party Function reference data

Code List Responsible Agency reference data contains examples of Code List Responsible Agency. More details can be found here: [DCSA-Information-]

Model/codelistresponsibleagencycodes.csv. This data populates Code List Responsible Agency entity

DCSA Responsible Agency Code	Code List Responsible Agency Code	Code List Responsible Agency Name	Code List Responsible Agency Description
BIC	20	BIC (Bureau International des Containeurs)	The container industry's international organisation responsible for the issuance of container-related codes.
SCAC	182	US, Standard Carrier Alpha Code (Motor)	Organisation maintaining the SCAC lists and transportation operating in North America.
SMDG	306	SMDG (Ship-planning Message Design Group)	User Group for Shipping Lines and Container Terminals.
ZZZ	ZZZ	Mutually defined	A code assigned within a code list to be used on an interim basis and as defined among trading partners until a precise code can be assigned to the code list.
CBSA		CBSA	Canada Border Services Agency
FMC	163	FMC	Federal Maritime Commission
DCSA		Digital Container Shipping Association	Maintainer of the EBL Solution provider list

DCSA Responsible Agency Code	Code List Responsible Agency Code	Code List Responsible Agency Name	Code List Responsible Agency Description
DID		Decentralized Identifier	Decentralized identifiers (DIDs) are a new type of identifier that enables verifiable, decentralized digital identity. Can be used to identify parties that are part of the endorsement chain
LEI		Legal Entity Identifier	Legal Entity Identifier. An identifying number of an Individual or entity used for tax purposes.

Table 45: Code List Responsible Agency reference data

5.4 Charges

The subject area of Charges relates to the monetary value of freight and other service charges for a shipment and contains two entities, Charges and Charge Type, as shown in the figure below.

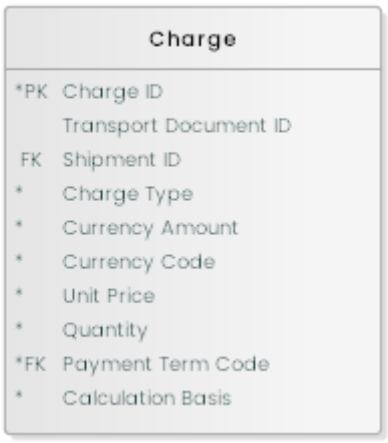


Figure 13: Charges subject area

Charge entity: addresses the monetary value of freight and other service charges for a transport document.

Attribute	Definition	Data type
Charge ID	The identifier of a charge.	Text(100)

Attribute	Definition	Data type
Transport Document ID	The unique identifier of the transport document that the charge concerns.	UUID
Shipment ID	The unique identifier of the shipment that the charge concerns.	UUID
Charge Type	Description of the charge type applied.	Text(20)
Currency Amount	The monetary value of all freight and other service charges for a transport document, with a maximum of 2-digit decimals.	Number
Currency code	The currency for the charge, using a 3-character code (ISO 4217).	Text(3)
Payment Term Code	An indicator of whether a charge is prepaid or collect, using a 3-character code to identify INCO terms.	Text(3)
Calculation Basis	The code specifying the measure unit used for the corresponding unit price for this cost, such as per day, per ton, per square metre.	Text(50)
UnitPrice	The unit price of this charge item in the currency of the charge.	Number
Quantity	The amount of unit for this charge item.	Number

Table 46: Charge entity

5.5 Equipment

The subject area of Equipment contains 2 entities: Equipment, ISO Equipment Code. These entities are shown in Figure 14.

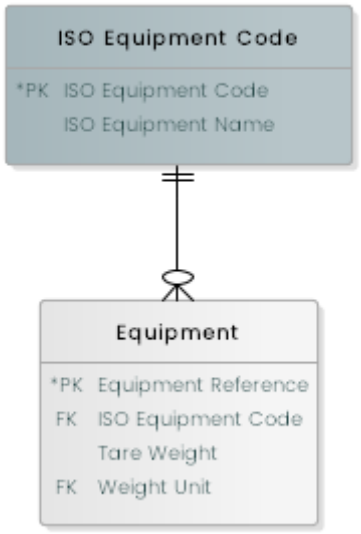


Figure 14: Equipment subject area

The equipment subject area is modelled to ensure that a specific equipment can be identified and detailed appropriately in terms of type and size in accordance with ISO 6346:1995 Freight containers – Coding, identification and marking and amendment 3 (2012) to ISO 6346:1995. Whenever ISO 6346:1995 is mentioned as a reference in this document, it all instances of equipment that can be used to fulfil a shipment. Each piece of equipment can be categorised according to its type and size, and this information is contained in a hierarchy of reference tables based on ISO 6346. The ISO Equipment Code entity brings together reference data regarding equipment size and type. The entities within the Equipment subject area are defined and detailed in the following tables.

Equipment entity: used for storing cargo in/on during transport. The equipment size/type is defined by the ISO 6346 code. The most common equipment size/type is 20'/40'/45' Dry Freight Container, but several different versions exist.

Attribute	Definition	Data type
Equipment Reference	The unique identifier for the equipment, which should follow the BIC ISO Container Identification Number where possible. According to ISO 6346, a container identification code consists of a 4-letter prefix and a 7-digit number (composed of a 3-letter owner code, a category identifier, a serial number, and a check-digit). If a container does not comply with ISO 6346, it is suggested to follow Recommendation #2 "Container with non-ISO identification" from SMDG.	Text(15)
ISO Equipment Code	Unique code for the different equipment size/type used for transporting commodities. The code is a concatenation of ISO Equipment Size Code and ISO Equipment Type Code A and follows the ISO 6346 standard.	Text(4)
Tare Weight	The weight of an empty container (gross container weight).	Number
Weight Unit	The unit of measure; it can be in either Kilograms or Pounds as provided by the shipper.	Text(3)

Table 47: Equipment entity

ISO Equipment Code entity: contains the ISO Equipment Code which identifies equipment based on different sizes, types, and purposes, for example, 20-foot reefer container, and follows the ISO 6346 standard. ISO Equipment Code, examples contains reference data for this table

Attributes	Definitions	Data type
ISO Equipment Code	Unique code for the different equipment size/type used for transporting commodities. The code is a concatenation of ISO Equipment Size Code and ISO Equipment Type Code A and follows the ISO 6346 standard.	Text(4)

Attributes	Definitions	Data type
ISO Equipment Name	Textual description for the equipment, follows the ISO 6346 standard.	Text(35)

Table 48: ISO Equipment Code entity

5.5.1 Equipment reference data

The figure below shows the reference data entity in the Equipment area.

Figure 15: Equipment reference data entity

Table 50 contains examples of ISO 6346 equipment codes.[1] This list is a small part of the full list of ISO 6346 equipment codes and names. There are more than 15,000 unique equipment code combinations (not including ISO equipment type code B). This data populates ISO Equipment Code entity

ISO Equipment Code	ISO Equipment Name
10G0	10ft General purpose container Without ventilation Opening(s) at one end or both ends.
25R2	20ft Thermal container Self-powered refrigerated/heated Mechanically refrigerated.
45P7	40ft Platform (container) Platform-based container for named cargo Car carrier.

Table 49: ISO Equipment Code, examples

5.6 Stuffing

The subject area of Stuffing describes the activity of putting cargo items into a container and recording the number of packages/parcels in the shipping instruction to be published on the transport document. It contains ten entities: Consignment Item, Cargo Item, Cargo line item,

[1] NEN Standards Products & Services has granted DCSA the permission to use the ISO 6346 equipment code examples in this publication.

Utilized Transport Equipment, Active Reefer Settings, Seal, Seal Source and Seal Type, HS Code and Package Code. These entities are shown in Figure 16.

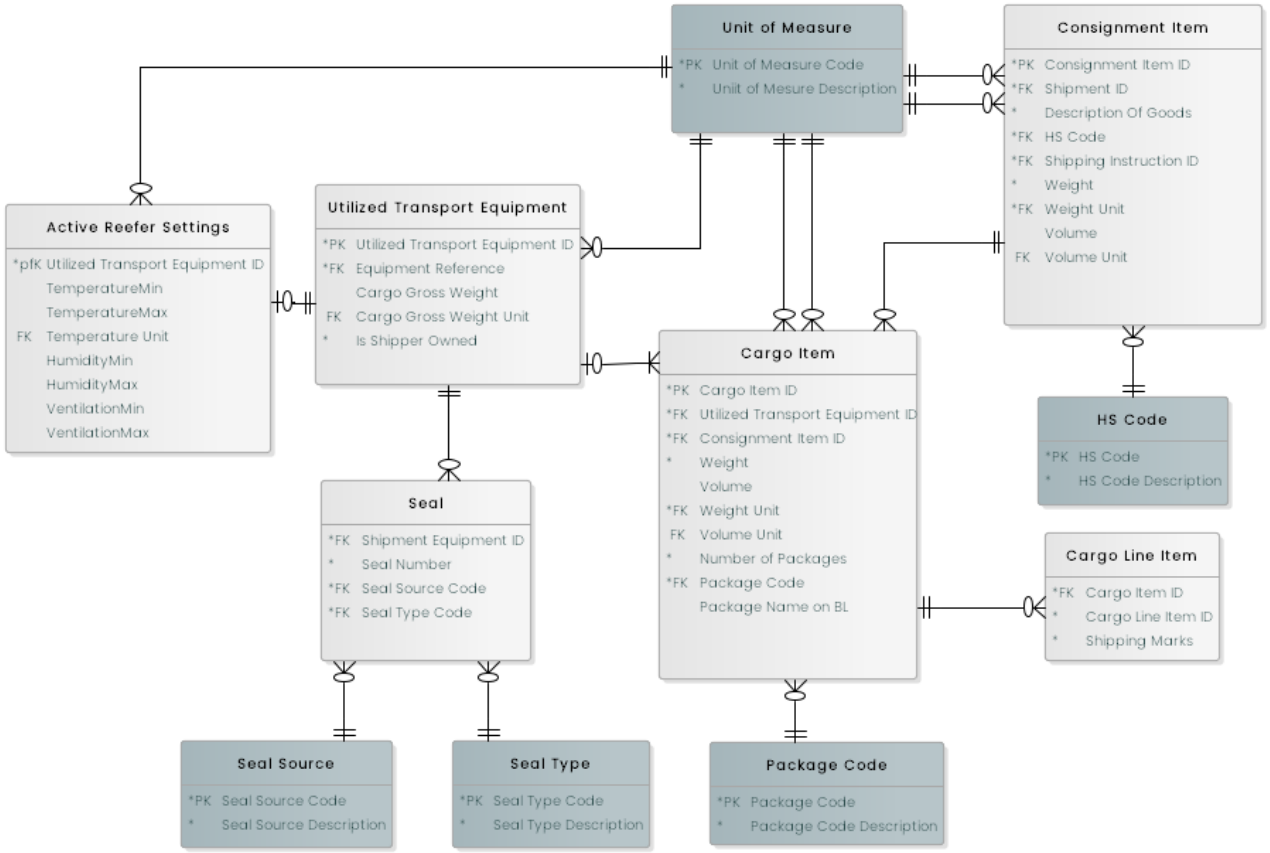


Figure 16: Stuffing subject area

The entities within the Stuffing subject area are defined and detailed in the following tables.

Utilized Transport Equipment entity: specifies the container assigned to a shipment.

Attribute	Definition	Data type
Utilized Transport Equipment ID	The identifier of the assignment of a container to a shipment.	UUID
Equipment Reference	Identifies the assigned equipment (container) to the shipment.	Text(15)

Attribute	Definition	Data type
Cargo Gross Weight	The grand total weight of the cargo and weight per container(s) including packaging items being carried, which can be expressed in imperial or metric terms, as provided by the shipper. Excludes the tare weight of the container(s).	Number
Cargo Gross Weight Unit	The unit of measure of the cargo gross weight; it can be in either Kilograms or Pounds as provided by the shipper.	Text(3)
Is Shipper Owned	Indicator if the container is Shipper Owned (SOC)	Boolean

Table 50: Utilized Transport Equipment entity

Active Reefer Settings entity: specifies the settings for an active reefer container used to a shipment.

Attribute	Definition	Data type
Utilized Transport Equipment ID	The identifier of the assignment of a container to a shipment.	UUID
TemperatureMin	Indicates the minimum temperature setting on the container.	Number
TemperatureMax	Indicates the maximum temperature setting on the container.	Number
Temperature Unit	Celsius (CEL) or Fahrenheit (FAH).	Text(3)
HumidityMin	Indicates the minimum humidity setting on the container in percent.	Number
HumidityMax	Indicates the maximum humidity setting on the container in percent.	Number
VentilationMin	Indicates the minimum ventilation setting on the container in MTQ/Hr.	Number

Attribute	Definition	Data type
VentilationMax	Indicates the maximum ventilation setting on the container in MTQ/Hr.	Number

Table 51: Active Reefer Settings entity

Consignment Item entity: addresses the possibility to split Cargo Items across multiple containers. All Cargo Items linked to the same Consignment Item links to the same Booking.

Attribute	Definition	Data type
Consignment Item ID	Identifies the consignment item.	UUID
Shipment ID	Identifies the associated Shipment.	UUID
Description of Goods	The cargo description are details which accurately and properly describe the cargo being shipped in the container(s) as provided by the shipper.	Text
HS Code	Used by customs to classify the product being shipped. Can be either 4, 6, 8 or 10 characters long	Text(10)
Weight	The total weight of all the Cargo Items. Excludes the tare weight of the container(s).	Number
Volume	Total volume of all the Cargo Items.	Number
Weight Unit	The unit of measure which can be expressed in imperial or metric terms as provided by the shipper.	Text(3)
Volume Unit	The unit of measure which can be expressed in either imperial or metric terms as provided by the shipper.	Text(3)
Shipping Instruction ID	The identifier for a shipping instruction provided by the carrier for system purposes.	UUID

Table 52: Consignment Item entity

Cargo Item entity: addresses the cargo items to be stuffed into a container for a shipment. A cargo item cannot be split across containers.

Attribute	Definition	Data type
Cargo Item ID	Identifies the cargo item to be stuffed.	UUID
Consignment Item ID	Identifies the consignment item.	UUID
Weight	The total weight of the cargo including packaging items being carried in the container(s). Excludes the tare weight of the container(s).	Number
Volume	Calculated by multiplying the width, height, and length of the packed cargo.	Number
Weight Unit	The unit of measure which can be expressed in imperial or metric terms as provided by the shipper.	Text(3)
Volume Unit	The unit of measure which can be expressed in either imperial or metric terms as provided by the shipper.	Text(3)
Number of Packages	Specifies the number of packages associated with this cargo item.	Number
Package Code	The unique identifier for the package type	Text(3)
Package Name On B/L	To provide package description displayed on the BL	Text(50)
Utilized Transport Equipment ID	The identifier of the assignment of a container to a shipment.	UUID

Table 53: Cargo Item entity

Cargo Line Item entity: identifies the specific details of packages within a cargo item.

Attribute	Definition	Data type
Cargo Line Item ID	Identifies the cargo line item (package) within the cargo. The cargo line item ID is provided by the shipper and is used to define the stuffing. Cargo line items belonging to the same cargo items are stuffed in the same container.	Text
Cargo Item ID	Identifies the cargo item to be stuffed.	UUID
Shipping Marks	The identifying details of a package or the actual markings that appear on the package(s). This information is provided by the shipper.	Text

Table 54: Cargo Line Item entity

HS Code entity: HS stands for Harmonized Commodity Description and Coding Systems. The Harmonized System is an international nomenclature for the classification of products. It is used to classify traded goods on a common basis for customs purposes.

The HS codes can be found on the UN statistics website (see unstats.un.org/.../Harmonized-Commodity-Description-and-Coding-Systems-HS). HS Code, example contains reference data for this table

Attribute	Definition	Data type
HS Code	The Harmonized System is an international nomenclature for the classification of products. It allows participating countries to classify traded goods on a common basis for customs purposes. At the international level, the Harmonized System (HS) for classifying goods is a six-digit code system.	Text(10)
HS Code Description	Description of the product classification.	Text(250)

Table 55: HS Code entity

Seal entity: addresses the seal-related information associated with the Utilized Transport Equipment. A seal is put on a Utilized Transport Equipment once it is loaded. This seal is meant to stay on until the Utilized Transport Equipment reaches its Place of Delivery.

Attribute	Definition	Data type
Utilized Transport Equipment ID	Identifies the Utilized Transport Equipment associated with the seal.	UUID
Seal Number	Identifies a seal affixed to the container.	Text(15)
Seal Source Code	The source of the seal, namely who has affixed the seal. This attribute links to the Seal Source ID defined in the Seal Source reference data entity.	Text(5)
Seal Type Code	The type of seal. This attribute links to the Seal Type ID defined in the Seal Type reference data entity.	Text(5)

Table 56: Seal entity

Seal Source entity: identifies the party who has affixed the seal. Seal Source reference data contains reference data for this table

Attribute	Definition	Data type
Seal Source Code	The code for the seal source.	Text(5)
Seal Source Description	The description of the seal source code, e.g. carrier, shipper, phytosanitary or veterinary.	Text(50)

Table 57: Seal Source entity

Seal Type entity: addresses the type of seals. Seal Type reference data contains reference data for this table

Attribute	Definition	Data type
Seal Type Code	The code for a seal type.	Text(5)
Seal Type Description	The description of the seal type code, e.g. keyless padlock, bolt, wire.	Text(50)

Table 58: Seal Type entity

Package Code entity: specifies the package-related information.

Attribute	Definition	Data type
Package Code	A code identifying the outer package.	Text(3)
Package Code Description	Description of the package code.	Text(50)

Table 59: Package Code entity

Package code list reference data is based on UN/CEFACT and can be found here: https://www.unece.org/fileadmin/DAM/cefact/recommendations/rec21/rec21rev4_ecetrd309.pdf

Unit of Measure entity: the list of units of measures used in the model as defined by UNECE. Unit of Measure reference data contains reference data for this table

Attribute	Definition	Data type
Unit of Measure Code	The code for a unit of measure.	Text(3)
Unit of Measure Description	The description of the unt of measure.	Text(50)

Table 60: Unit of Measure entity

5.6.1 Stuffing reference data

The figure below shows the reference data entities in the Stuffing subject area.

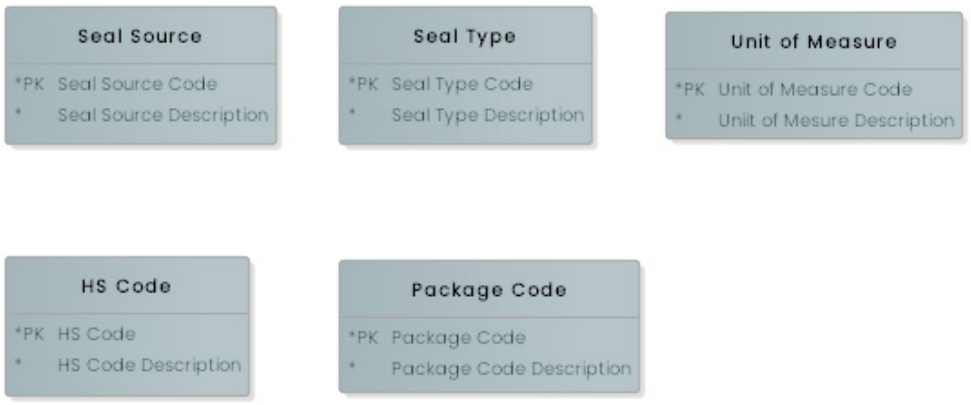


Figure 17: Stuffing reference data entities

Seal Source reference data contains seal sources defined by DCSA. More details can be found here: DCSA-Information-Model/sealsourcecodes.csv. This data populates Seal Source entity

Seal Source Code	Seal Source Description
CAR	Carrier
SHI	Shipper
PHY	Phytosanitary
VET	Veterinary
CUS	Customs

Table 61: Seal Source reference data

Seal Type reference data contains seal types defined by DCSA. More details can be found here: DCSA-Information-Model/sealtypecodes.csv. This data populates Seal Type entity

Seal Type Code	Seal Type Description
KLP	Keyless padlock
BLT	Bolt
WIR	Wire

Table 62: Seal Type reference data

These differ from the UN/EDIFACT Seal Type Codes (4525) which only contain the types "Mechanical" and "Electronic".

HS Code, example contains examples of HS Codes[2]. This data populates HS Code entity

HS Code	HS Code Description
392620	Plastics: articles of apparel and clothing accessories (including gloves).

[2] HS codes and descriptions can be downloaded from UN Comtrade Commodity Classifications.

HS Code	HS Code Description
420310	Apparel: articles of apparel, of leather or of composition leather.
761410	Aluminium: stranded wire, cables, plaited bands, and the like, (not electrically insulated), with steel core.

Table 63: HS Code, example

Unit of Measure reference data as defined by defined by UNECE. More details can be found here: DCSA-Information-Model/unitofmeasures.csv. This data populates Unit of Measure entity

Unit of Measure Code	Unit of Measure Description
KGM	Kilogram
LBR	Pounds
MTQ	Cubic Metres
FTQ	Cubic Feet
CEL	Celsius
FAH	Fahrenheit
FOT	Foot
MTR	Meter

Table 64: Unit of Measure reference data

5.7 Location

The subject area of Location relates to a physical location and/or "UN/LOCODE" ("United Nations Code for Trade and Transport Locations") from where the shipment is received and to where it is finally delivered. It contains the following entities: Location, Shipment Location, Shipment Location Type, UN Location, Country, Facility and Facility Type. These entities are shown in Figure 18. Location, as identified within the UN Location Code entity, is at a more granular level than the one identified within the Country entity (the Country Code). The location identifier within the Facility entity (the Facility Code), is at an even more granular level than the location provided by the UN Location Code. To make it possible to track the location of an event, the Facility entity is also

linked to each of the Event entities for Equipment and Transport. These entities are described in the Events subject area.

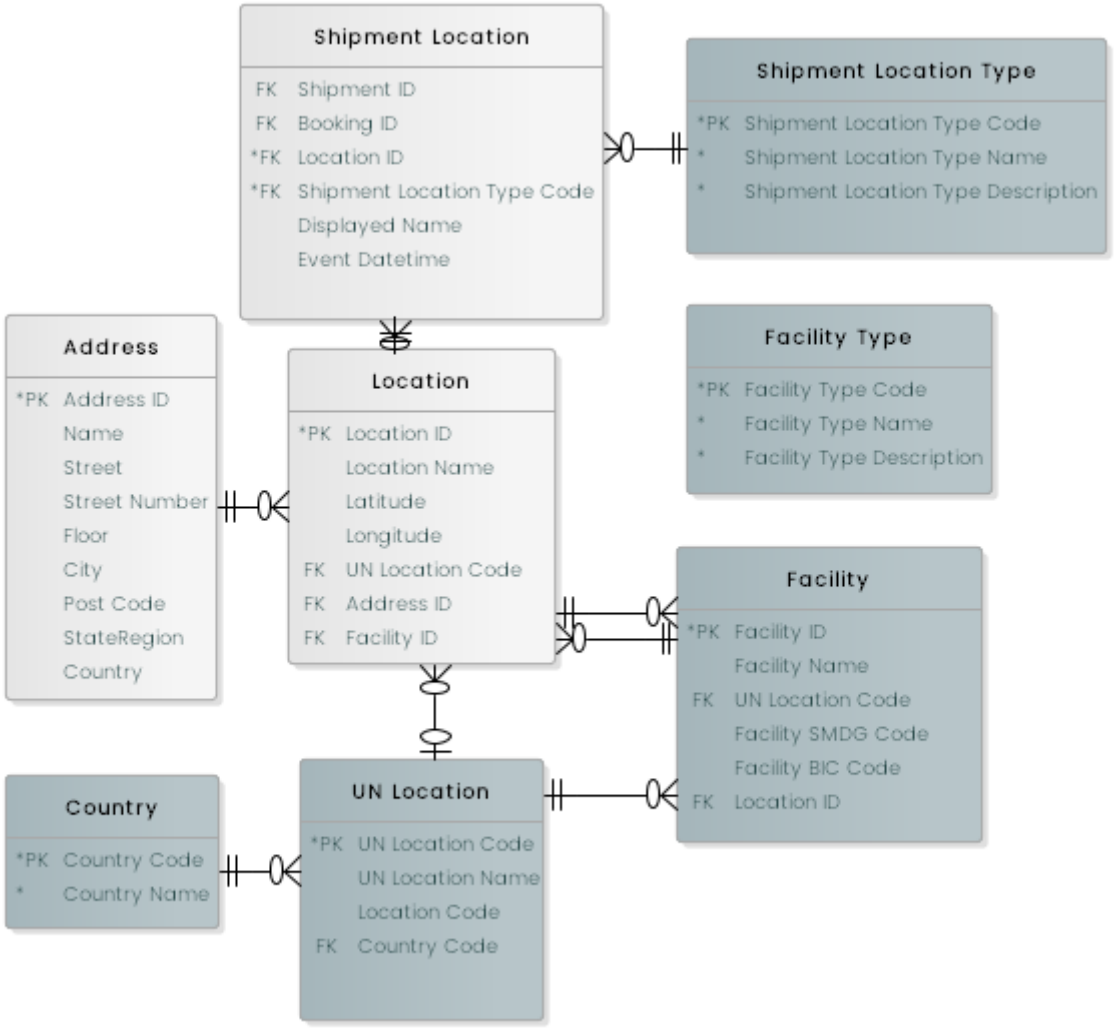


Figure 18: Location subject area

The entities within the Location subject area are defined and detailed in the following tables.

Location entity: generally used to capture location-related data, also for locations without UN Location Codes.

Attribute	Definition	Data type
Location ID	The identifier for a location.	UUID
Location name	The name of the location.	Text(100)
Address ID	The identifier for the physical address of the location.	UUID

Attribute	Definition	Data type
Latitude	Geographic coordinate that specifies the north–south position of a point on the Earth's surface.	Text(10)
Longitude	Geographic coordinate that specifies the east–west position of a point on the Earth's surface.	Text(11)
UN Location Code	The UN Location code specifying where the place is located.	Text(5)
Facility ID	Links to the facility object containing the BIC and/or the SMDG code to specify the involved facility.	UUID

Table 65: Location entity

Shipment Location entity: maps the relationship between Shipment and Location, e.g., the place of receipt and the places of delivery for a specific shipment.

Attribute	Definition	Data type
Shipment ID	The identifier for a shipment.	UUID
Booking ID	A unique internal identifier to identify a Booking by	UUID
Location ID	The identifier for a location.	UUID
Shipment Location Type Code	Links to the Location Type Code defined by DCSA.	Text(3)
Displayed name	The address to be displayed on the transport document.	Text(250)
Event DateTime	Optional datetime indicating when the event at the location takes place	DateTime

Table 66: Shipment Location entity

Shipment Location Type entity: contains the Shipment Location Type defined by DCSA, e.g. the Place of Receipt and Place of Delivery. Shipment Location Type reference data contains reference data for this table

Attribute	Definition	Data type
Shipment Location Type Code	DCSA defined code for shipment locations.	Text(3)
Shipment Location Type Name	The name of the shipment location code	Text(50)
Shipment Location Type Description	Description of the shipment location type code.	Text(250)

Table 67: Shipment Location Type entity

Country entity: Country names are as defined by the ISO 3166 standard published by ISO. This standard defines codes for the names of countries, dependent territories, and special areas of geographical interest. Country, example contains reference data for this table

Attribute	Definition	Data type
Country Code	The two-letter ISO 3166 country code. E.g. BE for Belgium.	Text(2)
Country Name	The full name for the country as defined by ISO 3166-1.	Text(75)

Table 68: Country entity

UN Location entity: UN Location is a location as defined by UNECE and commonly known as "UN/LOCODE" ("United Nations Code for Trade and Transport Locations"). The UN Location identifies a location in the sense of a city/town/village, being the smaller administrative area existing as defined by the competent national authority in each country. UN Location, example contains reference data for this table

A list of all UN location codes can be found in the unece.org/.../unlocode-code-list-country-and-territory

Attribute	Definition	Data type
UN Location Code	The UN Location Code identifies a location in the sense of a city/town/village, being the smaller administrative area existing as defined by the competent national authority in each country. A complete UN Location Code is a combination of a two-character country code and a three-character city/town/area Location Code, e.g. BEANR is known as the city of Antwerp (ANR), which is located in Belgium (BE).	Text(5)
UN Location Name	The name of the location as defined by the UNECE.	Text(100)
Location Code	Location Code identifies a location in the sense of a city/town/village, being the smaller administrative area existing as defined by the competent national authority in each country. Location Code is a three-character code e.g. ANR for Antwerp.	Text(3)
Country Code	The country that the UN Location belongs to.	Text(2)

Table 69: UN Location entity

Facility entity: contains the Facility which is a location entity at a sub-level to UN Location Code and provides the locational context for the event, which is being reported on, as defined by DCSA.

Attribute	Definition	Data type
Facility ID	Identifier for facility	UUID
Facility Name	The name of the facility.	Text(100)
Facility BIC Code	The code used for identifying the specific facility according to the BIC code list. The BIC code should always be used in combination with the UN Location Code	Text(4)

Attribute	Definition	Data type
Facility SMDG Code	The code used for identifying the specific facility according to the SMDG code list. The SMDG code should always be used in combination with the UN Location Code	Text(6)
UN Location Code	The UN Location code specifying where the Facility is located.	Text(5)
Location ID	The Identifier for the location for this facility entity	UUID

Table 70: Facility entity

Facility Type entity: contains the Facility Type which provides the locational context for the event being reported on. The facility types are defined as unique areas where equipment and/or a transport type can be located for a specified period as defined by DCSA. Facility Type reference data contains reference data for this table

Attribute	Definition	Data type
Facility Type Code	Four-character code to identify the specific type of facility.	Text(4)
Facility Type Name	The name of the facility type.	Text(100)
Facility Type Description	The description of the facility type.	Text(250)

Table 71: Facility Type entity

Address entity: Stores address information.

Attribute	Definition	Data type
Address ID	Unique identifier of the address entity.	UUID
Name	Name used for the address	Text(100)
Street	The name of the street of the party's address.	Text(100)
Street number	The number of the street of the party's address.	Text(50)

Attribute	Definition	Data type
Floor	The floor of the party's street number.	Text(50)
Post code	The postal code of the party's address.	Text(10)
City	The city name of the party's address.	Text(65)
StateRegion	The state/region of the party's address.	Text(65)
Country	The country of the address	Text(75)

Table 72: Address entity

5.7.1 Location reference data

The figure below shows the reference data entities in the Location subject area.

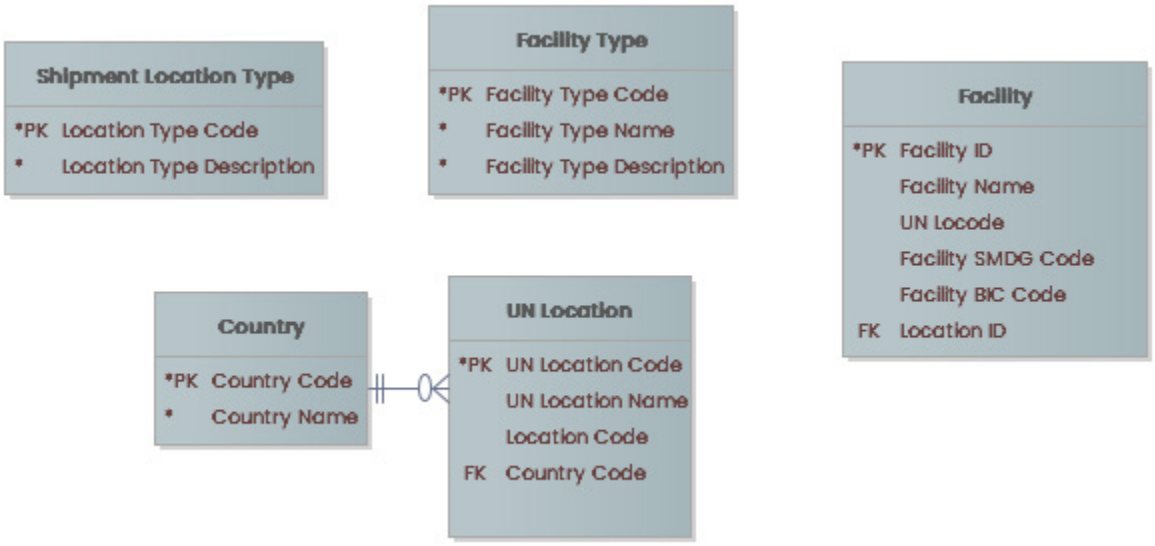


Figure 19: Location reference data entities

Country, example contains examples of country names and codes as published by ISO. The full country list (ISO 3166-1) can be obtained via the ISO Online Browsing Platform (OBP).[3] This data populates Country entity

[3] https://www.iso.org/obp/ui/#search.

Country Code	Country Name
AL	Albania
BR	Brazil
HR	Croatia
DK	Denmark
SV	El Salvador

Table 73: Country, example

The first two characters of the UN Location Code are the ISO 3166-1 alpha-2 Country Code, which are followed by a three-character code representing a city/town area location within the country. An area containing several functions (port, train station, airport, etc.) should still only have one UN Location Code assigned.

UN Location, example contains examples of location names and codes as provided by the UN/ECE linked to the Country Code. Combining the Country Code and the Location Code constitutes the UN Location Code. This data populates UN Location entity

UN Location Code	Country Code	Location Code	UN Location Name
ALMIL	AL	MIL	Milot
BRAGS	BR	AGS	Alagoinhas
HRVUK	HR	VUK	Vukovar
DKAAR	DK	AAR	Aarhus
SVSMG	SV	SMG	San Miguel

Table 74: UN Location, example

Facility, example contains examples of facility codes and their appertaining attributes.

Facility ID	Facility Name	Facility BIC code	Facility SMDG code
f278d62c-7b42-4f57-8a3d-3d932f989887	KHALIFA PORT CONTAINER TERMINAL		ADT
208190d5-36d3-4e5e-9f94-f781a323bdf4	DP WORLD BRISBANE FISHERMAN ISLANDS		DPBNE
04959e1f-4b2e-4e03-9950-8d86473c3c75	GATEWAY TERMINALS INDIA (GTI)		GTICI
1abf6a05-e62b-4a03-8633-e2beb05d1858	Remain GMBH	RMAA	
09adae4e-7289-42e3-bd03-07ebebeb4f6b	Pentalver Transport Ltd	PTVA	

Table 75: Facility, example

Facility Type reference data contains the Facility Type which provides the locational context for the event being reported on. The facility types are defined as unique areas where equipment and/or a transport type can be located for a specified period as defined by DCSA. More details can be found here: DCSA-Information-Model/facilitytypes.csv. This data populates Facility Type entity

Facility Type Code	Facility Type Name	Facility Type Description
BOCR	Border crossing	Border crossing is the point at a border between two countries where people, transports or goods can cross. This may or may not include a customs checkpoint.
CLOC	Customer location	Customer location is the premise of the customer, who can be either the shipper or the consignee.
COFS	Container freight station	Container freight station is a facility where LCL (Less Than Container Load) shipments are consolidated or dispersed, cargo is stuffed into containers prior to shipment, or cargo is stripped from containers prior to release to the consignee.

Facility Type Code	Facility Type Name	Facility Type Description
COYA	Container yard	A place where containers are stored on the terminal or dry port (rail ramp) before they are loaded or offloaded from a ship. Containers are either stored for loading to be transported elsewhere or offloaded as they arrive into the port, terminal or rail ramp.
OFFD	Off dock storage	An interim storage facility where empty or full containers are stored in transit.
DEPO	Depot	Depot is a designated area where empty equipment is stored between use.
INTE	Inland terminal	Inland terminal is a facility where containers are loaded, moved, or discharged. The inland terminal can be serviced by trucks, rail, and barges (at river terminals).
POTE	Port terminal	Port terminal is a facility located adjacent to a waterway where containers are loaded, moved, or discharged onto/from sea-going vessels and barges.
PBPL	Pilot boarding place	The place where a pilot boards the vessel upon arrival at the port boundaries.
BRTH	Berth	The place where a vessel is moored in a port terminal
RAMP	Ramp	An inland container terminal (storing both full and empty containers) connected directly to a rail ramp where containers are loaded/discharged to/from a train
ANCH	Anchorage Location	The location in which vessels anchor or may anchor

Table 76: Facility Type reference data

Shipment Location Type reference data contains the Shipment Location Type defined by DCSA. More details can be found here: DCSA-Information-Model/shipmentlocationtypes.csv. This data populates Shipment Location Type entity

Shipment Location Type Code	Shipment Location Type Name	Shipment Location Type Description
PRE	Place of Receipt	The location where the cargo is handed over by the shipper, or his agent, to the shipping line. This indicates the point at which the shipping line takes on responsibility for carriage of the container.
POL	Port of Loading	The location where the cargo is loaded onto a first sea-going vessel for water transportation.
POD	Port of Discharge	The location where the cargo is discharged from the last sea-going vessel.
PDE	Place of Delivery	The location where the cargo is handed over to the consignee, or his agent, by the shipping line and where responsibility of the shipping line ceases.
PCF	Pre-carriage From	
PSR	Pre-carriage under shipper's responsibility	Place and mode of transportation for pre-carriage (e.g. truck, barge, rail) under shipper's responsibility
OIR	Onward In-land Routing	The location where the cargo is transported from port of discharge to consignee location on consignee's responsibility (merchant haulage).
DRL	Depot release location	

Shipment Location Type Code	Shipment Location Type Name	Shipment Location Type Description
ORI	Origin of goods	
IEL	Container intermediate export stop off location	
PTP	Prohibited transshipment port	
RTP	Requested transshipment port	
FCD	Full container drop-off location	
ECP	Empty container pick-up location	

Table 77: Shipment Location Type reference data

5.8 Transport

The subject area of Transport describes a movement of a shipment from origin to destination and contains nine entities: Transport, Vessel, Mode of Transport, Shipment Transport, Transport Call, Voyage, Transport Call Voyage, Commercial Voyage and Commercial Voyage Transport Call. These entities are shown in Figure 19. The Transport subject area is modelled around the key entity of Transport Call for storing specific instances of transport and a subtype (Vessel), which captures vessel-specific details. The Transport Call entity is linked to The Mode of Transport. The Mode of Transport entity describes the possible modes of transport. The DCSA Transport Type attribute has been added to the Mode of Transport reference data entity to provide shipping industry-specific terminology rather than more generic terms defined by the UN/CEFACT.

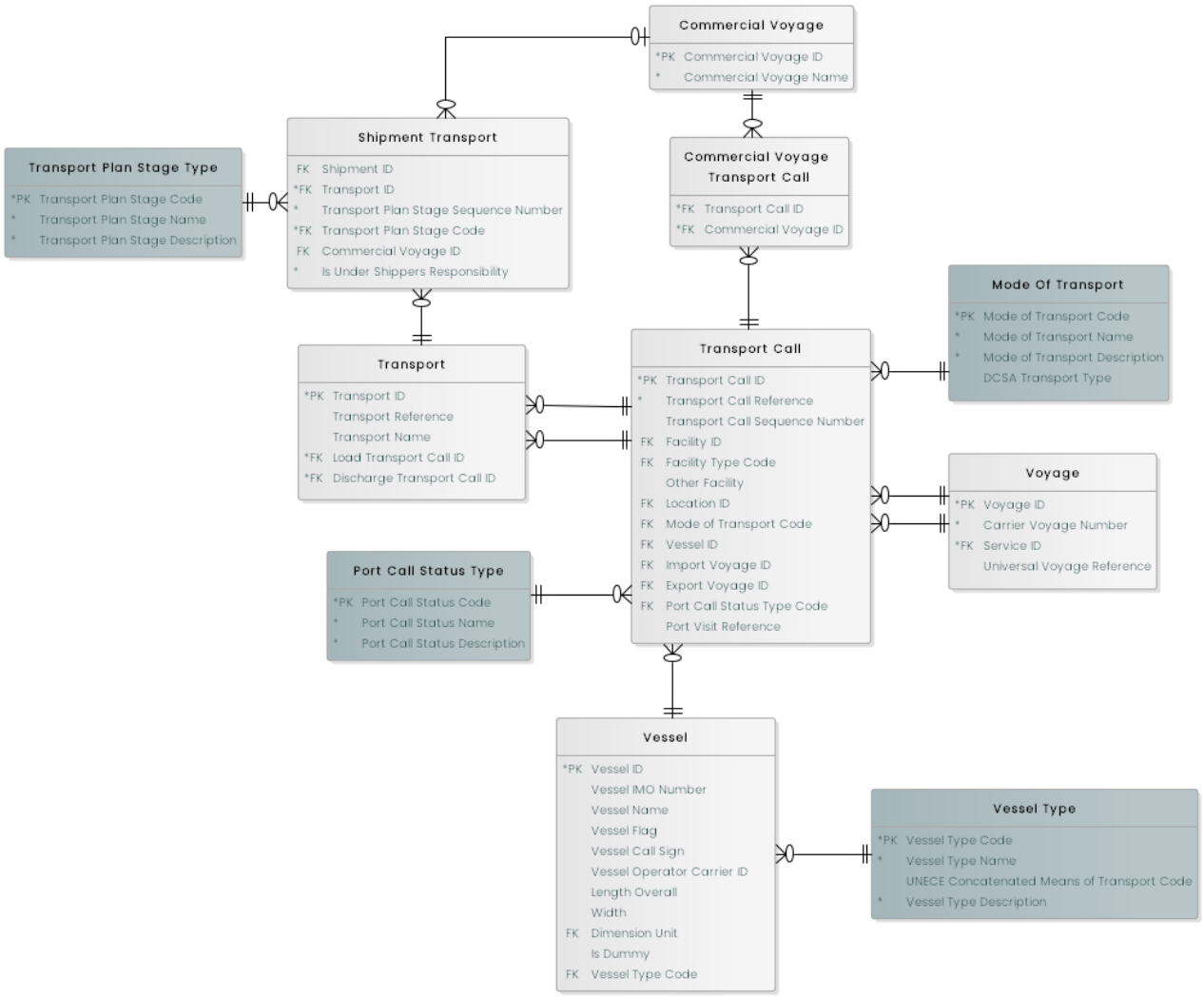


Figure 20: Transport subject area

The entities within the Transport subject area are defined and detailed in the following tables.

Mode of Transport entity: addresses the code specifying the transport mode for the logistic transport movement, following the UN/CEFACT Recommendation 19 - Codes for Modes of Transport mapped to the transport types as defined in the DCSA Web glossary of terms. Mode of Transport reference data contains reference data for this table

Attribute	Definition	Data type
Mode of Transport Code	The code specifying the mode (e.g. transport by rail) for the transport. The code follows UN/CEFACT Recommendation 19 - Codes for Modes of Transport.	Text(3)
Mode of Transport Name	The name of the mode of transport.	Text(100)
Mode of Transport Description	The description of the mode of transport as detailed by UN/CEFACT Recommendation 19 - Codes for Modes of Transport.	Text(250)
DCSA Transport Type	The DCSA-defined types of transport as used in events mapped to the Mode of Transport Code.	Text(50)

Table 78: Mode of Transport entity

Transport entity: used to convey goods or other objects from place to place, during logistics cargo movements.

Attribute	Definition	Data type
Transport ID	The unique identifier for the transport.	UUID
Transport Reference	The reference for the transport, e.g. when the mode of transport is a vessel, the Transport Reference will be the vessel IMO number.	Text(50)
Transport Name	The name of the transport instance, e.g. for a vessel, this is the vessel name.	Text(100)
Load Transport Call ID	Identifies the departure transport call of the shipment.	UUID
Discharge Transport Call ID	Identifies the arrival transport call of the shipment.	UUID

Table 79: Transport entity

Vessel entity: describes a floating, sea going structure (mother vessels and feeder vessels) with either an internal or external mode of propulsion designed for the transport of cargo and/or passengers. Ocean vessels are uniquely identified by an IMO number consisting of 7 digits, or alternatively by their AIS signal with an MMSI number.

Attribute	Definition	Data type
Vessel ID	Unique identifier for the vessel	UUID
Vessel IMO Number	The unique reference for a registered Vessel. The reference is the International Maritime Organisation (IMO) number, also sometimes known as the Lloyd's register code, which does not change during the lifetime of the vessel.	Text(7)
Vessel Name	The name of the Vessel given by the Vessel Operator and registered with IMO.	Text(35)
Vessel Flag	The flag of the nation whose laws the vessel is registered under. This is the ISO 3166 two-letter country code.	Text(2)
Vessel Call Sign	A unique alphanumeric identity that belongs to the vessel and is assigned by the International Telecommunication Union (ITU). It consists of a three-letter alphanumeric prefix that indicates nationality, followed by one to four characters to identify the individual vessel. For instance, vessels registered under Denmark are assigned the prefix ranges 5PA-5QZ, OUA-OZZ, and XPA-XPZ. The Call Sign changes whenever a vessel changes its flag.	Text(10)
Vessel Operator Carrier ID	Links to the carrier entity containing the SCAC and/or the SMDG code to specify the operating carrier.	UUID
Is Dummy	Indicates that the Vessel is a dummy Vessel. A dummy Vessel means that no physical vessel is assigned, the vessel can be used as a placeholder.	Boolean
Vessel Type Code	The code specifying the Vessel type	Text(4)

Attribute	Definition	Data type
Length Overall	The length overall (LOA) of the Vessel. If length is defined using feet (FOT) then the numbers after a decimal should be considered as a fraction of a foot – **not** as a number of inches. E.g. 120.5 feet means 120 and a half foot (which would be 120'6")	Number
Width	The width of the Vessel. If width is defined using feet (FOT) then the numbers after a decimal should be considered as a fraction of a foot – **not** as a number of inches. E.g. 120.5 feet means 120 and a half foot (which would be 120'6")	Number
Dimension Unit	The unit of measure for the width and length overall which can be expressed in either meters or feet.	Text(3)

Table 80: Vessel entity

Shipment Transport entity: connects Shipment and Transport, allowing the Vessel ID and Voyage ID to be published on a Transport Document. The sequence number is used to identify the next transport, which will uniquely identify the export voyage.

Attribute	Definition	Data type
Shipment ID	Identifies the shipment.	UUID
Transport ID	Links the associated transport to the shipment.	UUID
Commercial Voyage ID	The identifier of the Commercial Voyage.	UUID
Transport Plan Stage Code	Code qualifying a specific stage of transport e.g. pre-carriage, main carriage transport or on-carriage transport	Text(3)
Transport plan Stage Sequence Number	Sequence number of the transport plan stage	Number

Attribute	Definition	Data type
Is Under Shippers Responsibility	Indicator whether mode of transportation for pre-carriage (e.g. truck, barge, rail) is under shipper's responsibility	Boolean

Table 81: Shipment Transport entity

Transport Call entity: provides a list of all the locations involved in a transport journey.

Attribute	Definition	Data type
Transport Call ID	The unique identifier for a Transport Call.	UUID
Transport Call Reference	A reference provided by the carrier for a Transport Call. When the Mode of Transport is vessel, and the facility type is port/terminal then the transport call reference means terminal call reference	Text(100)
Transport Call Sequence Number	Transport operator's key that uniquely identifies each individual call. This key is essential to distinguish between two separate calls at the same location within one voyage.	Number
Facility ID	Links to the facility object containing the BIC and/or the SMDG code to specify the involved facility.	UUID
Facility Type Code	Code that identifies the type of facility.	Text(4)
Other Facility	An alternative way to capture the facility details, when no standardised DCSA facility code can be found.	Text(50)
Location ID	The associated location ID defined in the Location entity.	UUID
Mode of Transport Code	The code specifying the mode of transport.	Text(3)
Vessel ID	Unique identifier for the vessel	UUID

Attribute	Definition	Data type
Import Voyage ID	An identifier for the import (inbound) voyage to the region	UUID
Export Voyage ID	An identifier for the export (outbound) voyage to the region	UUID
Port Call Status Type Code	A code to communicate any change / exception to a published schedule. An example of this could be OMIT, PHOT, etc	Text(4)
Port Visit Reference	The unique port call reference provided by port authorities. Usually composed of Unlocode and a number. Port Visit Reference is used to group one or more Terminal visits to the same Port	Text(50)

Table 82: Transport Call entity

Port Call Status Type entity: contains the Port Call Status type codes. Port Call status type codes are used to communicate any change/exception to a published schedule. This can be an OMIT (Omit), PHOT (Phase Out), etc. Port Call Status reference data contains reference data for this table

Attribute	Definition	Data type
Port Call Status Type Code	Code of the Port Call Status Type	Text(4)
Port Call Status Type Name	Name of the Port Call Status Type	Text(30)
Port Call Status Type Description	Description of the Port Call Status Type	Text(250)

Table 83: Port Call Status Type entity

Voyage entity: describes the part of a service roundtrip that typically changes at the geographical "end-point" of a vessel rotation. As such, that specific port call can have two voyage numbers: one for the discharge of final shipments on the "current" voyage, and one that identifies the commencement of loading shipments (for allocation purposes). One rotation will typically have 2 voyages, one on each haul.

Attribute	Definition	Data type
Voyage ID	The identifier of the Voyage.	UUID
Carrier Voyage Number	The vessel operator-specific identifier of the Voyage.	Text(50)
Universal Voyage Reference	The universally agreed voyage reference to use. The voyage consists of 2 digits followed by 2 alpha numeric characters followed by a direction: N, S, E or W	Text(5)
Service ID	Identifies the Service this Voyage is linked to.	UUID

Table 84: Voyage entity

Commercial Voyage entity: defines the service and the voyage from a commercial perspective and is required to accommodate having the correct voyage number on the booking confirmation and transport document.

Attribute	Definition	Data type
Commercial Voyage ID	The identifier of the Commercial Voyage	UUID
Commercial Voyage Name	Identifies the commercial voyage as shown on the booking and the transport document	Text

Table 85: Commercial Voyage entity

Commercial Voyage Transport Call entity: expresses that each commercial voyage contains multiple transport calls.

Attribute	Definition	Data type
Transport call ID	Identifies the transport call that relates to the voyage.	UUID
Commercial Voyage ID	The identifier of the Commercial Voyage	UUID

Table 86: Commercial Voyage Transport Call entity

Transport Plan Stage Type entity: Qualifying a specific stage of transport. Transport Plan Stage Type reference data contains reference data for this table

Attribute	Definition	Data type
Transport Plan Stage Code	Code of the plan stage type	Text(3)
Transport Plan Stage Name	Name of the plan stage type	Text(100)
Transport Plan Stage Description	Description of the plan stage type	Text(250)

Table 87: Transport Plan Stage Type Entity

Vessel Type entity: qualifying a specific vessel type. UNECE codes are maintained for linkage

Attribute	Definition	Data type
Vessel Type Code	Code of the vessel type	Text(4)
Vessel Type Name	Name of the vessel type	Text(100)
UNECE Concatenated Means of Transport Code	The concatenated UNECE code used for linking the vessel type to the UNECE definition	Text(4)
Vessel Type Description	Description of the vessel type	Text(100)

Table 88: Vessel Type Entity

5.8.1 Transport reference data

The figure below shows the reference data entities in the Transport subject area.

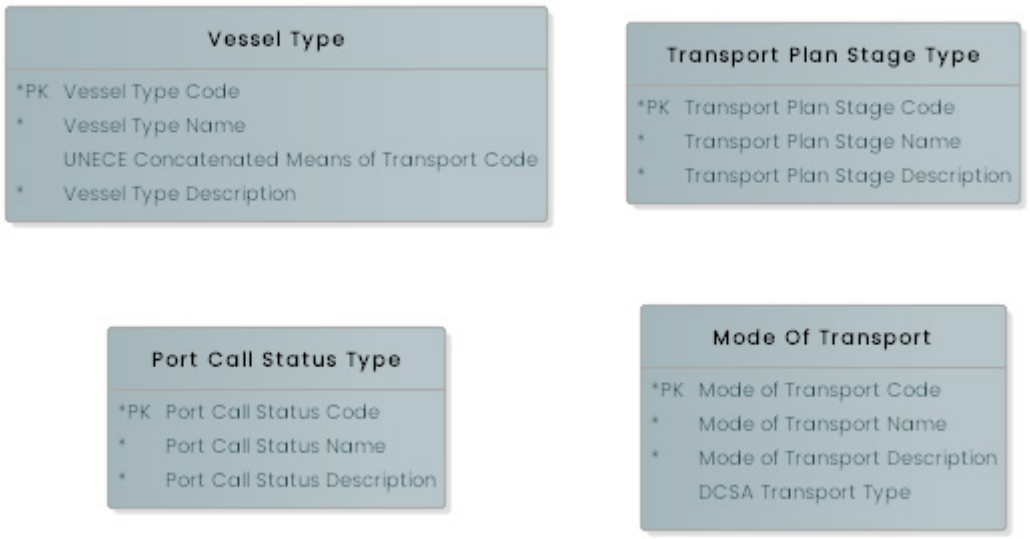


Figure 21: Transport reference data entities

Mode of Transport reference data contains the overview of mode of transport codes and names as published by the UN/CEFACT.4 In the below overview, these are linked to the DCSA-defined transport types. More details can be found here: DCSA-Information-Model/modeoftransportcodes.csv. This data populates Mode of Transport entity

Mode of Transport Code	Mode of Transport Name	Mode of Transport Description	DCSA Transport Type
0	Transport mode not specified	Transport mode has not been specified.	
1	Maritime transport	Transport of goods and/or persons is by sea.	Vessel
2	Rail transport	Transport of goods and/or persons is by rail.	Rail
3	Road transport	Transport of goods and/or persons is by road.	Truck

[4] https://www.unece.org/fileadmin/DAM/cefact/recommendations/rec19/rec19_ecetrd138.pdf

Mode of Transport Code	Mode of Transport Name	Mode of Transport Description	DCSA Transport Type
4	Air transport	Transport of goods and/or persons is by air.	
5	Mail	Method to convey goods is by mail.	
6	Multimodal transport	Method to convey goods and/or persons is by multimodal transport.	
7	Fixed Transport installation	Transport of item is via a fixed transport installation.	
8	Inland water Transport	Transport of goods and/or persons is by inland water.	Barge
9	Transport mode not applicable	The mode of transport in not applicable.	

Table 89: Mode of Transport reference data

Transport Plan Stage Type reference data: Qualifying a specific stage of transport. More details can be found here: DCSA-Information-Model/transportplanstagetypes.csv. This data populates Transport Plan Stage Type Entity

Transport Plan Stage Code	Transport Plan Stage Name	Transport Plan Stage Description
PRC	Pre-Carriage.	Pre-carriage: Transport leg occurring prior to the main transport leg.
MNC	Main Carriage Transport	The main transport leg(s), happening on one or more main vessels.
ONC	On-Carriage Transport	The transport leg occurring after the main leg to the Place of Delivery.

Table 90: Transport Plan Stage Type reference data

Vessel Type reference data: Qualifying a specific Vessel Type. The list is a subset of UNECE "Codes for Types of Means of Transport". More details can be found here: DCSA-Information-Model/vesseltypecodes.csv. This data populates Vessel Type Entity

Vessel Type Code	Vessel Type Name	UNECE concatenated Means of Transport Code	Vessel Type Description
GECA	General Cargo	50	Vessel designed to carry general cargo
CONT	Container	511	Vessel designed to carry containers only
RORO	RoRo	512	Vessel with ramp designed to carry roll-on/roll-off cargo.
CARC	Car carrier	513	Vessel designed to carry automotive vehicles
PASS	Passenger	59	Vessel designed to carry more than 12 passengers
FERY	Ferry	592	Vessel designed to ply regularly between two or more ports
BULK	Bulk	52	Vessel designed to carry bulk cargo
TANK	Tanker	53	Vessel solely equipped with tanks to carry cargo
LPGT	Liquefied gas tanker	54	Tanker designed to carry liquefied gas
ASSI	Assistance	60	Vessel designed to give assistance such as tug

Vessel Type Code	Vessel Type Name	UNECE concatenated Means of Transport Code	Vessel Type Description
PLOT	Pilot boat	711	Vessel designed to convey pilots to/from ships

Table 91: Vessel Type reference data

Port Call Status Type reference data: Qualifying a specific Port Call status. Values in this table is a subset of the SMDG values for SMDG Port Call Activity Code List. The codes are used when a change/exception to a published schedule occurs. More details can be found here: DCSA-Information-Model/portcallstatuscodes.csv. This data populates Port Call Status Type entity

Port Call Status Type Code	Port Call Status Type Name	Port Call Status Type Description
OMIT	Omit	When a ship does not call at a port included in the Long Term Schedule that was planned at the start of the voyage.
BLNK	Blank	When an already announced voyage is cancelled. In this case the voyage number is retained and planned port calls are blanked.
ADHO	Ad Hoc	An additional port call made on a specific voyage that was not originally included in the Long Term Schedule.
PHOT	Phase Out	When a vessel moves out of a service at a given port from the latest issued schedule with vessel partners.
PHIN	Phase In	When a vessel moves into a service at a given port from the lates issues schedule with vessel partners.
ROTC	Rotation Change	When the sequence of port calls is changed compared to the proforma.

Port Call Status Type Code	Port Call Status Type Name	Port Call Status Type Description
SLID	Sliding	When a vessel takes another position than planned in a service (i.e. due to relevant delay) resulting in one or more voyages to be cancelled or blanked.

Table 92: Port Call Status reference data

5.9 Events

The subject area of Events contains eleven entities. Shipment Event, Equipment Event, Transport Event and Operations Events are the four main entities. The other seven entities are related to the associated reference data: Event Classifier, Shipment Event Type, Document Type, Empty Indicator, Equipment Event Type, Transport Event Type and SMDG Delay Reason. These entities are shown in Figure 22.

The model design relating to the Equipment, Transport and Shipment Events is based on the Event Structure work that has been published by DCSA. Please refer to the DCSA Event Naming Convention and Event Structure Definitions to obtain more information about the definitions, syntax, parameters, and values for the events.

An event occurs in relation to the central entities of Shipment (for example, Shipment Release Message Issued), Transport (for example, Actual Vessel Departure from Port Terminal), and Equipment (for example, Actual Gate in of Laden Equipment at Port Terminal). These events have been documented by the DCSA Event Naming Convention and Event Structure Definitions supported with DCSA reference data. The Shipment, Transport, Equipment and Operations events have been modelled separately to keep the logical association of what the specific event relates to. For example:

- All types of events relating to shipment are captured in the Shipment Event Type.
- All types of events relating to transport are captured in the Transport Event Type.
- All types of events relating to equipment are captured in the Equipment Event Type.
- All types of events relating to vessel operations are captured in the Operations Event Type.

Each of the above event types can be further related to the estimated, planned, actual or requested state captured in the Event Classifier entity, and each Event also has specific entities that only relate to those types of events. For example, Equipment Event is related to the Empty Indicator.

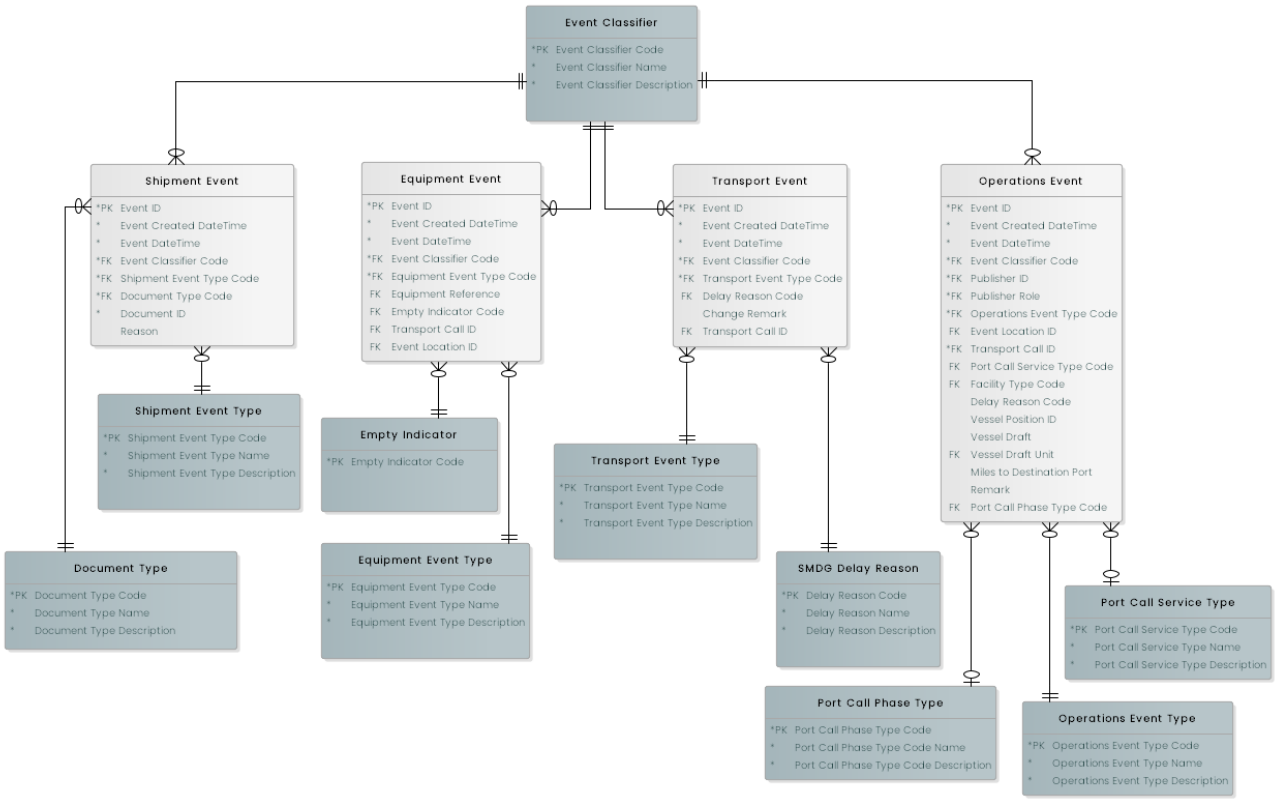


Figure 22: Events subject area

The entities within the Events subject area are defined and detailed in the following tables.

Event Classifier entity: denotes whether the event is planned, estimated or actual, requested. Event Classifier reference data contains reference data for this table

Attribute	Definition	Data type
Event Classifier Code	Code for the event classifier (PLN, ACT or EST, REQ).	Text (3)
Event Classifier Name	Name of the classifier.	Text(30)
Event Classifier Description	The description of the event classifier.	Text(250)

Table 93: Event Classifier entity

Empty Indicator entity: addresses the status of the equipment, specifically whether it is empty or laden. These are the two values that are currently tracked. Empty Indicator reference data contains reference data for this table

Attribute	Definition	Data type
Empty Indicator Code	Code to denote whether the equipment is empty or laden. The values are EMPTY or LADEN.	Text (5)

Table 94: Empty Indicator entity

Document Type entity: identifies the specific information type that a shipment event relates to. Document Type reference data contains reference data for this table

Attribute	Definition	Data type
Document Type Code	The code to identify the type of information that is related to the shipment.	Text (3)
Document Type Name	The name of the event that is related to the type of information related to the shipment, e.g. Booking, Arrival Notice or Transportation document.	Text(100)
Document Type Description	The description of the event that is related to the type of information related to the shipment, e.g. Booking, Arrival Notice or Transportation document.	Text(300)

Table 95: Document Type entity

Shipment Event Type entity: describes the types of events that can relate to a shipment, e.g. a booking confirmed. Shipment Event Type reference data contains reference data for this table

Attribute	Definition	Data type
Shipment Event Type Code	The code to identify the event type that is related to the shipment.	Text (4)
Shipment Event Type Name	The description of the event type that is related to the shipment, e.g. a booking confirmed.	Text(30)
Shipment Event Type Description	The description of each event type.	Text(350)

Table 96: Shipment Event Type entity

Equipment Event Type entity: describes the types of events that can relate to an equipment, e.g. an equipment loaded onto a vessel. Equipment Event Type reference data contains reference data for this table

Attribute	Definition	Data type
Equipment Event Type Code	The code to identify the event type that is related to the equipment.	Text (4)
Equipment Event Type Name	The name of the event type that is related to the equipment, e.g. loaded.	Text(30)
Equipment Event Type Description	The description of the event type that is related to the equipment.	Text(300)

Table 97: Equipment Event Type entity

Transport Event Type entity: describes the types of events that can relate to a transport, e.g. a vessel departed. Transport Event Type reference data contains reference data for this table

Attribute	Definition	Data type
Transport Event Type Code	The code to identify the type of event that is related to the transport.	Text (4)
Transport Event Type Name	The name of the event type for the Transport Event Code, e.g. a vessel departed.	Text(30)
Transport Event Type Description	The description of the event type.	Text(250)

Table 98: Transport Event Type entity

Operations Event Type entity: describes the types of events that can relate to an operation. e.g. Arrival of the means of transport. Operations Event Type reference data contains reference data for this table

Attribute	Definition	Data type
Operations Event Type Code	The code to identify the event type that is related to the operation.	Text (4)
Operations Event Type Name	The name of the event type that is related to the operation.	Text(30)

Attribute	Definition	Data type
Operations Event Type Description	The description of the event type that is related to the operation.	Text(250)

Table 99: Operations Event Type entity

Port Call Service Type entity: Describes the service provided to the vessel during the port call.

Port Call Service Type reference data contains reference data for this table

Attribute	Definition	Data type
Port Call Service Type Code	The code to identify the service provided to the vessel during the port call.	Text (4)
Port Call Service Type Name	The name to identify the service provided to the vessel during the port call.	Text(30)
Port Call Service Type Description	The description to identify the service provided to the vessel during the port call.	Text(250)

Table 100: Port Call Service Type entity

Shipment Event entity: describes an event that happens to a shipment.

Attribute	Definition	Data type
Shipment Event ID	A unique identifier for the shipment event captured.	UUID
Event Created DateTime	The date and time when the event entry was created.	DateTime
Event DateTime	The date and time when the event occurred or will occur.	DateTime
Event Classifier Code	Code for the event classifier (PLN, ACT or EST).	Text(3)
Shipment Event Type Code	The code to identify the event that is related to the shipment.	Text(4)

Attribute	Definition	Data type
Document Type Code	The code to identify the type of information that is related to the shipment.	Text(3)
Document ID	Reference to the document concerned by the event	Text(50)
Reason	Text field as part of the request message, describing the reasons for requesting the update, including their 'category' (e.g., mandatory, missing information, clauses, etc.)	Text(250)

Table 101: Shipment Event entity

Equipment Event entity: describes an event that happens to an equipment, e.g. a container loaded onto vessel at port terminal.

Attribute	Definition	Data type
Equipment Event ID	Unique identifier for the equipment event captured.	UUID
Event Created DateTime	The date and time when the event entry was created.	DateTime
Event DateTime	The date and time when the event occurred or will occur.	DateTime
Event Classifier Code	The code for the event classifier, e.g., Actual.	Text(3)
Equipment Event Type Code	The code to identify an equipment-related event type.	Text(4)
Equipment Reference	Reference that uniquely identifies the equipment involved in the event.	Text(15)
Empty Indicator Code	Code to denote whether the equipment is empty or laden.	Text(5)
Transport Call ID	Specifies the transport call involved in the event.	UUID
Event Location ID	The location where the event takes place	UUID

Table 102: Equipment Event entity

Transport Event entity: describes an event that happens to a transport instance, e.g., a vessel departed.

Attribute	Definition	Data type
Transport Event ID	Unique identifier for the transport event captured.	UUID
Event Created DateTime	The date and time when the event entry was created.	DateTime
Event DateTime	The date and time when the event occurred or will occur.	DateTime
Event Classifier Code	Specifies the code for the classifier of the event, e.g. Actual.	Text(3)
Transport Event Type Code	The code to identify the type of event that is related to transport.	Text(4)
Delay Reason Code	Code for the delay reason as provided by SMDG.	Text(3)
Change Remark	Free text description of the reason for the change in schedule.	Text(250)
Transport Call ID	Specifies the transport call involved in the event.	UUID

Table 103: Transport Event entity

Operations Event entity: describes an event that happens to a vessel during a port call

Attribute	Definition	Data type
Event ID	A unique identifier for the shipment event captured.	UUID
Event Created DateTime	The date and time when the event entry was created.	DateTime
Event DateTime	The date and time when the event occurred or will occur.	DateTime

Attribute	Definition	Data type
Event Classifier Code	Code for the event classifier (PLN, REQ, ACT or EST).	Text(3)
Publisher ID	The publisher (source) of the event (pointing to a party entity)	UUID
Publisher Role	The party function code of the publisher	Text(3)
Operations Event Type Code	The code to identify the event that is related to the operations event.	Text(4)
Transport Call ID	Specifies the transport call during which the event takes place.	UUID
Port Call Service Type Code	The code to identify the type of service provided during the port call.	Text(4)
Event Location ID	The location where the event takes place	UUID
Facility Type Code	The type of facility where the event takes place	Text(4)
Delay Reason Code	delay reasons as provided by SMDG.	Text(3)
Vessel Position ID	Relation to the location entity containing the location of the vessel when the message is sent expressed in latitude and longitude as per ISO 6709	UUID
Vessel Draft	The actual draft of the vessel in meter or foot	Number
Vessel Draft Unit	The unit of measure for the Draft which can be expressed in either meters or feet.	Text(3)

Attribute	Definition	Data type
Miles to Destination Port	Remaining distance reported by the vessel to the next destination port in nautical miles	Number
Remark	Free text to provide additional information on the context.	Text(500)
Port Call Phase Type Code	The general direction of the vessel for which information applies.	Text(4)

Table 104: Operations Event entity

SMDG Delay Reason entity: delay reasons as provided by SMDG, see the Code list DELAY on https://smdg.org/documents/smdg-code-lists/delay-reason-and-port-call-activity/ for a complete list of codes. Delay Reason Codes, examples populate this table

Attribute	Definition	Data type
Delay Reason Code	Code for the delay reason as provided by SMDG.	Text(3)
Delay Reason Name	Name of the delay reason as provided by SMDG.	Text(100)
Delay Reason Description	The description of the delay reason as provided by SMDG.	Text(250)

Table 105: SMDG Delay Reason entity

Port Call Phase Type entity: describes an indicator that shows a vessel's status within the four main phases of a port call

Attribute	Definition	Data type
Port Call Phase Type Code	Code for the delay reason as provided by SMDG.	Text(4)
Port Call Phase Type Name	Name of the delay reason as provided by SMDG.	Text(30)
Port Call Phase Type Description	The description of the delay reason as provided by SMDG.	Text(250)

Table 106: Port Call Phase Type entity

5.9.1 Events reference data

The figure below shows the reference data entities in the Events subject area.

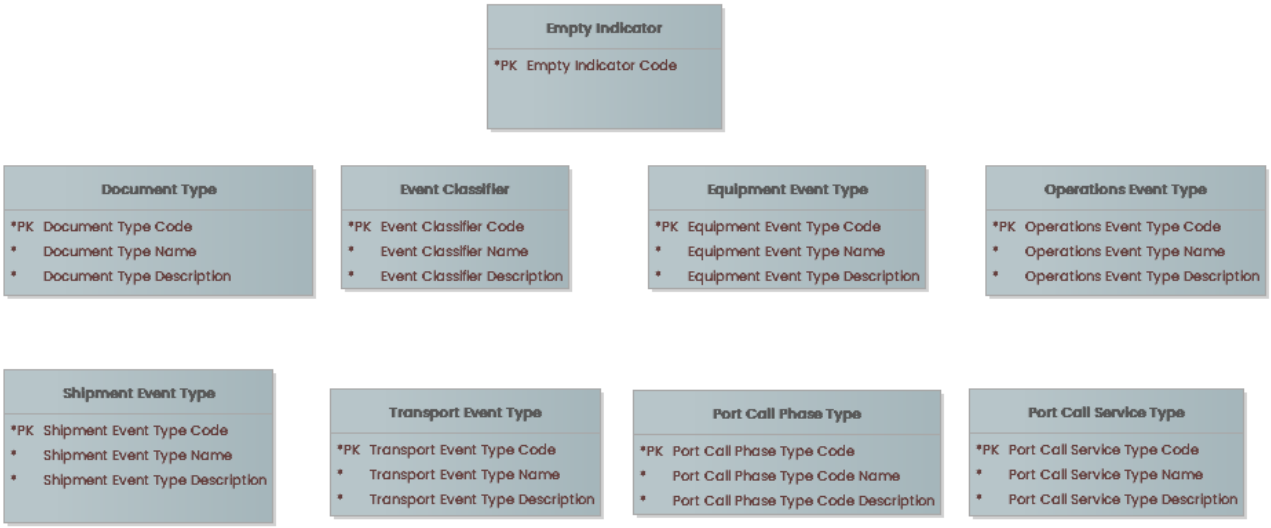


Figure 23: Events reference data entities

Event Classifier reference data contains the code and name for the event classifiers as defined by DCSA. More details can be found here: [DCSA-Information-Model/eventclassifiercodes.csv](). This data populates Event Classifier entity

Event Classifier Code	Event Classifier Name	Event Classifier Description
EST	Estimated	
ACT	Actual	
PLN	Planned	
REQ	Requested	

Table 107: Event Classifier reference data

Delay Reason Codes, examples contains the different Delay Reason codes and the description of them as defined by SMDG[5]. This data populates SMDG Delay Reason entity

Delay Reason Code	Delay Reason Name
1 – Ship Related	
ACC	Accident involving personnel
DEV	Deviation to avoid bad weather
STW	Stowage adjustment
2 – Shore related	
AIP	Accident involving personnel
ANA	Authorities not available
BUN	Bunkering delays
CGS	Arr OFF Proforma - Berth congestion
PRD	Low Productivity
QUA	Quarantine Inspection
YRD	Yard congestion
OTS	Others – Shore related
3 – Cargo related	
CAE	Cargo - Awaiting Exports

[5] The full list is available at https://smdg.org/documents/smdg-code-lists/delay-reason-and-port-call-activity/

Delay Reason Code	Delay Reason Name
CIN	Cargo inspection by Authorities
DIN	Deficient or inadequate information

Table 108: Delay Reason Codes, examples

Empty Indicator reference data contains the Empty Indicator code and name defined by DCSA. More details can be found here: DCSA-Information-Model/emptyindicatorcodes.csv. This data populatesEmpty Indicator entity

Empty Indicator Code
EMPTY
LADEN

Table 109: Empty Indicator reference data

Equipment Event Type reference data contains the Equipment Event Type code and name defined by DCSA. More details can be found here: DCSA-Information-Model/equipmenteventtypecodes.csv. This data populates Equipment Event Type entity

Equipment Event Type Code	Equipment Event Type Name	Equipment Event Type Description
LOAD	Loaded	
DISC	Discharged	
GTIN	Gated in	
GTOT	Gated out	
STUF	Stuffed	
STRP	Stripped	
PICK	Pick-up	

Equipment Event Type Code	Equipment Event Type Name	Equipment Event Type Description
DROP	Drop-off	
INSP	Inspected	
RMVD	Removed	
RSEA	Resealed	

Table 110: Equipment Event Type reference data

Transport Event Type reference data contains the Transport Event Type code and name defined by DCSA. More details can be found here: DCSA-Information-Model/transporteventtypecodes.csv. This data populates Transport Event Type entity

Transport Event Type Code	Transport Event Type Name	Transport Event Type Description
ARRI	Arrived	
DEPA	Departed	

Table 111: Transport Event Type reference data

Shipment Event Type reference data: contains the Shipment Event Type code and name defined by DCSA. More details can be found here: DCSA-Information-Model/shipmenteventtypecodes.csv. This data populates Shipment Event Type entity

Shipment Event Type Code	Shipment Event Type Name	Shipment Event Type Description
RECE	Received	Indicates that a document is received by the carrier or shipper.
DRFT	Drafted	Indicates that a document is in draft mode being updated by either the shipper or the carrier.

Shipment Event Type Code	Shipment Event Type Name	Shipment Event Type Description
PENA	Pending Approval	Indicates that a document has been submitted by the carrier and is now awaiting approval by the shipper.
PENU	Pending Update	Indicates that the carrier requested an update from the shipper which is not received yet.
PENC	Pending Confirmation	Indicates that a document has been submitted by the shipper and is now awaiting confirmation by the carrier.
CONF	Confirmed	Identifies that the booking request is confirmed by the carrier to the shipper i.e. booking confirmation completed
REJE	Rejected	Indicates that a document has been rejected by the carrier.
APPR	Approved	Indicates that a document has been approved by the shipper.
ISSU	Issued	Indicates that a document has been issued by the carrier.
SURR	Surrendered	Indicates that a document has been surrendered by the customer to the carrier.
SUBM	Submitted	Indicates that a document has been submitted by the customer to the carrier.
VOID	Void	Cancellation of an original transport document.
REQS	Requested	A status indicator that can be used with a number of identifiers to denote that a certain activity, service or document has been requested by the carrier, customer or authorities. This status remains constant until the requested activity is "Completed".

Shipment Event Type Code	Shipment Event Type Name	Shipment Event Type Description
CMPL	Completed	A status indicator that can be used with a number of activity identifiers to denote that a certain activity, service or document has been completed.
HOLD	On Hold	A status indicator that can be used with a number of activity identifiers to denote that a container or shipment has been placed on hold i.e. can't progress in the process.
RELS	Released	A status indicator that can be used with a number of activity identifiers to denote that a container or shipment has been released i.e. allowed to move from depot or terminal by authorities or service provider.
CANC	Cancelled	A status indicator to be used when the booking is cancelled by the Shipper or the Carrier

Table 112: Shipment Event Type reference data

Operations Event Type reference data contains the Operations Event Type code and name defined by DCSA. More details can be found here: DCSA-Information-Model/operationseventtypecodes.csv. This data populates Operations Event Type entity

Operations Event Type Code	Operations Event Type Name	Operations Event Type Description
ARRI	Arrived	
DEPA	Departed	
STRT	Started	
CMPL	Completed	
CANC	Cancelled	

Operations Event Type Code	Operations Event Type Name	Operations Event Type Description
OMIT	Omitted	

Table 113: Operations Event Type reference data

Port Call Phase Type reference data contains the Port Call Phase Type codes defined by DCSA. More details can be found here: DCSA-Information-Model/portcallphasetype.csv. This data populates

Port Call Phase Type Code	Port Call Phase Type Name	Port Call Phase Type Description
INBD	Inbound	Ship's physical movement from approach to (anchor) berth
ALGS	Alongside	Time from First Line Secured till Last Line Released
SHIF	Shifting	Ship's physical movement from (anchor) berth to (anchor) berth
OUTB	Outbound	Ship's physical movement from (anchor) berth to its next destination

Table 114: Port Call Phase Type reference data

Document Type reference data contains the Document Type code and name defined by DCSA. More details can be found here: DCSA-Information-Model/documenttypecodes.csv. This data populates Document Type entity

Document Type Code	Document Type Name	Document Type Description
CBR	Carrier Booking Request Reference	
BKG	Booking	

Document Type Code	Document Type Name	Document Type Description
SHI	Shipping Instruction	
VGM	Verified Gross Mass	
SRM	Shipment Release Message	
TRD	Transport Document	
ARN	Arrival Notice	
CAS	Cargo Survey	
CUS	Customs Inspection	
DGD	Dangerous Good Declaration	
OOG	Out Of Gauge	

Table 115: Document Type reference data

Port Call Service Type reference data contains the Port Call Service Type codes defined by DCSA. More details can be found here: DCSA-Information-Model/portcallservicetypecodes.csv.
This data populates Port Call Service Type entity

Port Call Service Type Code	Port Call Service Type Name	Port Call Service Type Description
PILO	Pilotage	The activity of conducting a vessel within restricted waters. Also, the fee for the services of a pilot.
MOOR	Mooring	The activity of securing a vessel, craft or boat, or other floating objects by ropes and/or chains to the shore, or to anchors. This service is usually provided by linesmen.

Port Call Service Type Code	Port Call Service Type Name	Port Call Service Type Description
CRGO	Cargo Operations	The activity of discharging, shifting, loading and lashing containers (both full and empty) as well as other cargo from/to a vessel during port stay.
TOWG	Towage	The activity of one vessel (boat/tug) assisting another vessel with manoeuvres within the port area.
BUNK	Bunkering	The transfer of liquid or gaseous fuel from land-based or floating facilities into a ship's permanent tanks
LASH	Lashing	All activities encompassing securing the containers and other arrangements onboard to prevent them from moving around on the vessel at sea.
SAFE	Safety	A safety timestamps indicates an acknowledgement of a participant that the vessel is ready for a responsibility handover from carrier to terminal and otherwise.
FAST	Fast	FAST is all fast (last line secured)
GWAY	Gangway	GWAY is gangway down and secure (authorized personnel can board the vessel)
ANCO	Anchorage ops	The activity of letting go or heaving in the anchor
SLUG	Sludge	The activity of removing waste from a vessel to shore during port stay
SHPW	Shore power	The transfer of electricity from shore to power the vessel

Port Call Service Type Code	Port Call Service Type Name	Port Call Service Type Description
LCRO	Loading cargo operations	The activity of loading containers (both full and empty) from the vessel etc.
DCRO	Discharge cargo operations	The activity of discharging containers (both full and empty) from the vessel etc.
VRDY	Vessel ready	The confirmation that the vessel is ready either to sail or to start cargo operations

Table 116: Port Call Service Type reference data

5.10 Vessel Sharing Agreement (VSA)

Vessel sharing agreement is used as an umbrella term to cover the different agreement types that carriers can have in place. The subject area of a VSA contains four entities: Vessel Sharing Agreement, Vessel Sharing Agreement Partner, Vessel Sharing Agreement Type and Tradelane. These entities are shown in Figure 24.

The Vessel Sharing Agreement subject area and its entities will allow for the identification of the partners in a vessel sharing agreement and which Tradelane the agreement relates to. The Vessel Sharing Agreement Type entity defines the different types of agreements, and the Vessel Sharing Agreement is used to outline the specific agreement. The Vessel Sharing Agreement Partner entity identifies the partners in the agreement. The Tradelane entity indicates which directional trade the agreement relates to and is linked to the Service entity (described in the Service subject area) to specify which services are covered in the Tradelane.

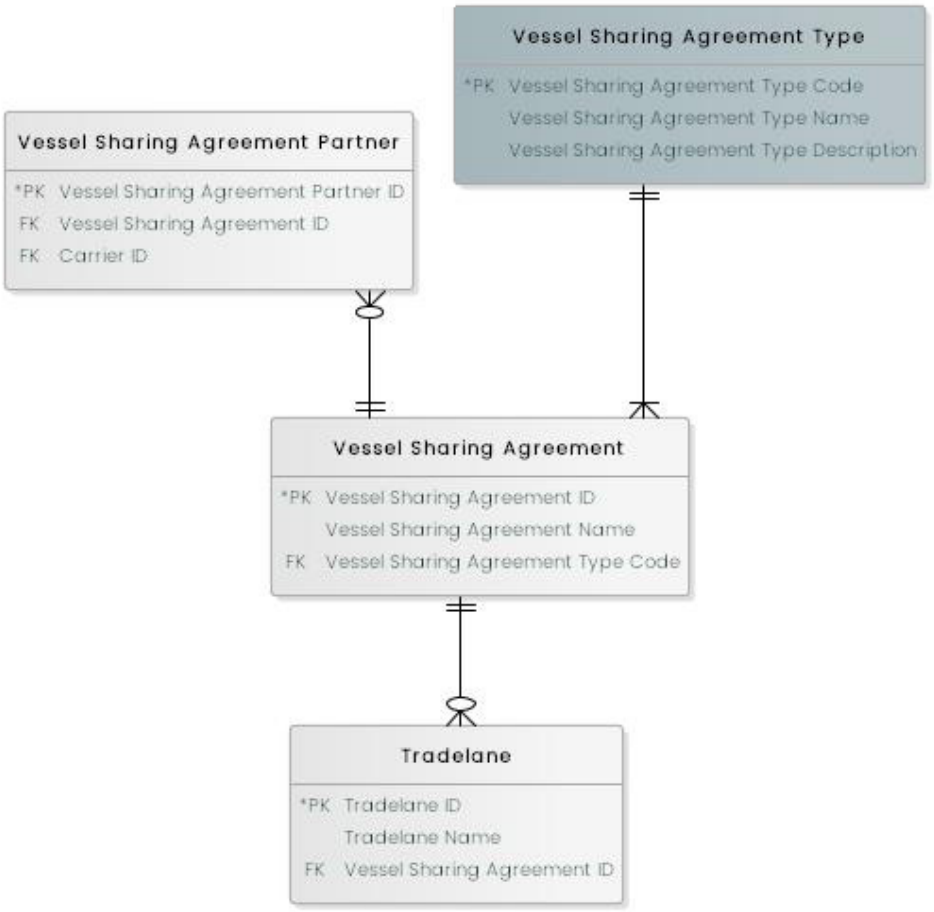


Figure 24: VSA subject area

The entities within the VSA subject area are defined and detailed in the following tables.

Vessel Sharing Agreement entity: describes an agreement between two or more shipping lines to share vessel capacity on specific trades to increase asset utilisation.

Attribute	Definition	Data type
Vessel Sharing Agreement ID	The identifier for the agreement.	UUID
Vessel Sharing Agreement Name	The name of the vessel sharing agreement.	Text(50)
Vessel Sharing Agreement Type Code	The code to identify the specific type of vessel sharing agreement.	Text(3)

Table 117: Vessel Sharing Agreement entity

Vessel Sharing Agreement Type entity: identifies a specific type of vessel sharing agreement. Vessel Sharing Agreement Type reference data contains data for this table

Attribute	Definition	Data type
Vessel Sharing Agreement Type Code	The code to identify the specific type of vessel sharing agreement.	Text(3)
Vessel Sharing Agreement Type Name	The name of the specific type of vessel sharing agreement.	Text(50)
Vessel Sharing Agreement Type Description	A description for a specific type of VSA, as detailed by DCSA.	Text(250)

Table 118: Vessel Sharing Agreement Type entity

Vessel Sharing Agreement Partner entity: identifies a participant in a vessel sharing agreement.

Attribute	Definition	Data type
Vessel Sharing Agreement Partner ID	The unique identifier for the VSA and its partners. The uniqueness of each row is based on the Carrier ID and Vessel Sharing Agreement ID.	UUID
Carrier ID	Identifies the carrier involved in the VSA.	UUID
Vessel Sharing Agreement ID	Identifies the VSA.	UUID

Table 119: Vessel Sharing Agreement Partner entity

Tradelane entity: describes an East/West or North/South directional trade indicator identifying the geographic area being covered by a specific carrier or service. A Tradelane can have many Services (E.g. Transpacific East-bound).

Attribute	Definition	Data type
Tradelane ID	The unique identifier for the Tradelane.	Text(8)
Tradelane Name	The name of the Tradelane.	Text(150)
Vessel Sharing Agreement ID	The identifier for the vessel sharing agreement.	UUID

Table 120: Tradelane entity

5.10.1 VSA reference data

The figure below shows the reference data entity in the VSA subject area. This entity indicates which type of agreement the partners are involved in.

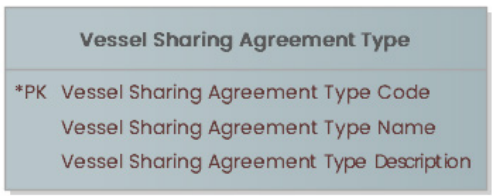


Figure 25: VSA reference data entities

Vessel Sharing Agreement Type reference data contains the Vessel Sharing Agreement Type Code, Name and Descriptions. More details can be found here: DCSA-Information-Model/vesselsharingagreementtypes.csv. This data populates Vessel Sharing Agreement Type entity

Vessel Sharing Agreement Type Code	Vessel Sharing Agreement Type Name	Vessel Sharing Agreement Type Description
VSA	Vessel Sharing Agreement	An agreement between two or more carriers agreeing to share vessel capacity in specific trades using a specified number of vessels.

Vessel Sharing Agreement Type Code	Vessel Sharing Agreement Type Name	Vessel Sharing Agreement Type Description
SCA	Slot Charter Agreement	An agreement between two carriers to sell or exchange a specific number of TEU slots in one or more trades.

Table 121: Vessel Sharing Agreement Type reference data

5.11 Service

Services are the central constituents of each carrier's network. They are typically operated on a weekly schedule. The Service Proforma entity has been modelled on a reduced scope and only allows one version (the latest) to be stored at any point in time, with a limited number of details captured.

The subject area of Service contains two entities: Service and Service Proforma. These entities are shown in Figure 26.

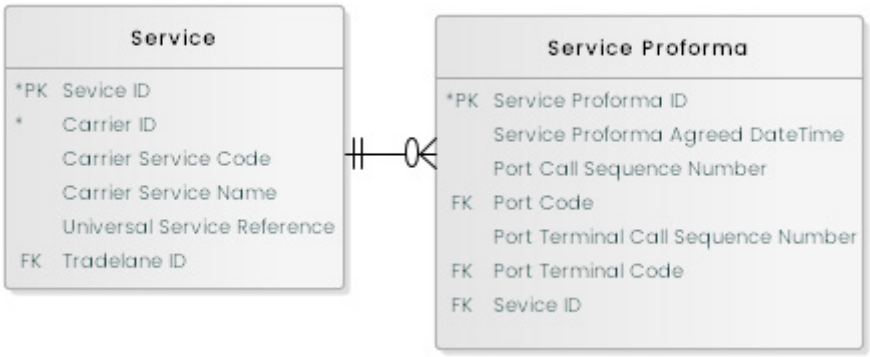


Figure 26: Service subject area

The entities within the Service subject area are defined and detailed in the following tables.

Service entity: contains the attributes identifying a given service.

Attribute	Definition	Data type
Service ID	The unique identifier of the Service.	UUID
Carrier ID	Unique internal identifier for the carrier.	UUID
Carrier Service Code	The code for the service. This is unique for each carrier.	Text(5)

Attribute	Definition	Data type
Universal Service Reference	The universally agreed service reference to use. This reference is unique across all carriers.	Text(8)
Carrier Service Name	The name of the service as provided by the carrier operating the vessel.	Text(50)
Tradelane ID	The Tradelane that the service is based upon.	Text(8)

Table 122: Service entity

Service Proforma entity: identifies the Proforma that the VSA Partners have agreed to. The actual port rotation that is carried out by the vessel.

Attribute	Definition	Data type
Service Proforma ID	The unique identifier for a Service Proforma.	UUID
Service Proforma Agreed DateTime	The date when all vessel sharing agreement partners have agreed to the new Proforma.	DateTime
Port Call Sequence Number	The port number in the sequence of ports that are or will be called on a voyage, as defined in the proforma prior to the voyage. This is useful for identifying a unique call, when calls are made to the same port more than once.	Number
Port Code	Identifies the port being called as a UN Location code.	Text(5)
Port Terminal Call Sequence Number	The Port Terminal number in the sequence of port terminals that are or will be called on a specific port call (as identified by the Port Call Sequence Number). This is useful to identify a unique port terminal call when calls are made to the same terminal more than once.	Number
Port Terminal Code	Identifies the port terminal being called as an SMDG port terminal code.	Text(11)
Service ID	The identifier of the Service.	UUID

Table 123: Service Proforma entity

6 Appendix

Bureau International des Containers et du Transport Intermodal (BIC) – Container Identification Number (2019):
https://www.bic-code.org/identification-number

International Organisation for Standardisation (ISO) 6346:1995 – Freight containers -- Coding, identification and marking:
https://www.iso.org/standard/20453.html

International Maritime Organisation (IMO) – Identification number schemes (2019):
http://www.imo.org/en/OurWork/MSAS/Pages/IMO-identification-number-scheme.aspx

International Telecommunication Union (ITU) – Table of International Call Sign Series (Appendix 42 to the RR):
https://www.itu.int/en/ITU-R/terrestrial/fmd/Pages/call_sign_series.aspx

ISO 6346:1995 – Freight containers — Coding, identification and marking — Amendment 3:2012:
https://www.iso.org/standard/59778.html

National Motor Freight Traffic Association (NMFTA) - Standard Carrier Alpha Codes (SCAC) 2019:
http://www.nmfta.org/pages/scac

Republic of the Marshall Islands - Vessel Registration and Mortgage Recording Procedures (MI-100, 2018):
https://www.register-iri.com/wp-content/uploads/MI-100.pdf

Ship-planning Message Development Group (SMDG) – Terminal Code List, Liner Code List, Delay Reason Codes, and SMDG Recommendations:
http://www.smdg.org/smdg-master-codes-lists/
http://www.smdg.org/documents/smdg-recommendations/

SMDG Liner Code:
https://smdg.org/documents/smdg-code-lists/smdg-liner-codes/

SMDG Terminal Code:
https://smdg.org/documents/smdg-code-lists/smdg-terminal-code-list/ (official website)
https://github.com/smdg-org/Terminal-Code-List/blob/master/SMDG%20Terminal%20Code%20List.csv

United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) Recommendation no. 19 (2000, first version):
https://www.unece.org/fileadmin/DAM/cefact/recommendations/rec19/rec19_ecetrd138.pdf

UN/CEFACT – UNLOCODE (2019):
https://www.unece.org/cefact/locode/service/location.html

UN/Trade Data Element Directory (TDED) (2005):
https://www.unece.org/fileadmin/DAM/trade/untdid/UNTDED2005.pdf

UN/CEFACT Core Component Library (CCL) (2019):
https://www.unece.org/cefact/codesfortrade/unccl/ccl_index.html

UN/Electronic Data Interchange for Administration, Commerce and Transport (EDIFACT):
https://www.unece.org/cefact/edifact/welcome.html
and (accessed 2019)
https://www.unece.org/tradewelcome/un-centre-for-trade-facilitation-and-e-business-uncefact/outputs/standards/unedifact/tradeedifactrules/part-4-edifact-rules-for-electronic-data-interchange-for-administration-commerce-and-transport/part-4-unedifact-rules-chapter-22-syntax-rules.html

UN/CEFACT BUY/SHIP/PAY Reference Data Model (BSP RDM) (version 1, 2019)
https://www.unece.org/fileadmin/DAM/cefact/brs/BuyShipPay_BRS_v1.0.pdf

UN/CEFACT Multi-Modal Transport Reference Data Model (MMT RDM) (v1.0, 2018)
https://www.unece.org/cefact/brs/brs_index.html