



# DCSA Interface Standard for the Bill of Lading 1.0

21 June, 2021

## Purpose

This document provides the DCSA interface standard for the Bill of Lading as applied in container shipping. 11 detailed use cases standardise the fundamental information exchanged between shippers and carriers to support the process of preparing and issuing a Bill of Lading regardless of the channel used, i.e. physical or digital (the latter is referred to as the eBL). The standard also applies to the Sea Waybill.

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## 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 industry 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, scope, conformance and supporting publications of this document.

### 1.2 Purpose

The objective of the DCSA Interface Standard for the Bill of Lading is to simplify the exchange of information between shippers and carriers, as related to Transport Documents. In doing so, this publication supports standardisation of the fundamental information exchanged between shippers and carriers. The focus of this publication is to ensure agreement on the shared requirements and standards that must be followed to streamline inter-operational functionality and data sharing across relevant industry participants.

Agreement on standards will ensure that data exchange interfaces, including functionality and data provided, will follow the same definitions and design. The aim is to ensure that the end-user experience remains consistent across all industry participants who use these standards. Hence, the interface elements must remain consistent whether they are built using EDI messaging, interactive UIs, APIs, manual data exchanges or any other interface technology.

### 1.3 Scope

#### 1.3.1 Process

The Interface Standard for the Bill of Lading focuses on the process steps 'Prepare Transport Document' and 'Issue Transport Document' as part of the end-to-end documentation process:



### 1.3.2 Actors

In defining a technology-agnostic interface standard, the interface describes all exchanges of information between any two parties. For the exchange of information regarding Shipping Instruction and Transport Document, the most relevant parties are:

- Shipper
- Carrier

Many other parties may be involved in the exchange of information regarding shipments, such as financial institutions and tax authorities. These are not in scope of this publication.

### 1.3.3 Transport Documents

In the aforementioned process steps, as well as the Use Cases, both 'Shipping Instruction' and 'Transport Document' are mentioned as being in scope, which are defined as follows in the Glossary of Terms 3.0:

- **Shipping Instruction:** "An enrichment to the original booking shared by the shipper to the carrier and the resulting booking confirmation issued by the carrier to the shipper. The Shipping Instruction includes final shipment parties, goods description, volume, weight, and other special instructions. The information given by the shipper through the Shipping Instruction is the information that is required to create the Transport Document".
- **Transport Document:** The document that governs the terms of carriage between shipper and carrier. 2 distinct types of transportation documents exist:
  - **Bill of Lading:** "Contractual document issued to the shipper which confirms the carrier's receipt of the cargo, acknowledges goods being shipped or received for shipment, and specifies the terms of delivery (as one of the evidences of the contract of carriage). The Bill of Lading is usually prepared based on Shipping Instruction, 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 and can be in either a physical or digital format."
  - **Sea Waybill:** "A separate Transport Document type is a non-negotiable Waybill which is evidence of contract of carriage and receipt of the goods. It must be issued to a named consignee and can be either in a physical or digital format. Goods can be released at destination without presenting the original Sea Waybill as proof of ownership."

The following Transport Document types are in scope and are catered for in the Interface Standard:

- Bill of Lading (physical and electronic)
- Sea Waybill

## 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 in order to conform to the agreed standards within the DCSA framework.

## 1.5 Supporting publications.

This document is supported by a range of supplementary DCSA publications. 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 Interface Standard for the Bill of Lading Reading Guide	The reading guide provides insight into the container shipping documentation process and specifically addresses the “prepare transport document” and “issue transport document” process steps for specific transport document types.
2	DCSA Information Model 3.0.1	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. The information model includes a diagrammatic representation of selected data entities and their relationships with one another.
3	DCSA Information Model 3.0 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.
4	DCSA 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.
5	DCSA Industry Blueprint 3.0	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.
6	DCSA Event Naming Convention 1.0, and Event Structure Definitions 1.0	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 business practices, each carrier has created and published (online) their own definitions for events. To align these across the industry, this



Index	Publication	Descriptions
		document provides a standard naming convention that enables a common understanding of customer-facing track and trace events.
7	DCSA Schedule Definitions 1.0	This document standardises the 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.
8	DCSA Interface Standard for Operational Vessel Schedule 1.0 and respective Reading Guide	The DCSA Interface Standard for Operational Vessel Schedule has been created to simplify the exchange of vessel schedule-related information between vessel operators, and to support the standardisation of the fundamental information provided across the vessel operator liner domain. The reading guide provides insight into the different concepts and methods utilised in the production of the OVS Interface Standard and suggests ways in which the document can be used as a foundation for future implementations.
9	DCSA Interface Standard for Track and Trace 1.2 and respective Reading Guide	The DCSA Interface Standard for Track and Trace 1.2 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.

Table 1: Supporting publications.

## 2 Use cases

### 2.1 Use Cases

Following the user stories that have been defined by DCSA's members regarding information exchange for the process steps Prepare Transport Document and Issue Transport Document, eleven use cases have been identified.

Use Case #	Use Case name	[actor] to [actor]
1	Post Shipping Instruction	Shipper to carrier
2	Request update to Shipping instruction	Carrier to shipper
3	Post updated Shipping Instruction	Shipper to carrier
4	Publish Draft Transport Document	Carrier to shipper
5	Post changes to Draft Transport Document	Shipper to carrier
6	Approve Draft Transport Document	Shipper to carrier
7	Request amendments to Draft Transport Document	Shipper to carrier
8	Approve amendments to Draft Transport Document	Carrier to shipper
9	Issue Transport Document	Carrier to shipper
10	Request amendments to Transport Document	Shipper to carrier
11	Approve amendments to Transport Document	Carrier to shipper

Table 2: Use Cases

For each use case a definition is given, supported by a UML Use Case Diagram. Further, UML Activity Diagrams depict the activity flow of each use case, and inputs and outputs are provided. The listed attributes are part of the DCSA Information Model 3.0.1

### 3. Use Case I: Post Shipping Instruction

#### 3.1 Use Case Definition

This section describes the use case of 'Post Shipping Instruction' via an exemplified interaction between shipper and carrier. Figure 1: Use Case Diagram UC 1 supports this use case, displaying the interaction between the shipper and carrier.

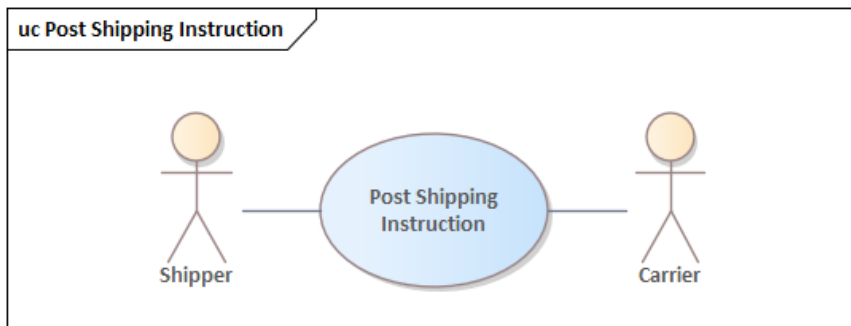


Figure 1: Use Case Diagram UC 1

Name of use case	Post Shipping Instruction (shipper to carrier)		
Created by	DCSA	Last updated by	DCSA PI
Date Created	9 October 2020	Last revision date	May 2021
Description	The shipper posts the Shipping Instruction for his shipment. If the post was successful, the carrier will respond with a success message.		
Actors	Shipper, Carrier		
Preconditions	Booking is confirmed by the carrier, equipment is released to the shipper.		
Postconditions	The Shipping Instruction is successfully posted, and the shipper has received a success message from the carrier.		
Flow	1. Shipper posts Shipping Instruction. 2. If post is successful, Carrier responds with success message.		
Exceptions	2a. Shipper is unable to post the Shipping Instruction. Shipper will receive an error message.		

Table 3: Use Case Definition 1

#### 3.1.1 Shipping Instruction

The Shipping Instruction is an enrichment to the original booking shared by the shipper to the carrier and the resulting booking confirmation issued by the carrier to the shipper. The Shipping Instruction includes final shipment parties, final locations (displayed), goods description, volume, weight, and other special instructions. The information given by the shipper through the shipping instruction is the information that is required to create the Transport document'.

### 3.1.2 Preconditions

The Shipping Instruction reflects information that is provided through the Booking Confirmation and holds additional information. In addition to the information specified in the Booking Confirmation, other attributes are provided in this use case; those attributes are described in chapter 3.3. The Shipping Instruction is related to the Booking Confirmation via the attribute <Carrier Booking Reference>.

### 3.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 2: Activity Diagram UC 1 describes the activity flows that the interface for posting Shipping instruction provides. The interface activity flow for 'Post Shipping Instruction' can follow two paths: the success path or the exception path. The success path begins with a shipper posting the shipping instruction. If the post is successful, the carrier responds with a success message, indicating that the Shipping Instruction is received. If the post was not successful, the exception path is followed, in which an error message is returned to the shipper indicating that posting the Shipping Instruction failed, including a reason for the failure.

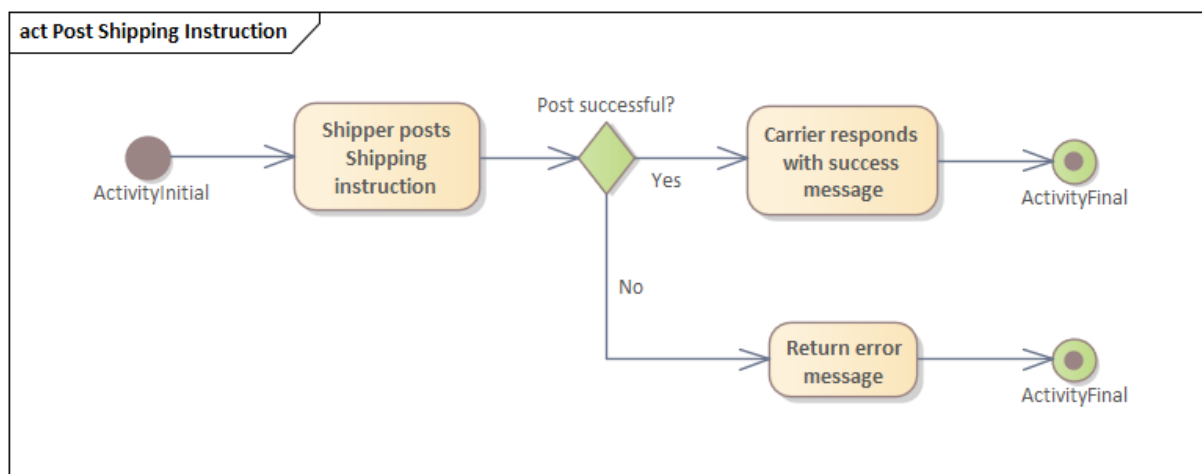


Figure 2: Activity Diagram UC 1

### 3.3 Input

In addition to the information already specified in the Booking Confirmation, other attributes are provided in this use case to complete the Shipping Instruction. The Shipping Instruction is related to the Booking Confirmation via <Carrier Booking Reference>.

The Shipping Instruction consists of an array of <shipment locations>, a list of <Cargo Items>, a list of <UtilizedTransportEquipment>, a list of <Document Parties>, a list of References <References> and other attributes that are relevant to the Shipping Instruction itself. Cargo Items are related to Equipment (containers) via the attributes <Equipment Reference> (identifier for <UtilizedTransportEquipment>) to cater for the 'stuffing' of cargo items in containers. A Cargo item cannot be split across several containers. Cargo Line Items (identifier: <Cargo Line Item ID>) belonging to the same cargo items are stuffed in the same container.

In addition to the information already specified in the Booking Confirmation, the following attributes are relevant input for this Use Case:

Attribute	Type	Description	Example	Reference data owner
Transport Document Type Code	Text (3)	REQUIRED. Specifies the type of transport document (a Bill of Lading (BOL) or a Sea Waybill (SWB))	<i>BOL</i>	DCSA
Is Shipped Onboard Type	Boolean	Required. Specifies whether the Transport document is a received for shipment or shipped onboard.	<i>false</i>	NA
Number of originals	Number	CONDITIONAL. The requested number of originals of the Transport document to be issued by the carrier. Only applicable for physical documents	<i>3</i>	NA
Number of copies	Number	CONDITIONAL. The requested number of copies of the Transport document to be issued by the carrier. Only applicable for physical documents	<i>5</i>	NA
Pre-carriage under shipper's responsibility	Text	OPTIONAL. Mode of transportation for pre-carriage (e.g., truck, barge, rail), under shipper's responsibility	<i>RAIL</i>	DCSA
Invoice Payable At	Object	REQUIRED. Location where payment by the customer will take place. Usually refers to Basic Ocean Freight alone. This is an object of the attributes below.		
		<b>Attribute</b>	<b>Type</b>	<b>Description</b>
		Location name	Text(100)	Name of the location.
		UN location code	Text(5)	The UN Location code specifying where the place is located.
		City name	Text(65)	The city name of the party's address

Attribute	Type	Description	Example	Reference data owner
		StateRegion	Text(65)	The state/region of the party's address
		Country	Text(75)	The country of the party's address
Is Electronic	Boolean	REQUIRED. Indicates whether the transport document should be electronic or not.	<i>True</i>	NA
Carrier Booking Reference	Text (35)	CONDITIONAL. The associated booking number provided by the carrier. Condition: Must be provided here if not provided on the cargo items	<i>ABC709951</i>	Carrier
Is Charges Displayed	Boolean	OPTIONAL: Indicates whether Charges are displayed	True	NA
<b>Attributes related to &lt;Cargo Items&gt; - array</b>				
Cargo Line Items	Array	OPTIONAL. List of cargo line items together with Shipping Marks used to identify the Cargo Item. The cargo line item list is provided by the shipper. Cargo line items belonging to the same cargo items are stuffed in the same container.		
		<b>Attribute</b>	<b>Type</b>	<b>Description</b>
		Cargo Line Item ID	Text	REQUIRED. Identifies the cargo line item (package) within the cargo. The cargo line item ID is provided by the customer. Cargo line items belonging to the same cargo items are stuffed in the same container.
		Shipping Marks	Text	REQUIRED. The identifying details on a package or the actual markings that appear on the package(s). This information is provided by the customer.
Carrier Booking Reference	Text (35)	OPTIONAL. The associated booking number provided by the carrier for this cargo line item (if different from the main	<i>ABC709951</i>	Carrier

Attribute	Type	Description	Example	Reference data owner
		carrier booking reference)		
Description of goods	Text	REQUIRED. The cargo description are details which accurately and properly describe the cargo being shipped in the container(s), as provided by the shipper.	<i>Description</i>	NA
HS Code	Text (10)	REQUIRED. Used by customs to classify the product being shipped. The type of HS code depends on country and customs requirements.	<i>392620</i>	UN/CEFACT
Number of Packages	Number	REQUIRED. Specifies the number of packages associated with this cargo item	<i>18</i>	NA
Weight	Number	REQUIRED. The weight of the cargo item including packaging items being carried in the container(s). Excludes the tare weight of the container(s)	<i>13000.3</i>	NA
Volume	Number	OPTIONAL. Calculated by multiplying the width, height, and length of the packed cargo	<i>12</i>	NA
Weight Unit	Text (3)	REQUIRED. The unit of measure. which can be expressed in either imperial or metric terms as provided by the shipper.	<i>KGM</i>	UNECE

Attribute	Type	Description	Example	Reference data owner
Volume Unit	Text (3)	OPTIONAL. The unit of measure, which can be expressed in either MTQ or FTQ as provided by the shipper.	<i>MTQ</i>	UNECE
Package Code	Text (3)	REQUIRED. A code identifying the outer package	5H	UNECE
Equipment Reference	Text(15)	REQUIRED. The unique identifier for the equipment, which should follow the BIC ISO Container Identification Number where possible.	<i>APZU4812090</i>	ISO Container ID
<b>Attributes related to &lt;UtilizedTransportEquipment&gt; - array</b>				
Equipment Reference	Text (15)	REQUIRED. The unique identifier for the equipment, which should follow the BIC ISO Container Identification Number where possible.	<i>APZU4812090</i>	ISO Container ID
Weight Unit	Text (3)	REQUIRED. The unit of measure, which can be expressed in either imperial or metric terms as provided by the shipper.  This selected value applies for all weight indicators.	<i>KGM</i>	UNECE
Cargo Gross Weight	Number	REQUIRED. The grand total weight of the cargo and weight per container(s) including packaging items being carried,	<i>10738</i>	NA



Attribute	Type	Description	Example	Reference data owner																					
		which can be expressed in imperial or metric terms, as provided by the shipper. Excludes the tare weight of the container(s).																							
Container tare weight	Number	CONDITIONAL. Tare weight of the container as registered on the CSC plate of the physical container unit. Only applicable for Shipper Owned Containers (SOC)	2117	NA																					
ISO equipment code	Text(4)	CONDITIONAL. Unique code for the different equipment size/type used for transporting commodities. Only applicable for Shipper Owned Containers	22G1	ISO6341																					
Is Shipper Owned	Boolean	REQUIRED: Indicates whether the container is shipper owned (SOC)	True	NA																					
Active Reefer Settings	Object	<p>CONDITIONAL. 'Active Reefer Settings' is an object of the attributes below.  <u>Condition:</u> Only applicable to Active Reefers</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Temperature Min</td> <td>Number</td> <td>Indicates the minimum temperature setting on the container</td> </tr> <tr> <td>Temperature Max</td> <td>Number</td> <td>Indicates the maximum temperature setting on the container</td> </tr> <tr> <td>Temperature unit</td> <td>Text (3)</td> <td>Celsius (CEL) or Fahrenheit (FAH)</td> </tr> <tr> <td>Humidity Min</td> <td>Number</td> <td>Indicates the minimum humidity setting on the container in percent</td> </tr> <tr> <td>Humidity Max</td> <td>Number</td> <td>Indicates the maximum humidity setting on the container in percent</td> </tr> <tr> <td>Ventilation Min</td> <td>Number</td> <td>Indicates the minimum ventilation setting on the container CBM/Hr</td> </tr> </tbody> </table>	Attribute	Type	Description	Temperature Min	Number	Indicates the minimum temperature setting on the container	Temperature Max	Number	Indicates the maximum temperature setting on the container	Temperature unit	Text (3)	Celsius (CEL) or Fahrenheit (FAH)	Humidity Min	Number	Indicates the minimum humidity setting on the container in percent	Humidity Max	Number	Indicates the maximum humidity setting on the container in percent	Ventilation Min	Number	Indicates the minimum ventilation setting on the container CBM/Hr		
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Attribute	Type	Description	Example	Reference data owner																																							
		Ventilation Max	Number	Indicates the maximum ventilation setting on the container CBM/Hr																																							
Seals	Array	REQUIRED. 'Seal' is an array of the attributes below.																																									
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Attribute	Type	Description	Example	Reference data owner																								
		COW, COX, NI, N2, NI, DDR, DDS, MS.																										
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Is To Be Notified	Boolean	REQUIRED. Used to decide whether the party will be notified of the arrival of the cargo.	<i>True</i>	NA																								
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Displayed name	Text(250)	OPTIONAL. The location to be displayed on the transport document.																																						
<b>Attributes related to &lt;References&gt; - array</b>																																								
Reference Type	Text (3)	REQUIRED. The reference type codes defined by DCSA, which can be one of the following values: FF, SI, PO, CR, AAO.	FF	UNECE																																				
Reference Value	Text (100)	REQUIRED. The actual value of the reference.	NA	NA																																				

Table 4: Input UC 1

### 3.4 Output

If the posting of the Shipping Instruction was successful, the carrier will respond with a success message, indicating that the Shipping Instruction is received, and that the SI document status is RECEIVED. If the posting is unsuccessful, the shipper will receive an error message, including the reason (for instance highlighting the missing fields). A unique identifier for the Shipping

Instruction is generated by the carrier's system: <Shipping Instruction ID> and passed back to shipper.

## 4. Use Case 2: Request update to Shipping Instruction.

### 4.1 Use Case Definition

This section describes the use case of 'Request update to Shipping Instruction' via an exemplified interaction between carrier and shipper. Figure 3: Use Case Diagram UC 2 supports this use case, displaying the interaction between the carrier and shipper.

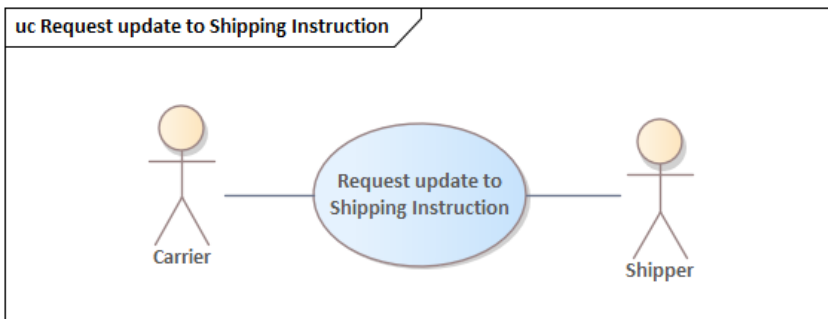


Figure 3: Use Case Diagram UC 2

Name of use case	Request update to Shipping Instruction (carrier to shipper)		
Created by	DCSA	Last updated by	DCSA P1
Date Created	9 October 2020	Last revision date	May 2021
Description	Carrier requests the shipper to update the Shipping Instruction.		
Actors	Carrier, Shipper		
Preconditions	Shipping Instruction has been received by the carrier.		
Postconditions	Request to update the Shipping Instruction has been successfully sent.		
Flow	1. Carrier requests update to Shipping Instruction. 2. If request is successful, Shipper responds with a success message.		
Exceptions	2a. Carrier is unable to request the updated Shipping Instruction.		

Table 5: Use Case definition UC 2

### 4.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 4: Activity Diagram UC 2 describes the activity flows that the interface for Request update to Shipping Instruction provides. The interface activity flow for 'Request update to Shipping Instruction' can follow two paths: the success path or the exception path. The success path begins with a carrier requesting updates to the Shipping Instruction. If the post is successful,

the shipper responds with a success message, indicating that the request is received. If the post was not successful, the exception path is followed.

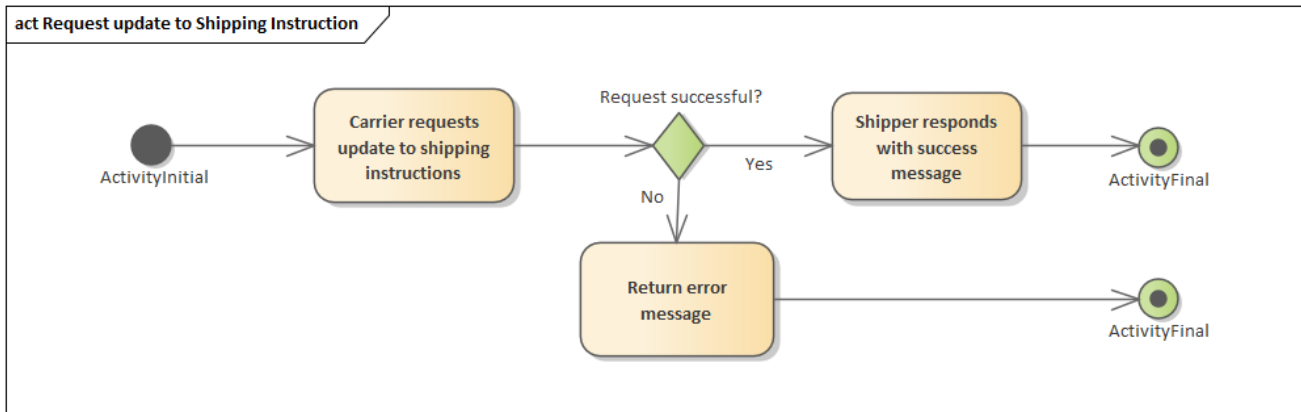


Figure 4: Activity Diagram UC 2

### 4.3 Input

The <Shipping Instruction ID> or <TransportDocument Reference> are input to this Use Case, as well as a text field as part of the request message, describing the reasons for requesting the update.

Attribute	Type	Description	Example	Reference data owner
Shipping Instruction ID	Text(100)	REQUIRED. The ID associated for the reference.		
Carrier Booking Reference	Text (35)	OPTIONAL. The associated booking number provided by the carrier.	<i>ABC709951</i>	Carrier
Document Type	Text (2)	REQUIRED. The type of the ID, which can be a Shipping Instruction (SI) or a Transport Document (TD).	<i>NA</i>	DCSA
Reason*	Text	REQUIRED. Text field as part of the request message, describing the reasons for requesting the update, including their 'category' (e.g.,	<i>NA</i>	NA

Attribute	Type	Description	Example	Reference data owner
		mandatory, missing information, clauses, etc.)		
Document Signature	Text(500)	Digital signature	NA	NA

\*not part of eBL IM Model

Table 6: Input UC 2

#### 4.4 Output

If the request was successful, the shipper will respond with a success message, indicating that the request to update the Shipping Instruction is received and that the document status is PENDING UPDATE.



## 5. Use Case 3: Post updates to Shipping Instruction.

### 5.1 Use Case Definition

This section describes the use case of 'Post updates to Shipping Instruction' via an exemplified interaction between shipper and carrier. Figure 5: Use Case Diagram UC 3 supports this use case, displaying the interaction between the shipper and carrier.

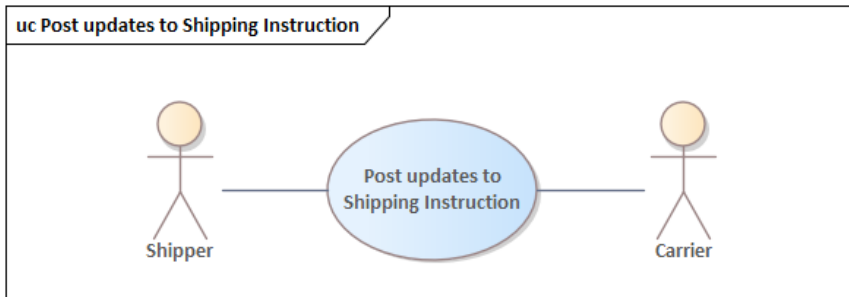


Figure 5: Use Case Diagram UC 3

Name of use case	Post updates to Shipping Instruction (shipper to carrier)		
Created by	DCSA	Last updated by	DCSA P1
Date Created	9 October 2020	Last revision date	May 2021
Description	Shipper posts updates to the Shipping Instruction, based on the request made by the carrier.		
Actors	Shipper, Carrier		
Preconditions	Request to update Shipping Instruction received by Shipper.		
Postconditions	Updates to Shipping Instruction received by Carrier.		
Flow	<ol style="list-style-type: none"> <li>1. Shipper posts updates to Shipping Instruction.</li> <li>2. If post is successful, Carrier responds with a success message.</li> </ol>		
Exceptions	2a. Shipper is unable to post the updates to the Shipping Instruction. Shipper will receive an error message.		

Table 7: Use Case definition UC 3

### 5.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 6: Activity Diagram UC 3 describes the activity flows that the interface for posting the updates to the Shipping Instruction provides. The interface activity flow for 'Post updates to the Shipping Instruction' can follow two paths: the success path or the exception path. The success path begins with a shipper posting the updates to the Shipping Instruction. If the post is successful, the carrier responds with a success message, indicating that the updates are received. If the post was not successful, the exception path is followed, in which an error message

is returned to the shipper indicating that posting the updates to the Shipping Instruction failed, including a reason for the failure.

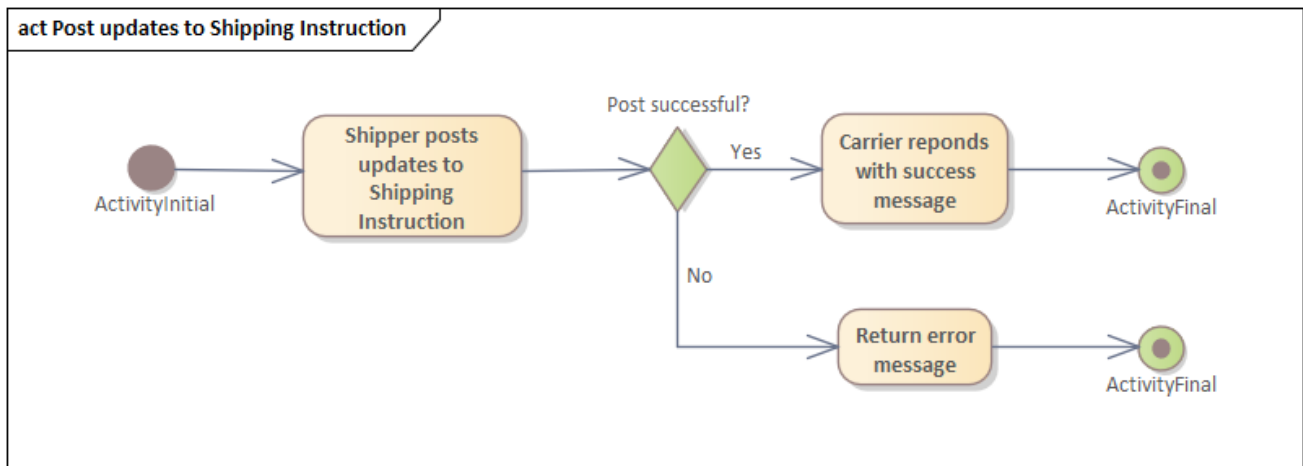


Figure 6: Activity Diagram UC 3

### 5.3 Input

To refer to the correct Shipping Instruction, the <Shipping Instruction ID> is needed. Other attributes can potentially be updated and serve as input to this Use Case:

Attribute	Type	Description	Example	Reference Data Owner
<b>Attributes related to &lt;Shipping Instruction&gt;</b>				
Shipping Instruction ID	Text(100)	REQUIRED (cannot be updated by shipper). The associated shipping instruction ID provided by the carrier.	<i>e0559d83-00e2-438e-afd9-fdd610c1a008</i>	Carrier
Carrier booking reference	Text (35)	OPTIONAL. The associated booking number provided by the carrier for this cargo line item (if different from the main carrier booking reference)	<i>ABC709951</i>	Carrier
Invoice Payable At	Object	REQUIRED. Location where payment by the customer will take place. Usually refers to Basic Ocean Freight alone. This is an object of the attributes below.		
		<b>Attribute</b>	<b>Type</b>	<b>Description</b>
		Location name	Text(100)	Name of the location.
		UN location code	Text(5)	The UN Location code specifying where the place is located.

Attribute	Type	Description	Example	Reference Data Owner									
		<table border="1"> <tr> <td>City name</td> <td>Text(65)</td> <td>The city name of the party's address</td> </tr> <tr> <td>StateRegion</td> <td>Text(65)</td> <td>The state/region of the party's address</td> </tr> <tr> <td>Country</td> <td>Text(75)</td> <td>The country of the party's address</td> </tr> </table>	City name	Text(65)	The city name of the party's address	StateRegion	Text(65)	The state/region of the party's address	Country	Text(75)	The country of the party's address		
City name	Text(65)	The city name of the party's address											
StateRegion	Text(65)	The state/region of the party's address											
Country	Text(75)	The country of the party's address											
Is Electronic	Boolean	REQUIRED. Indicates whether the document is electronic or not.	<i>True</i>	NA									
Number of originals	Number	CONDITIONAL. The requested number of originals of the Transport document to be issued by the carrier. Only applicable for physical documents	<i>3</i>	NA									
Number of copies	Number	CONDITIONAL. The requested number of copies of the Transport document to be issued by the carrier. Only applicable for physical documents	<i>5</i>	NA									
Pre-carriage under shipper's responsibility	Text	OPTIONAL. mode of transportation for pre-carriage (e.g., truck, barge, rail), under shipper's responsibility	<i>TRUCK</i>	DCSA									
Transport Document Type	Text (3)	OPTIONAL. Specifies the type of transport document (a Bill of Lading (BOL) or a Sea Waybill (SWB))	<i>BOL</i>	DCSA									
Is Charges Displayed	Boolean	OPTIONAL: Indicates whether Charges are displayed	<i>True</i>	NA									
<b>Attributes related to &lt;Cargo Items&gt; - array</b>													
Cargo Line Items	Array	REQUIRED. List of cargo line items together with Shipping Marks used to identify the Cargo Item. The cargo line item list is provided by the shipper. Cargo line items belonging to the same cargo items are stuffed in the same container.											
		<table border="1"> <thead> <tr> <th><u>Attribute</u></th> <th><u>Type</u></th> <th><u>Description</u></th> <th><u>Reference Data Owner</u></th> </tr> </thead> <tbody> <tr> <td>Cargo Line Item ID</td> <td>Text</td> <td>Identifies the cargo line item (package) within the cargo. The cargo line item ID is provided by the customer. Cargo line items belonging to the same cargo</td> <td>Shipper</td> </tr> </tbody> </table>	<u>Attribute</u>	<u>Type</u>	<u>Description</u>	<u>Reference Data Owner</u>	Cargo Line Item ID	Text	Identifies the cargo line item (package) within the cargo. The cargo line item ID is provided by the customer. Cargo line items belonging to the same cargo	Shipper			
<u>Attribute</u>	<u>Type</u>	<u>Description</u>	<u>Reference Data Owner</u>										
Cargo Line Item ID	Text	Identifies the cargo line item (package) within the cargo. The cargo line item ID is provided by the customer. Cargo line items belonging to the same cargo	Shipper										

Attribute	Type	Description	Example	Reference Data Owner	
			items are stuffed in the same container.		
		Shipping Marks	Text	The identifying details on a package or the actual markings that appear on the package(s). This information is provided by the customer.	Shipper
Carrier booking reference	Text (35)	OPTIONAL. The associated booking number provided by the carrier for this cargo line item (if different from the main carrier booking reference)	<i>ABC709951</i>	Carrier	
Description of goods	Text	REQUIRED. The cargo description are details which accurately and properly describe the cargo being shipped in the container(s), as provided by the shipper.	<i>Description</i>	NA	
HS Code	Text (10)	REQUIRED. Used by customs to classify the product being shipped. The type of HS code depends on country and customs requirements.	<i>392620</i>	UN/CEFACT	
Number of Packages	Number	REQUIRED. Specifies the number of packages associated with this cargo item.	<i>18</i>	NA	
Weight	Number	REQUIRED. The weight of the cargo item including packaging items being carried in the container(s). Excludes the tare weight of the container(s)	<i>13000</i>	NA	
Volume	Number	OPTIONAL. Calculated by multiplying the width, height, and length of the packed cargo	<i>12</i>	NA	
Weight Unit	Text (3)	REQUIRED. The unit of measure, which can be expressed in either imperial or metric terms, as provided by the shipper.	<i>KGM</i>	UNECE	

Attribute	Type	Description	Example	Reference Data Owner
Volume Unit	Text (3)	OPTIONAL. The unit of measure which can be expressed in either MTQ or FTQ, as provided by the shipper.	<i>MTQ</i>	UNECE
Package Code	Text (3)	OPTIONAL. A code identifying the outer package.	<i>5H</i>	UN/CEFACT
Equipment Reference	Text (15)	REQUIRED. The unique identifier for the equipment, which should follow the BIC ISO Container Identification Number where possible.	<i>APZU481209 0</i>	ISO Container ID
<b>Attributes related to &lt;UtilizedTransportEquipments&gt; - array</b>				
Equipment Reference	Text (15)	REQUIRED. The unique identifier for the equipment, which should follow the BIC ISO Container Identification Number where possible.	<i>APZU481209 0</i>	ISO Container ID
Weight Unit	Text (3)	REQUIRED. The unit of measure, which can be expressed in either imperial or metric terms, as provided by the shipper.	<i>KGM</i>	UNECE
Cargo Gross Weight	Number	REQUIRED. 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)	<i>9317</i>	NA
Container tare weight	Number	CONDITIONAL. Tare weight of the container as registered on the CSC plate of the physical container unit. Only applicable for Shipper Owned Containers (SOC)	<i>2117</i>	NA
ISO equipment code	Text(4)	CONDITIONAL. Only applicable for SOCs	<i>22G1</i>	ISO6341

Attribute	Type	Description	Example	Reference Data Owner																								
Is Shipper Owned	Boolean	REQUIRED: Indicates whether the container is shipper owned (SOC)	<i>True</i>	NA																								
Active Reefer Settings	Object	<p>CONDITIONAL. 'Active Reefer Settings' include the attributes below <u>Condition</u>: Only applicable to Active Reefers.</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Temperature Min</td> <td>Number</td> <td>Indicates the minimum temperature setting on the container</td> </tr> <tr> <td>Temperature Max</td> <td>Number</td> <td>Indicates the maximum temperature setting on the container.</td> </tr> <tr> <td>Temperature unit</td> <td>Text (3)</td> <td>Celsius (CEL) or Fahrenheit (FAH)</td> </tr> <tr> <td>Humidity Min</td> <td>Number</td> <td>Indicates the minimum humidity setting on the container in percent</td> </tr> <tr> <td>Humidity Max</td> <td>Number</td> <td>Indicates the maximum humidity setting on the container in percent</td> </tr> <tr> <td>Ventilation Min</td> <td>Number</td> <td>Indicates the minimum ventilation setting on the container CBM/Hr</td> </tr> <tr> <td>Ventilation Max</td> <td>Number</td> <td>Indicates the maximum ventilation setting on the container CBM/Hr</td> </tr> </tbody> </table>	Attribute	Type	Description	Temperature Min	Number	Indicates the minimum temperature setting on the container	Temperature Max	Number	Indicates the maximum temperature setting on the container.	Temperature unit	Text (3)	Celsius (CEL) or Fahrenheit (FAH)	Humidity Min	Number	Indicates the minimum humidity setting on the container in percent	Humidity Max	Number	Indicates the maximum humidity setting on the container in percent	Ventilation Min	Number	Indicates the minimum ventilation setting on the container CBM/Hr	Ventilation Max	Number	Indicates the maximum ventilation setting on the container CBM/Hr		
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Temperature unit	Text (3)	Celsius (CEL) or Fahrenheit (FAH)																										
Humidity Min	Number	Indicates the minimum humidity setting on the container in percent																										
Humidity Max	Number	Indicates the maximum humidity setting on the container in percent																										
Ventilation Min	Number	Indicates the minimum ventilation setting on the container CBM/Hr																										
Ventilation Max	Number	Indicates the maximum ventilation setting on the container CBM/Hr																										
Seals	Array	<p>'Seal' is an array of the attributes below.</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Seal Number</td> <td>Text (15)</td> <td>REQUIRED. Indicates the number or reference listed on the Seal</td> </tr> <tr> <td>Seal Source</td> <td>Text (5)</td> <td>CONDITIONAL. The source of seal, namely who has affixed the seal. This attribute links to the Seal Source ID defined in the Seal Source reference data entity. <u>Condition</u>: Conditional on type of commodity</td> </tr> <tr> <td>Seal Type</td> <td>Text (5)</td> <td>REQUIRED. Addresses the type of seal</td> </tr> </tbody> </table>	Attribute	Type	Description	Seal Number	Text (15)	REQUIRED. Indicates the number or reference listed on the Seal	Seal Source	Text (5)	CONDITIONAL. The source of seal, namely who has affixed the seal. This attribute links to the Seal Source ID defined in the Seal Source reference data entity. <u>Condition</u> : Conditional on type of commodity	Seal Type	Text (5)	REQUIRED. Addresses the type of seal														
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<b>Attributes related to &lt;Document Parties&gt; - array</b>																												
Party	Object	<p>CONDITIONAL. 'Party' is an object of the attributes below.</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Party Name</td> <td>Text(100)</td> <td>Name of the party</td> </tr> <tr> <td>Tax Reference 1</td> <td>Text(20)</td> <td>The identifying number of the consignee or shipper (Individual or entity) used for tax purposes</td> </tr> </tbody> </table>	Attribute	Type	Description	Party Name	Text(100)	Name of the party	Tax Reference 1	Text(20)	The identifying number of the consignee or shipper (Individual or entity) used for tax purposes																	
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Attribute	Type	Description	Example	Reference Data Owner												
		Public Key	Text (500)	The public key used for a digital signature												
		Street	Text(100)	The name of the street of the party's address												
		Street number	Text(50)	The number of the street of the party's address												
		Floor	Text(50)	The floor of the party's street number												
		Post Code	Text(10)	The post code of the party's address												
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		StateRegion	Text(65)	The state/region of the party's address												
		Country	Text(75)	The country of the party's address												
		Tax Reference 2	Text(20)	The 2 <sup>nd</sup> identifying number of the consignee or shipper (Individual or entity) used for tax purposes												
		NMFTA code	Text(4)	The applicable SCAC code for a party												
Party Function	Text (3)	REQUIRED. The name of the specific role, which can be one of the following values: OS, CN, COW, CNO, COX, NI, N2, NI, DDR, DDS, MS.	<i>OS</i>	UNECE												
Displayed Address	Array	OPTIONAL. The address of the party to be displayed on the transport document which is an array of the attributes below. <table border="1"> <thead> <tr> <th><b>Attribute</b></th> <th><b>Type</b></th> <th><b>Description</b></th> </tr> </thead> <tbody> <tr> <td>Address line</td> <td>Text(250)</td> <td>Address of the party</td> </tr> </tbody> </table>	<b>Attribute</b>	<b>Type</b>	<b>Description</b>	Address line	Text(250)	Address of the party								
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Name	Text(100)	Name of the contact														
Email	Text(100)	Email of the contact														
Phone	Text(30)	Phone number of the contact														
Is To Be Notified	Boolean	REQUIRED. Used to decide whether the party will be notified of the arrival of the cargo.	<i>True</i>	NA												
<b>Attributes related to &lt;Shipment locations&gt; - array</b>																
Displayed name	Text (250)	OPTIONAL. The location to be displayed on the transport document.														

Attribute	Type	Description	Example	Reference Data Owner																																				
Location Type	Text(3)	REQUIRED. DCSA-defined code for shipment locations.	<i>PRE</i>	DCSA																																				
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<b>Attributes related to &lt;References&gt; - array</b>																																								
Reference type	Text (3)	REQUIRED. The reference type codes defined by DCSA, which can be one of the following values: FF, SI, PO, CR, AAO.	<i>SI</i>	NA																																				
Reference Value	Text (100)	REQUIRED. The actual value of the reference	<i>NA</i>	NA																																				

Table 8: Input UC 3

## 5.4 Output

If the posting of the updates to the Shipping Instruction was successful, the carrier will respond with a success message, indicating that the updated Shipping Instruction is received and that the document status is now DRAFTED. Once changes have been validated by the carrier, a new draft transport document will be shared with the shipper and the document status will be



changed to PENDING APPROVAL. If the posting is unsuccessful, the shipper will receive an error message, including the reason (for instance highlighting the missing fields).

## 6. Use Case 4: Publish Draft Transport Document

### 6.1 Use Case Definition

This section describes the use case of 'Publish Draft Transport Document' via an exemplified interaction between carrier and shipper. Figure 7: Use Case Diagram UC 4 supports this use case, displaying the interaction between the carrier and shipper.

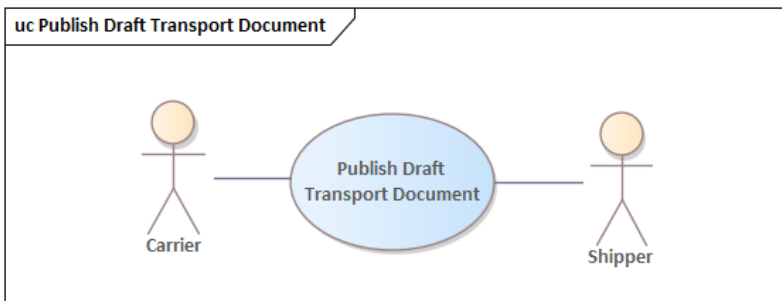


Figure 7: Use Case Diagram UC 4

Name of use case	Publish Draft Transport Document (carrier to shipper)		
Created by	DCSA	Last updated by	DCSA P1
Date Created	9 October 2020	Last revision date	May 2021
Description	Carrier publishes the Draft Transport Document based on the Shipping Instruction as received from the shipper.		
Actors	Carrier, Shipper		
Preconditions	Shipping Instruction is complete and correct, and accepted by the carrier.		
Postconditions	Draft Transport Document is received by the shipper.		
Flow	<ol style="list-style-type: none"> <li>Carrier publishes the Draft Transport Document.</li> <li>If publish is successful, shipper responds with a success message.</li> </ol>		
Exceptions	2a. Carrier is unable to publish the Draft Transport Document and receives an error message. Carrier will not receive a success message from the shipper.		

Table 9: Use Case definition UC 4

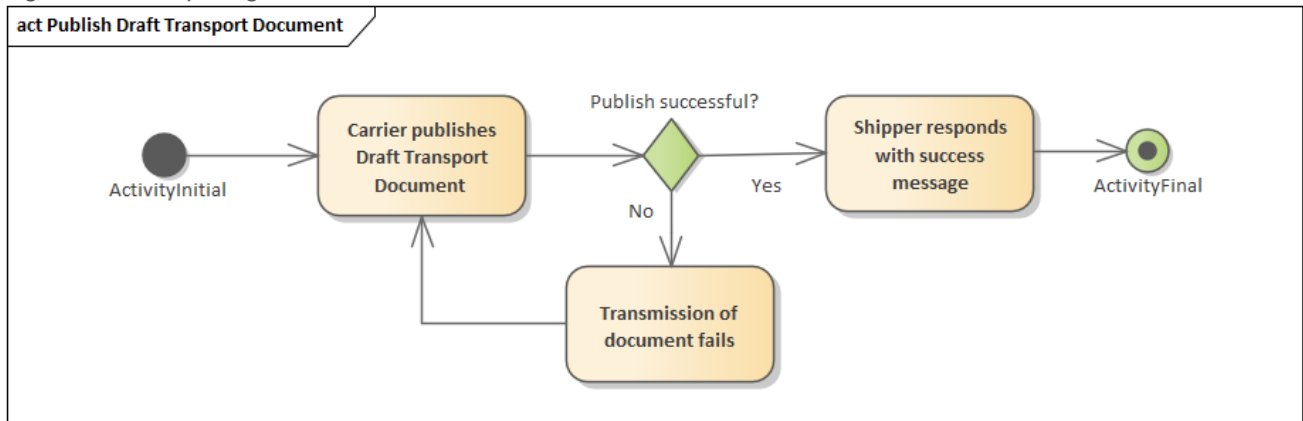
Transport Document: The Transport Document is 'the document that governs the terms of carriage between shipper and carrier'.

### 6.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 8: Activity Diagram UC 4 describes the activity flows that the interface for publishing the Draft Transport Document provides. The interface activity flow for 'Publish Draft Transport Document' can follow two paths: the success path or the exception path. The success path

begins with a carrier publishing the Draft Transport Document. If publishing is successful, the shipper responds with a success message, indicating that the Draft Transport Document is received. If the post was not successful, the exception path is followed.

Figure 8: Activity Diagram UC 4



### 6.3 Input

In addition to the attributes described in chapter 3.3, the following attributes are input to this Use Case:

Attribute	Type	Description	Example	Reference data owner
<b>Attributes related to &lt;Transport Document&gt;</b>				
Shipping Instruction ID	Text(100)	REQUIRED. The associated Shipping Instruction ID for the reference	<i>e0559d83-00e2-438e-afd9-fdd610c1a008</i>	Carrier
Transport Document Reference	Text (20)	REQUIRED. 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.	NA	Carrier
ShippedOnBoardDate	Date	CONDITIONAL. Date when the last container that is linked to the transport document will be physically loaded onboard	<i>2020-12-12</i>	ISO 8601

		the vessel indicated on the transport document. <u>Condition:</u> Not applicable for 'Receipt for Shipment BOL'		
Terms and Conditions	Text	REQUIRED. Additional carrier terms and conditions aside from the general terms and conditions	NA	NA
Receipt/Delivery Type at origin	Text(3)	REQUIRED. Indicates the type of service offered at the place of receipt	CY	UN/CEFACT
Receipt/Delivery Type at destination	Text(3)	REQUIRED. Indicates the type of service offered at the or place of delivery	CFS	UN/CEFACT
Cargo Movement Type at origin	Text(3)	REQUIRED. Indicates who is responsible for stuffing and stripping the container at place of receipt	FCL	UN/CEFACT
Cargo Movement Type at destination	Text(3)	REQUIRED. Indicates who is responsible for stuffing and stripping the container at place of delivery	LCL	UN/CEFACT
IssueDate	Date	REQUIRED. Date when the Original Bill of Lading will be issued.	2020-12-12	ISO 8601
Place of issue	Object	CONDITIONAL. Place where the original transport document (Bill of Lading) will be issued. <u>Condition:</u> Only applicable for physical Bill of Lading. Place of issue is an object of the attributes below.		
		<b>Attribute</b>	<b>Type</b>	<b>Description</b>
		Location name	Text(100)	Name of the location.

		UN location code	Text(5)	The UN Location code specifying where the place is located.
		Street name	Text(100)	The name of the street of the party's address
		Street number	Text(50)	The number of the street of the party's address
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		Post Code	Text(10)	The post code of the party's address
		City name	Text(65)	The city name of the party's address
		StateRegion	Text(65)	The state/region of the party's address
		Country	Text(75)	The country of the party's address
Received for Shipment Date	Date	OPTIONAL. Date when the carrier has taken possession of the last container linked to the B/L, in case of carrier haulage, at place of receipt and in case of merchant haulage, when the container is physically in the terminal.	2020-12-12	ISO 8601
Service Contract Reference	Text(30)	OPTIONAL. 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 of time and the carrier commits to a certain rate or rate schedule	NA	Carrier
Transport leg	Array	REQUIRED. A transport leg is an array of the following attributes:		
		<b>Attribute</b>	<b>Type</b>	<b>Description</b>
		VesselName	Text(35)	The name of the first sea going Vessel on board which the cargo is loaded or intended to be loaded
		CarrierVoyageNumber	Text(50)	A carrier specific voyage identifier.
		Load Location	Text(3)	PRE or POL
		Discharge location	Text(3)	POD or POR

		Mode of Transport	Text(6)	Rail, Truck, Vessel or Barge						
Declared Value	Number	CONDITIONAL. The value of the cargo that the shipper declares in order 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. <u>Condition:</u> If customers want the value to show, evidence is required, and customers need to approve additional insurance fee charge from the carrier (very exceptional).	1012.12	NA						
Declared Value Currency	Text (3)	CONDITIONAL. The currency used for the declared value, using the 3-character code defined by ISO 4217.	EUR	ISO 4217						
Issuer code	Text (4)	REQUIRED. The SCAC code of the issuing carrier of the Transport Document	MMCU	NA						
Issuer code list provider	Text (5)	REQUIRED. The code list provider for the issuer code. Can be either NMFTA or SMDG.	NMFTA	NA						
Carrier Clauses	Array	OPTIONAL. Additional clauses for a specific shipment added by the carrier to the bill of lading, subject to local rules / guidelines or certain mandatory information required to be shared with the customer. <table border="1" data-bbox="651 1861 1211 2018"> <thead> <tr> <th>Attribute</th> <th>Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Clause Content</td> <td>Text</td> <td>OPTIONAL. A clause for a specific shipment.</td> </tr> </tbody> </table>	Attribute	Type	Description	Clause Content	Text	OPTIONAL. A clause for a specific shipment.		Carrier
Attribute	Type	Description								
Clause Content	Text	OPTIONAL. A clause for a specific shipment.								

Number of Rider Pages	Number	The number of additional pages required to contain the goods description on a transport document. Only applicable for physical transport documents.	4	NA						
Binary Copy	Blob	CONDITIONAL. Snapshot of the document, only applicable for electronic documents.	NA	NA						
Document Hash	Text	CONDITIONAL. Cryptographic hash of the binary copy using the SHA-256 algorithm, only applicable for electronic documents.	NA	SHA-256						
<b>Attributes related to &lt;Transport plan&gt;</b>										
Planned Arrival Date	Date	REQUIRED. The date of arrival at place of destination	2020-12-12	ISO 8601						
Planned Departure Date	Date	REQUIRED. The date of departure from place of receipt	2020-12-12	ISO 8601						
Pre-carried by	Text	OPTIONAL. Mode of transportation for pre-carriage (e.g., truck, barge, vessel, rail). When transport to the port of loading is organised by the carrier.	Rail	DCSA						
Place of Receipt	Object	CONDITIONAL. 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. Only when pre-carriage is done by the carrier. It is an object of the following attributes.	<table border="1"> <thead> <tr> <th><b>Attribute</b></th> <th><b>Type</b></th> <th><b>Description</b></th> </tr> </thead> <tbody> <tr> <td>Location name</td> <td>Text(100)</td> <td>Name of the location.</td> </tr> </tbody> </table>		<b>Attribute</b>	<b>Type</b>	<b>Description</b>	Location name	Text(100)	Name of the location.
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		StateRegion	Text(65)	The state/region of the party's address																		
		Country	Text(75)	The country of the party's address																		
Port of Loading	Object	<p>REQUIRED. The location where the cargo is loaded onto a first sea-going vessel for water transportation. It is an object of the following attributes.</p> <table border="1"> <thead> <tr> <th><b>Attribute</b></th> <th><b>Type</b></th> <th><b>Description</b></th> </tr> </thead> <tbody> <tr> <td>Location name</td> <td>Text(100)</td> <td>Name of the location.</td> </tr> <tr> <td>UN location code</td> <td>Text(5)</td> <td>The UN Location code specifying where the place is located.</td> </tr> <tr> <td>City name</td> <td>Text(65)</td> <td>The city name of the party's address</td> </tr> <tr> <td>StateRegion</td> <td>Text(65)</td> <td>The state/region of the party's address</td> </tr> <tr> <td>Country</td> <td>Text(75)</td> <td>The country of the party's address</td> </tr> </tbody> </table>			<b>Attribute</b>	<b>Type</b>	<b>Description</b>	Location name	Text(100)	Name of the location.	UN location code	Text(5)	The UN Location code specifying where the place is located.	City name	Text(65)	The city name of the party's address	StateRegion	Text(65)	The state/region of the party's address	Country	Text(75)	The country of the party's address
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Port of Discharge	Object	<p>REQUIRED. The location where the cargo is discharged from the last sea-going vessel. It is an object of the following attributes.</p> <table border="1"> <thead> <tr> <th><b>Attribute</b></th> <th><b>Type</b></th> <th><b>Description</b></th> </tr> </thead> <tbody> <tr> <td>Location name</td> <td>Text(100)</td> <td>Name of the location.</td> </tr> <tr> <td>UN location code</td> <td>Text(5)</td> <td>The UN Location code specifying where the place is located.</td> </tr> <tr> <td>City name</td> <td>Text(65)</td> <td>The city name of the party's address</td> </tr> <tr> <td>StateRegion</td> <td>Text(65)</td> <td>The state/region of the party's address</td> </tr> <tr> <td>Country</td> <td>Text(75)</td> <td>The country of the party's address</td> </tr> </tbody> </table>			<b>Attribute</b>	<b>Type</b>	<b>Description</b>	Location name	Text(100)	Name of the location.	UN location code	Text(5)	The UN Location code specifying where the place is located.	City name	Text(65)	The city name of the party's address	StateRegion	Text(65)	The state/region of the party's address	Country	Text(75)	The country of the party's address
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Place of Delivery	Object	<p>CONDITIONAL. 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. Only when onward transport is done by the carrier. It is an object of the following attributes.</p> <table border="1"> <thead> <tr> <th><b>Attribute</b></th> <th><b>Type</b></th> <th><b>Description</b></th> </tr> </thead> <tbody> </tbody> </table>			<b>Attribute</b>	<b>Type</b>	<b>Description</b>															
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Onward inland routing	Object	<p>CONDITIONAL. The location where the cargo is transported from port of discharge to consignee location on consignee's responsibility (merchant haulage). When onward transport is done by customer. It is an object of the attributes below.</p> <table border="1"> <thead> <tr> <th><u>Attribute</u></th> <th><u>Type</u></th> <th><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>Location name</td> <td>Text(100)</td> <td>Name of the location.</td> </tr> <tr> <td>UN location code</td> <td>Text(5)</td> <td>The UN Location code specifying where the place is located.</td> </tr> <tr> <td>Street name</td> <td>Text(100)</td> <td>The name of the street of the party's address</td> </tr> <tr> <td>Street number</td> <td>Text(50)</td> <td>The number of the street of the party's address</td> </tr> <tr> <td>Floor</td> <td>Text(50)</td> <td>The floor of the party's street number</td> </tr> <tr> <td>Post Code</td> <td>Text(10)</td> <td>The post code of the party's address</td> </tr> <tr> <td>City name</td> <td>Text(65)</td> <td>The city name of the party's address</td> </tr> <tr> <td>StateRegion</td> <td>Text(65)</td> <td>The state/region of the party's address</td> </tr> <tr> <td>Country</td> <td>Text(75)</td> <td>The country of the party's address</td> </tr> </tbody> </table>			<u>Attribute</u>	<u>Type</u>	<u>Description</u>	Location name	Text(100)	Name of the location.	UN location code	Text(5)	The UN Location code specifying where the place is located.	Street name	Text(100)	The name of the street of the party's address	Street number	Text(50)	The number of the street of the party's address	Floor	Text(50)	The floor of the party's street number	Post Code	Text(10)	The post code of the party's address	City name	Text(65)	The city name of the party's address	StateRegion	Text(65)	The state/region of the party's address	Country	Text(75)	The country of the party's address
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Street number	Text(50)	The number of the street of the party's address																																
Floor	Text(50)	The floor of the party's street number																																
Post Code	Text(10)	The post code of the party's address																																
City name	Text(65)	The city name of the party's address																																
StateRegion	Text(65)	The state/region of the party's address																																
Country	Text(75)	The country of the party's address																																
Pre-carriage under shipper's responsibility	Object	<p>CONDITIONAL. Place and mode of transportation for pre-carriage (e.g. truck, barge, rail), under shipper's responsibility. It is an object of the attributes below.</p> <table border="1"> <thead> <tr> <th><u>Attribute</u></th> <th><u>Type</u></th> <th><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>Location name</td> <td>Text(100)</td> <td>Name of the location.</td> </tr> <tr> <td>Latitude</td> <td>Text (10)</td> <td>Geographic coordinate that specifies the north-south position of a point on the Earth's surface.</td> </tr> </tbody> </table>			<u>Attribute</u>	<u>Type</u>	<u>Description</u>	Location name	Text(100)	Name of the location.	Latitude	Text (10)	Geographic coordinate that specifies the north-south position of a point on the Earth's surface.																					
<u>Attribute</u>	<u>Type</u>	<u>Description</u>																																
Location name	Text(100)	Name of the location.																																
Latitude	Text (10)	Geographic coordinate that specifies the north-south position of a point on the Earth's surface.																																

		Longitude	Text(11)	Geographic coordinate that specifies the east–west position of a point on the Earth’s surface.	
		UN location code	Text(5)	The UN Location code specifying where the place is located.	
		Street name	Text(100)	The name of the street of the party’s address	
		Street number	Text(50)	The number of the street of the party’s address	
		Floor	Text(50)	The floor of the party’s street number	
		Post Code	Text(10)	The post code of the party’s address	
		City name	Text(65)	The city name of the party’s address	
		StateRegion	Text(65)	The state/region of the party’s address	
		Country	Text(75)	The country of the party’s address	
<b>Attributes related to &lt;Charges&gt; - array</b>					
Charge Type	Text (20)	REQUIRED. Description of the charge type applied		<i>THC</i>	Carrier
Currency Amount	Number	REQUIRED. The monetary value of all freight and other service charges for a transport document, with a maximum of 2-digit decimals		<i>150,58</i>	NA
Currency Code	Text (3)	REQUIRED. The currency for the amount of the charge, using a 3-character code (ISO 4217)		<i>EUR</i>	ISO
Payment Term	Text (3)	REQUIRED. An indicator of whether a charge is prepaid or collect		<i>FOB</i>	DCSA
Calculation Basis	Text(50)	REQUIRED. The code specifying the measure unit used for the corresponding unit price for this cost, such as per day, per ton, per square metre.		<i>Per day</i>	Carrier

Unit Price	Number	REQUIRED. The unit price of this charge item	3456.7	NA
Quantity	Number	REQUIRED. The number of units for this charge item	42	NA

Table 10: Input UC 4

#### 6.4 Output

If publishing the Draft Transport Document was successful, the carrier will update the document status to PENDING APPROVAL. the shipper will respond with a success message, indicating that the Draft Transport Document is received.

## 7. Use Case 5: Post changes to Draft Transport Document

### 7.1 Use Case Definition

This section describes the use case of 'Post changes to Draft Transport Document' via an exemplified interaction between shipper and carrier. Figure 9: Use Case Diagram UC 5 supports this use case, displaying the interaction between the shipper and carrier.

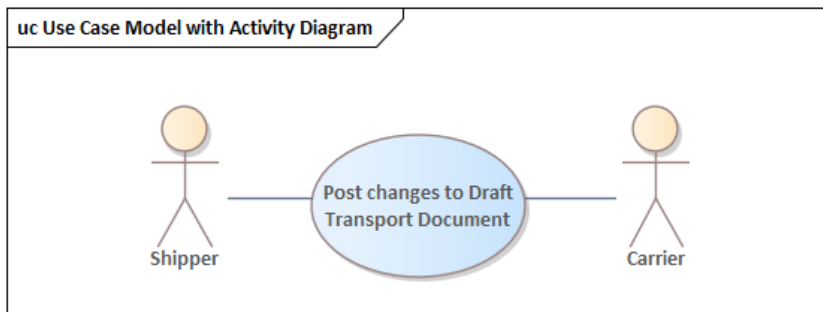


Figure 9: Use Case Diagram UC 5

Name of use case	Post changes to Draft Transport Document (shipper to carrier)		
Created by	DCSA	Last updated by	DCSA P1
Date Created	9 October 2020	Last revision date	May 2021
Description	The shipper posts changes to the Draft Transport Document. If the post was successful, the carrier will respond with a success message.		
Actors	Shipper, Carrier		
Preconditions	Draft Transport Document is published.		
Postconditions	The changes to the Draft Transport Document are successfully posted and the shipper has received a success message from the carrier.		
Flow	<ol style="list-style-type: none"> <li>1. Shipper posts changes to the Draft Transport Document.</li> <li>2. If post is successful, Carrier responds with success message.</li> </ol>		
Exceptions	2a. Shipper is unable to post the changes to the Draft Transport Document. Shipper will receive an error message.		

Table 11: Use Case definition UC 5

### 7.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 10: Activity Diagram UC 5 describes the activity flows that the interface for posting changes to the Draft Transport Document provides. The interface activity flow for 'Post changes to Draft Transport Document' can follow two paths: the success path or the exception path. The success path begins with a shipper posting changes to the Draft Transport Document. If the post is successful, the carrier responds with a success message, indicating that the changes have been received. If the post was not successful, the exception path is followed, in which an error

message is returned to the shipper indicating that posting the changes failed, including a reason for the failure.

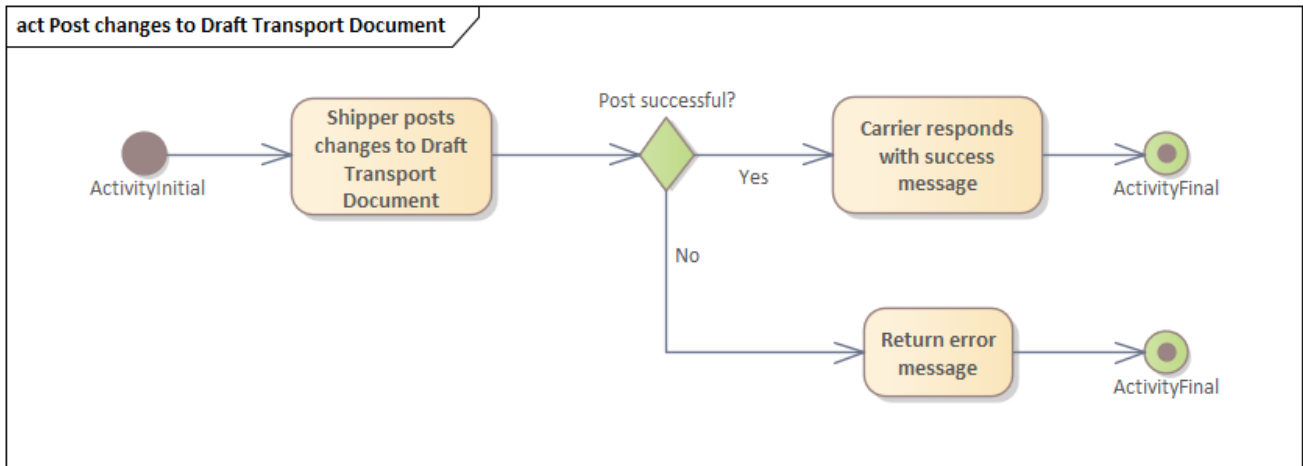


Figure 10: Activity Diagram UC 5

### 7.3 Input

All attributes from the Draft Transport Document may be changed. Please refer to use case 3 for an overview of these attributes in addition to the attributes listed below. The Transport Document Reference is required input.

Attribute	Type	Description	Example	Reference data owner
Transport Document Reference	Text (20)	REQUIRED. A unique reference assigned by the shipping line to the transport document, and the main number used for tracking status of the shipment.	NA	Carrier
<b>Attributes related to &lt;Charges&gt;- array</b>				
Currency Code	Text (3)	<b>REQUIRED. The currency for the amount of the charge, using a 3-character code (ISO 4217)</b>	EUR	ISO 4217
Payment Term	Text (3)	REQUIRED. An indicator of whether a charge is prepaid or collect, using a 3-character code to identify INCO terms.	FOB	INCO
Are Charges Displayed	Boolean	REQUIRED. An indicator of whether the charges are displayed.	True	NA

Table 12: Input UC 5

### 7.4 Output

If the posting of the changes to the Draft Transport Document was successful, the carrier will respond with a success message, indicating that the changes are received, and a new draft transport document will be issued with status PENDING APPROVAL. If the request is unsuccessful, the shipper will receive an error message including the reason for failure.

## 8. Use Case 6: Approve Draft Transport Document

### 8.1 Use Case Definition

This section describes the use case of 'Approve Draft Transport Document' via an exemplified interaction between shipper and carrier. Figure 11: Use Case Diagram UC 6 supports this use case, displaying the interaction between the shipper and carrier.

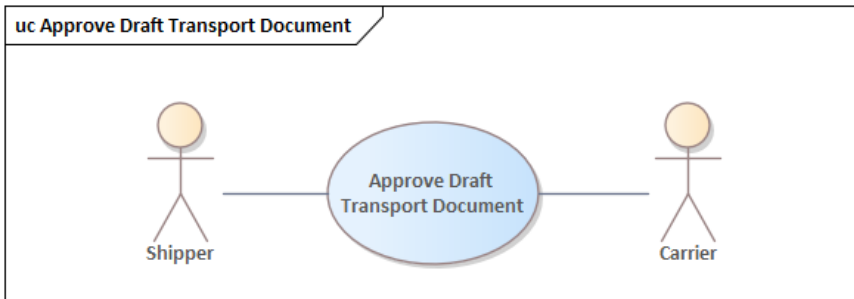


Figure 11: Use Case Diagram UC 6

Name of use case	Approve Draft Transport Document (shipper to carrier)		
Created by	DCSA	Last updated by	DCSA P1
Date Created	9 October 2020	Last revision date	May 2021
Description	The shipper approves or rejects the Draft Transport Document.		
Actors	Shipper, Carrier		
Preconditions	Draft Transport Document is published.		
Postconditions	The Draft Transport Document is approved and signed, and the carrier has received an approval message from the shipper. 'Document Status' is updated.		
Flow	1. Shipper reviews Draft Transport Document. 2a. If Shipper approves the Draft Transport Document, Shipper updates the document status and sends an approval message.		
Exceptions	2b. Shipper rejects the Draft Transport Document and will request changes to the Draft Transport Document (Use Case 5). 2c. Transmission of approval or rejection message fails.		

Table 13: Use Case definition UC 6

### 8.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 12: Activity Diagram UC 6 describes the activity flows that the interface for approving the Draft Transport Document provides. The interface activity flow for 'Approve Draft Transport Document' can follow two paths: the success path or the exception path. The success path

begins with a shipper reviewing the Draft Transport Document. If the shipper approves the Draft Transport Document, the shipper updates the document status and sends an approval message to the carrier. If the shipper rejects the Draft Transport Document, the exception path is followed, in which the shipper will request changes to the Shipping Instruction (Use Case 5).

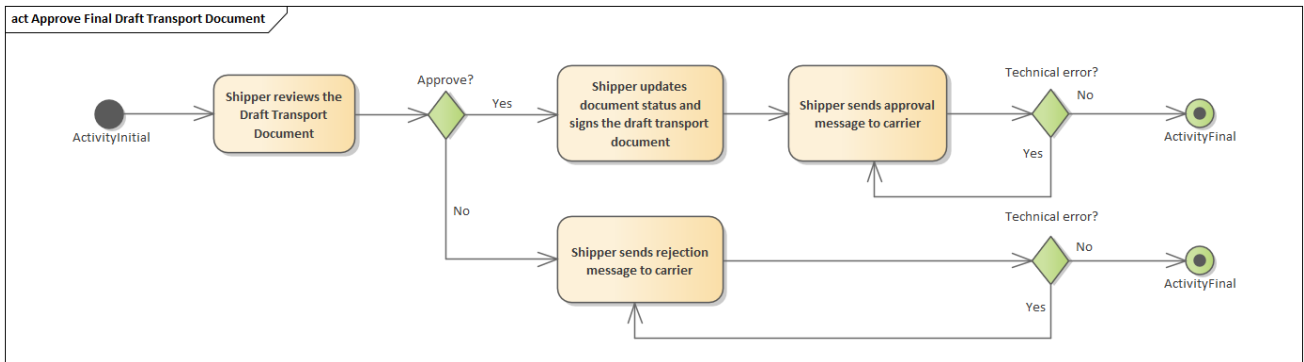


Figure 12: Activity Diagram UC 6

### 8.3 Input

If the shipper approves the Draft Transport Document, the document status is updated.

Attribute	Type	Description
Transport Document Reference	Text (20)	REQUIRED. A unique reference allocated by the shipping line to the transport document and the main number used for tracking status of the shipment.
Signature	Text(500)	REQUIRED. Digital signature

Table 14: Input UC 6

### 8.4 Output

The carrier receives an approval message from the shipper and the document status is changed to APPROVED. If the shipper does not approve the Draft Transport Document, changes should be requested through Use Case 5.



## 9. Use Case 7: Request amendments to Draft Transport Document

### 9.1 Use Case Definition

This section describes the use case of 'Request amendments to Draft Transport Document' via an exemplified interaction between shipper and carrier. Figure 13: Use Case Diagram UC 7 supports this use case, displaying the interaction between the shipper and carrier.

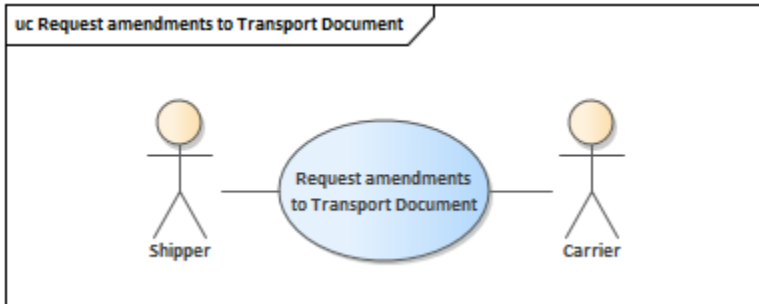


Figure 13: Use Case Diagram UC 7

<b>Name of use case</b>	<b>Request amendments to Draft Transport Document (shipper to carrier)</b>		
<b>Created by</b>	DCSA	<b>Last updated by</b>	DCSA PI
<b>Date Created</b>	9 October 2020	<b>Last revision date</b>	May 2021
<b>Description</b>	Shipper requests amendments to the Draft Transport Document after it has been approved. The carrier may accept or reject these amendments and charges to the shipper may be applied when making amendments to the Draft Transport Document.		
<b>Actors</b>	Shipper, Carrier		
<b>Preconditions</b>	Draft Transport Document has been published and approved.		
<b>Postconditions</b>	Request for amendments to the Draft Transport Document has been received by the carrier.		
<b>Flow</b>	<ol style="list-style-type: none"> <li>1. Shipper requests amendments to the Draft Transport Document.</li> <li>2. The carrier accepts that amendments may be made.</li> <li>3. If request is successful, carrier responds with a success message.</li> </ol>		
<b>Exceptions</b>	<ol style="list-style-type: none"> <li>1a. Shipper is unable to request amendments to the Draft Transport Document. Shipper will receive an error message.</li> <li>2a. The carrier rejects amendments to the draft transport document. The process stops.</li> </ol>		

Table 15: Use Case definition UC 7

## 9.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 14: Activity Diagram UC 7 describes the activity flows that the interface for requesting amendments to the Draft Transport Document provides. The interface activity flow for 'Request amendment to Draft Transport Document' can follow two paths: the success path or the exception path. The success path begins with a shipper requesting amendments to the Draft Transport Document. If the request is successful, the carrier responds with a success message, indicating that the request has been received. If the request is not successful, the exception path is followed, in which an error message is returned to the shipper indicating that making the request failed, including a reason.

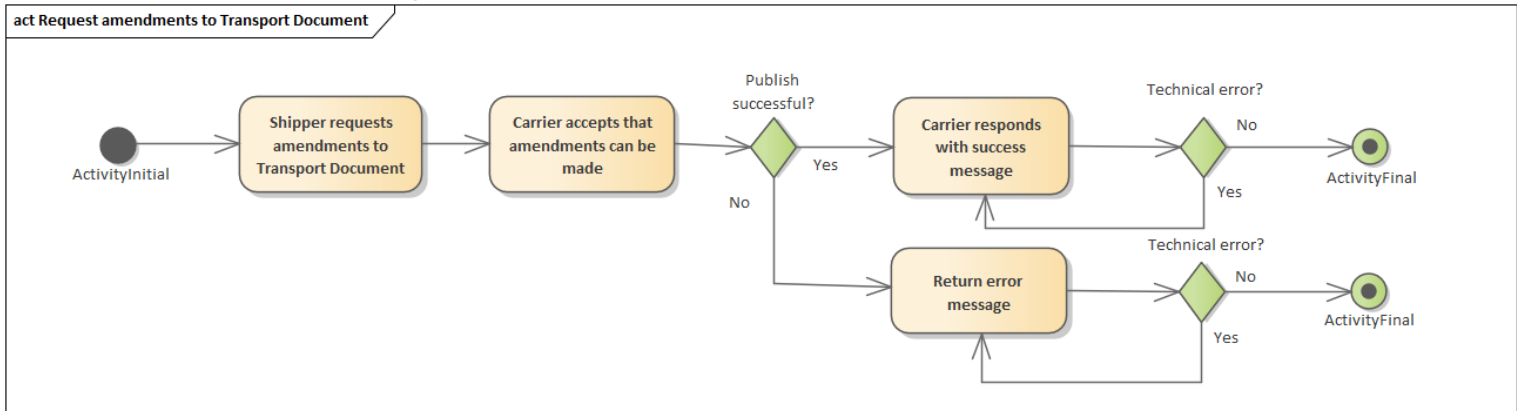


Figure 14: Activity Diagram UC 7

## 9.3 Input

Amendments to the Draft Transport Document can be requested for all attributes. Please refer to Use case 5 in chapter 7 for a detailed overview of each input attribute.

## 9.4 Output

If the request to make amendments to the Draft Transport Document is successful, the carrier will respond with a success message, indicating that the request is received. If the request is unsuccessful, the shipper will receive an error message.

## 10. Use Case 8: Approve amendments to Draft Transport Document

### 10.1 Use Case Definition

This section describes the use case of 'Approve amendments to Draft Transport Document' via an exemplified interaction between carrier and shipper. Figure 15: Use Case Diagram UC 8 supports this use case, displaying the interaction between the carrier and shipper.

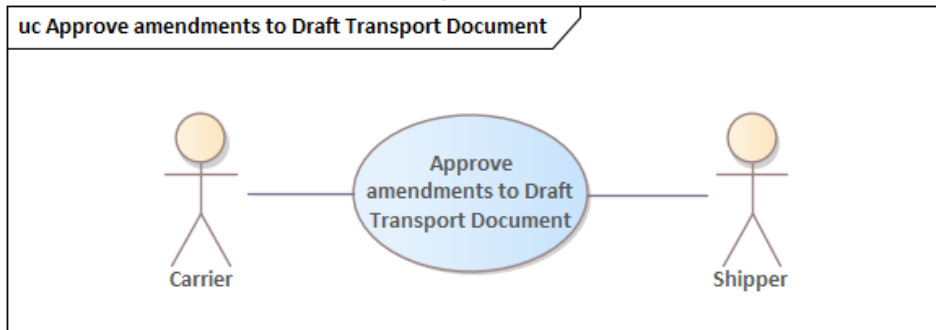


Figure 15: Use Case Diagram UC 8

<b>Name of use case</b>	<b>Approve amendments to Draft Transport Document (carrier to shipper)</b>		
<b>Created by</b>	DCSA	Last updated by	DCSA P1
<b>Date Created</b>	9 October 2020	Last revision date	May 2021
<b>Description</b>	The carrier approves or rejects the requested amendments to the Draft Transport Document.		
<b>Actors</b>	Carrier, Shipper		
<b>Preconditions</b>	Request for amendments to the Draft Transport Document is received by the carrier.		
<b>Postconditions</b>	Approval or rejection of the requested amendments to the Draft Transport Document is received by the shipper.		
<b>Flow</b>	1. Carrier reviews the requested amendments to the Draft Transport Document. 2a. If carrier approves the requested amendments, carrier sends an approval message to the shipper. The Draft transport document will be re-issued.		
<b>Exceptions</b>	2b. Carrier rejects the requested amendments and responds with a rejection message. 2c. Carrier is unable to send the transmission message and receives an error message.		

Table 16: Use Case definition UC 8

### 10.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 16: Activity Diagram UC 8 describes the activity flows that the interface for approving amendments to the Draft Transport Document provides. The interface activity flow for ‘Approve amendments to Draft Transport Document’ can follow two paths: the success path or the exception path. The success path begins with a carrier reviewing the amendments to the Draft Transport Document. If the carrier approves the amendments to the Draft Transport Document, the carrier sends an approval message to the shipper. If the carrier rejects the amendments to the Draft Transport Document, the exception path is followed, in which the carrier sends a rejection message to the shipper, including reason(s) for rejection.

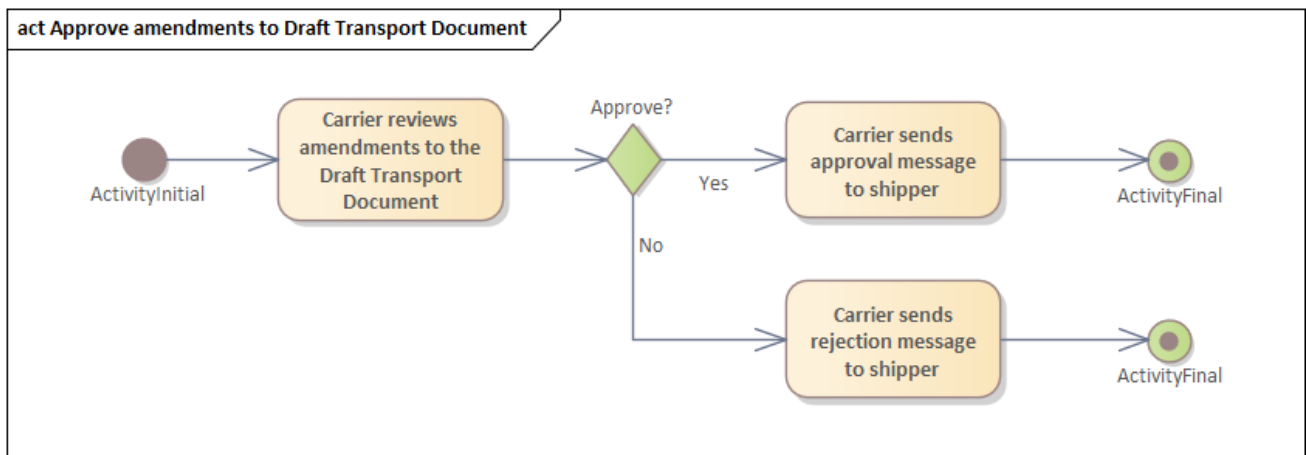


Figure 16: Activity Diagram UC 8

### 10.3 Input

With the approval or rejection of the amendments, the document status will be updated. A reason for approval can be given, while a reason for rejection must be given.

Attribute	Type	Description
Transport Document Reference	Text (20)	REQUIRED. A unique reference assigned by the shipping line to the transport document and the main number used for tracking the status of the shipment.
Document Status	Text (50)	REQUIRED. The current status of the transport document, e.g., SI Received, Drafted, Pending Approval, Approved, Issued, and Surrendered.
<i>Reason*</i>	Text	CONDITIONAL. Text field as part of the rejection message describing the reasons for rejection. <u>Condition</u> : required if the requested amendments are rejected, optional if the amendments are approved.

\*not part of eBL IM Model

Table 17: Input UC 8

#### **10.4 Output**

The shipper will receive a message from the carrier, with an indication whether the requested amendments are approved or rejected. If approved, the carrier will publish a new draft transport document and update the document status to PENDING APPROVAL.

## 11. Use Case 9: Issue Transport Document

### 11.1 Use Case Definition

This section describes the use case of 'Publish Transport Document' via an exemplified interaction between carrier and shipper. Figure 17: Use Case Diagram UC 9 supports this use case, displaying the interaction between the carrier and shipper.

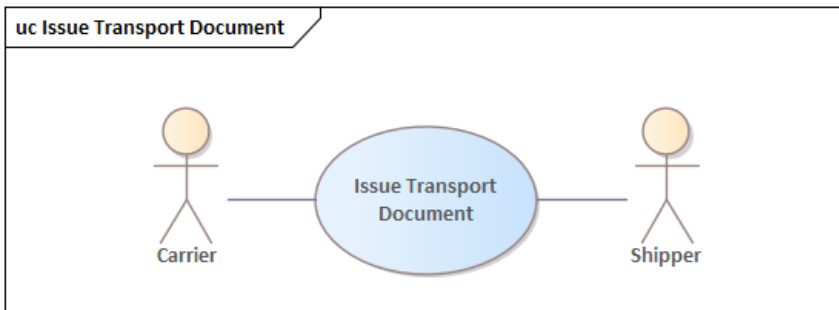


Figure 17: Use Case Diagram UC 9

Name of use case	Issue Transport Document (carrier to shipper)		
Created by	DCSA	Last updated by	DCSA P1
Date Created	09 October 2020	Last revision date	May 2021
Description	The carrier signs the Transport Document and issues it to the shipper.		
Actors	Carrier, Shipper		
Preconditions	Draft Transport Document is approved, OR amendments to the Draft Transport Document are approved. If amendments are approved, the draft Transport Document will be updated, and the status will fall back to Pending Approval.		
Postconditions	The Transport Document is successfully issued, and the carrier has received a success message from the shipper. 'Document Status' is updated.		
Flow	<ol style="list-style-type: none"> <li>Carrier signs the Transport Document and issues it to the shipper.</li> <li>If issue is successful, shipper responds with a success message.</li> </ol>		
Exceptions	2a. Carrier is unable to issue the Transport Document. Carrier will not receive a success message from the shipper.		

Table 18: Use Case definition UC 9

### 11.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 18: Activity Diagram UC 9 describes the activity flows that the interface for issuing the Transport Document provides. The interface activity flow for 'Issue Transport Document' can follow two paths: the success path or the exception path. The success path begins with a carrier

signing the Transport Document and changing the document status. If issuance is successful, the shipper responds with a success message, indicating that the Transport Document is received. If issuance was unsuccessful, the exception path is followed.

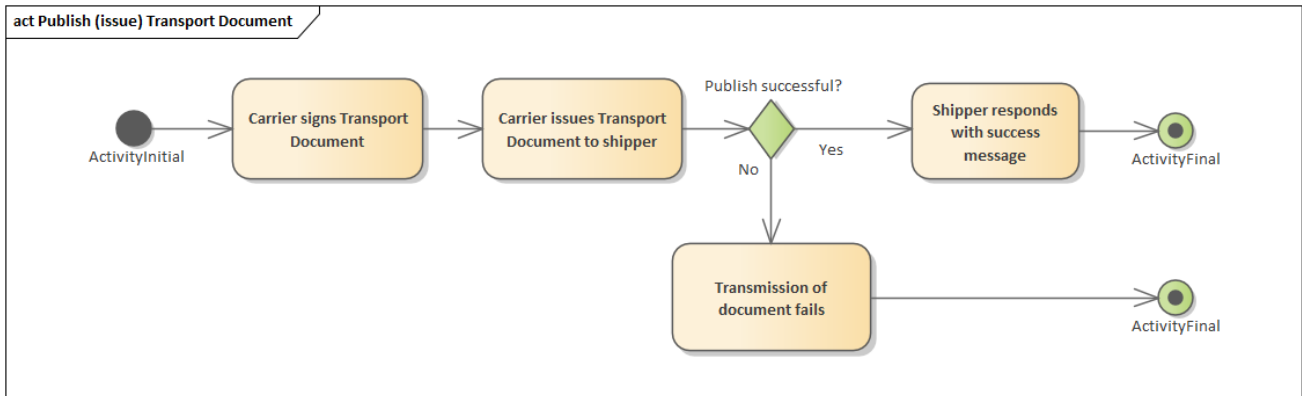


Figure 18: Activity Diagram UC 9

### 11.3 Input

The carrier signs the approved Draft Transport Document (if amendments are requested, the requested amendments should be approved as well) and changes the Document Status to “issued”. If the shippedOnBoardDate and Place of issue (if applicable) are not in the Draft Transport Document yet, these should be added to the Transport Document in this Use Case. Please refer to Use Case 4 in chapter 6 for a detailed overview of each attribute.

Attribute	Type	Description
Transport Document Reference	Text(20)	REQUIRED. A unique reference assigned by the shipping line to the transport document and the main number used for tracking the status of the shipment.
Document Status	Text (50)	REQUIRED. The current status of the transport document, e.g., SI Received, Drafted, Pending Approval, Approved, Issued, and Surrendered
Signature	Text (500)	REQUIRED. Digital signature
ShippedOnBoardDate	Date	CONDITIONAL. Date when the last container that is linked to the transport document is physically loaded onboard the vessel indicated on the transport document. <u>Condition</u> : should be added to the Transport Document if it is not provided in the Draft Transport Document. Not applicable for ‘Receipt for Shipment BOL’
Received for Shipment Date	Date	CONDITIONAL. Date when the carrier has taken possession of the last container linked to the B/L, in case of carrier haulage, at place of receipt

Attribute	Type	Description																														
		and in case of merchant haulage, when the container is physically in the terminal. Condition: only applicable for received for shipment B/L																														
Place of issue	Object	<p>CONDITIONAL. The location where original transport document (bill of lading) has been issued. <u>Condition:</u> should be added to the Transport Document if it is not provided in the Draft Transport Document. Place of issue is an object of the attributes below.</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Location name</td> <td>Text(100)</td> <td>Name of the location.</td> </tr> <tr> <td>UN location code</td> <td>Text(5)</td> <td>The UN Location code specifying where the place is located.</td> </tr> <tr> <td>Street name</td> <td>Text(100)</td> <td>The name of the street of the party's address</td> </tr> <tr> <td>Street number</td> <td>Text(50)</td> <td>The number of the street of the party's address</td> </tr> <tr> <td>Floor</td> <td>Text(50)</td> <td>The floor of the party's street number</td> </tr> <tr> <td>Post Code</td> <td>Text(10)</td> <td>The post code of the party's address</td> </tr> <tr> <td>City name</td> <td>Text(65)</td> <td>The city name of the party's address</td> </tr> <tr> <td>StateRegion</td> <td>Text(65)</td> <td>The state/region of the party's address</td> </tr> <tr> <td>Country</td> <td>Text(75)</td> <td>The country of the party's address</td> </tr> </tbody> </table>	Attribute	Type	Description	Location name	Text(100)	Name of the location.	UN location code	Text(5)	The UN Location code specifying where the place is located.	Street name	Text(100)	The name of the street of the party's address	Street number	Text(50)	The number of the street of the party's address	Floor	Text(50)	The floor of the party's street number	Post Code	Text(10)	The post code of the party's address	City name	Text(65)	The city name of the party's address	StateRegion	Text(65)	The state/region of the party's address	Country	Text(75)	The country of the party's address
Attribute	Type	Description																														
Location name	Text(100)	Name of the location.																														
UN location code	Text(5)	The UN Location code specifying where the place is located.																														
Street name	Text(100)	The name of the street of the party's address																														
Street number	Text(50)	The number of the street of the party's address																														
Floor	Text(50)	The floor of the party's street number																														
Post Code	Text(10)	The post code of the party's address																														
City name	Text(65)	The city name of the party's address																														
StateRegion	Text(65)	The state/region of the party's address																														
Country	Text(75)	The country of the party's address																														
IssueDate	Date	REQUIRED. Date when the Original bill of lading was issued.																														

Table 19: Input UC 9

#### 11.4 Output

If issuing the Transport Document was successful, the shipper will respond with a success message, indicating that the signed Transport Document is received. The carrier will update the document status to be ISSUED.



## 12. Use Case 10: Request amendments to the Transport Document

### 12.1 Use Case Definition

This section describes the use case of 'Request amendments to Transport Document' via an exemplified interaction between shipper and carrier. Figure 19: Use Case Diagram UC 10 supports this use case, displaying the interaction between the shipper and carrier.

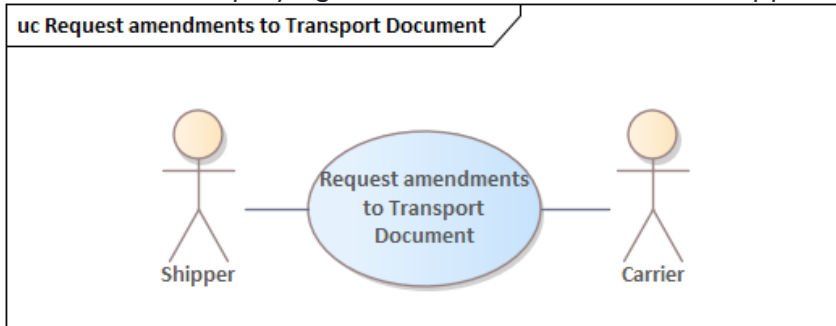


Figure 19: Use Case Diagram UC 10

Name of use case	Request amendments to Transport Document (shipper to carrier)		
Created by	DCSA	Last updated by	DCSA PI
Date Created	9 October 2020	Last revision date	May 2021
Description	Shipper requests amendments to the Transport Document after it has been issued. The carrier may accept or reject that request and charges to the shipper may be applied when making amendments to the Transport Document.		
Actors	Shipper, Carrier		
Preconditions	Transport Document has been issued. The request for amendment has been approved by the carrier. All copies of current original are surrendered to the carrier and the requester has been confirmed to hold the rights to amend the transport document.		
Postconditions	Request for amendments to the Transport Document has been received by the carrier.		
Flow	<ol style="list-style-type: none"> <li>1. Shipper requests amendments to the Transport Document.</li> <li>2. Carrier approves amendment request.</li> <li>3. If request is successful, carrier responds with a success message.</li> <li>4. The carrier checks for a technical error, in case there is, the carrier resends the message.</li> </ol>		
Exceptions	<ol style="list-style-type: none"> <li>1a. Shipper is unable to request amendments to the Transport Document. Shipper will receive an error message.</li> <li>2a. Carrier rejects amendment request and the process stops</li> </ol>		

Table 20: Use Case definition UC 10

## 12.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 20: Activity Diagram UC 10 describes the activity flows that the interface for requesting amendments to the Transport Document provides. The interface activity flow for 'Request amendment to Transport Document' can follow two paths: the success path or the exception path. The success path begins with a shipper requesting amendments to the Transport Document. If the request is successful, the carrier responds with a success message, indicating that the request has been received. If the request was not successful, the exception path is followed, in which an error message is returned to the shipper indicating that making the request failed, including a reason.

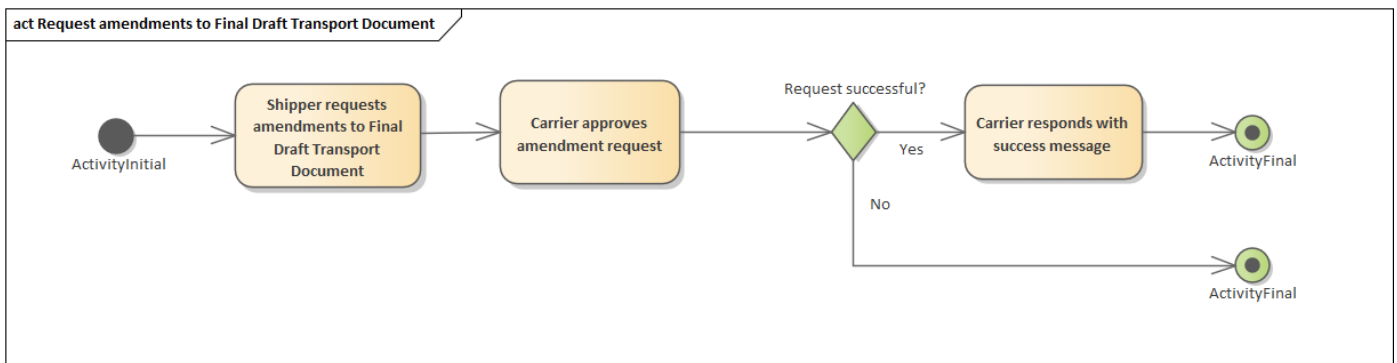


Figure 20: Activity Diagram UC 10

## 12.3 Input

Amendments to the Transport Document can be done for all attributes in the shipping instruction. Please refer to use case 5 for an overview of all the relevant attributes.

## 12.4 Output

If the request to make amendments to the Transport Document was successful, the carrier will respond with a success message, indicating that the request is received. If the request is unsuccessful, the shipper will receive an error message.

### 13. Use Case II: Approve amendments to Transport Document.

#### 13.1 Use Case Definition

This section describes the use case of 'Approve amendments to Transport Document' via an exemplified interaction between carrier and shipper. Figure 21: Use Case Diagram UC 11 supports this use case, displaying the interaction between the carrier and shipper.

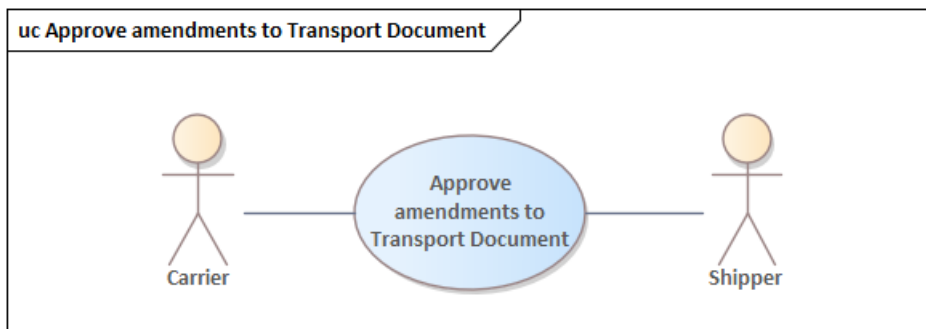


Figure 21: Use Case Diagram UC 11

Name of use case	Approve amendments to Transport Document (carrier to shipper)		
Created by	DCSA	Last updated by	DCSA P1
Date Created	9 October 2020	Last revision date	May 2021
Description	The carrier approves or rejects the requested amendments to the Transport Document.		
Actors	Carrier, Shipper		
Preconditions	Request for amendments to the Transport Document is received by the carrier and all copies of the current original are surrendered to the carrier.		
Postconditions	Approval or rejection of the requested amendments to the Transport Document is received by the shipper. If approved, the current original Transport Document will be voided.		
Flow	1. Carrier reviews the requested amendments to the Transport Document. 2a. If carrier approves the requested amendments, carrier sends an approval message to the shipper. A new Transport Document will be issued by the carrier (see UC 9).		
Exceptions	2b. Carrier rejects the requested amendments and responds with a rejection message. 2c. Carrier is unable to send the transmission message and receives an error message.		

Table 21: Use Case definition UC 11

### 13.2 Activity Diagram

The purpose of the activity diagram is to capture dynamic behavior in the system as a message flow. Figure 22: Activity Diagram UC 11 describes the activity flows that the interface for requesting amendments to the Transport Document provides. The interface activity flow for ‘Request amendment to Transport Document’ can follow two paths: the success path or the exception path. The success path begins with a shipper requesting amendments to the Transport Document. If the request is successful, the carrier responds with a success message, indicating that the request has been received. If the request was not successful, the exception path is followed, in which an error message is returned to the shipper indicating that making the request is rejected, including a reason.

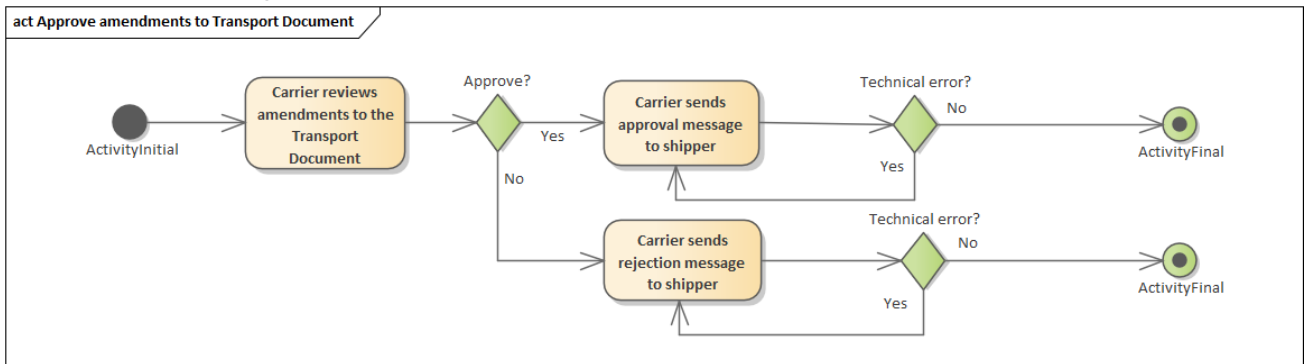


Figure 22: Activity Diagram UC 11

### 13.3 Input

With the approval or rejection of the amendments, the document status will be updated. A reason for approval can be given, while a reason for rejection should be given.

Attribute	Type	Description
Transport Document Reference	Text (20)	REQUIRED. A unique reference assigned by the shipping line to the transport document and the main number used for tracking the status of the shipment.
Document Status	Text (50)	REQUIRED. The current status of the transport document, e.g., SI Received, Drafted, Pending Approval, Approved, Issued, and Surrendered
<i>Reason*</i>	Text	CONDITIONAL. Text field as part of the rejection message, describing the reasons for rejection. Condition: the requested amendments are rejected.

\*not part of eBL IM Model

Table 22: Input UC 11

### 13.4 Output

After review, the carrier will send a message to the shipper, indicating whether the requested amendments are approved or rejected. If approved, and the current original has been surrendered to the carrier, a revised transport document will be issued.