# e-Cargo and FDPS Simulator

# Training Guide

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# Imprint

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Imprint

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# Introduction

SkyRadar e-Cargo is a simulation application. Using this tool, you can track the movement of air cargo from the point of booking it with a freight forwarder as a consignor, and ensuring its arrival at the consignee.

This document is an easy-to-read guide to the SkyRadar e-Cargo simulation application. You will find regular assessment exercises, to test yourself, as you progress.

# SkyRadar e-Cargo Features

SkyRadar lets you simulate the following actions:

1. Booking a shipment with a freight forwarder
2. Selecting a carrier
3. Generating a waybill and other documents
4. Reaching  the shipment to the carrier (airline)
5. Completing ground handling activities
6. Loading the shipment at the port of origin
7. Unloading the shipment at the destination
8. Transferring the shipment to the freight forwarder at the receiving end
9. Reaching the shipment to the consignee

# Introduction to SkyRadar e-Cargo

With the digitalization of records across the world, it is imperative to know how to efficiently use an air cargo application. Rather than being directly exposed to a live and dynamic server based application, where data can be seen by many users, the e-Cargo simulation

tool helps you to understand how the real operations take place. The tool prepares the requisite audience to perform their tasks, corresponding to their roles.

It has been designed on the basis of IATA‘s sequence of rules and regulations going into the following three directions:

- Safety and Security
- Effectiveness Law
- Abidance and Crime Prevention

It provides an environment for technical and procedural training of aviation personnel.

## Training Environment for various objectives

Operating an airport, in particular managing the cargo and value flows can be compared - with regard to complexity - to a big-sized modern factory. It supplies just-in-sequence, in function of the dynamically changing availabilities of the aircraft.

But in deviation to a modern plant, it receives its cargo out-of-sequence, it needs to buffer the flows, provide storage with flexible potential of delivery. And it faces another challenge. A factory is supplied by accredited suppliers, often in mutual compliance to ISO 9000 or ISO 14000 procedures. The airport cannot pre-select its suppliers. Mutual trust is by definition impossible. In the contrary: the risk of terrorist attacks, wrong declaration of hazardous goods or smuggling of undeclared or blacklisted goods requires an a priori suspicion of malfeasance.

This laboratory provides a close-to-life but pedagogically optimized laboratory for aviation security

### A Training Environment for IATA based regulations

The system provides an optimized environment to practice the regulations and procedures for efficient and compliant air cargo management and security management.

### A Procedural Training for optimized Air-Cargo Management

Efficient airflow management needs to work seamlessly from supply to loading and from unloading to discharging. It embraces management skills, security competences and cargo handling expertise. Various professions from operations to university level are required to work hand in hand.

IATA offers regulations which evolve over the years. This training environment provides training environments for electronic cargo handling, Dangerous Goods Handling and Detection.

## Why SkyRadar e-Cargo?

Since a decade, SkyRadar has been a pioneer in the supply and implementation of high-class training equipment for ICAO, IATA and EUROCONTROL related training and certification programs. The Germany-based manufacturer is known for its quality and precision. SkyRadar uses operational and industrial equipment, as deployed by Airports and ATC operators. SkyRadar provides solutions for essential technological systems in air flow, air traffic control, communications, navigation and surveillance.

SkyRadar's portfolio of training systems ranges from the IATA e-freight route network systems to ATSEP radar training systems and ATCO oriented 3D Tower / APP or en-route simulators.

# Working with e-Cargo Overview

The following are the typical roles in the air cargo movement workflow:

1. Shipper (Consignor)
2. Origin Freight Forwarder
3. Origin GHA (Ground Handling Agents)
4. Customs Official (Export)
5. Origin Carrier
6. destination GHA
7. Customs Official (Import)
8. Destination Freight forwarder

This document uses the following definitions:

- Cargo = the material or item that needs to be airlifted.
- Consignor = the person or organization that has to send a cargo to another destination.
- Freight  forwarder = the agent or company that arranges to pick up the cargo from the consignor ( also known as the shipper) from the base location for onward transhipment, to the consignee.
- Export customs = the customs at place of origin
- Import customs = the customs at place of destination
- GHA = the ground handling agent. A ground handler ensures the safe loading, flight, unloading and all ground operations of a cargo. GHAs are associated with the operational efficiency and quality service delivery.
- Shipment = Freight + Information, also mentioned as freight.
- Information = Electronic Data or Paper relating to the freight.
- Carrier = Airline.
- Domain = Sphere of Influence/Control.

- Consignee = the person or company who is receiving the shipment from the consignor.
- Branch warehouse = the location where the freight forwarder stores all cargo that await transhipment and connection to the airline. A large city can have several branch warehouses.
- Hub warehouse = a large warehouse of a freight forwarder that houses all cargo to be loaded into a plane.  A hub warehouse is typically located very near to a major airport for logistic reasons. Several branches comprise a hub.

# Action based Training

## Challenges and the need for action based training

Cargo handling experts, be they from ground handling, customs or from the carrier (airline) are confronted by all kinds of challenges. There is the continuous strive for supply chain optimization and more effective procedures. There is a growing amount of international directives and regulations as well of local law that require compliance. But there is also the requirement of a highest amount of flexibility and reactivity on changing parameters like changed flight schedules, risk of contraband, cyber piracy and the ever increasing threat of terrorist attacks. Secure supply chains and e-Cargo chains are required by IATA and in regional programs like the EU's ACC3 expectation to non European Carriers.

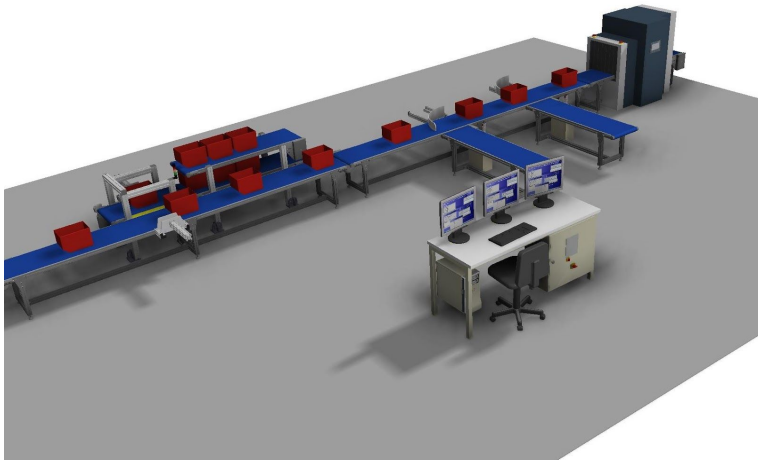
The CARGO personnel has to understand and master the overall process to be able to react, and to notice signs of threat, at the earliest stage.

SkyRadar's CARGO training laboratory provides an environment to train in all aspects of cargo movement.

In the following we draft out training scenarios. It can only be a suggestion and we can never cover the plethora of (ever changing) training requirements and local regulations and law that you need to train. Our intent is to show you how it can be done.

You the trainers can design specific training scenarios. And you the students may also set up your exercises. In the following pages, we show you how.

# Training Scenarios



In this section, we suggest two diverse concepts of training scenarios:

1. e-Cargo: Run through the complete process of the involvement of the shipper to the pick up at the final destination.
2. e-Cargo and Physical Cargo Handling: Run through the process of the e-Cargo solution and the hardware-based training environment.

## Scenario 1: e-Cargo Workflow

Build a team of 7 students and write the following roles in front of their desks:

1. Shipper (Consignor)
2. Origin Freight forwarder
3. Origin Ground Handler
4. Carrier (Airline)

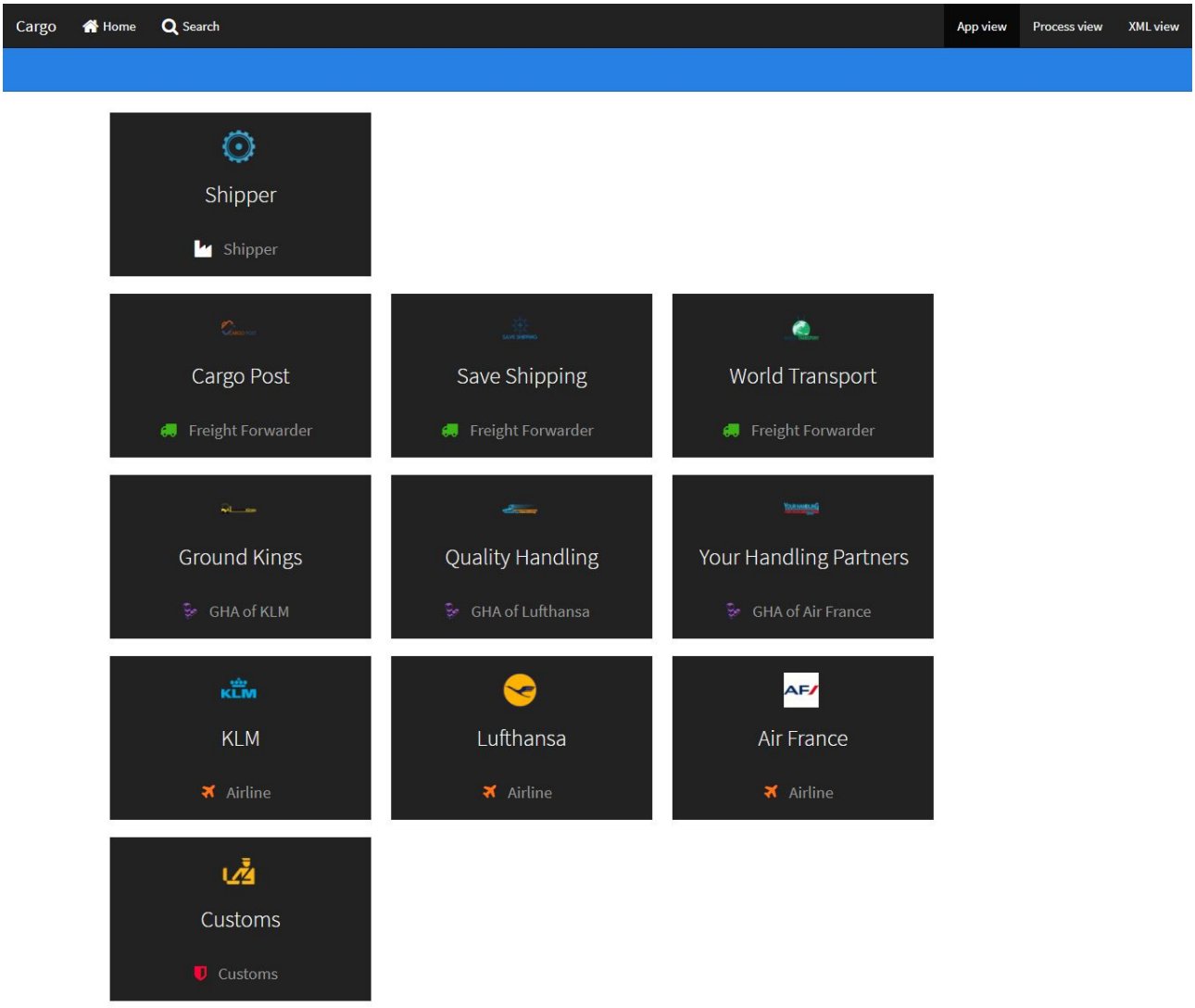
5. Destination Ground Handler
6. Destination Freight forwarder
7. Consignee (Receiver)

Ask each of these students to introduce themselves in the above roles and enact the following steps, **associated with their roles:**

1. Book and plan shipments
2. Pick up the shipment from the consignor (shipper)
3. Receive the shipment at the forwarder branch warehouse
4. Transfer the shipment to the forwarder hub warehouse
5. Prepare shipment documentation
6. Transfer the shipment to the carrier domain (airport)
7. Inspect the export consignment before loading on to the plane (Customs)
8. Load the consignment to the plane hold
9. Receive shipment at the airport terminal
10. Accept the shipment as ready for carriage
11. Distribute information through the system
12. Unload the shipment at the destination airport
13. Inspect the import shipment that has arrived
14. Collect the shipment at the airport and bring it to the branch warehouse
15. Segregate the shipment, corresponding to each hub warehouse.
16. Load truck and produce run sheet
17. Deliver the shipment to the consignee and obtain POD to conclude the workflow.

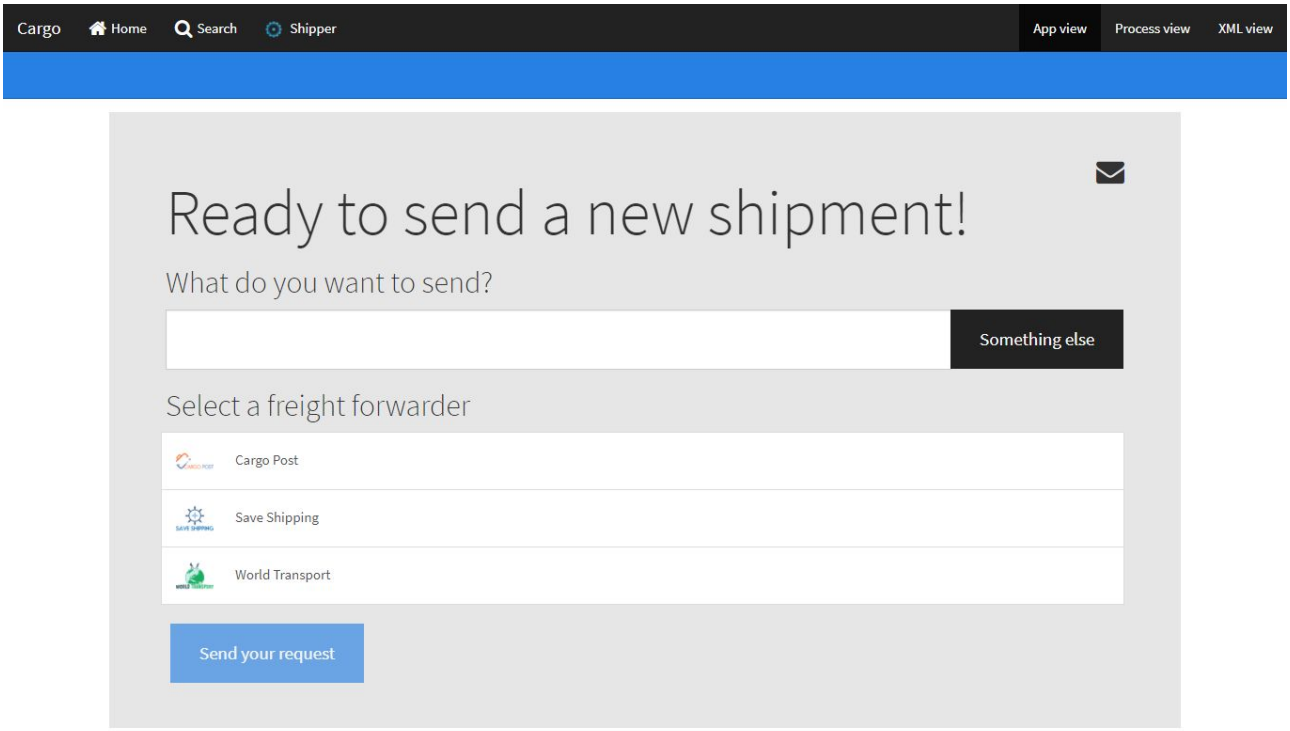
The following screenshots help you with the process:

e-Cargo Application Main screen

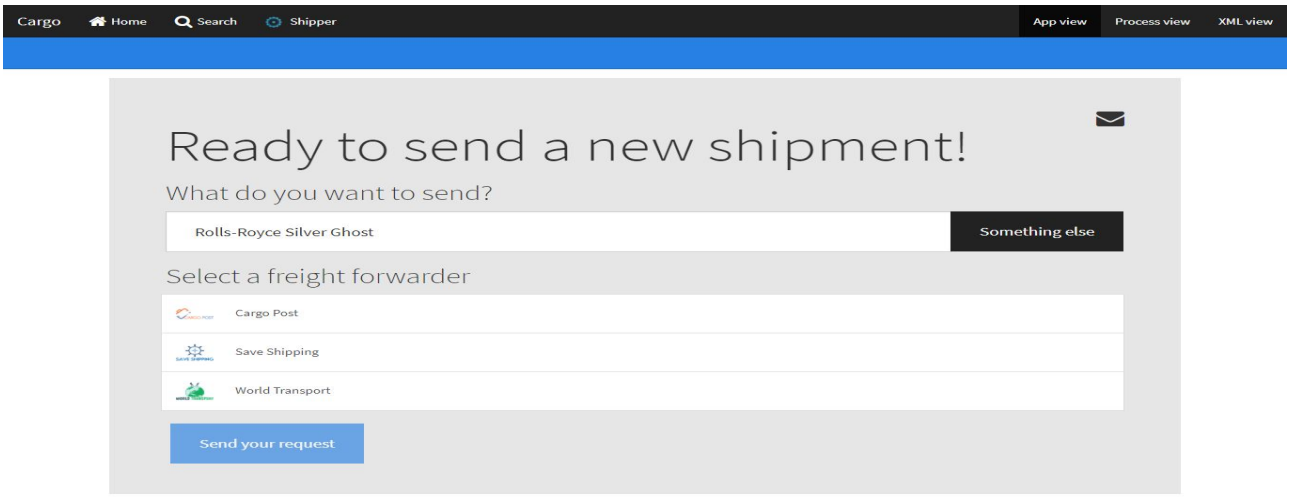


**Note:** The GHAs are linked to the respective carrier. For example, **Ground Kings** is the GHA for KLM, **Quality Handling** for Lufthansa and **Your Handling Partners** for Air France. The system will automatically map the process accordingly.

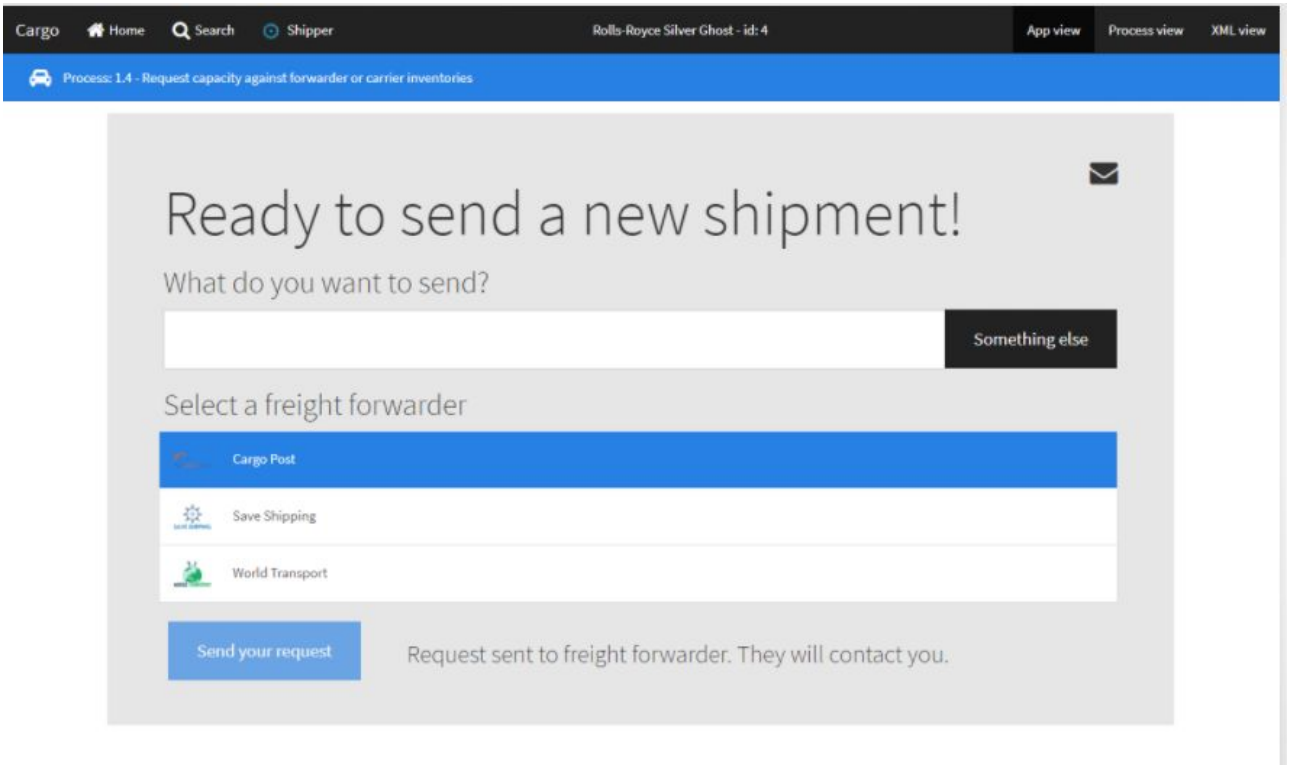
**Click Shipper** to view empty screen as seen by the shipper:



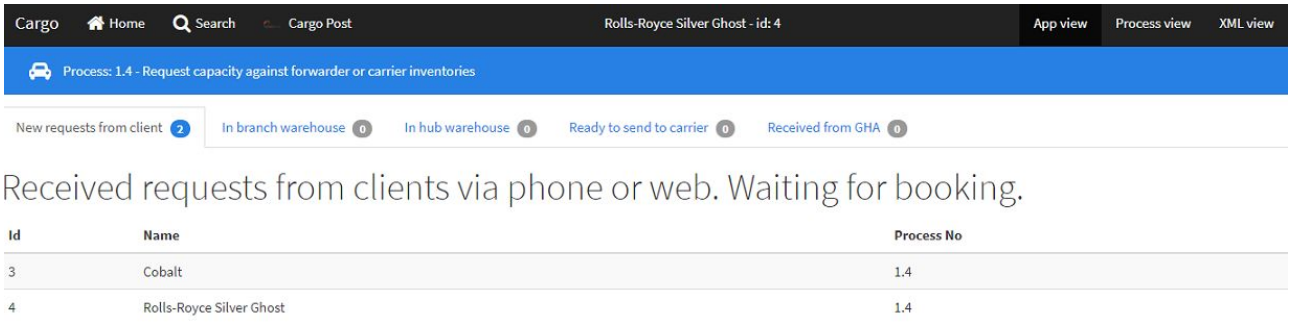

Enter the consignment name/type in the **What do you want send?** field




**Select a freight forwarder**, for example, Cargo Post and **click Send your request,** to view the following screen.




Get into the role of the freight forwarder by going to **Home > Freight Forwarder** (Cargo Post).

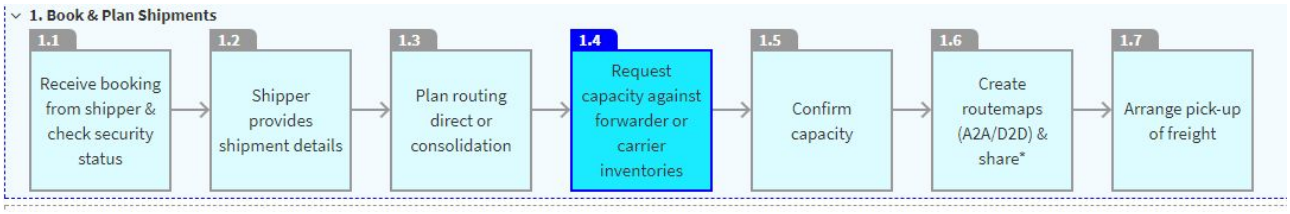



Note the ID for the shipment as Rolls-Royce Silver Ghost id 4 at the top of the screen.

**Click** the **Process View** to understand where you are, in the IATA work process. The following image is the complete process of a shipment, with the the various (human )roles involved in it.

Cargo
Home
Search
Cargo Post
App view
Process view
XML view
Fold All
Unfold All
1. Book & Plan Shipments
1.1 Receive booking from shipper & check security status
1.2 Shipper provides shipment details
1.3 Plan routing direct or consolidation
1.4 Request capacity against forwarder or carrier inventories
1.5 Confirm capacity
1.6 Create routemaps (A2A/D2D) & share*
1.7 Arrange pick-up of freight
2. Pick up from Shipper
2.1 Labeling Freight (by shipper)
2.2 Associate unique piece level information with booking
2.3 Pick-up freight
3. Receive freight at forwarder branch facility
3.1 Arrival of freight at forwarder branch facility
3.2 Check / apply labeling & verify physical integrity of packages
3.3 Check information to match actual freight and security details available
3.4 Check Accuracy of booking & adjust if needed
3.5 Create shipment record
3.6 Sort & transfer freight to build or storage locations
4. Transfer to forwarder hub
4.1 Confirm information to hub
4.2 Issue loading list for truck to hub
4.3 Loaded truck departs forwarder branch facility for hub
5. Prepare export shipments
5.1 Arrival of truck at forwarder hub
5.2 Check / verify physical integrity of truckload
5.3 Check security status of shipments
5.4 Create MAWB shipment record and consolidation manifest
5.5 Send freight picking instructions to warehouse
5.6 Prepare shipment for export
6. Transfer shipment to carrier domain
6.1 Issue loading list for truck to carrier / load freight
6.2 Depart truck from forwarder hub to carrier domain
6.3 Transmit forwarder information to carrier
6.4 Arrival of truck at carrier domain
7. Receive shipment into carrier domain
7.1 Channel forwarder information to GHA where applicable
7.2 Assign unloading slot and position to truck
7.3 Validate security / customs status of truck
7.4 Unload truck. Receive shipments transferred from other carriers
7.5 Screen freight as applicable
7.6 Check booking information matches actual freight
8. Accept shipment as ready for carriage
8.1 Verify shipment has cleared security
8.2 Perform ready for carriage checks
8.3 Validate information against booking and correct
9. Prepare freight for transport
9.1 Shipments in transit received from process 13
9.2 Shipments in transit security cleared
9.3 Plan flight and send booking list to warehouse
9.4 Collect freight and unitize as planned
9.5 Consolidate information
10. Shipment to flight, load & depart
10.1 Move shipments from warehouse to hold area for ramp transport
10.2 Move shipments from hold area to parking position
10.3 Flight loaded as per load plan & identify discrepancies
10.4 Resolve discrepancies
10.5 Depart flight
11. Distribute information
11.1 Transmit flight and shipment information to down line stations and authorities
12. Arrive flight, unload & dispatch shipment to warehouse
12.1 Arrive flight at destination
12.2 Unload flight
12.3 Move shipments to appropriate facility
12.4 Arrive shipments at warehouse
13. Check-in shipment
13.1 Receive shipments in warehouse
13.2 Move shipments in transit to appropriate location
13.3 Move shipments to be transferred to other carrier
14. Arrive shipment
14.1 Store freight for import
14.2 Notify forwarder freight and information on hand at destination
14.3 Hand over of documents (information) to forwarder
15. Handover freight to forwarder
15.1 Check customs release status
15.2 Prepare freight for handover
15.3 Handover freight to forwarder
16. Arrive shipment at forwarder hub
16.1 Depart freight for forwarder hub
16.2 Arrive / unload truck at forwarder hub
16.3 Check shipment details against expected (after breakdown)
16.4 Resolve discrepancies
16.5 Issue loading list for on carriage or delivery
17. Transfer shipment to forwarder branch facility
17.1 Depart truck to forwarder branch facility
17.2 Arrive / unload truck at forwarder branch facility
17.3 Check / verify physical integrity of truckload
17.4 Resolve discrepancies
18. Load truck and produce run sheet
18.1 Contact customer for handover instructions
18.2 Pick up freight by customer
18.3 Issue loading list for truck to consignee / load truck
18.4 Depart truck from forwarder branch facility to consignee
19. Deliver, obtain POD & conclude cycle
19.1 Make delivery & capture POD data
19.2 Finalize D2D roadmap*
19.3 Discrepancy reports produced and resolved

The process has changed to 1.4: Request capacity against forwarder or carrier inventories, seen here:



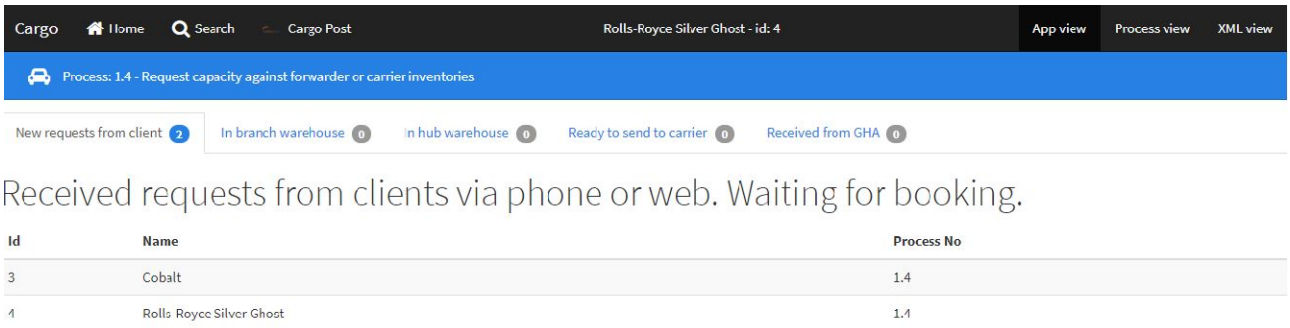

Each of these entries in the Process Workflow has an expanded flowchart to show the phased progress of the shipment. You can see the process updating itself on the top left under the menu bar.

**Preparing export shipments**

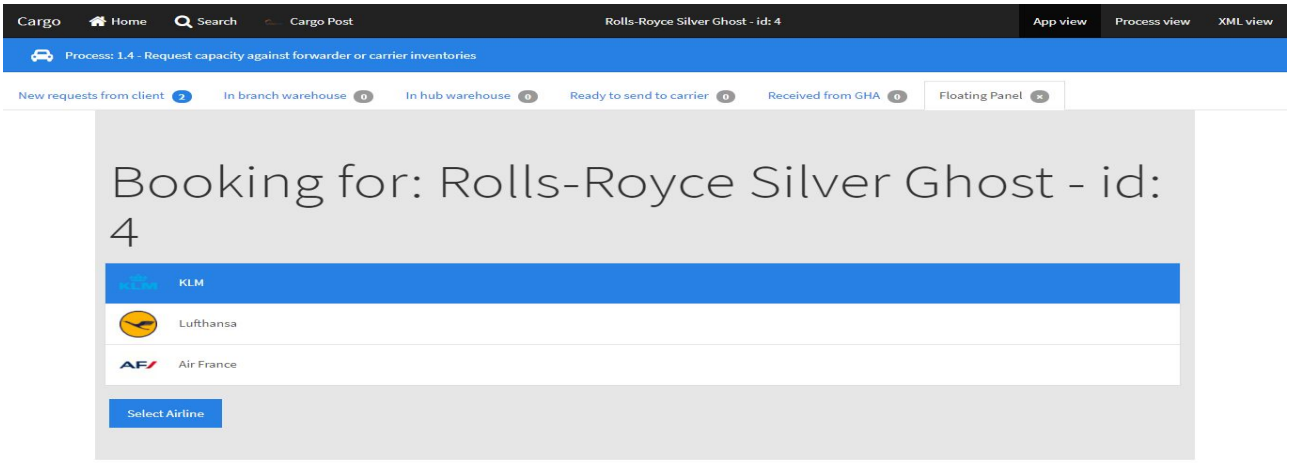
Shipments going out of the country require special documentation. In general, these include:

- Bill of entry
- Commercial invoice
- Certificate of origin
- Airway bill
- Insurance certificate
- Letter of credit
- Shipment advice
- Technical literature, installation instructions or product manuals

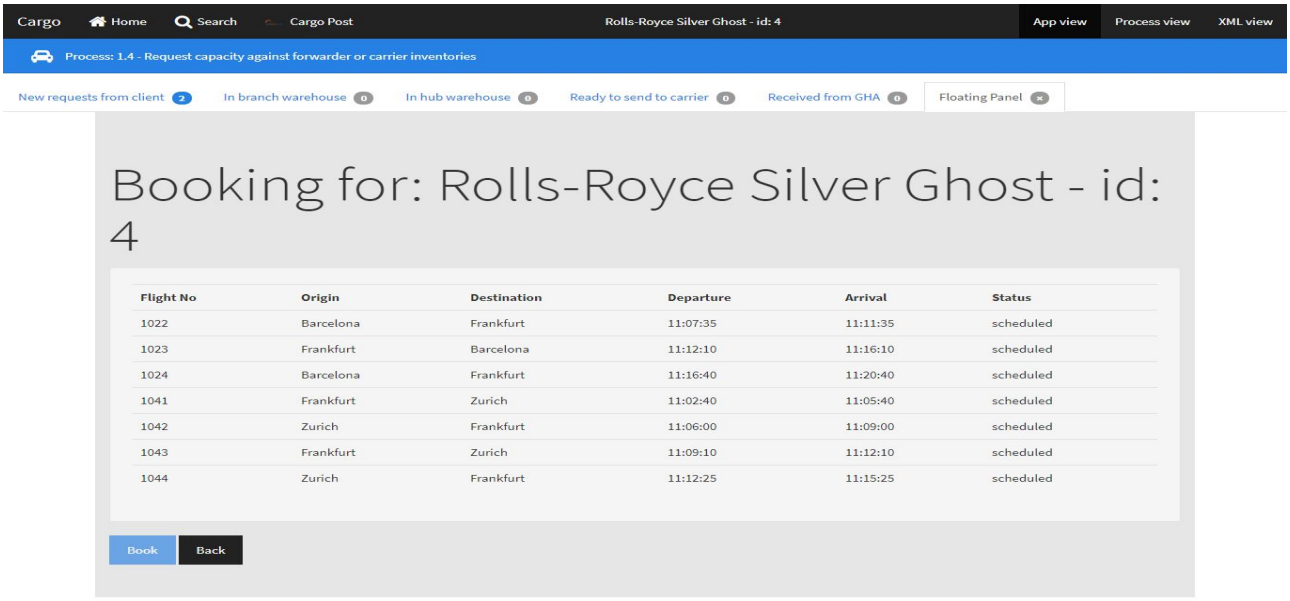
The nature and number of documents differ from country to country, and subject to the laws of the land.


Cargo
Home
Search
Cargo Post
Rolls-Royce Silver Ghost - id: 4
App view
Process view
XML view
Process: 1.4 - Request capacity against forwarder or carrier inventories
New requests from client 2
In branch warehouse 0
In hub warehouse 0
Reacy to send to carrier 0
Received from GHA 0
Received requests from clients via phone or web. Waiting for booking.
Id
Name
Process No
3
Cobalt
1.4
4
Rolls Royce Silver Ghost
1.4

Click a shipment row, to book a carrier (airline) for the shipment, as seen here:



**Click Select Airline,** to get the following screen and to book the consignment:

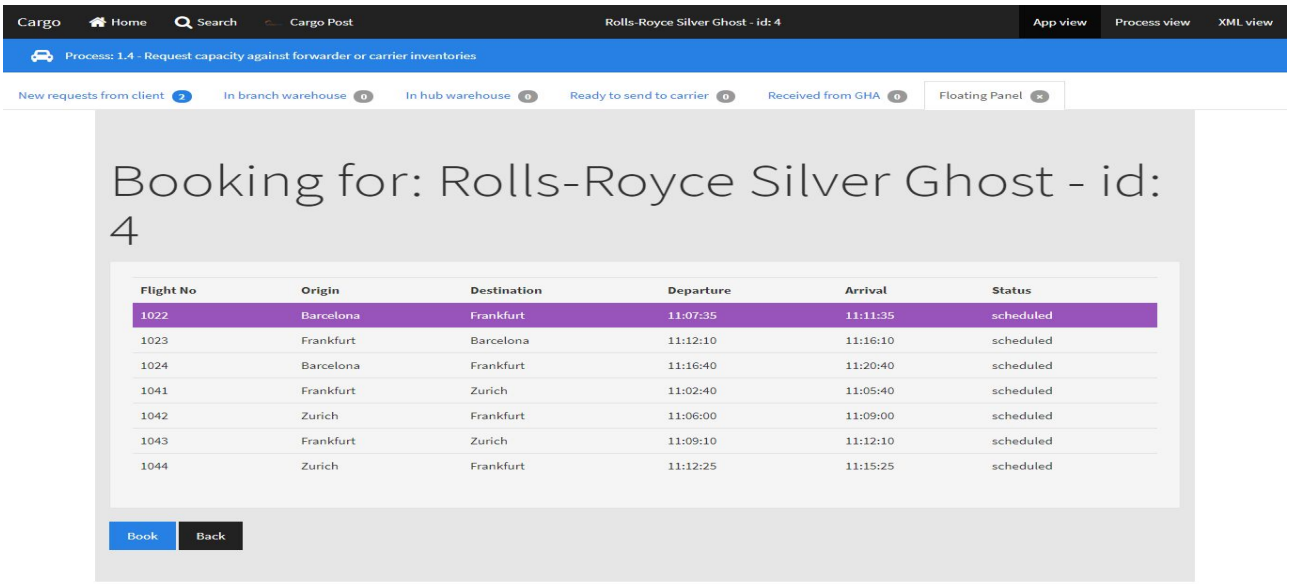



The screen contains the following information:

- Flight Number
- Origin
- Destination
- Departure
- Arrival
- Status (scheduled)

**Note:**This screen only populates flights that are scheduled to take off, in the next few hours.

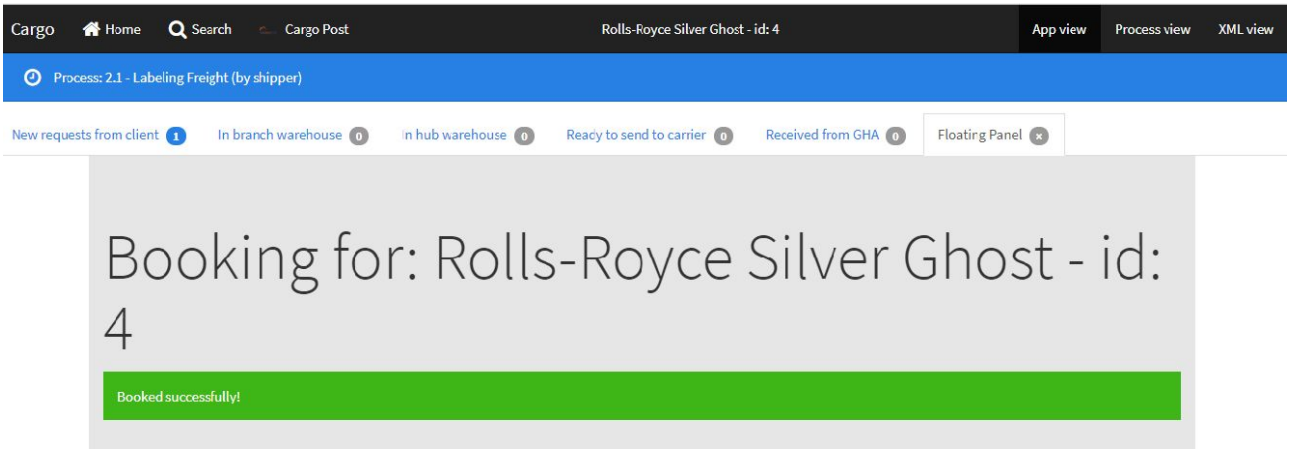
**Select** the **origin** and the **destination**, for example, Barcelona as the origin and Frankfurt as the destination, as seen here:




Click **Book**.

A Flight Data Processing System (FDPS) is at the heart of any ATC (Air traffic Control) facility. Flight Data Processing (FDPS) works with flight plan data and conducts the flight during the flight execution with respects to its flight progress and airspace organization. Information distribution within the system is updated in real time, accompanied by events identified by the flight monitoring subsystem.

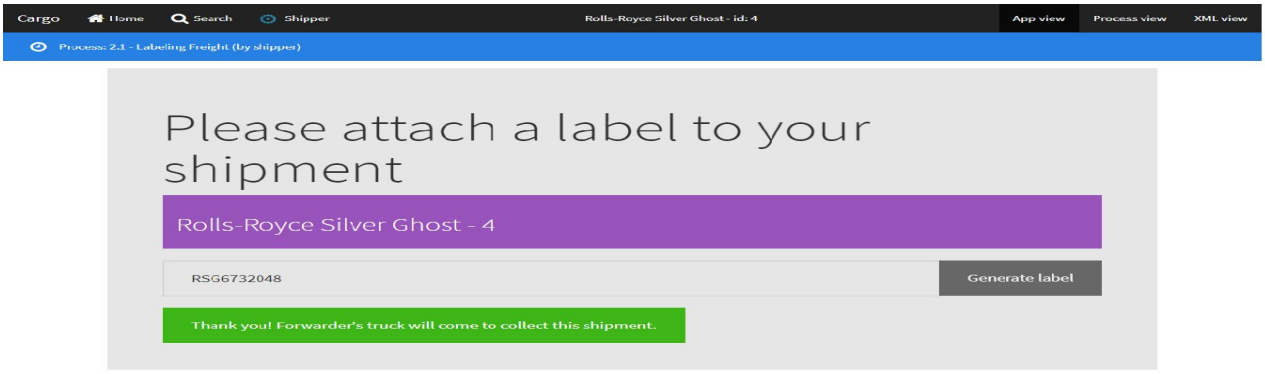
As the freight forwarder, you have successfully booked the shipment:



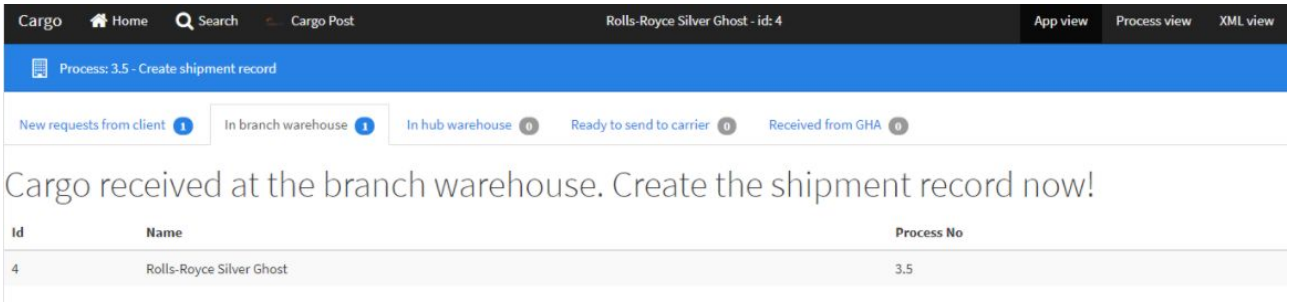

Go to **Home** > **Shipper** and click the mailbox icon, to get the following screen:

**Type** the **label serial number** or **click Generate Label** to secure the number and click **Attach label and ready your cargo for the forwarder.**

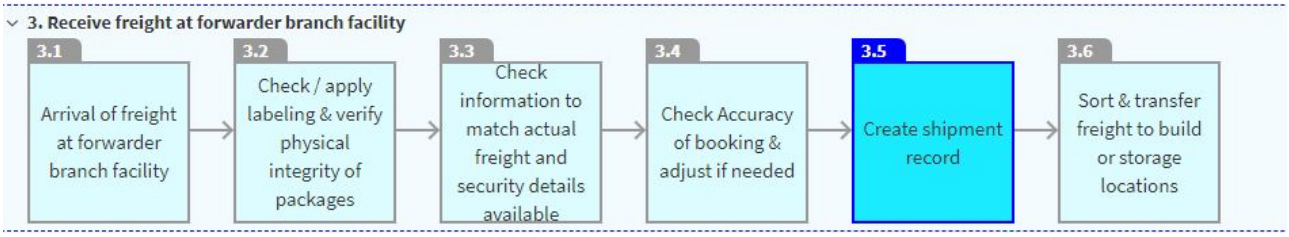
As the shipper, you have generated a shipment label, as this screen shows:



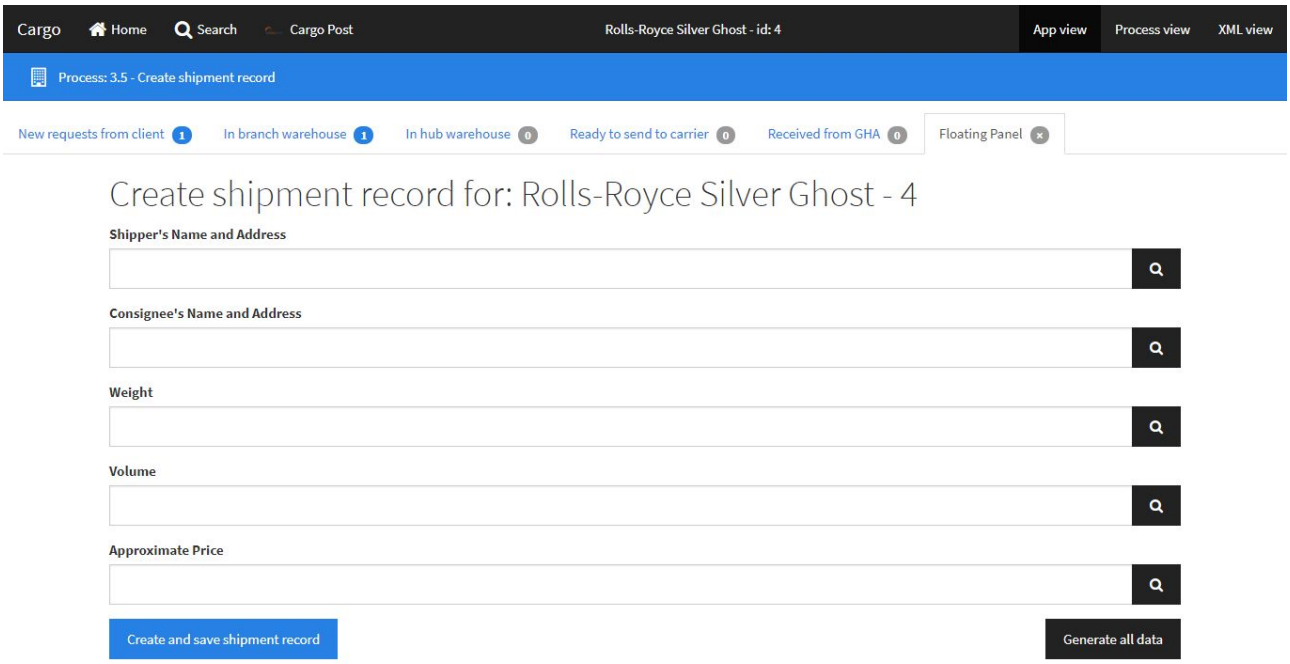
The freight forwarder has brought the shipment to the branch warehouse:




You are in process 3.5, as seen below:




**Click** the **Rolls-Royce Silver Ghost** row in the **In branch warehouse** tab, to get a blank screen of the shipment record template, as seen here:



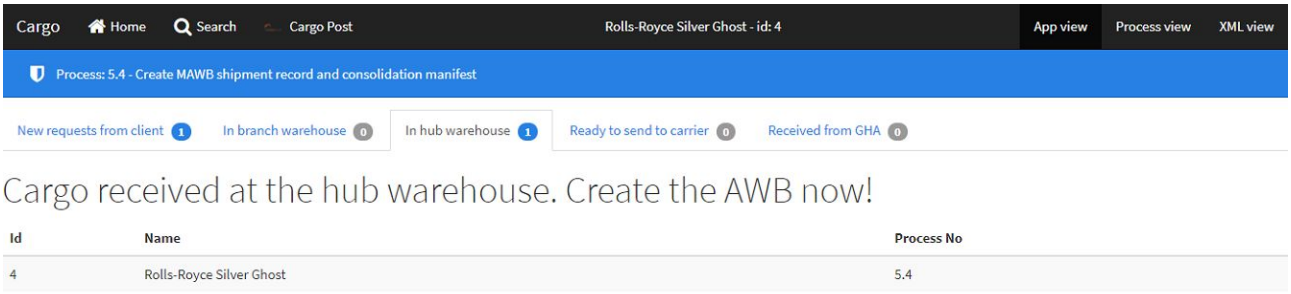

In this screen you need to populate the following fields:

1. Shipper's name and address
2. Consignee's name and address
3. Weight
4. Volume
5. Approximate price

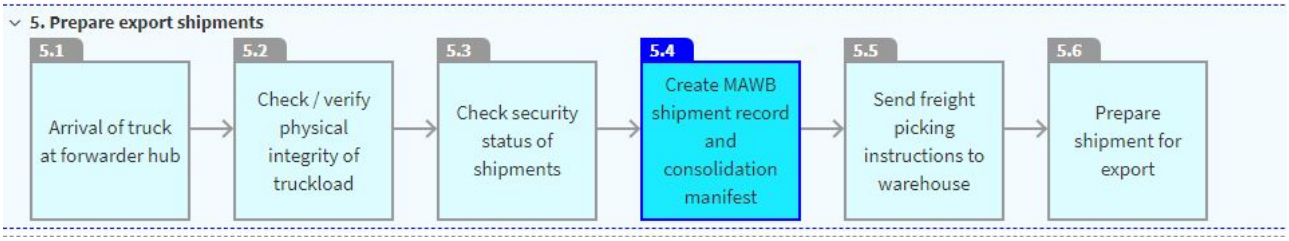
As the freight forwarder, populate  these fields by clicking on their respective icons, as seen here:

You can either type out the information or click **Generate all data**. The system will fetch all this information from the database.

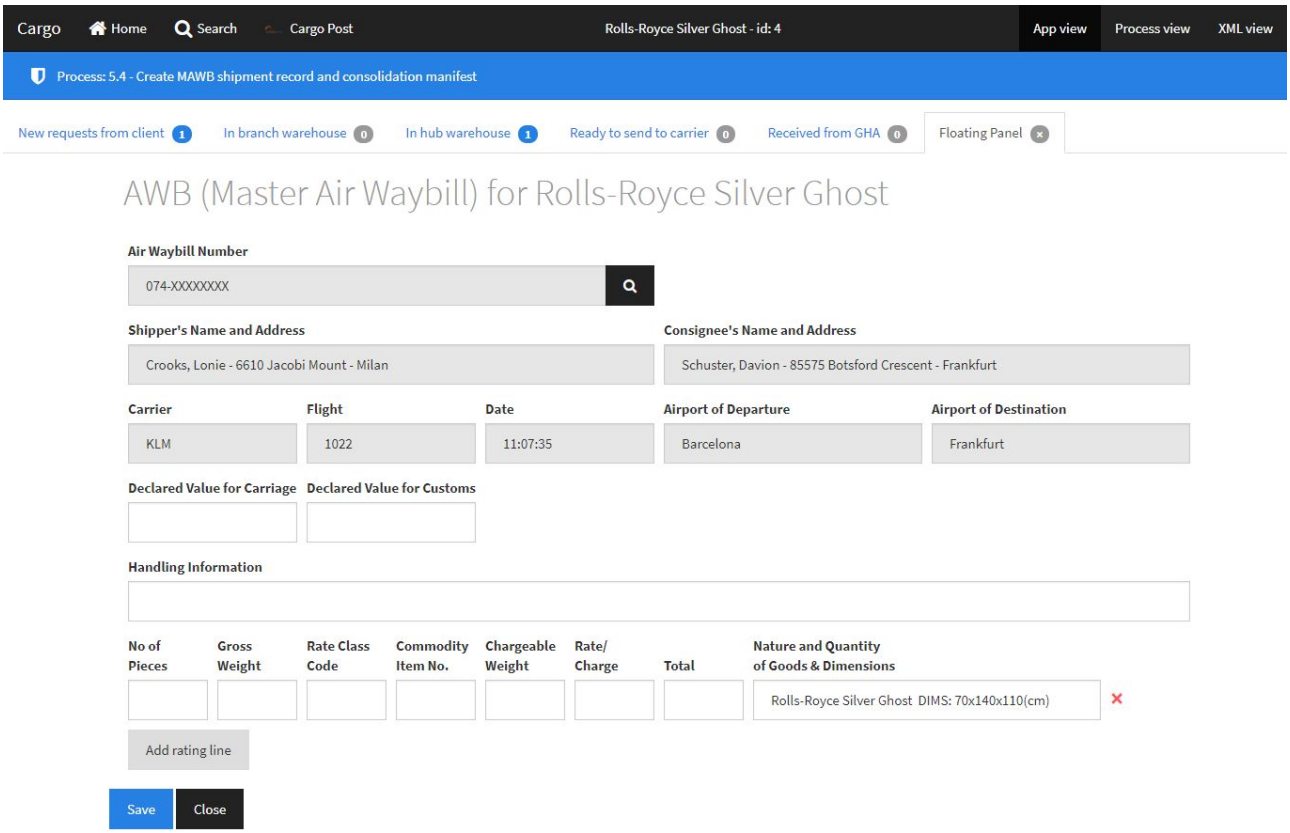
The freight forwarder has brought the shipment to the hub warehouse:




You are now in process 5.4 as seen here:




**Click** the **Rolls-Royce Silver Ghost** row in In hub warehouse, to generate the air waybill template, as seen here:




The air waybill is the most important document in the whole shipping cycle. Without it, no transhipment will be complete. Populate the following fields, including the generation of the air waybill number:

1. **Air Waybill number**: The system will generate the 11 digit air waybill number.
2. **Shipper's name and address**: Enter the name, address, city, postal code, country and telephone number of the shipper.
3. **Consignee's name and address**: Enter the name, address, city, postal code, country and telephone number of the consignee.
4. **Carrier**: Enter the three letter code for the airline, for example, KLM

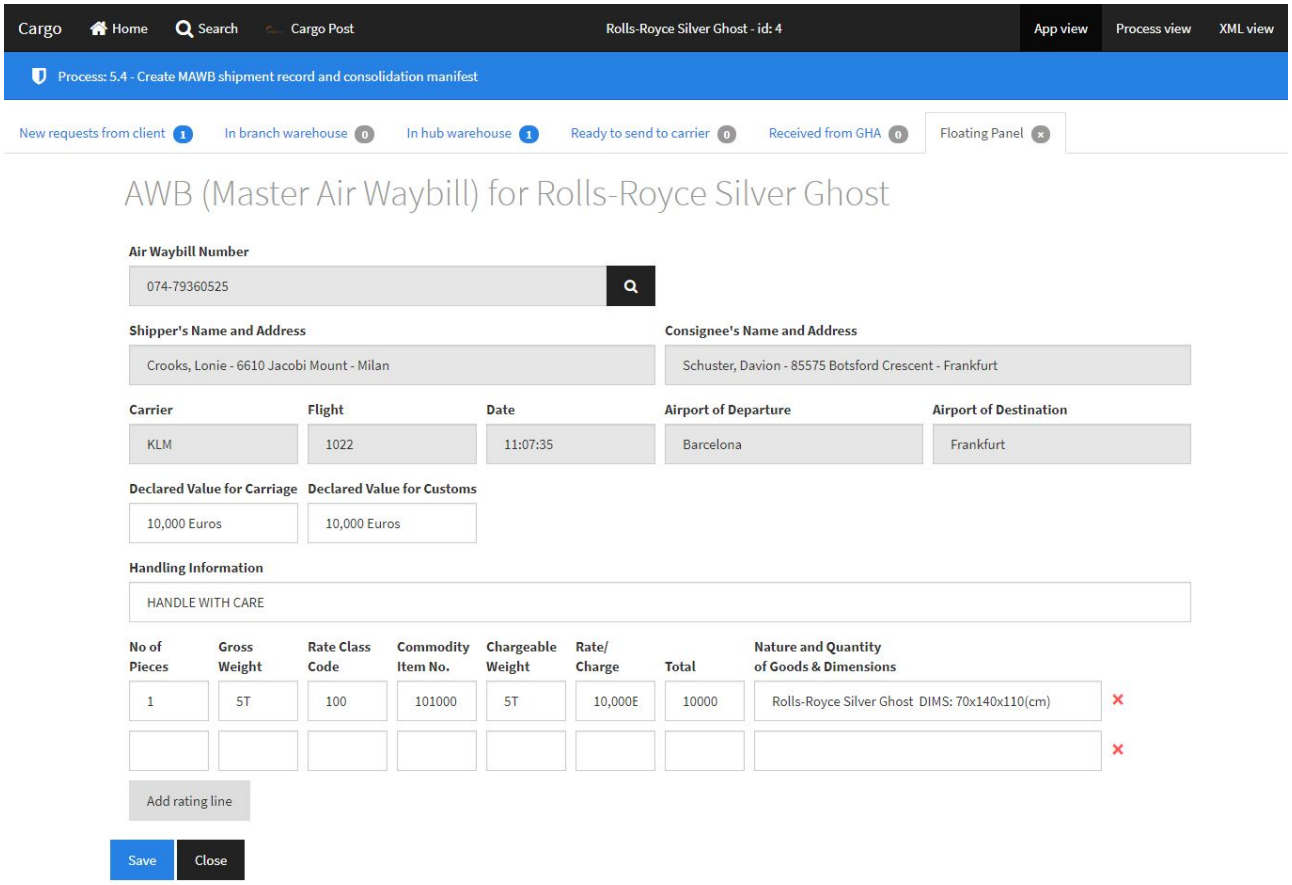
5. **Flight**: Enter the flight number, for example, KL0932.
6. **Date**: Enter the date of the flight.
7. **Airport of departure**: Enter the three letter city code, for example, VIE, for Vienna.
8. **Airport of destination**: Enter the three letter city code, for example, FRA for Frankfurt.
9. **Declared Value for Carriage**: Enter the declared value for carriage as specified by the shipper. For example, 39,000 euros for a Rolls Royce Silver Shadow 2017 edition. If there is no value, enter NVD (NO VALUE).
10. **Declared Value for Customs**: Enter a value for customs purposes as declared by the shipper as applicable. For example, 40,000 euros for a Rolls Royce Silver Shadow 2017 edition. Otherwise, leave the field blank.
11. **Handling Information**: Enter handling remarks, special instructions, identifying marks and numbers which appear on the consignment, method of packing, attachments, or instructions.
12. **Number of Pieces**: Indicate the number of pieces. Where there is more than one entry, enter the total number of pieces in the bottom row.
13. **Gross Weight**: Enter the actual gross weight of the pieces. When a ULD is used, indicate the actual tare weight as an additional line entry. Where there is more than one entry, enter the total gross weight of the shipment in the bottom row. For example, 4100.56 kilos. (Gross is net+tare. Tare is the weight of the container, or packing).
14. **Rate Class Code**: Enter the tariff level (rate class) under any of these six codes, as applicable:
    - **M**:Minimum freight
    - **C**:SCR (Specific Commodity Rates)
    - **S**:Surcharge on the shipment. This is higher than the general cargo tariff.
    - **R**:Reduced tariff, which is lesser than the general cargo tariff.
    - **N**:Normal, for example 45 kilos or under.

- **Q**:Quantity, for example, 45 kilos or above

**Important:** Consult the carrier's agent for more information on rate class code.

15. **Commodity Item Number**: Enter the commodity item number, for example, “9 UN1845” for Carbon Dioxide.
16. **Chargeable Weight**: Enter the actual weight or the dimensional weight, whichever is greater. For example, 124.5 kilos.
17. **Rate/Charge**: Enter the rate per unit, such as or a litre, kilogram or pound, for example, 0.5 euros per litre.
18. **Total Rate**: Enter the total rate of the shipment, that includes charges and surcharges, as applicable. For example, 2330 euros.
19. **Nature and Quantity of Goods & Dimensions**: Enter the description of a shipment, such as “Carbon dioxide, solid, 9 UN1845, 2 X 25 kg.”
20. **Signature of Shipper or Agent**: Get the the signature and stamp of the shipper or agent.
21. **Signature of Issuing Carrier:** Get the signature and stamp of the concerned airline authority.

**Note**: **Click Add rating line**, to add relevant information to the air waybill. More rows will appear, as seen below:

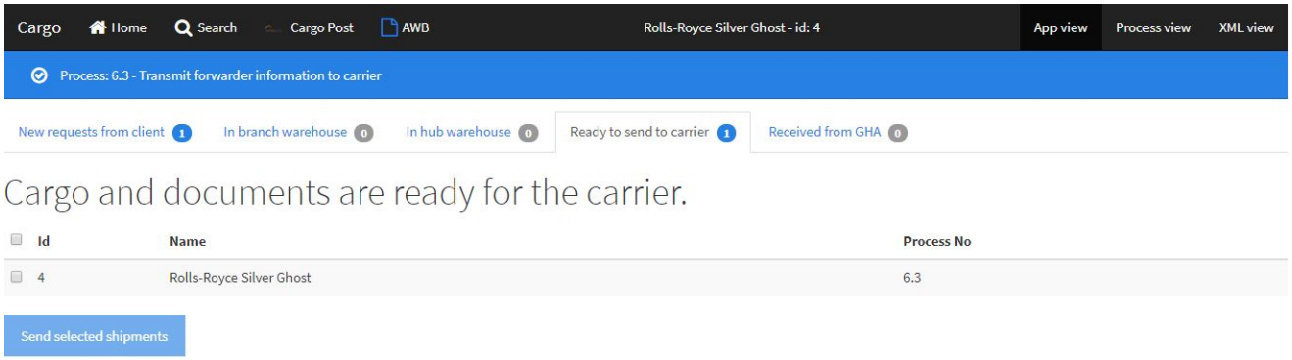



**Click Save > Submit > Close,** to get the final MAWB, as seen here:

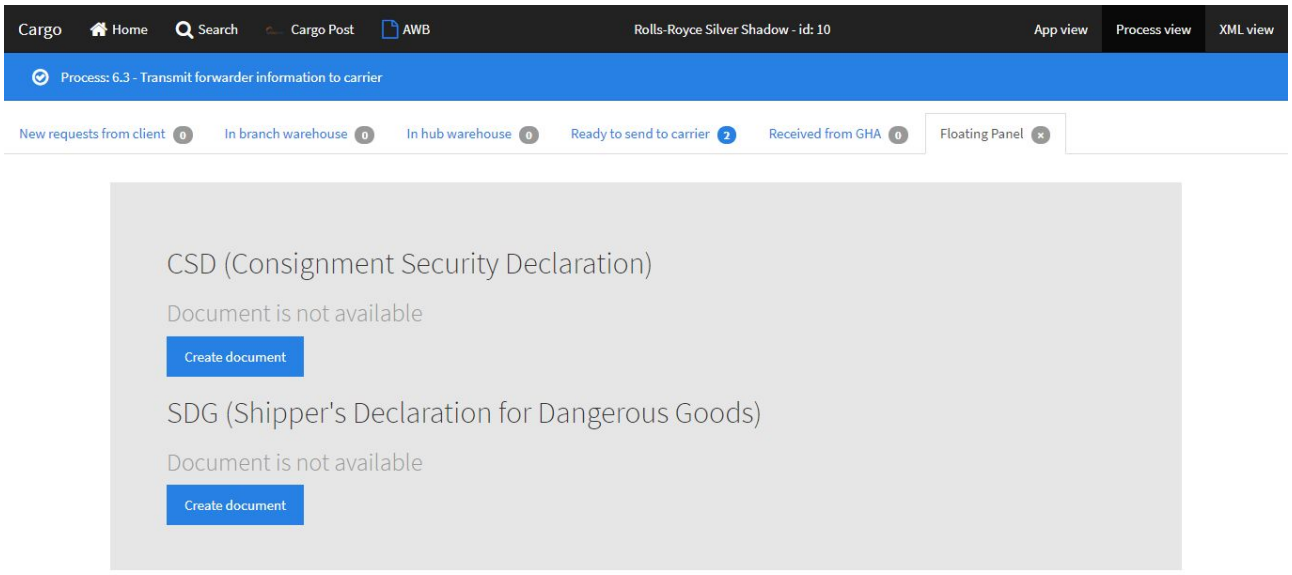
Cargo
Home
Search
Ground Kings
AWB
Rolls-Royce Silver Ghost - id: 4
App view
Process view
XML view
Process: 16.3 - Check shipment details against expected (after breakdown)
Received from forwarder 0
Collect to load 0
Unload flight 0
Customs release status 0
Handover to forwarder 0
Floating Panel
AWB (Master Air Waybill) for Rolls-Royce Silver Ghost
Air Waybill Number
074-49642143
Shipper's Name and Address
Crooks, Lonie - 6610 Jacobi Mount - Milan
Consignee's Name and Address
Schuster, Davion - 85575 Botsford Crescent - Frankfurt
Carrier
KLM
Flight
1022
Date
11:07:35
Airport of Departure
Barcelona
Airport of Destination
Frankfurt
Declared Value for Carriage
Declared Value for Customs
Handling Information
No of Pieces
Gross Weight
Rate Class Code
Commodity Item No.
Chargeable Weight
Rate/ Charge
Total
Nature and Quantity of Goods & Dimensions
1
5T
100
101000
5T
10,000
10000
Rolls-Royce Silver Ghost DIMS: 70x140x110(cm)

.

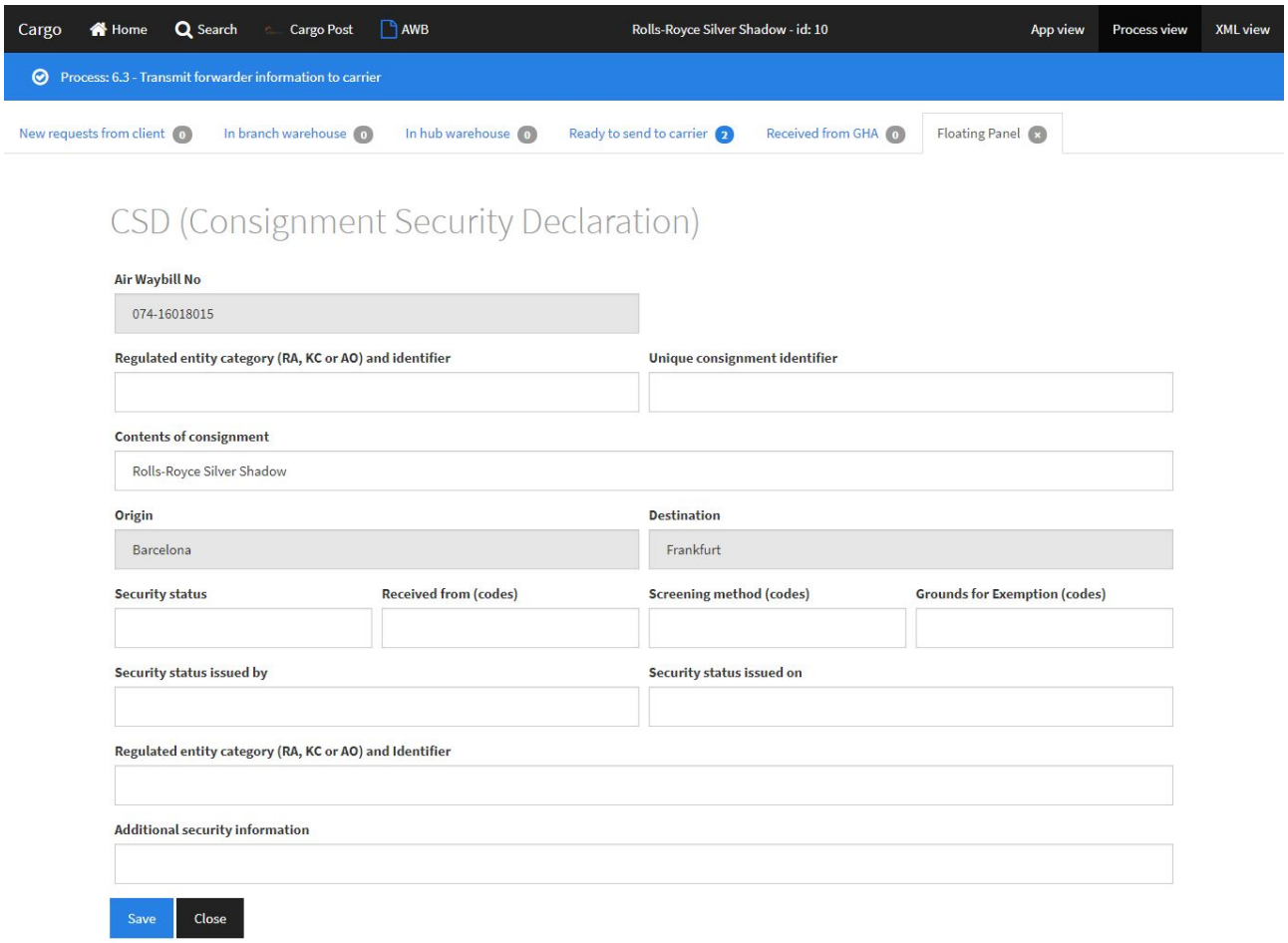
The freight forwarder readies the shipment for the carrier:




You are now ready to create the SDG and the CSD documents, as seen below:



**Click CSD** to create the Consignment Security Declaration ( CSD) and **click SDG** to create the Shipper's Declaration for Dangerous Goods (SDG) template, as seen here:




In the CSD template, make sure to populate fill out the following fields:

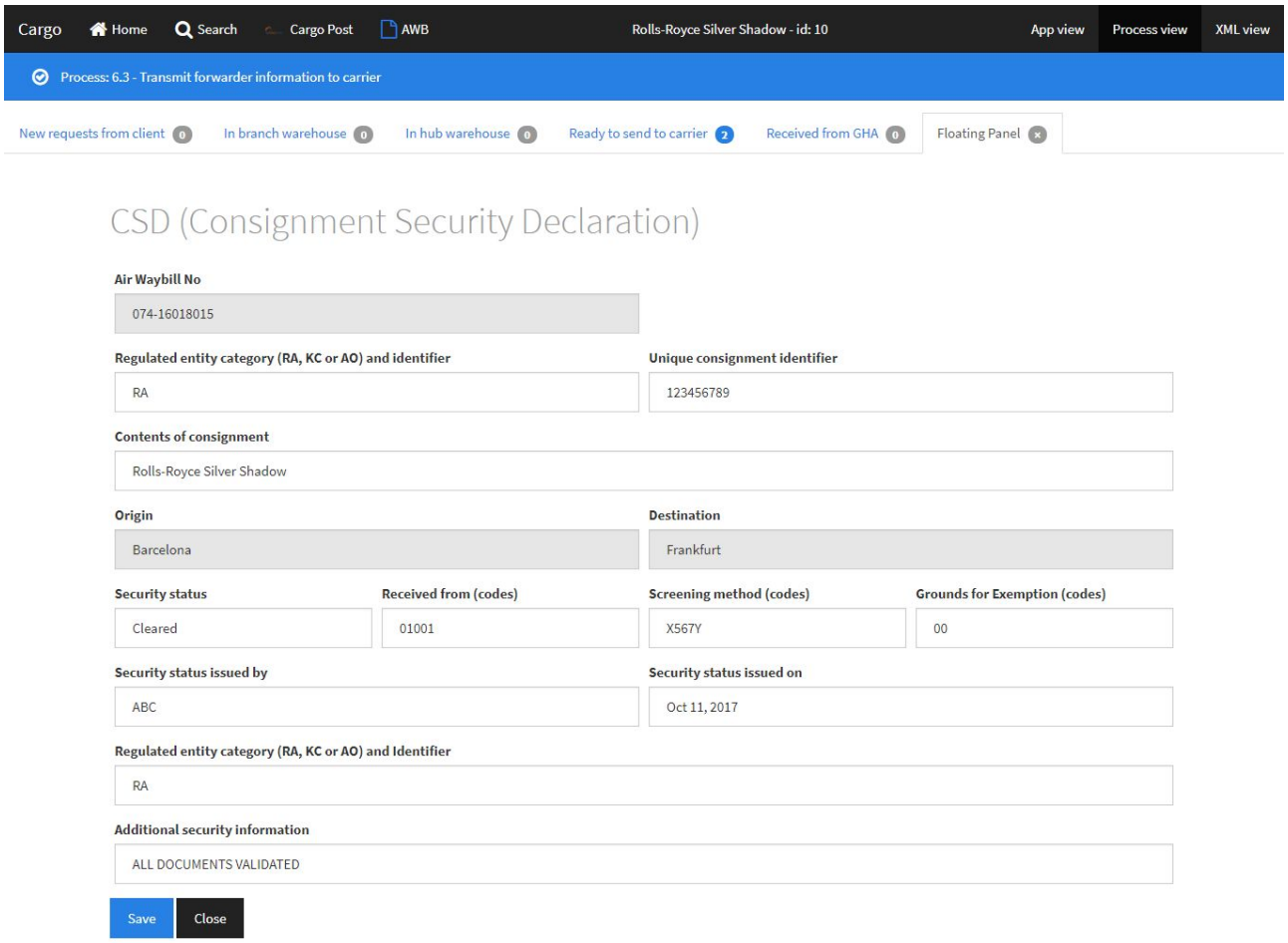
1. **Regulated entity category (RA, KC or AO) and identifie**r: Enter the unique entity code for RA, KC or AO, as applicable. (RA = Regulated Agent, KC= Known Consignor, and AO= Aircraft Operator.)

2. **Unique consignment identifier**: Enter the identification of the consignment. This may be an air waybill (format is nnn nnnnnnnn), a house bill or a mail consignment identifier. But in a majority of cases, it is the air waybill.
3. **Contents of consignment**: Enter the consignment details, for example, 1 Rolls Royce Silver Shadow. Cobalt blue.
4. **Origin**: Enter the IATA three letter airport code, from where the consignment has originated, for example, VIE for Vienna.
5. **Destination**: Enter the destination IATA three letter airport code, for example, FRA for Frankfurt.
6. **Transfer/Transit points**: Enter the three letter transit airport code, if any. For example, MUN, (Munich) if the flight is VIE-MUN-FRA.
7. **Security Status**: Enter any of these three codes, as applicable:
    i. SPX, if it is a regular passenger, cargo and mail aircraft.
    ii. SCO, if it is an all cargo and all mail aircraft.
    iii. SHR, if it is a high risk requirement all cargo and all mail aircraft.
8. **Received from (codes)**: Enter the code from whom received, for example, RA, KC or AO. (RA = Regulated Agent, KC= Known Consignor, and AO= Aircraft Operator.) **Note**:If the fields, “Grounds for Exemption” and “Other Screening Method” are not filled, then you cannot leave the “Received from” field blank.
9. **Screening Method (codes)**: This entry identifies codes assigned to the application of screening methods and technologies that are used to prevent act of unlawful interference. Enter any or more of these IATA specified codes, as applicable:
    - **PHS**-Physical Inspection and/or hand search
    - **VCK**-Visual check
    - **XRY**-Xray equipment
    - **EDS**-Explosive detection system
    - **RES**-Remote explosive scent tracing explosive detection dogs
    - **FRD**-Free running explosive detection dogs

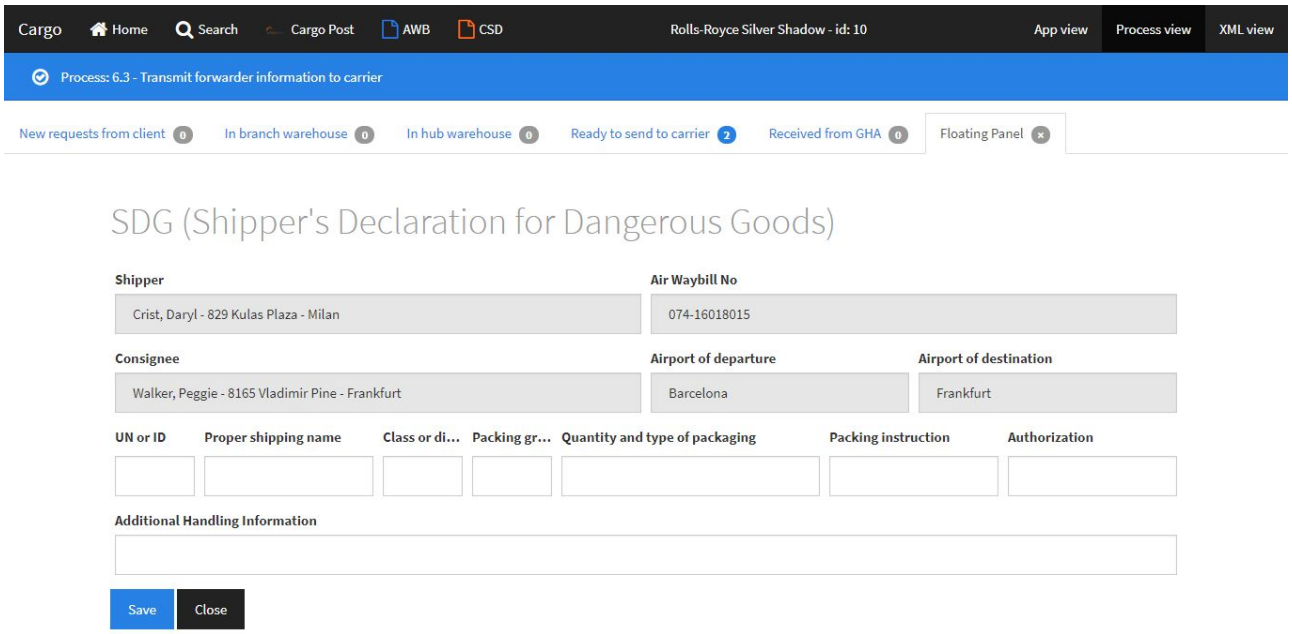
- **VPT**-Vapor trace
- **PRT**-Particle trace
- **MDE**-Metal Detection Equipment
- **AOM**-Subjected to any other means. You must complete this entry by using free text that specifies what other mean was used to secure the shipment. For example, the use of a hand held scanner.

10. **Grounds for Exemption (codes)**: Enter free text, if there is exemption, for example, "*free shipment of study material to under-privileged children in Germany*."
11. **Other Screening Method(s)**: Enter free text, if you encounter any screening situation, not covered under point 11, i.e, Screening Method (codes). For example, the shipment "*is too large for a scanner and was thus manually scanned and physically checked*."
12. **Security status issued by**: Enter the employee code of the RA, KC or AO.
13. **Security status issued on**: Enter the date of creating the CSD.
14. **Regulated entity category (RA, KC or AO) and Identifie**r: Enter the identifier that takes custody of the cargo and accepts the security status originally issued by the RA, KO or AO. For example, this can be the employee code of a security official, accepting responsibility for the security of the shipment.
15. **Additional security information**: Enter any additional security information that may be required by an ICAO Member State, for example, a national regulation, applicable to the responsibilities in the event of a false declaration, or any applicable emergency amendment. For example, the attachment of SAD (Single Administrative Document) required for custom purposes into the European Union.

This is how the fully populated CSD template should look like:




**Click SDG** to generate a semi filled SDG template, as seen here:



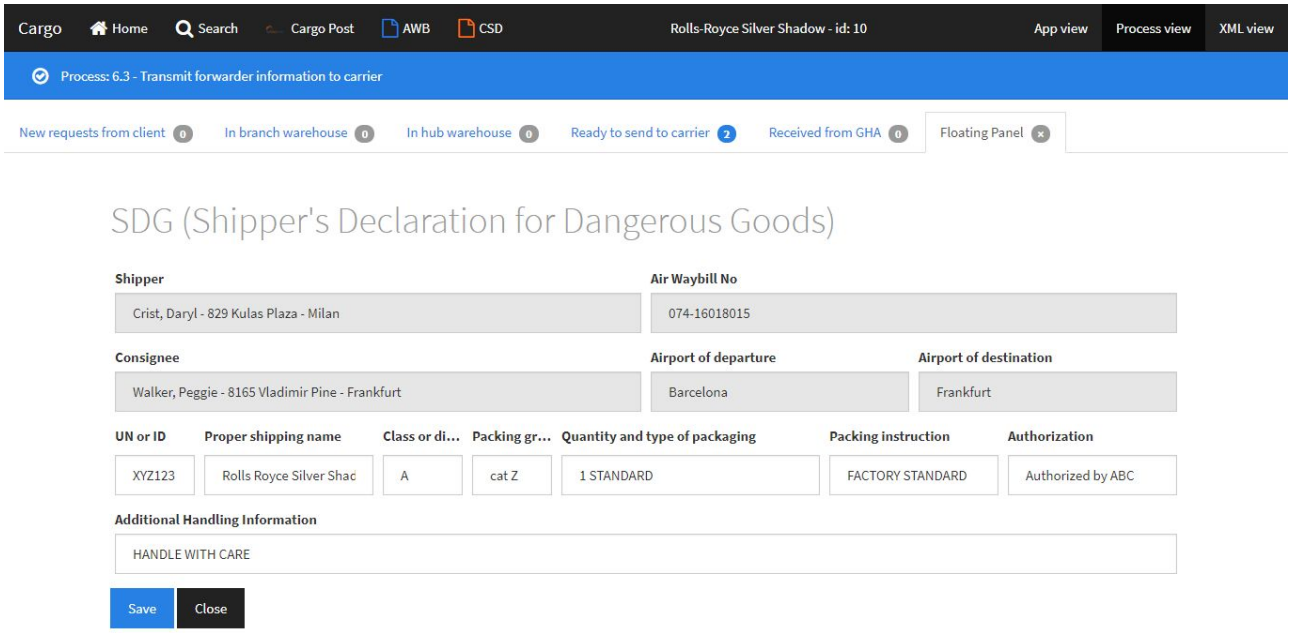

Here are these fields that are to be populated in the SDG:

1. **Shipper**: Enter the full name and address of the shipper.
2. **Air Waybill number**: The system will generate the airway bill.
3. **Consignee**: Enter the full name and address of consignee.
4. **Transport Details**: Specify if there are aircraft limitations, such as the *"the consignment complies with the limitations for passenger and cargo aircraft, or if the consignment is limited to cargo aircraft only*." Strike out the box that does not apply.
5. **Airport of Departure**:Enter the full name of the airport or city of departure. The three-letter airport code is not acceptable. This information can be left blank and completed by the agent or airline.
6. **Airport of Destination**: Enter the full name of the airport or city of destination. The three-letter airport code is not acceptable. This information can be left blank and completed by the agent or airline.

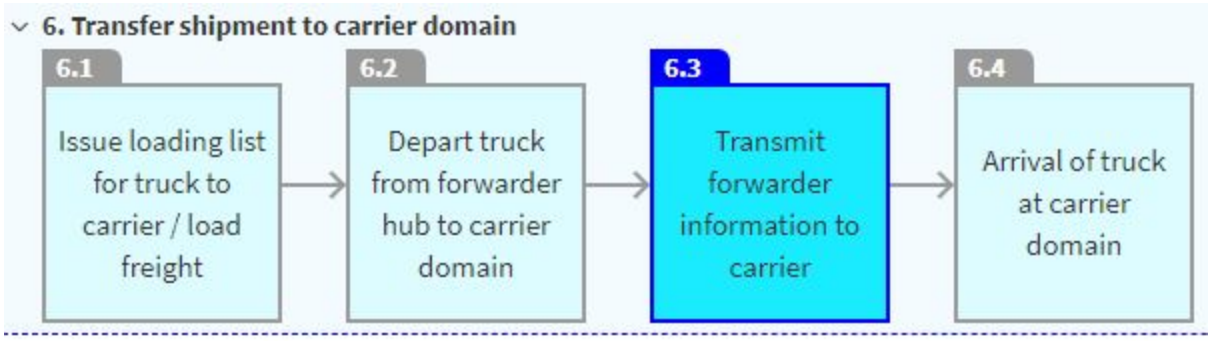
7. **Shipment Type**: Specify if the shipment is Non-Radioactive or Radioactive. strike out the box that does not apply.
8. **UN or ID**: Specify the UN or ID number from Column A in Section 4.2 of the DG (Dangerous Goods) list, that records over 4,000 Dangerous Goods. Note that all entries begin with UN with one exception, which applies to consumer commodities, which is ID 8000. (https://www.unece.org/fileadmin/DAM/trans/danger/publi/unrec/English/part3.pdf)
9. **Proper shipping name**: Specify the proper shipping name found in Column B of Section 4.2 of the DG list. For example, AMMONIUM PICRATE dry or wetted with less than 10% water, by mass. Note that some entries may require you to add the technical name of the product in parenthesis after the proper shipping name. This requirement is indicated by a star.
10. **Class or division**: Enter the Class or division as specified in column 3 of section 4.2 of the DG list. For example, “1.1D” for the above mentioned example of a shipment of ammonia.
11. **Packaging group**: Enter the packing group as per column 6 of the DG list. In most cases, the DG list does not specify the UN packing group. Then you may leave the field blank.
12. **Quantity and type of packaging**: Enter the quantity and type of packaging. For example, 125 kilos of ammonium picrate in 25 kg glass jars.
13. **Packing instruction**: Enter the packaging instruction as specified in column 8 of the DG list. For example, "P112(a)  (b) or (c)" for a shipment of ammonia, as mentioned in the earlier points.
14. **Authorization**: Get or attach the required authorization to ship the consignment by air. In the European Union, EASA (European Aviation Safety Agency) is one such body (https://www.easa.europa.eu/), like the DOT (Department of Telecommunication) in the US.

15. **Additional Handling Information**: Enter any specific handling information relevant to the consignment, such as the emergency response telephone number for shipments, for large quantities, or high value items, or dangerous goods, such as ammunition cartridges. Or "*explosive material. Store away from sunlight*." Or *Infectious substance for laboratory testing.Do not open*"
16. **Declaration**: This will be printed in the SDG in its standard global format.
17. **Name of Signatory**: Enter the name of the person actually signing the shipper's declaration.
18. **WARNING**: This is a statutory warning that appears in the SDG, by default. You do not have to fill out any information.

Here is the filled out SDG form.

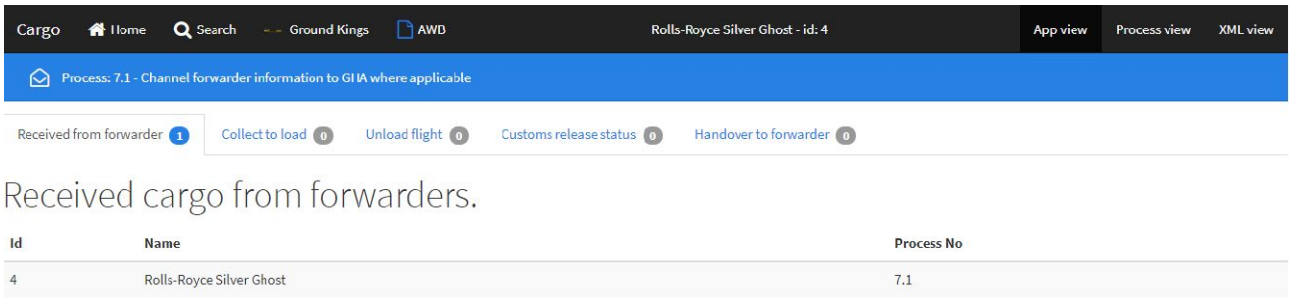



You are now in process 6.3, as seen here:

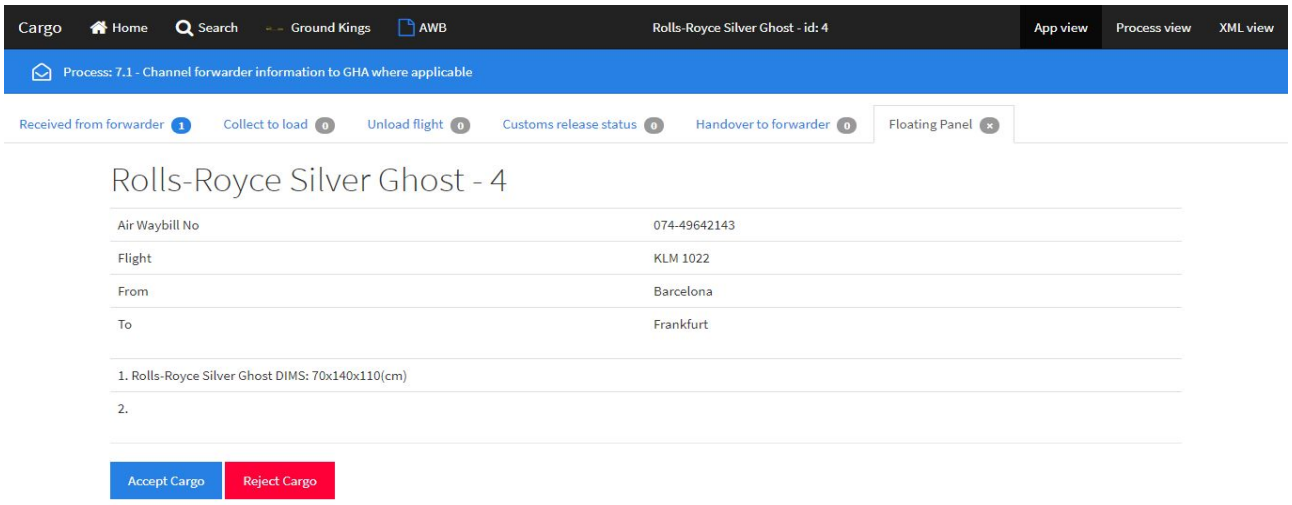



**Check** the **Rolls-Royce Silver Ghost** row and click **Send selected shipments**.

Go to **Home** > **Ground Kings** (GHA of KLM), to get the following screen:



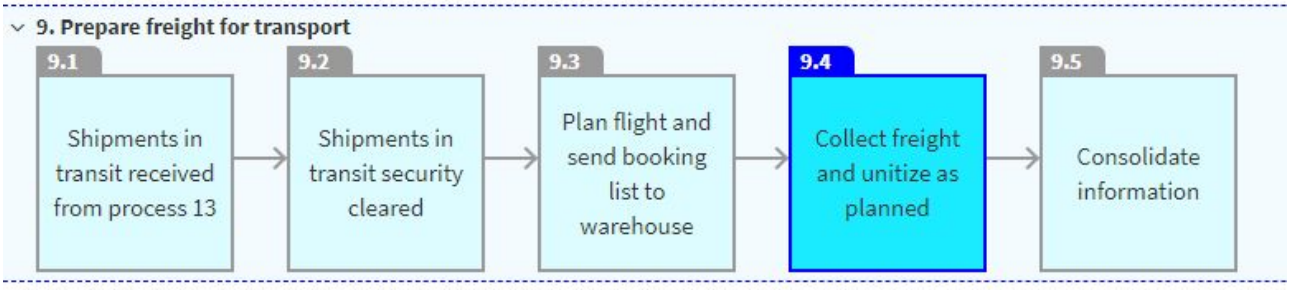

**Click** the **Rolls-Royce Silver Ghost** row in the **Received from forwarder** tab, to get the following screen:

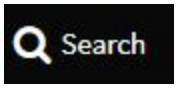



As the GHA, you have the option to either accept the cargo, or reject it, if need be.

When you click **Accept Cargo**, you will get the **Accepted! Close this panel** tab. **Click this tab**, to get the  Rolls-Royce Silver Ghost row in the Collect to load Pane.

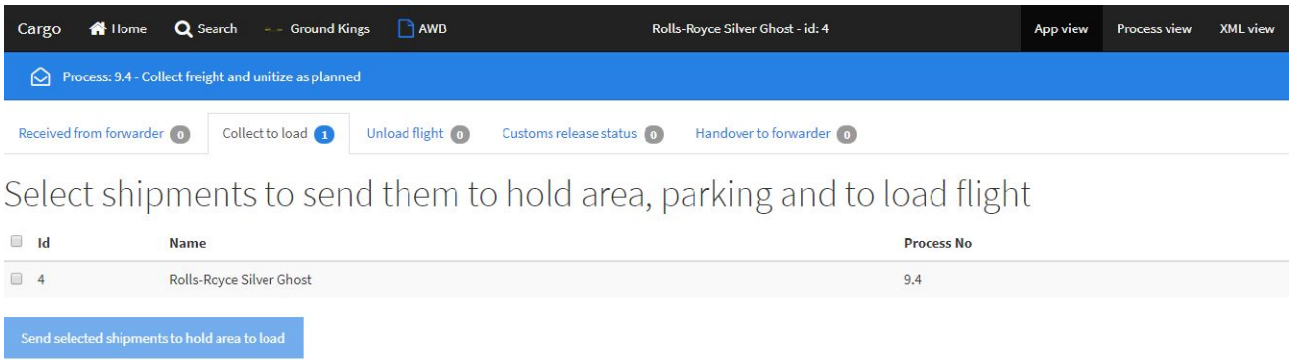
You are now in process 9.4, as seen here:




**Note:** A shipment can also get rejected, for various reasons. In such a case, the rejected item will be archived, for reference. You can view the list of rejected shipments by using the 

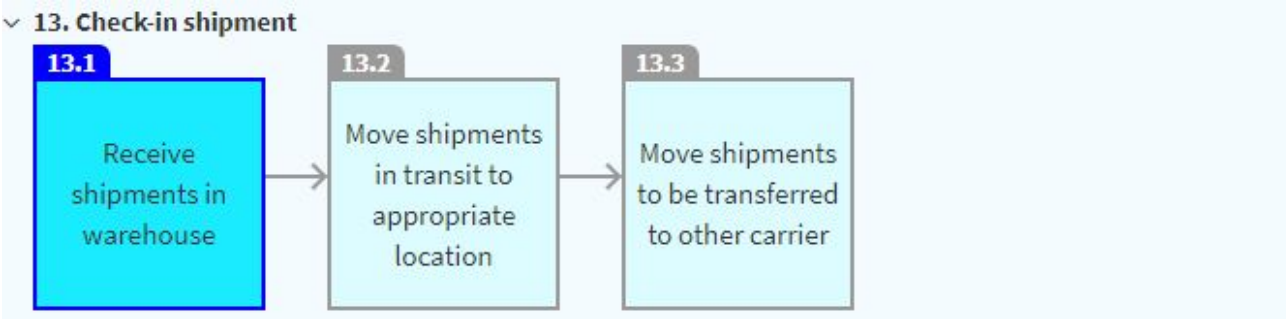
option.

**Click Collect to Load** pane, to get the following screen:

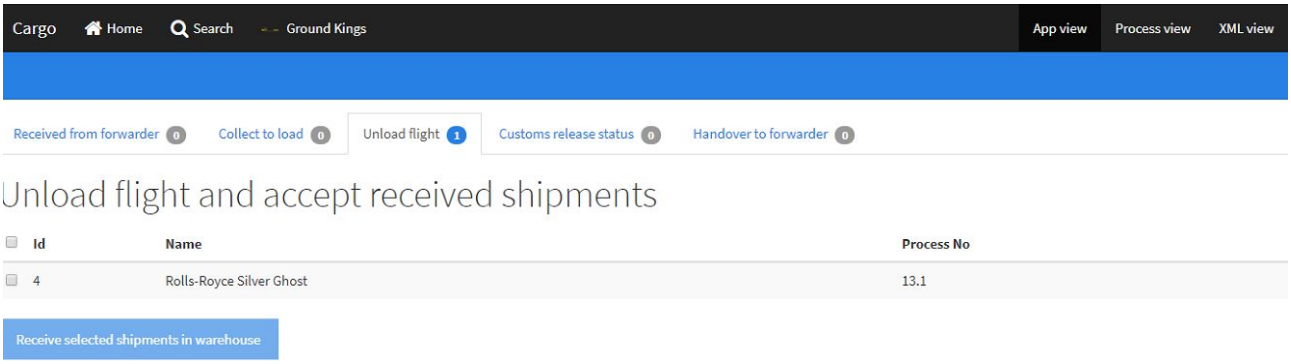



**Click the Send selected shipments to hold area to load tab, to reach the following screen:**

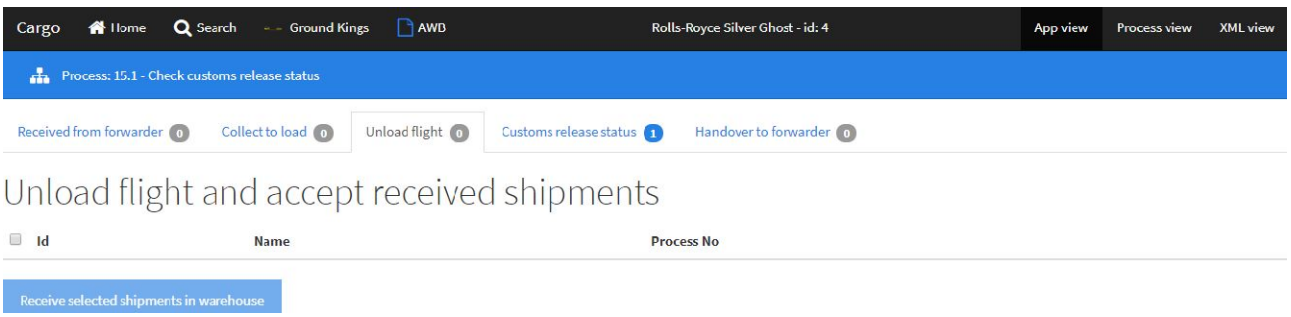
You are in process 13.1, as seen here:



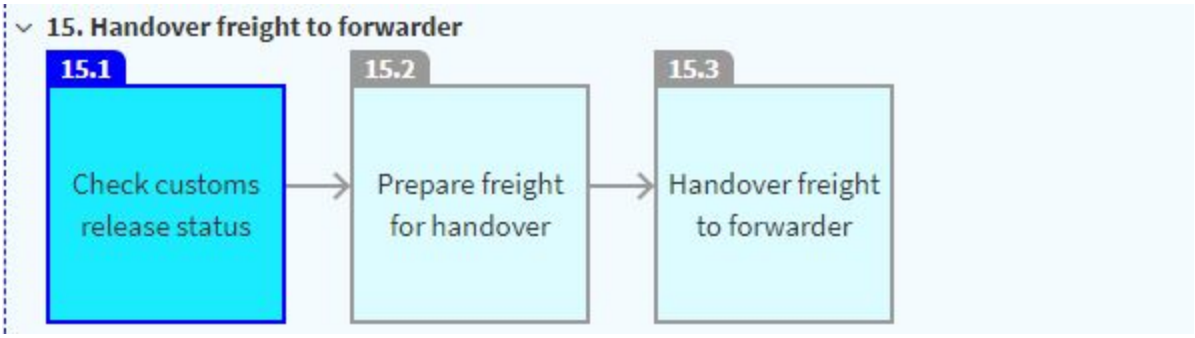

**Click the Unload flight** pane, to view the following screen:



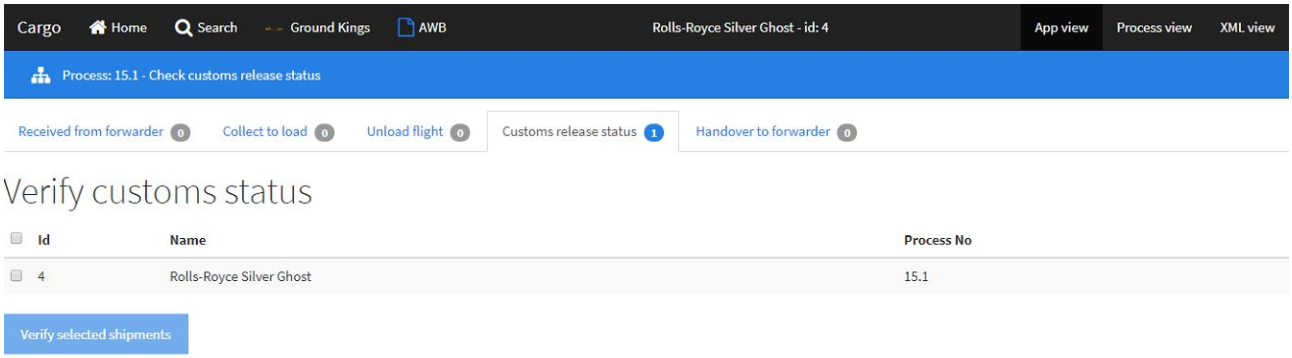

Check the **Rolls-Royce Silver Ghost** row and click **Receive selected shipments in warehouse**, to get the following screen:



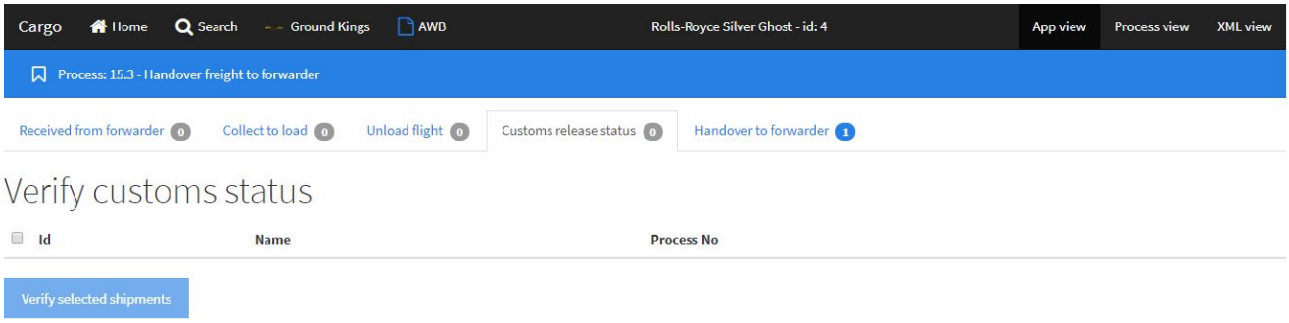
You have now reached 15.1 in the process, as seen here:



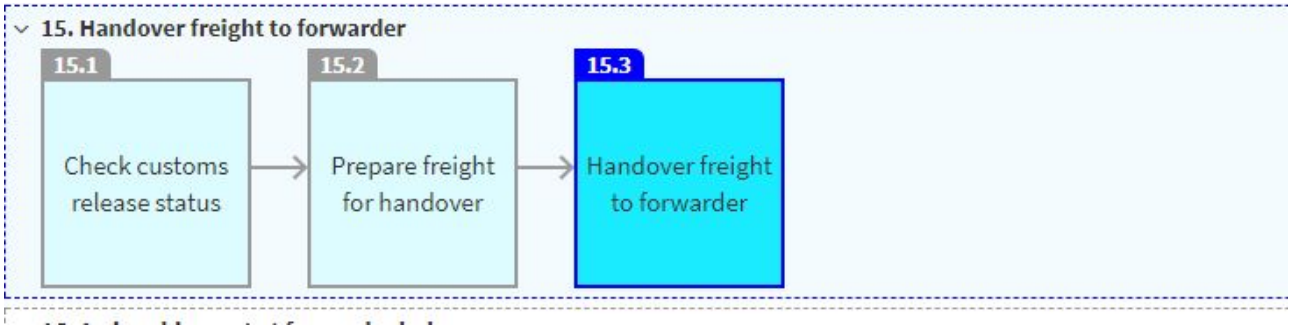

**Click** the **Customs release status** pane, to get the following screen:



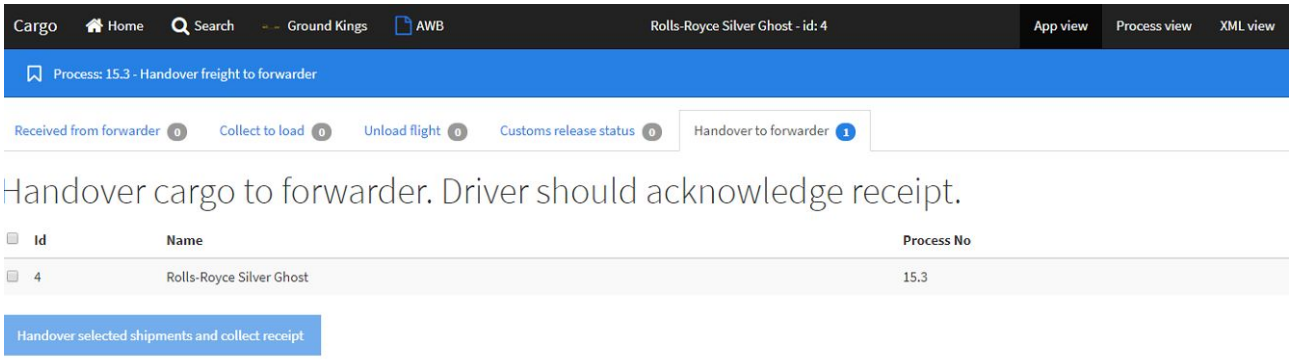

**Check** the **Rolls-Royce Silver Ghost** row and click **Verify selected shipments,** to get the following screen in the Handover to forwarder pane:



You are now at process 15.3, as seen here:



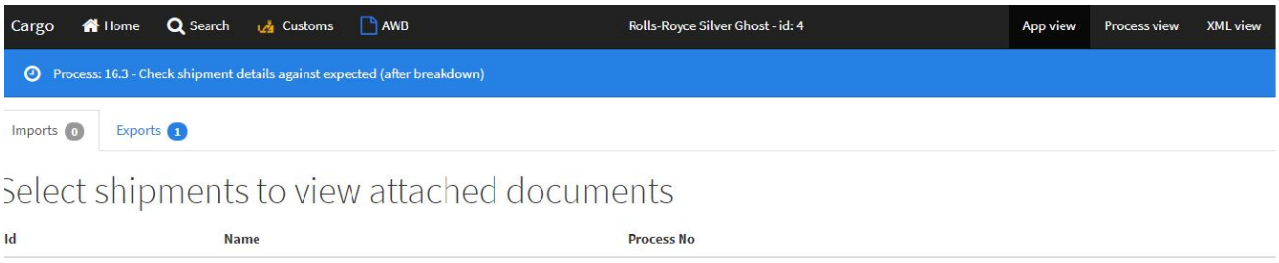

**Click** the **Handover to forwarder** pane, to get the following screen:



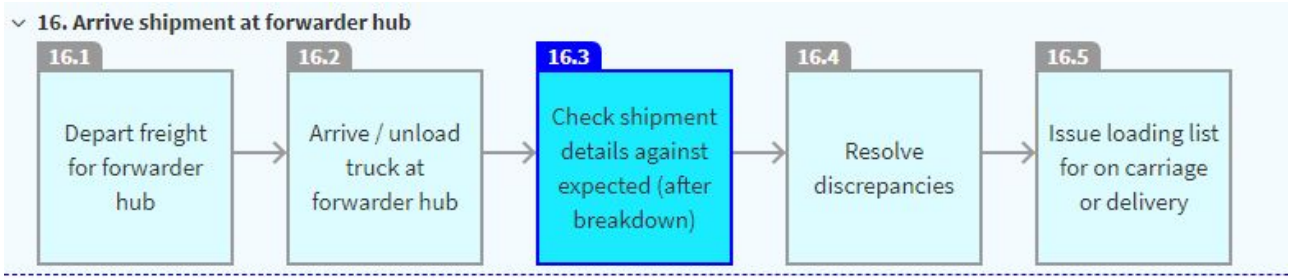

Check the **Rolls-Royce Silver Ghost** row and click **Handover selected shipments and collect receipt.**

The shipment has moved from the freight forwarder and the origin GHA to Customs.

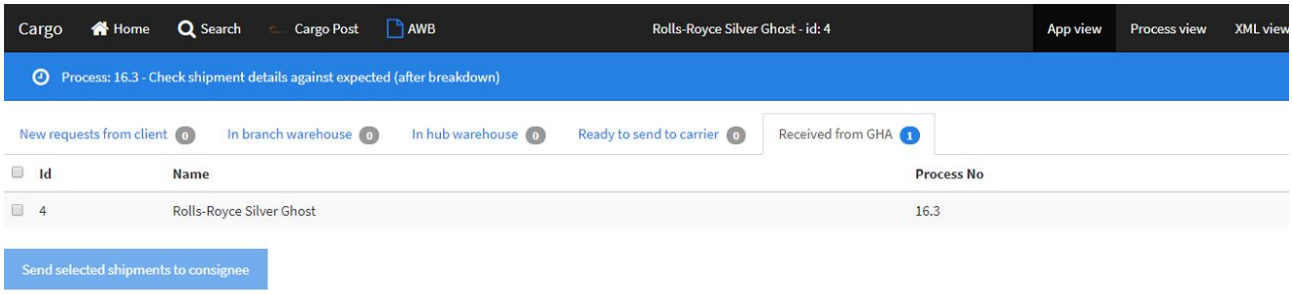
Go to **Home > Customs**, to view the following screen:



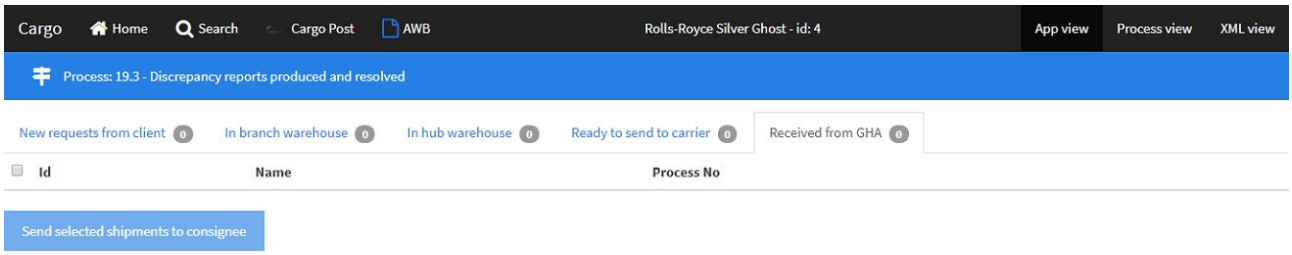

You have now reached 16.3 in the process, as seen here:



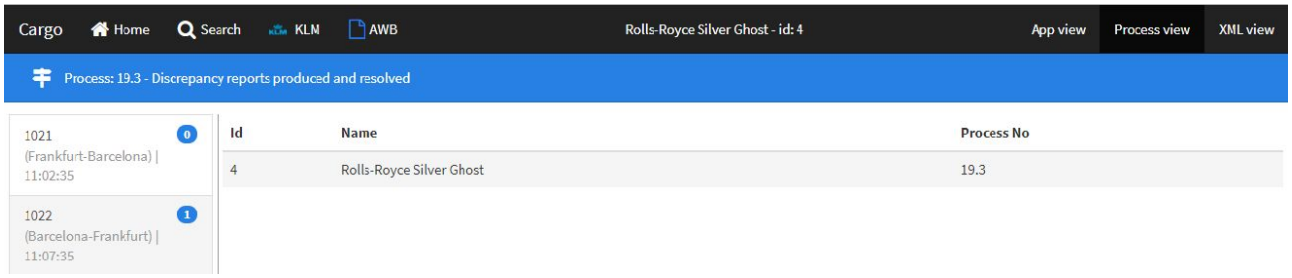

Go to **Home > Freight Forwarder** to view the following screen:



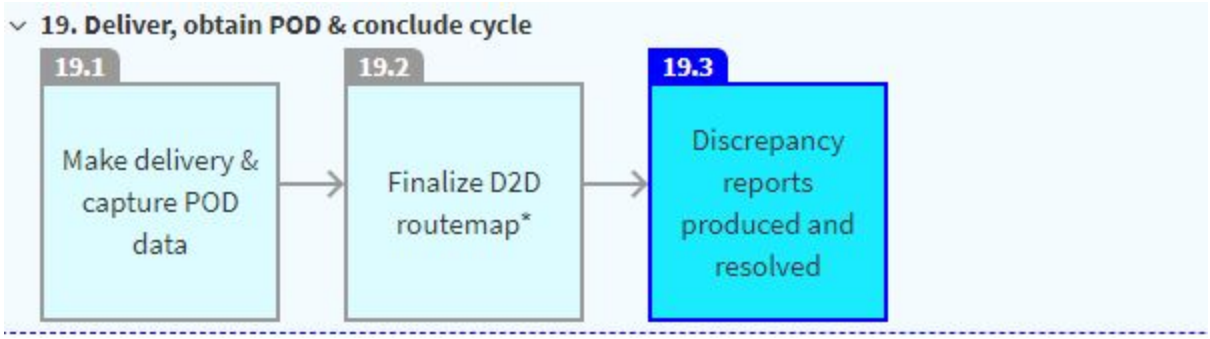

Click **Send selected shipments to consignee** to reach the following screen:




This is the view from the carrier's phase of the cycle:




You have now reached 19.3 in the process and the end of the shipment cycle.

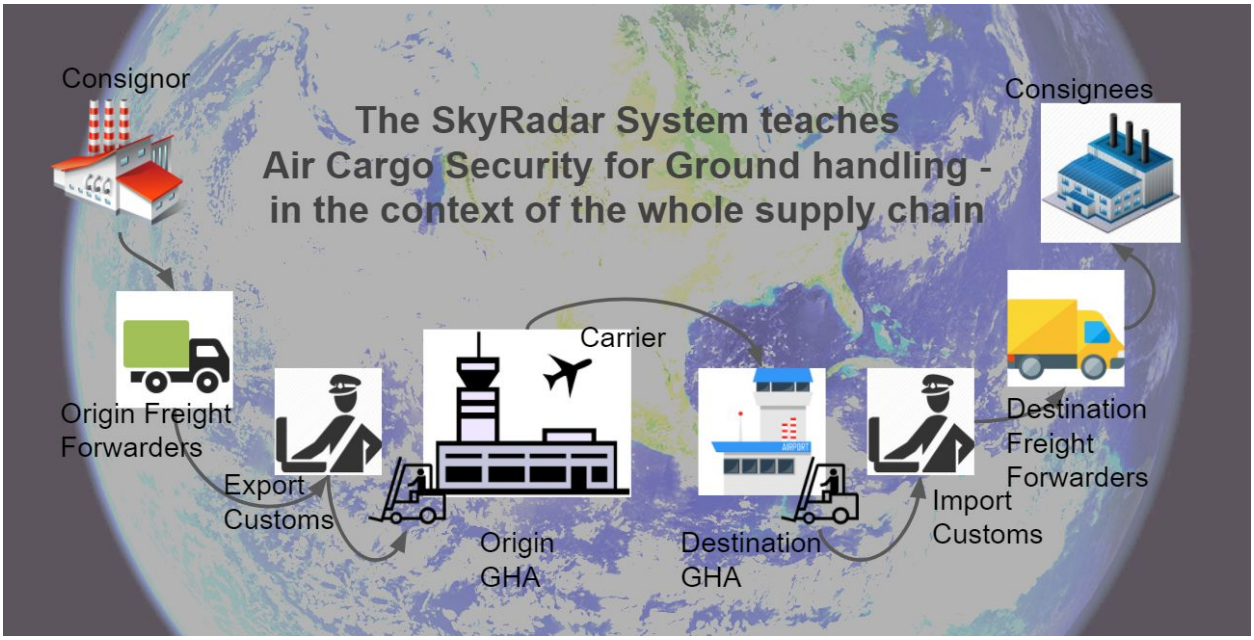



**Congratulations! You have completed the first scenario of the e-Cargo training, that is, understanding the shipment booking process.**

**Note:** To demonstrate a variety of shipments, there may be several screens being shown, such as Rolls- Royce Silver Ghost,  gray sailboat maroon fridge etc. The student is encouraged to create various shipments on one;s own and complete the various processes.

## Scenario 2: e-Cargo Supply Chain

Here is a simple concept. We set up groups which represent the whole supply chain:




The SkyRadar Aviation Security Laboratory allows to build the complete supply chain.

The e-Cargo chain - meaning the integration of the CARGO data into the virtual supply chain begins with the role of the Origin freight forwarder and ends with the role of the Destination freight forwarder. Both the shipper (consignor) and the receiver (consignee) can log into the supply chain anytime, to view the status of a shipment in real time.

Customs at both the origin and destination airports have the right to detain any suspicious shipment.

**Exercise on Simple Cargo**

Step into these 5 roles:

1. Origin Forwarders

2. Origin Ground Handlers
3. Carriers
4. Destination Ground Handlers
5. Experiment Master: Consignor, Consignee and Flight Data Processing

One person should have the role of the experiment leader. It may be the teacher, a senior student or a student of the team. All other roles should be alternating, so that the students can experience each role and get an understanding for the challenges of this specific role.

The experiment master sets the scope of the game. He provides a list of products to be transported (it could be a simple packing list, or a commercial invoice).

In this simple cargo example, we do not yet include customs

Let us enact this simple example:

**Step 1: the Experiment Master starts off the process**

The experiment master, in the role of the consignor passes the following packaging list to the origin shipper:

| PACKAGING LIST |
| --- |

| | |
|---|---|
| Consignor:<br><br>Sandy Mount Wholesalers<br><br>53, Aungler Street,<br><br>DO2 PT 67,<br><br>Dublin 2<br><br>Telephone: 014.4782607 | Consignee:<br><br>Restaurant El Gran,<br><br>Plaza Reial, 8,<br><br>Barcelona, 08002<br><br>Telephone: 034.931798491 |
| Date: [12/09/2017]<br>• 25 bags of potatoes (10 kg each)<br>• 10 bags of rice (10 kg each)<br>• 500 bottles of water, 0.5litres each | |

Throughout the process the experiment master may challenge the delivery while delaying (or even cancelling) flights (representing natural hazards or reasons outside the carriers influence, like congestion of the air slots, natural hazards like storms, etc.)

**Step 2: The origin forwarder creates the eAWB**

The student with the role origin shipper creates an eAWB, booking the consignment into the next available aircraft to Stockholm. You get the flight data from the FDPS (Flight Data processing system), as seen in the next page:

2017-10-12 | 11:42:46

Departures | Arrivals

| id | no | origin | destination | departure | arrival | distance | status |
|---|---|---|---|---|---|---|---|
| 1 | 1001 | Frankfurt | Helsinki | 11:02:35 | 11:05:35 | 515 | active |
| 3 | 1003 | Frankfurt | Helsinki | 11:09:05 | 11:12:05 | 515 | scheduled |
| 5 | 1005 | Frankfurt | Helsinki | 11:16:05 | 11:19:05 | 515 | scheduled |
| 7 | 1021 | Frankfurt | Barcelona | 11:02:35 | 11:06:35 | 610 | active |
| 9 | 1023 | Frankfurt | Barcelona | 11:12:10 | 11:16:10 | 610 | scheduled |
| 11 | 1041 | Frankfurt | Zurich | 11:02:40 | 11:05:40 | 490 | scheduled |
| 13 | 1043 | Frankfurt | Zurich | 11:09:10 | 11:12:10 | 490 | scheduled |
| 15 | 1061 | Frankfurt | Milan | 11:02:55 | 11:05:55 | 465 | scheduled |
| 17 | 1063 | Frankfurt | Milan | 11:09:50 | 11:12:50 | 465 | scheduled |
| 19 | 1081 | Frankfurt | Rome | 11:02:50 | 11:04:50 | 370 | scheduled |
| 21 | 1083 | Frankfurt | Rome | 11:08:00 | 11:10:00 | 370 | scheduled |
| 23 | 1085 | Frankfurt | Rome | 11:12:25 | 11:14:25 | 370 | scheduled |

## (Only Departures)

2017-10-12 | 11:43:52

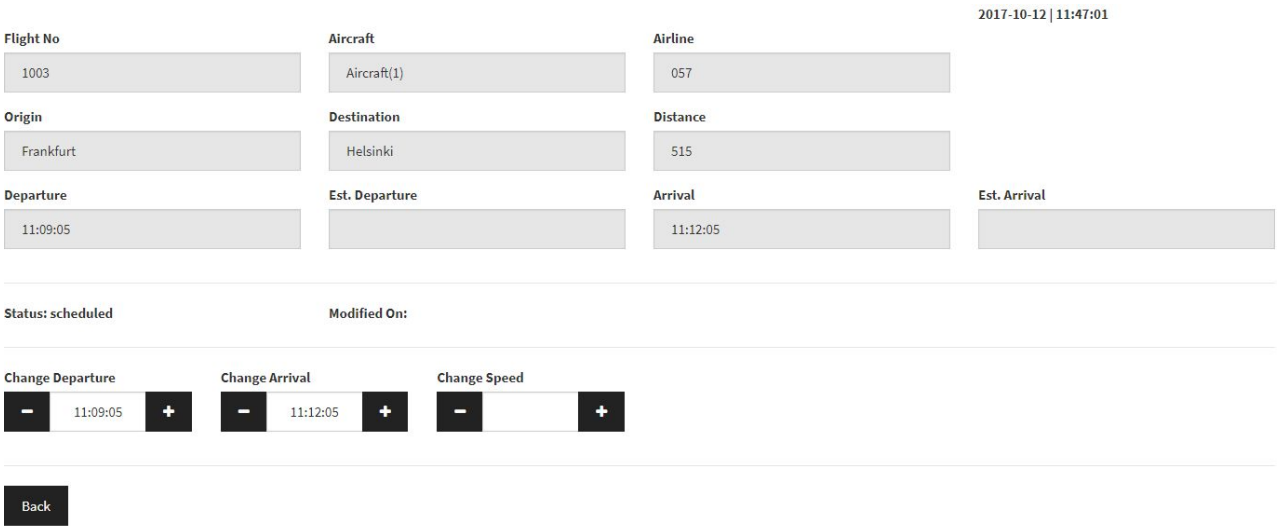
Departures | Arrivals

| id | no | origin | destination | departure | arrival | distance | status |
|---|---|---|---|---|---|---|---|
| 2 | 1002 | Helsinki | Frankfurt | 11:05:45 | 11:08:45 | 515 | scheduled |
| 4 | 1004 | Helsinki | Frankfurt | 11:12:10 | 11:15:10 | 515 | scheduled |
| 6 | 1006 | Helsinki | Frankfurt | 11:19:05 | 11:22:05 | 515 | scheduled |
| 8 | 1022 | Barcelona | Frankfurt | 11:07:35 | 11:11:35 | 610 | scheduled |
| 10 | 1024 | Barcelona | Frankfurt | 11:16:40 | 11:20:40 | 610 | scheduled |
| 12 | 1042 | Zurich | Frankfurt | 11:06:00 | 11:09:00 | 490 | scheduled |
| 14 | 1044 | Zurich | Frankfurt | 11:12:25 | 11:15:25 | 490 | scheduled |
| 16 | 1062 | Milan | Frankfurt | 11:27:05 | 11:09:35 | 465 | scheduled |
| 18 | 1064 | Milan | Frankfurt | 11:13:20 | 11:16:20 | 465 | scheduled |
| 20 | 1082 | Rome | Frankfurt | 11:05:25 | 11:07:25 | 370 | scheduled |
| 22 | 1084 | Rome | Frankfurt | 11:10:15 | 11:12:15 | 370 | scheduled |
| 24 | 1086 | Rome | Frankfurt | 11:15:10 | 11:17:10 | 370 | scheduled |

## (Only Arrivals)

This screen displays all the flights including the flight ID, flight number, origin, destination, ETD (departure time), ETA (arrival), the distance in kilometres and the status. A live clock on the top right ticks away, to map the current time vis-à-vis the next available flight. The three differently coloured statuses include Scheduled, Active and Landed, as the case may be.

Select a flight from your origin port to the destination port, with the closest time of departure, or as you require. The Scheduling screen appears, as seen below:




For the purposes of demonstration in this simulation, the Change Departure option works in increments of five seconds. In the real scenario, the actual flight schedules will replace this simulation.

Some of the fields are automatically populated, while the rest will be filled out by the actual user of the FDPS application. Click **Back** to view the screen with the latest status, as seen in the next page:

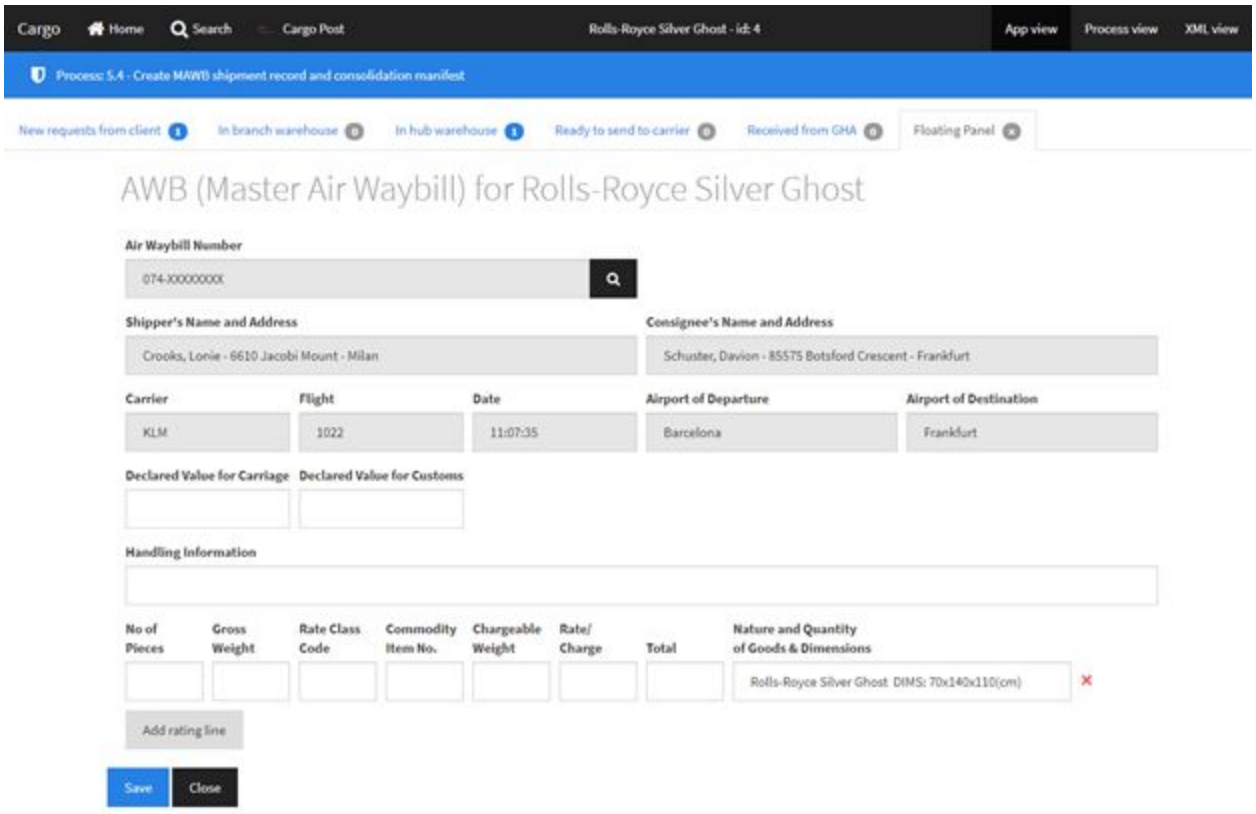
2017-10-12 | 11:50:12

Departures | Arrivals

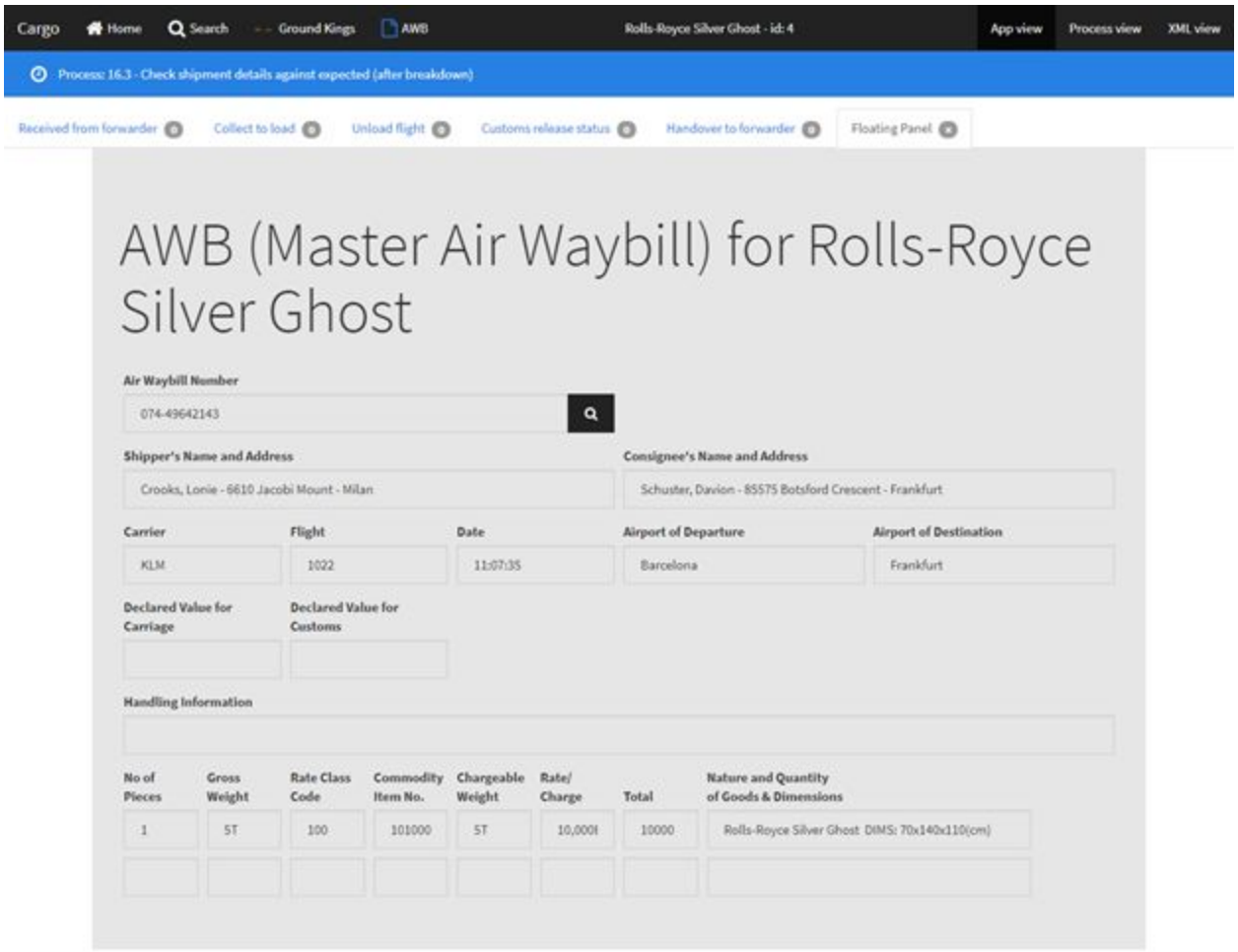
| id | no | origin | destination | departure | arrival | distance | status |
|---|---|---|---|---|---|---|---|
| 1 | 1001 | Frankfurt | Helsinki | 11:02:35 | 11:05:35 | 515 | active |
| 3 | 1003 | Frankfurt | Helsinki | 11:09:05 | 11:12:05 | 515 | scheduled |
| 5 | 1005 | Frankfurt | Helsinki | 11:16:05 | 11:19:05 | 515 | scheduled |
| 7 | 1021 | Frankfurt | Barcelona | 11:10:20 | 11:06:35 | 610 | active |
| 9 | 1023 | Frankfurt | Barcelona | 11:12:10 | 11:16:10 | 610 | scheduled |
| 11 | 1041 | Frankfurt | Zurich | 11:02:40 | 11:05:40 | 490 | scheduled |
| 13 | 1043 | Frankfurt | Zurich | 11:09:10 | 11:12:10 | 490 | scheduled |
| 15 | 1061 | Frankfurt | Milan | 11:02:55 | 11:05:55 | 465 | scheduled |
| 17 | 1063 | Frankfurt | Milan | 11:09:50 | 11:12:50 | 465 | scheduled |
| 19 | 1081 | Frankfurt | Rome | 11:02:50 | 11:04:50 | 370 | scheduled |
| 21 | 1083 | Frankfurt | Rome | 11:08:00 | 11:10:00 | 370 | scheduled |
| 23 | 1085 | Frankfurt | Rome | 11:12:25 | 11:14:25 | 370 | scheduled |

The above screen shows that flight #7 from Frankfurt to Barcelona has been changed to 11:10:20 hours from 11:00:00 hours.

Open the e-Cargo application and go through the processes of booking a shipment, arranging a pickup, and transferring it to the Barcelona airport. Come to the creation of the airway bill.  Here is a sample AWB:




Click the Airway bill number icon to generate the airway bill number, as seen here:


Cargo
Home
Search
Ground Kings
AWB
Rolls-Royce Silver Ghost - id: 4
App view
Process view
XML view
Process: 16.3 - Check shipment details against expected (after breakdown)
Received from forwarder
Collect to load
Unload flight
Customs release status
Handover to forwarder
Floating Panel
AWB (Master Air Waybill) for Rolls-Royce Silver Ghost
Air Waybill Number
074-49642143
Shipper's Name and Address
Crooks, Lonie - 6610 Jacobi Mount - Milan
Consignee's Name and Address
Schuster, Davion - 85575 Botsford Crescent - Frankfurt
Carrier
Flight
Date
Airport of Departure
Airport of Destination
KLM
1022
11:07:35
Barcelona
Frankfurt
Declared Value for Carriage
Declared Value for Customs
Handling Information
No of Pieces
Gross Weight
Rate Class Code
Commodity Item No.
Chargeable Weight
Rate/ Charge
Total
Nature and Quantity of Goods & Dimensions
1
5T
100
101000
5T
10,000
10000
Rolls-Royce Silver Ghost DIMS: 70x140x110(cm)

**Step 3: The GHA sees and treats the eAWB (showing the receipt of the goods)**

The student with the GHA role checks and completes the airway bill:

The air waybill is the most important document in the whole shipping cycle. Without it, no transhipment will be complete. The following fields appear in a blank air waybill:

1. **Air Waybill number**: The system will generate the 11 digit air waybill number.
2. **Shipper's name and address**: Enter the name, address, city, postal code, country and telephone number of the shipper.

3. **Consignee's name and address**: Enter the name, address, city, postal code, country and telephone number of the consignee.
4. **Carrier**: Enter the three letter code for the airline, for example, KLM
5. **Flight**: Enter the flight number, for example, KL0932.
6. **Date**: Enter the date of the flight.
7. **Airport of departure**: Enter the three letter city code, for example, VIE, for Vienna.
8. **Airport of destination**: Enter the three letter city code, for example, FRA for Frankfurt.
9. **Declared Value for Carriage**: Enter the declared value for carriage as specified by the shipper. For example, 39,000 euros for a Rolls Royce Silver Shadow 2017 edition. If there is no value, enter NVD (NO VALUE).
10. **Declared Value for Customs**: Enter a value for customs purposes as declared by the shipper as applicable. For example, 40,000 euros for a Rolls Royce Silver Shadow 2017 edition. Otherwise, leave the field blank.
11. **Handling Information**: Enter handling remarks, special instructions, identifying marks and numbers which appear on the consignment, method of packing, attachments, or instructions.
12. **Number of Pieces**: Indicate the number of pieces. Where there is more than one entry, enter the total number of pieces in the bottom row.
13. **Gross Weight**: Enter the actual gross weight of the pieces. When a ULD is used, indicate the actual tare weight as an additional line entry. Where there is more than one entry, enter the total gross weight of the shipment in the bottom row. For example, 4100.56 kilos. (Gross is net+tare. Tare is the weight of the container, or packing).
14. **Rate Class Code**: Enter the tariff level (rate class) under any of these six codes, as applicable:
    - **M**:Minimum freight
    - **C**:SCR (Specific Commodity Rates)

- **S**:Surcharge on the shipment. This is higher than the general cargo tariff.
- **R**:Reduced tariff, which is lesser than the general cargo tariff.
- **N**:Normal, for example 45 kilos or under.
- **Q**:Quantity, for example, 45 kilos or above

**Important:** Consult the carrier's agent for more information on rate class code.

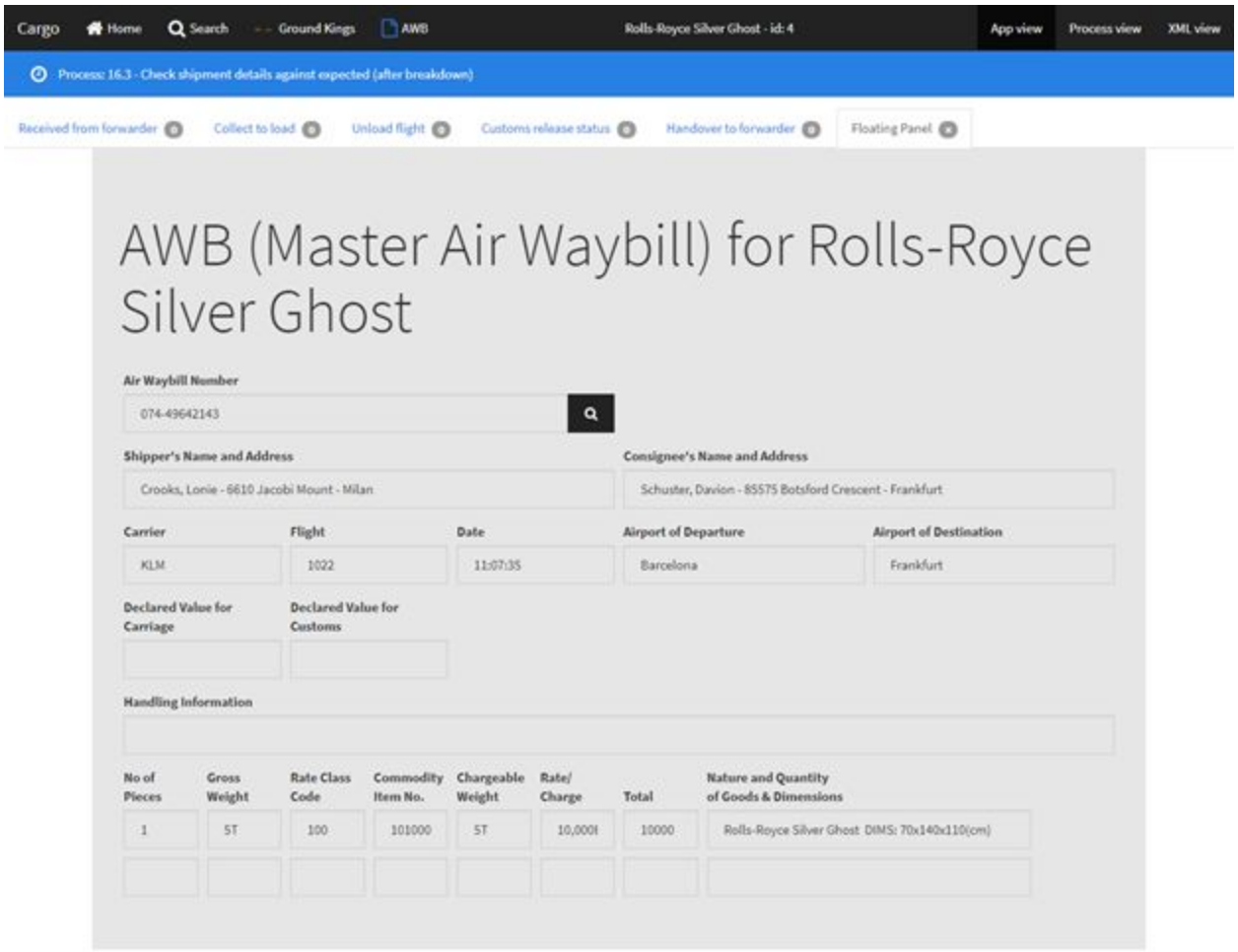
15. **Commodity Item Number**: Enter the commodity item number, for example, “9 UN1845” for Carbon Dioxide.
16. **Chargeable Weight**: Enter the actual weight or the dimensional weight, whichever is greater. For example, 124.5 kilos.
17. **Rate/Charge**: Enter the rate per unit, such as or a litre, kilogram or pound, for example, 0.5 euros per litre.
18. **Total Rate**: Enter the total rate of the shipment, that includes charges and surcharges, as applicable. For example, 2330 euros.
19. **Nature and Quantity of Goods & Dimensions**: Enter the description of a shipment, such as “Carbon dioxide, solid, 9 UN1845, 2 X 25 kg.”
20. **Signature of Shipper or Agent**: Get the the signature and stamp of the shipper or agent.
21. **Signature of Issuing Carrier:** Get the signature and stamp of the concerned airline authority.

**Note**: **Click Add rating line**, to add relevant information to the air waybill. More rows will appear, as seen below:

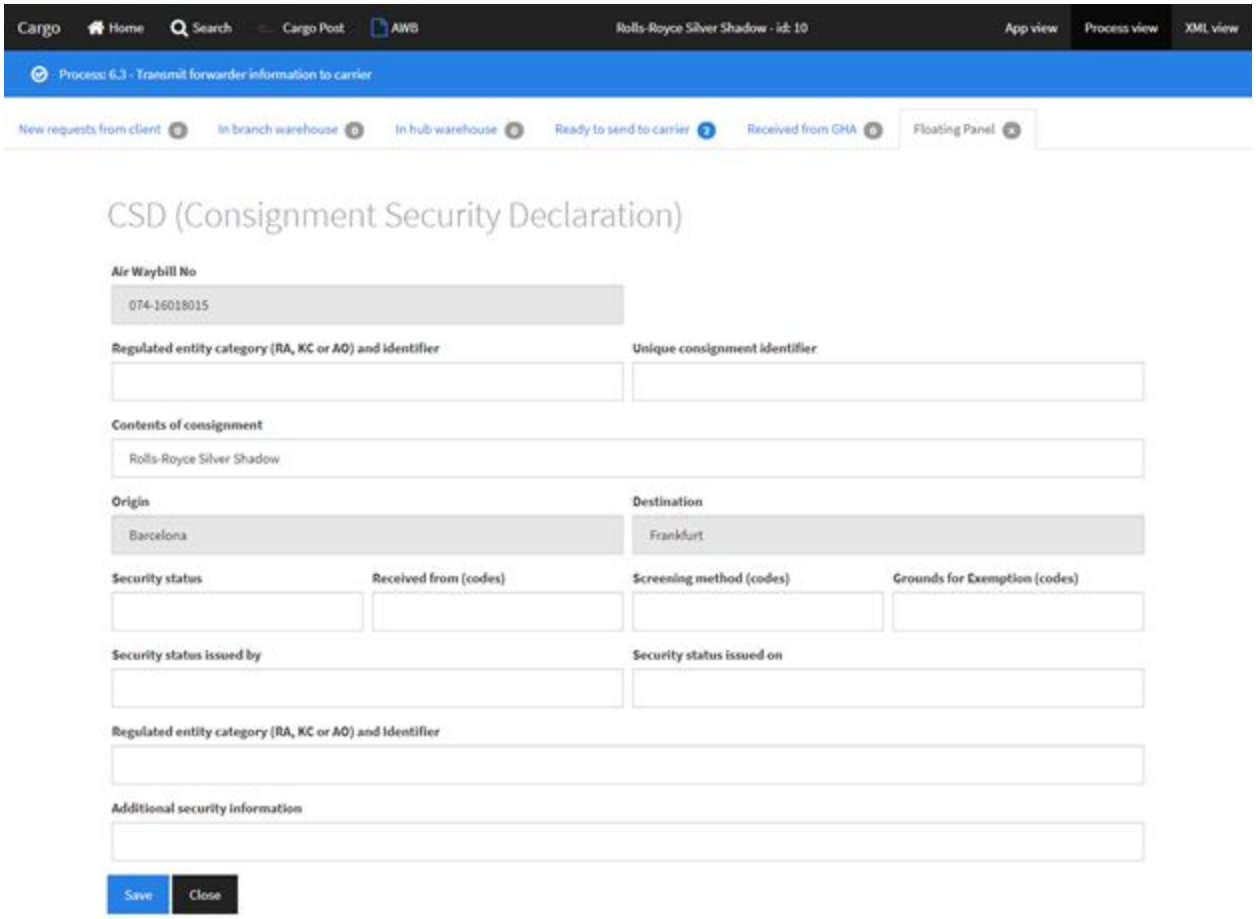
**Click Save > Submit > Close,** to get the final AWB, also called Master Air Waybill (MAWB).

**Step 4: The GHA and the Airway bill**

Here, the GHA compares the AWB, showing the loading of the aircraft) with the eCSD. The student with the role GHA updates the airway bill showing that the goods have been loaded into the aircraft.


Cargo
Home
Search
Ground Kings
AWB
Rolls-Royce Silver Ghost - id: 4
App view
Process view
XML view
Process: 16.3 - Check shipment details against expected (after breakdown)
Received from forwarder
Collect to load
Unload flight
Customs release status
Handover to forwarder
Floating Panel
AWB (Master Air Waybill) for Rolls-Royce Silver Ghost
Air Waybill Number
074-49642143
Shipper's Name and Address
Crooks, Lonie - 6610 Jacobi Mount - Milan
Consignee's Name and Address
Schuster, Davion - 85575 Botsford Crescent - Frankfurt
Carrier
Flight
Date
Airport of Departure
Airport of Destination
KLM
1022
11:07:35
Barcelona
Frankfurt
Declared Value for Carriage
Declared Value for Customs
Handling Information
No of Pieces
Gross Weight
Rate Class Code
Commodity Item No.
Chargeable Weight
Rate/ Charge
Total
Nature and Quantity of Goods & Dimensions
1
5T
100
101000
5T
10,000
10000
Rolls-Royce Silver Ghost DIMS: 70x140x110(cm)

The student with the role GHA create the eCSD (consignment security declaration). The Consignment Security Declaration (CSD) provides regulators with an audit trail of how, when and by whom cargo has been secured along the supply chain.
Its objective is to meet ICAO requirements, ensuring that each consignment received by an aircraft operator or a regulated agent comes with documentation, either on the e-Air Waybill or on a separate declaration.
To avoid a plethora of different security declarations, IATA developed a standard CSD in cooperation with the industry and regulators.



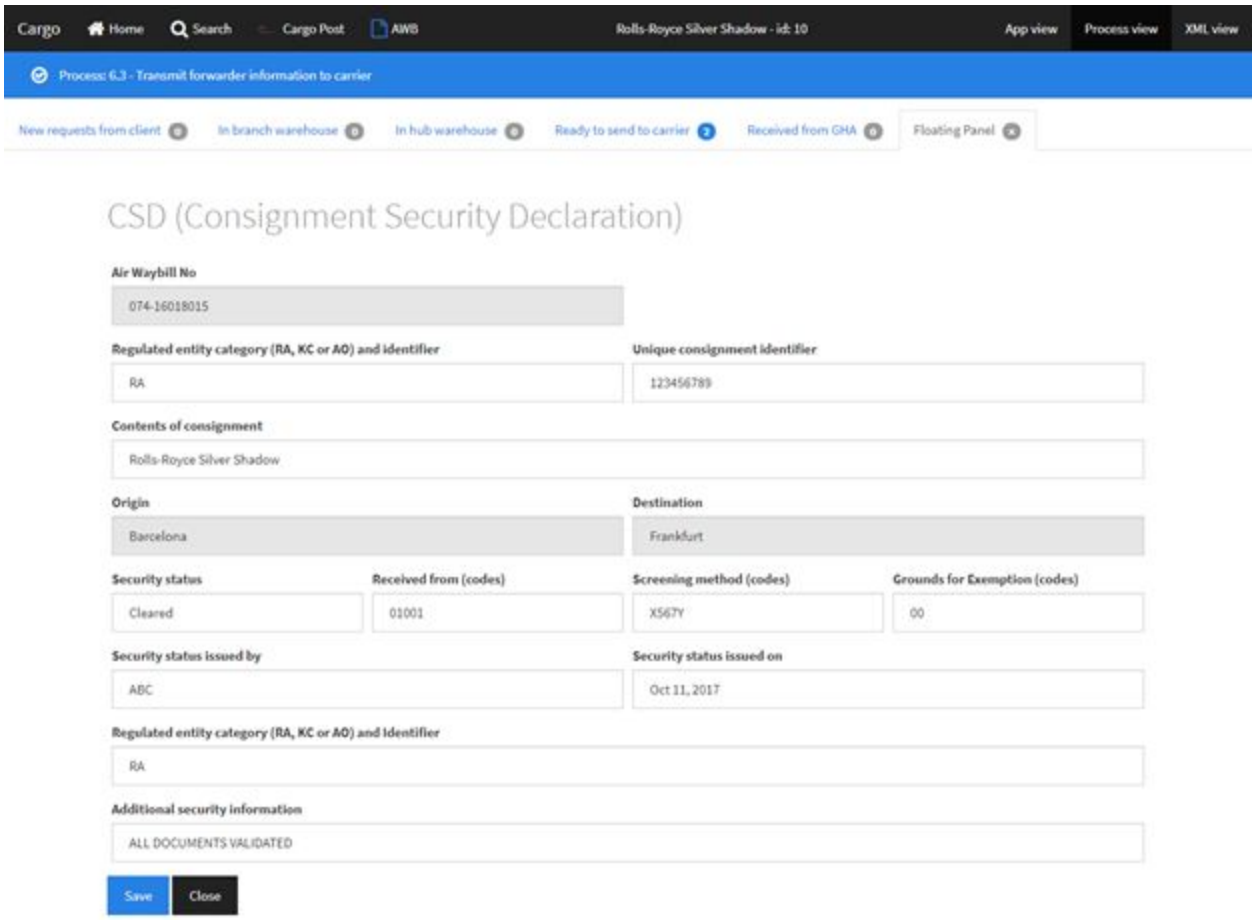
Fill out the following fields in the CSD screen, as appropriate:

1. **Regulated entity category (RA, KC or AO) and identifie**r: Enter the unique entity code for RA, KC or AO, as applicable. (RA = Regulated Agent, KC= Known Consignor, and AO= Aircraft Operator.)
2. **Unique consignment identifier**: Enter the identification of the consignment. This may be an air waybill (format is nnn nnnnnnnn), a house bill or a mail consignment identifier. But in a majority of cases, it is the air waybill.
3. **Contents of consignment**: Enter the consignment details, for example, 1 Rolls Royce Silver Shadow. Cobalt blue.
4. **Origin**: Enter the IATA three letter airport code, from where the consignment has originated, for example, VIE for Vienna.
5. **Destination**: Enter the destination IATA three letter airport code, for example, FRA for Frankfurt.
6. **Transfer/Transit points**: Enter the three letter transit airport code, if any. For example, MUN, (Munich) if the flight is VIE-MUN-FRA.
7. **Security Status**: Enter any of these three codes, as applicable:
    i. SPX, if it is a regular passenger, cargo and mail aircraft.
    ii. SCO, if it is an all cargo and all mail aircraft.
    iii. SHR, if it is a high risk requirement all cargo and all mail aircraft.
8. **Received from (codes)**: Enter the code from whom received, for example, RA, KC or AO. (RA = Regulated Agent, KC= Known Consignor, and AO= Aircraft Operator.)
   **Note**:If the fields, “Grounds for Exemption” and “Other Screening Method” are not filled, then you cannot leave the “Received from” field blank.
9. **Screening Method (codes)**: This entry identifies codes assigned to the application of screening methods and technologies that are used to prevent act of unlawful interference. Enter any or more of these IATA specified codes, as applicable:
    - **PHS**-Physical Inspection and/or hand search

- **VCK**-Visual check
- **XRY**-Xray equipment
- **EDS**-Explosive detection system
- **RES**-Remote explosive scent tracing explosive detection dogs
- **FRD**-Free running explosive detection dogs
- **VPT**-Vapor trace
- **PRT**-Particle trace
- **MDE**-Metal Detection Equipment
- **AOM**-Subjected to any other means. You must complete this entry by using free text that specifies what other mean was used to secure the shipment. For example, the use of a hand held scanner.

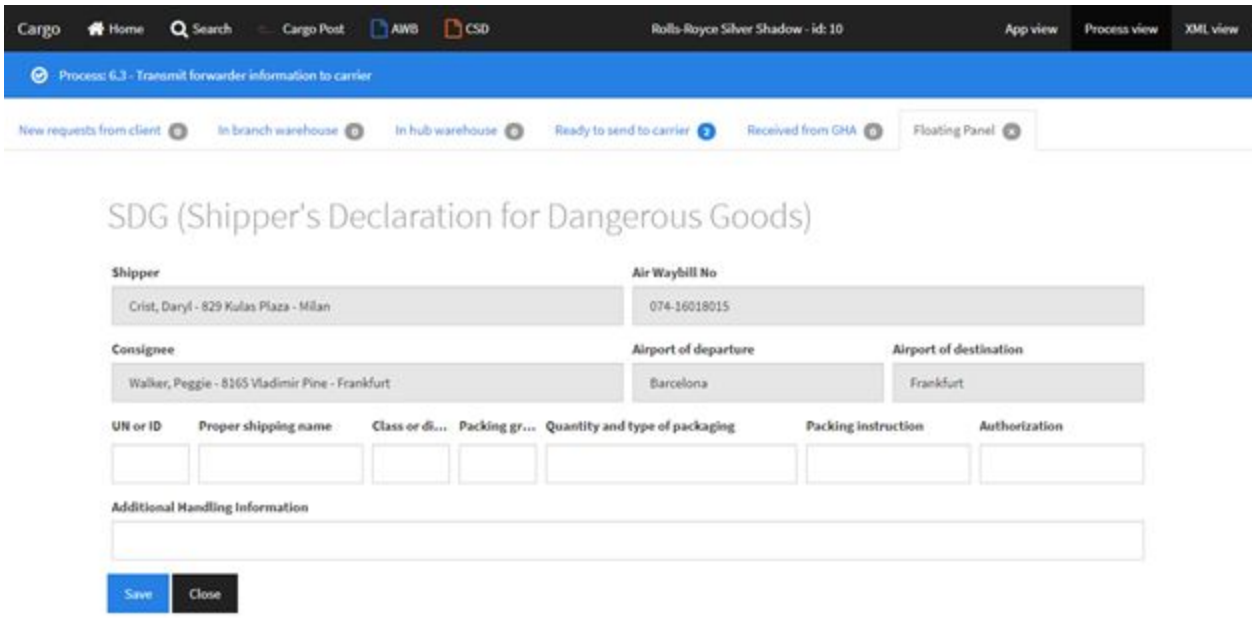
10. **Grounds for Exemption (codes)**: Enter free text, if there is exemption, for example, "*free shipment of study material to under-privileged children in Germany*."
11. **Other Screening Method(s)**: Enter free text, if you encounter any screening situation, not covered under point 11, i.e, Screening Method (codes). For example, the shipment "*is too large for a scanner and was thus manually scanned and physically checked*."
12. **Security status issued by**: Enter the employee code of the RA, KC or AO.
13. **Security status issued on**: Enter the date of creating the CSD.
14. **Regulated entity category (RA, KC or AO) and Identifie**r: Enter the identifier that takes custody of the cargo and accepts the security status originally issued by the RA, KO or AO. For example, this can be the employee code of a security official, accepting responsibility for the security of the shipment.
15. **Additional security information**: Enter any additional security information that may be required by an ICAO Member State, for example, a national regulation, applicable to the responsibilities in the event of a false declaration, or any applicable emergency amendment. For example, the attachment of SAD (Single Administrative Document) required for custom purposes into the European Union.

This is how the fully populated CSD template will look like:




**Click Save**.

**Click SDG** to generate a blank SDG template, as seen here:



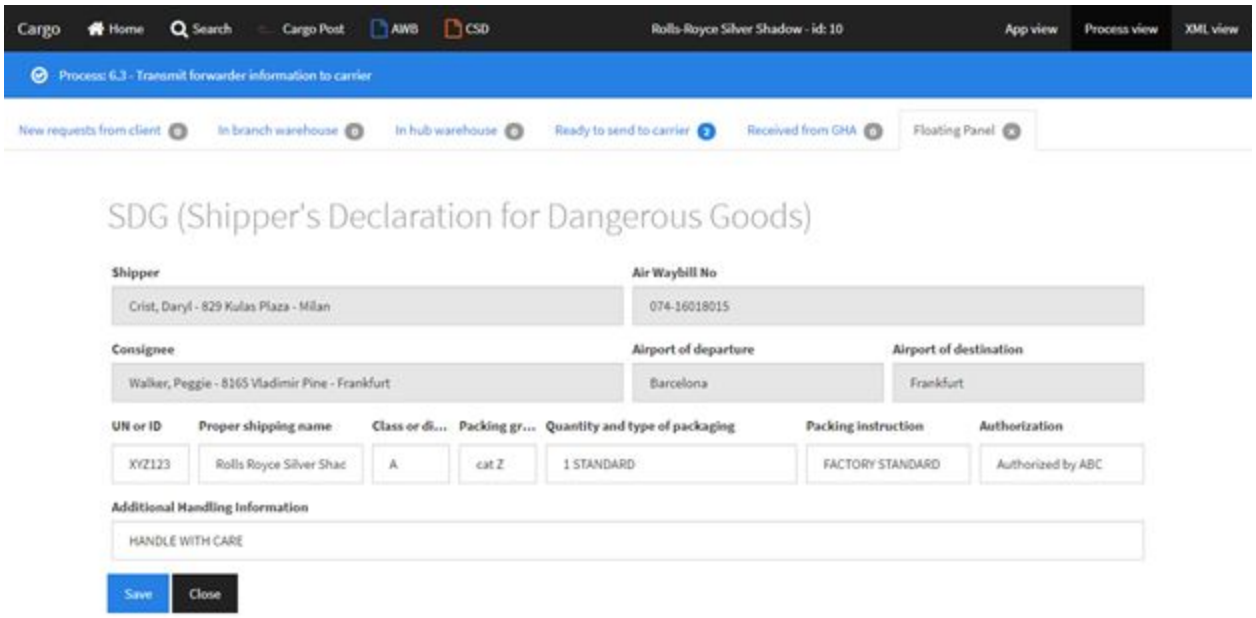

Make sure you populate the following fields in the SDG, as seen below:

1. **Shipper**: Enter the full name and address of the shipper.
2. **Air Waybill number**: The system will generate the airway bill.
3. **Consignee**: Enter the full name and address of consignee.
4. **Transport Details**: Specify if there are aircraft limitations, such as the *"the consignment complies with the limitations for passenger and cargo aircraft, or if the consignment is limited to cargo aircraft only*." Strike out the box that does not apply.
5. **Airport of Departure**:Enter the full name of the airport or city of departure. The three-letter airport code is not acceptable. This information can be left blank and completed by the agent or airline.
6. **Airport of Destination**: Enter the full name of the airport or city of destination. The three-letter airport code is not acceptable. This information can be left blank and completed by the agent or airline.

7. **Shipment Type**: Specify if the shipment is Non-Radioactive or Radioactive. strike out the box that does not apply.
8. **UN or ID**: Specify the UN or ID number from Column A in Section 4.2 of the DG (Dangerous Goods) list, that records over 4,000 Dangerous Goods. Note that all entries begin with UN with one exception, which applies to consumer commodities, which is ID 8000. (https://www.unece.org/fileadmin/DAM/trans/danger/publi/unrec/English/part3.pdf)
9. **Proper shipping name**: Specify the proper shipping name found in Column B of Section 4.2 of the DG list. For example, AMMONIUM PICRATE dry or wetted with less than 10% water, by mass. Note that some entries may require you to add the technical name of the product in parenthesis after the proper shipping name. This requirement is indicated by a star.
10. **Class or division**: Enter the Class or division as specified in column 3 of section 4.2 of the DG list. For example, “1.1D” for the above mentioned example of a shipment of ammonia.
11. **Packaging group**: Enter the packing group as per column 6 of the DG list. In most cases, the DG list does not specify the UN packing group. Then you may leave the field blank.
12. **Quantity and type of packaging**: Enter the quantity and type of packaging. For example, 125 kilos of ammonium picrate in 25 kg glass jars.
13. **Packing instruction**: Enter the packaging instruction as specified in column 8 of the DG list. For example, "P112(a)  (b) or (c)" for a shipment of ammonia, as mentioned in the earlier points.
14. **Authorization**: Get or attach the required authorization to ship the consignment by air. In the European Union, EASA (European Aviation Safety Agency) is one such body (https://www.easa.europa.eu/), like the DOT (Department of Telecommunication) in the US.

15. **Additional Handling Information**: Enter any specific handling information relevant to the consignment, such as the emergency response telephone number for shipments, for large quantities, or high value items, or dangerous goods, such as ammunition cartridges. Or "*explosive material. Store away from sunlight*." Or *Infectious substance for laboratory testing.Do not open*"
16. **Declaration**: This will be printed in the SDG in its standard global format.
17. **Name of Signatory**: Enter the name of the person actually signing the shipper's declaration.
18. **WARNING**: This is a statutory warning that appears in the SDG, by default. You do not have to fill out any information.

Here is how the filled out SDG looks like:




The student in the role of the destination GHA must verify the accuracy and validity of the eAWB, while getting this document from the destination freight forwarder.  All the documents - the CSD, DSG and the waybill is loaded to the flight hold by the GHA, on successful validation of the documents and the shipment.

**Congratulations! You have completed the second scenario of the e-Cargo training, that is, understanding the e-Cargo Supply Chain.**

**Note:** To demonstrate a variety of shipments, there may be several screens being shown, such as Rolls- Royce Silver Ghost,  gray sailboat maroon fridge etc. The student is encouraged to create various shipments on one;s own and complete the various processes.

## Scenario 3: e-Cargo workflow of FDPS and Customs

Customs administrations and the IT Solution Providers are playing a pivotal role in the electronic air cargo supply chain. In June 2005 the World Customs Organization (WCO) Council adopted the Standards to Secure and Facilitate Global Trade (SAFE Framework) that would act as a deterrent to international terrorism, secure revenue collections and promote trade facilitation worldwide. In order to meet the WCO Safe Framework of standards, Customs Administrations around the world have devised Advance Cargo Information (ACI) initiatives such as US-AMS and EU-ICS. These ACI initiatives were historically based on the Cargo-IMP standards or customs administrations were using for their own messaging standards. As the customs administration teams are unable to support the Cargo-IMP messages directly from the industry members, who were mandated to provide advanced information, IT service providers were acting as a bridge between the air cargo stakeholders filing ACI and the customs administration teams.

IATA has given best practice examples like the implementations by Kühne & Nagel or the Argentinian Customs which have inspired our solution.

Customs has a view only access to a screen called Advanced Cargo Information where they have a view-only access to the supply chain.

**Step 1: the Experiment Master starts off the process**

The experiment master, in the role of the consignor passes the following packaging list to the origin shipper:

| PACKAGING LIST |
| --- |

| | |
|---|---|
| Consignor:<br><br>Sandy Mount Wholesalers<br><br>53, Aungler Street<br><br>DO2 PT 67<br><br>Dublin 2<br><br>Telephone: 014.4782607 | Consignee:<br><br>Restaurant El Gran<br><br>Plaza Reial, 8<br><br>Barcelona, 08002<br><br>Telephone: 034.931798491 |
| Date: [12/09/2017]<br>• 25 bags of potatoes (10 kg each)<br>• 10 bags of rice (10 kg each)<br>• 500 bottles of water, 0.5litres each | |

**Step 2: The origin forwarder creates the eAWB**

The student with the role of the origin shipper creates an eAWB, booking the consignment with the next available flight to Barcelona. He gets the FDPS (Flight Data Processing System) system. FDPS  forms an important element of the airline and aerospace industries. Using this system, you can manage the entire airspace with greater flexibility.

You can combine sectors and adjust schedules to changing traffic demand patterns, specific weather conditions or areas that are temporarily reserved for military operations, in real time. The initial trajectory of a flight is continuously updated by radar data and by inputs from the controller.

For the sake of this application, the FDPS simulator lets you understand the booking and tracking of flights that carry shipments from one destination to another. The following sections describe the process of moving a shipment from Barcelona to Frankfurt to, as seen below in the screen for departures and arrivals:

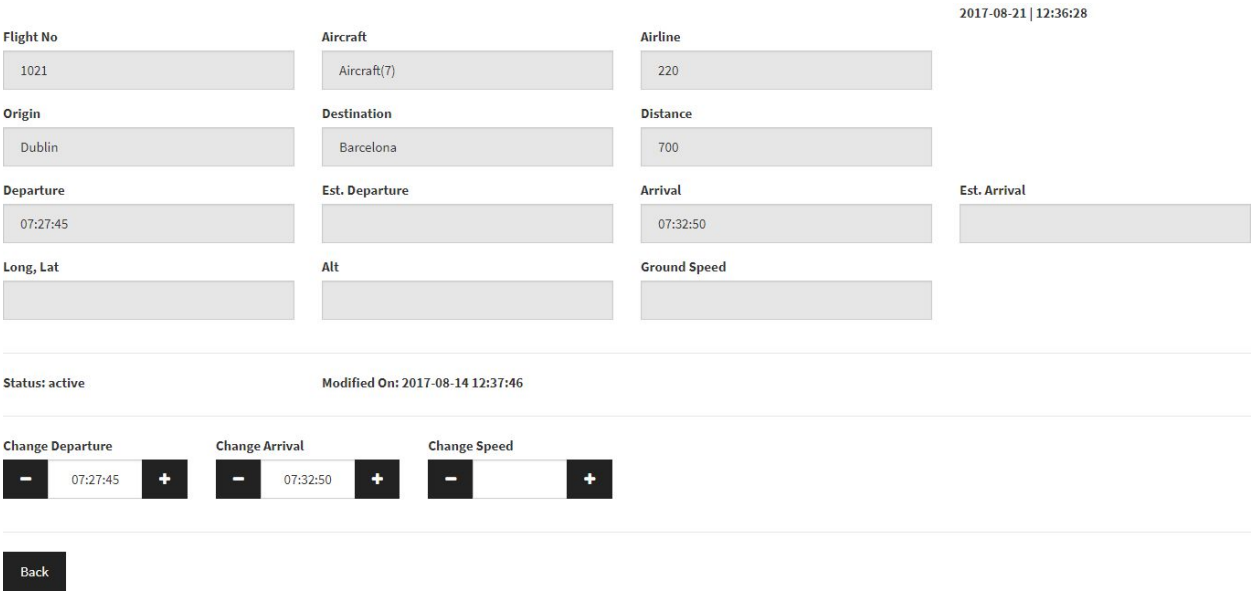
2017-10-12 | 12:40:16

Departures | Arrivals

| id | no | origin | destination | departure | arrival | distance | status |
|---|---|---|---|---|---|---|---|
| 2 | 1002 | Helsinki | Frankfurt | 11:05:45 | 11:08:45 | 515 | scheduled |
| 4 | 1004 | Helsinki | Frankfurt | 11:12:10 | 11:15:10 | 515 | scheduled |
| 6 | 1006 | Helsinki | Frankfurt | 11:19:05 | 11:22:05 | 515 | scheduled |
| 8 | 1022 | Barcelona | Frankfurt | 11:07:35 | 11:11:35 | 610 | scheduled |
| 10 | 1024 | Barcelona | Frankfurt | 11:16:40 | 11:20:40 | 610 | scheduled |
| 12 | 1042 | Zurich | Frankfurt | 11:06:00 | 11:09:00 | 490 | scheduled |
| 14 | 1044 | Zurich | Frankfurt | 11:12:25 | 11:15:25 | 490 | scheduled |
| 16 | 1062 | Milan | Frankfurt | 11:27:05 | 11:09:35 | 465 | scheduled |
| 18 | 1064 | Milan | Frankfurt | 11:13:20 | 11:16:20 | 465 | scheduled |
| 20 | 1082 | Rome | Frankfurt | 11:05:25 | 11:07:25 | 370 | scheduled |
| 22 | 1084 | Rome | Frankfurt | 11:10:15 | 11:12:15 | 370 | scheduled |
| 24 | 1086 | Rome | Frankfurt | 11:15:10 | 11:17:10 | 370 | scheduled |

This screen displays all the flights including the flight ID, flight number, origin, destination, ETD (departure time), ETA (arrival), the distance in kilometres and the status. A live clock on the top right ticks away, to map the current time vis-à-vis the next available flight. The three differently coloured statuses include Scheduled, Active and Landed, as the case may be.

Select a flight from your origin port to the destination port, with the closest time of departure, or as you require. The Scheduling screen appears, as seen below:




For the purposes of demonstration in this simulation, the Change Departure option works in increments of five seconds. In the real scenario, the actual flight schedules will replace this simulation. Some of the fields are automatically populated, while the rest will be filled out by the actual user of the FDPS application.

**Click Back** to view the screen with the latest status, as seen below:

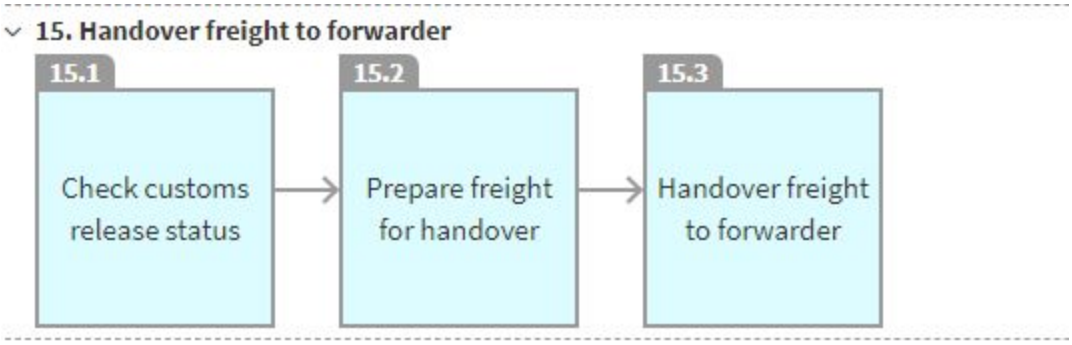
2017-10-12 | 12:45:22

Departures | Arrivals

| id | no | origin | destination | departure | arrival | distance | status |
|---|---|---|---|---|---|---|---|
| 1 | 1001 | Frankfurt | Helsinki | 11:02:35 | 11:05:35 | 515 | active |
| 3 | 1003 | Frankfurt | Helsinki | 11:09:05 | 11:12:05 | 515 | scheduled |
| 5 | 1005 | Frankfurt | Helsinki | 11:16:05 | 11:19:05 | 515 | scheduled |
| 7 | 1021 | Frankfurt | Barcelona | 11:20:05 | 11:06:35 | 610 | active |
| 9 | 1023 | Frankfurt | Barcelona | 11:12:10 | 11:16:10 | 610 | scheduled |
| 11 | 1041 | Frankfurt | Zurich | 11:02:40 | 11:05:40 | 490 | scheduled |
| 13 | 1043 | Frankfurt | Zurich | 11:09:10 | 11:12:10 | 490 | scheduled |
| 15 | 1061 | Frankfurt | Milan | 11:02:55 | 11:05:55 | 465 | scheduled |
| 17 | 1063 | Frankfurt | Milan | 11:09:50 | 11:12:50 | 465 | scheduled |
| 19 | 1081 | Frankfurt | Rome | 11:02:50 | 11:04:50 | 370 | scheduled |
| 21 | 1083 | Frankfurt | Rome | 11:08:00 | 11:10:00 | 370 | scheduled |
| 23 | 1085 | Frankfurt | Rome | 11:12:25 | 11:14:25 | 370 | scheduled |

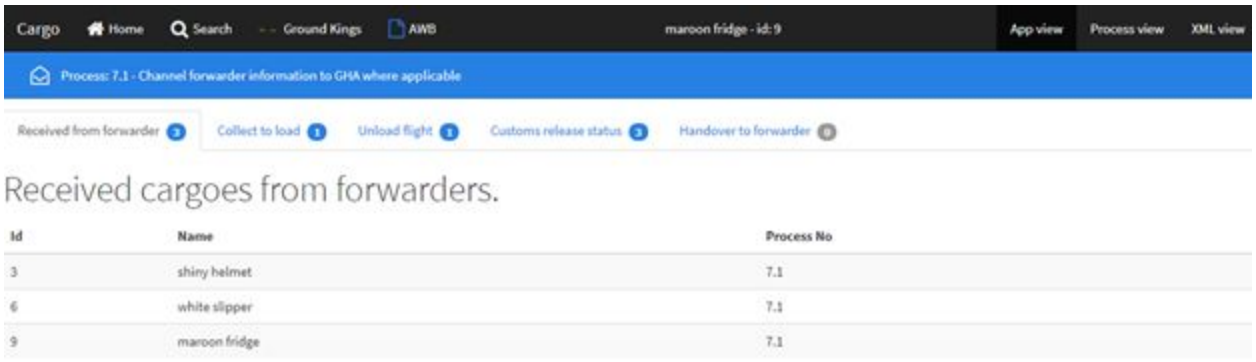
Go to the **e-Cargo** application.

**Note:** During any stage in the e-Cargo application, you can select the **Process View,** to understand the relevant steps and to co-ordinate where you are, in the workflow.



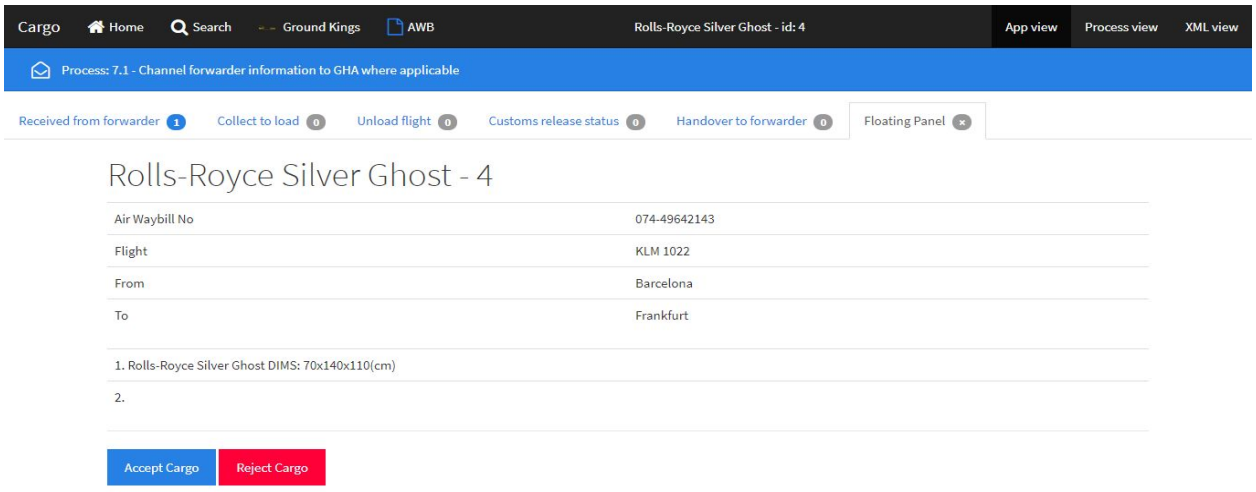

The involved processes are 7.1, 9.4, 13.1 and 15.1 for export and import process.

Go to the **Home** page and **click** the GHA tab, to view the following screen:




There is an acknowledgement that these shipments have been received from the freight forwarder.

**Click** the maroon fridge row, to get the following screen:

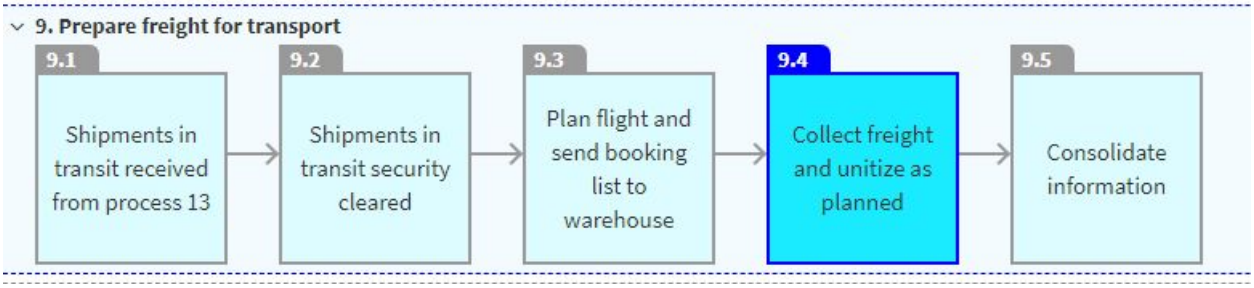



Click **Accept Cargo,** to view the accepted status.

As the GHA, you have the option to either accept the cargo, or reject it, if need be.

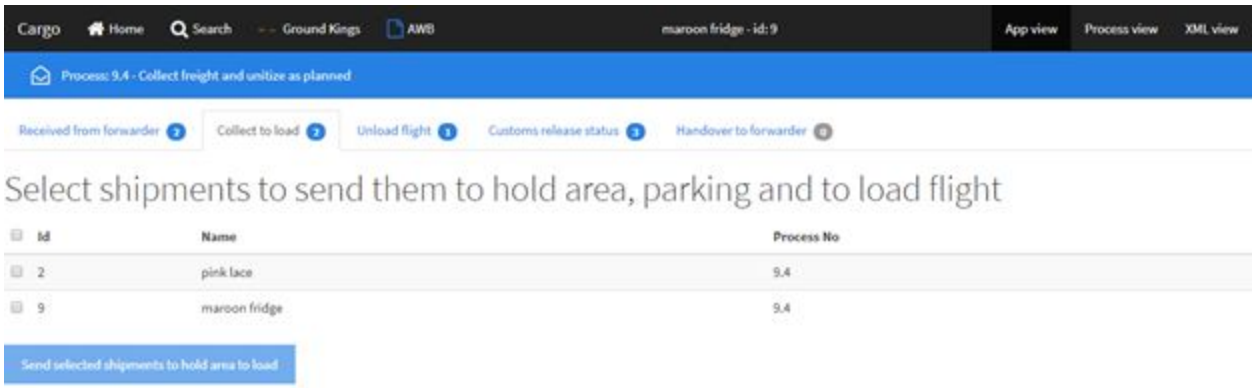
When you click **Accept Cargo**, you will get the **Accepted! Close this panel** tab. **Click this tab**, to get the  Rolls-Royce Silver Ghost row in the Collect to load Pane.

You are now in process 9.4, as seen here:



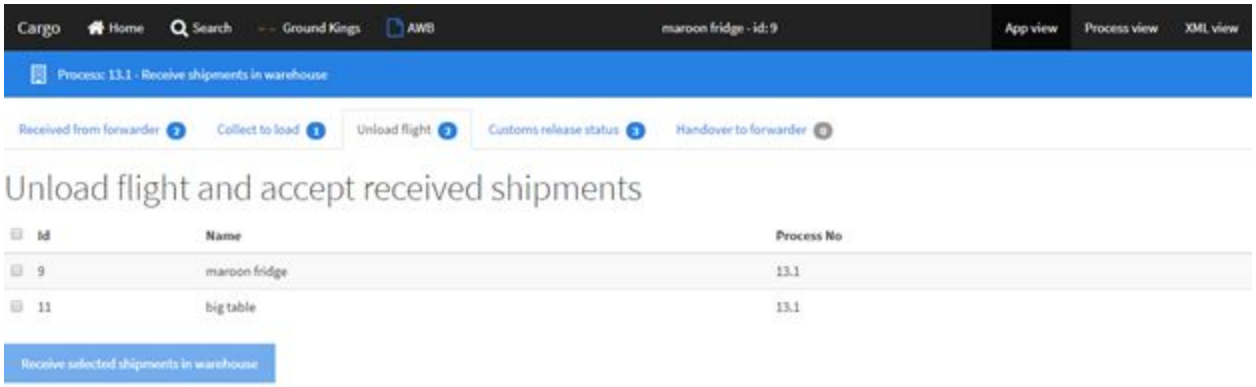

**Note:** A shipment can also get rejected, for various reasons. In such a case, the rejected item will be archived, for reference. You can view the list of rejected shipments by using the Search option.

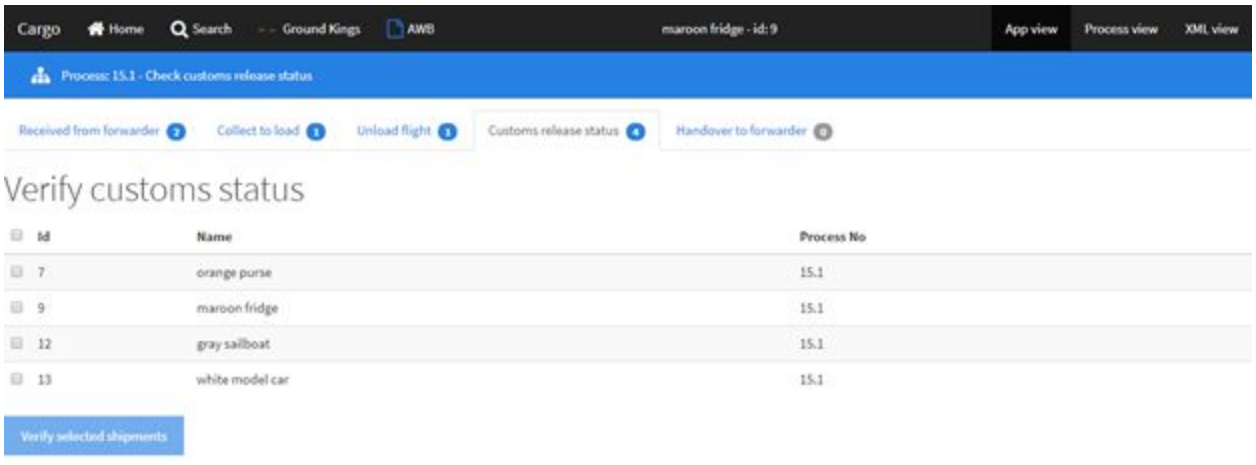
Click **Collect to Load**, to view the following screen:



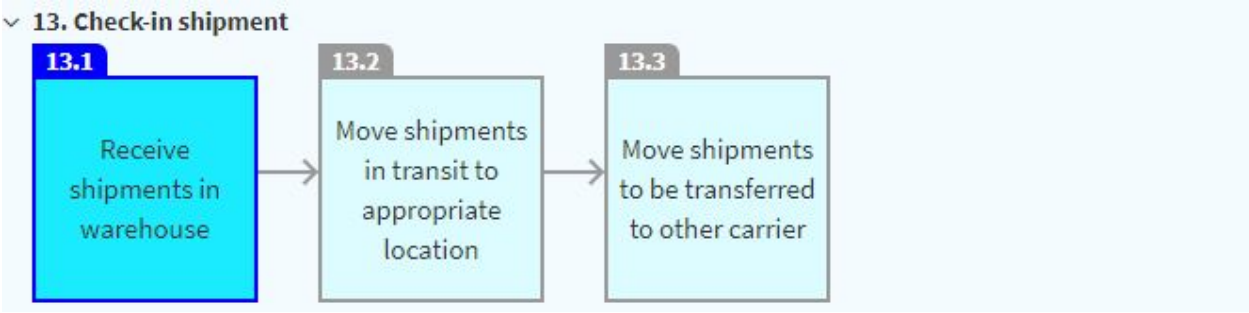

The shipment, (in this example) maroon fridge has moved from the forwarder to the loading area. From here, the shipment will be sent to the hold area, parking and load flight.

**Select** the maroon fridge row and send it for shipment, as seen below:

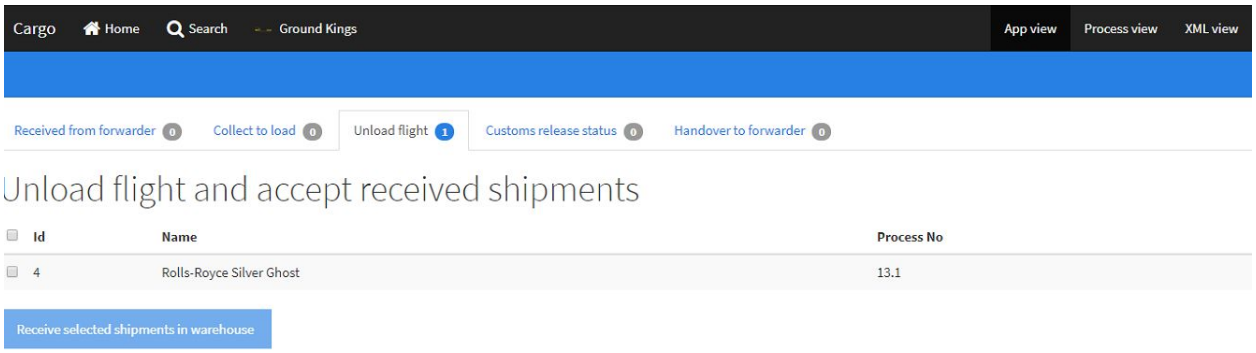


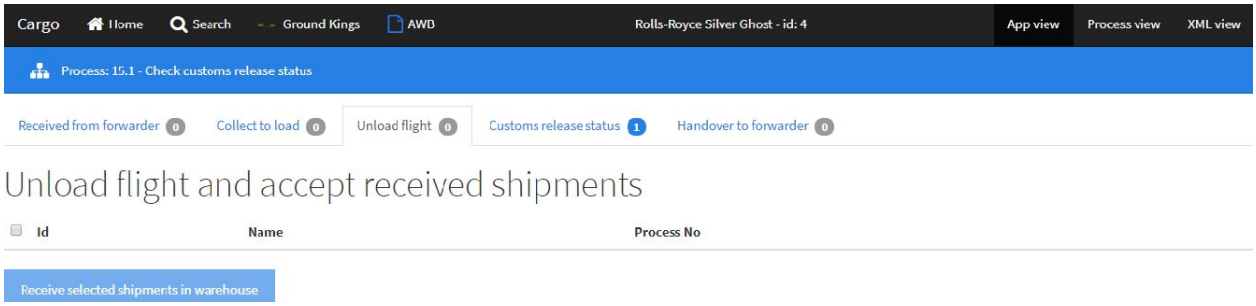

You are in process 13.1, as seen here:



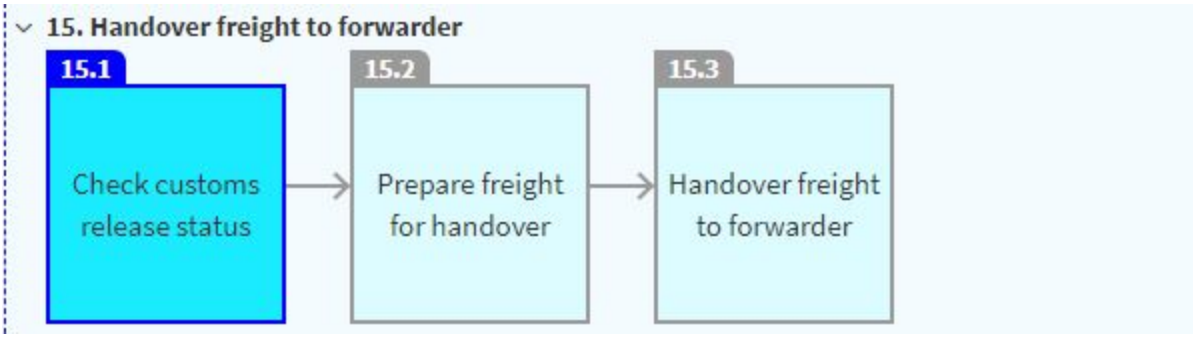

**Click the Unload flight** pane, to view the following screen:



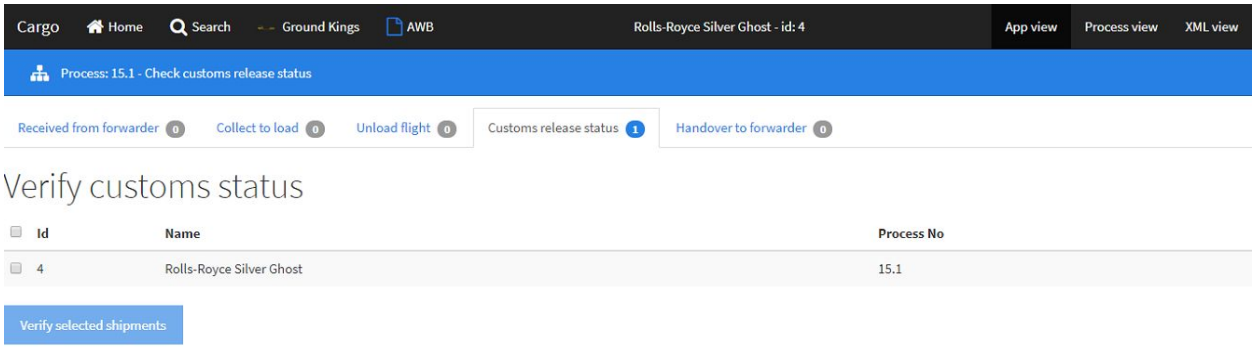

Check the **Rolls-Royce Silver Ghost** row and click **Receive selected shipments in warehouse**, to get the following screen:



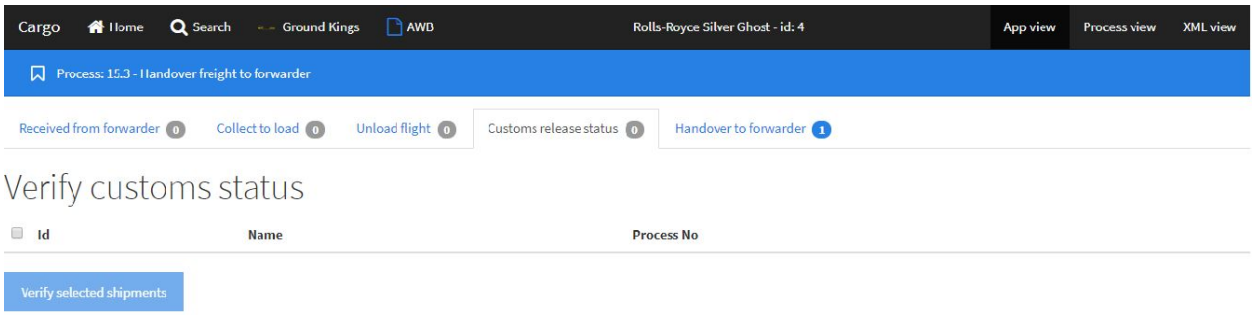

You have now reached 15.1 in the process, as seen here:



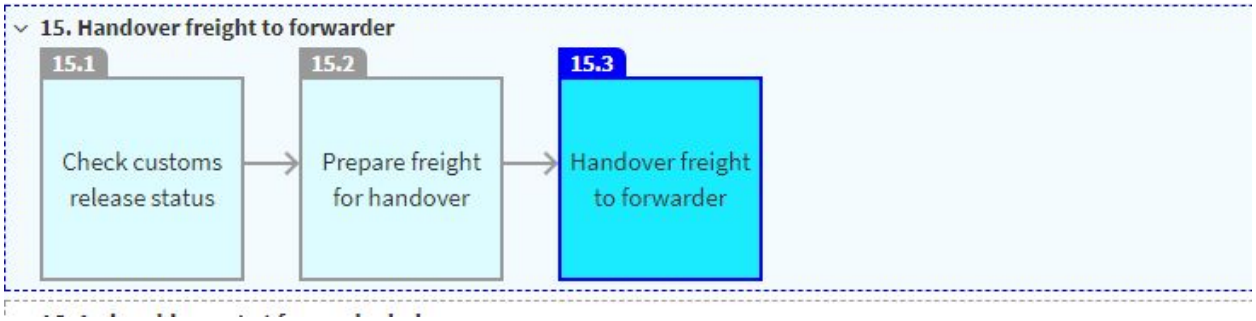

**Click** the **Customs release status** pane, to get the following screen:



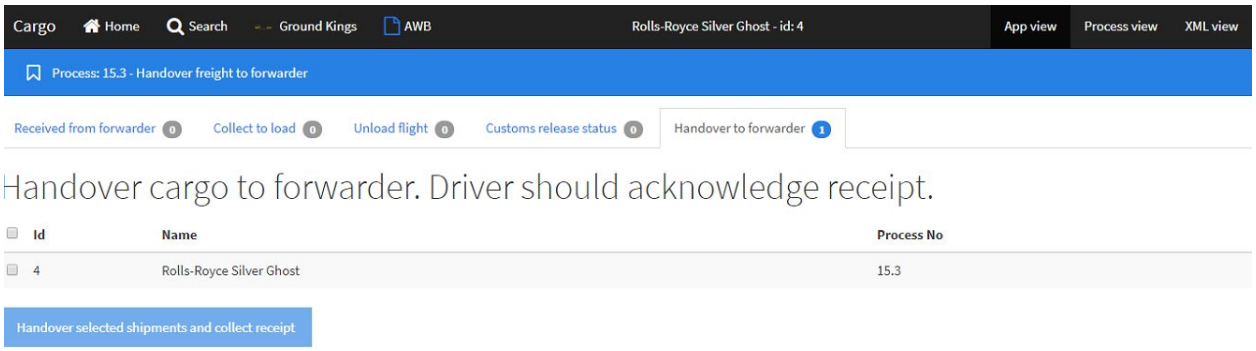

**Check** the **Rolls-Royce Silver Ghost** row and click **Verify selected shipments,** to get the following screen in the Handover to forwarder pane:




You are now at process 15.3, as seen here:



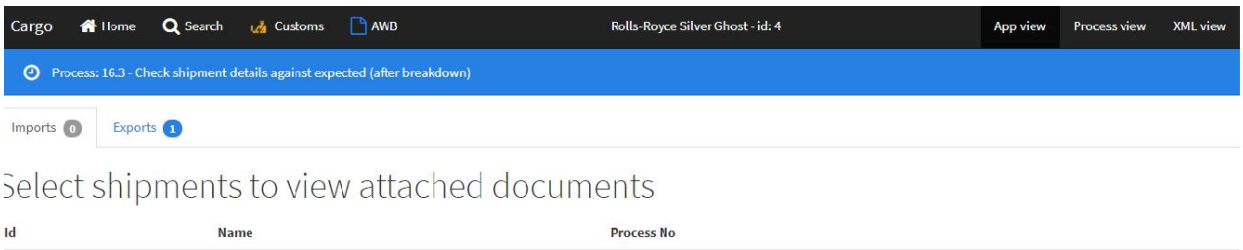

**Click** the **Handover to forwarder** pane, to get the following screen:



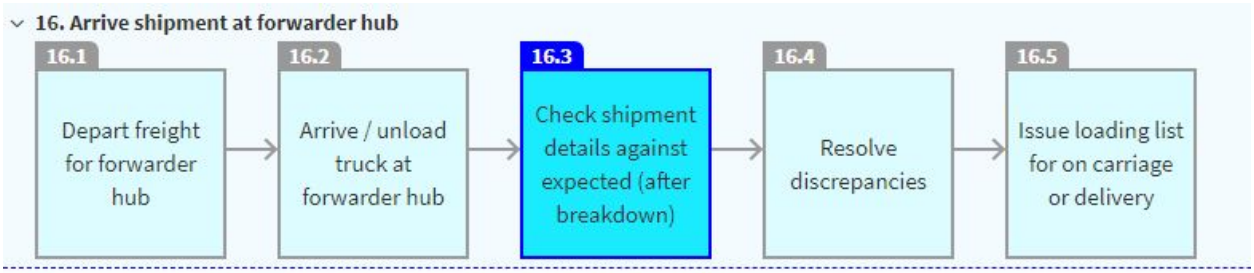

Check the **Rolls-Royce Silver Ghost** row and click **Handover selected shipments and collect receipt.**

The shipment has moved from the freight forwarder and the origin GHA to Customs.

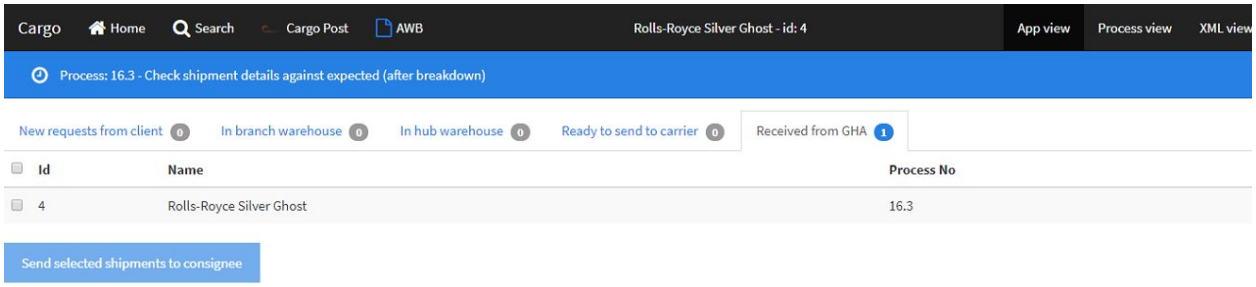
Go to **Home > Customs**, to view the following screen:



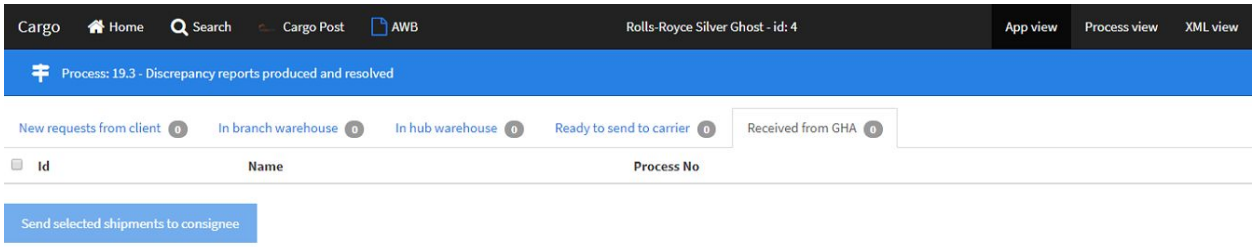

You have now reached 16.3 in the process, as seen here:



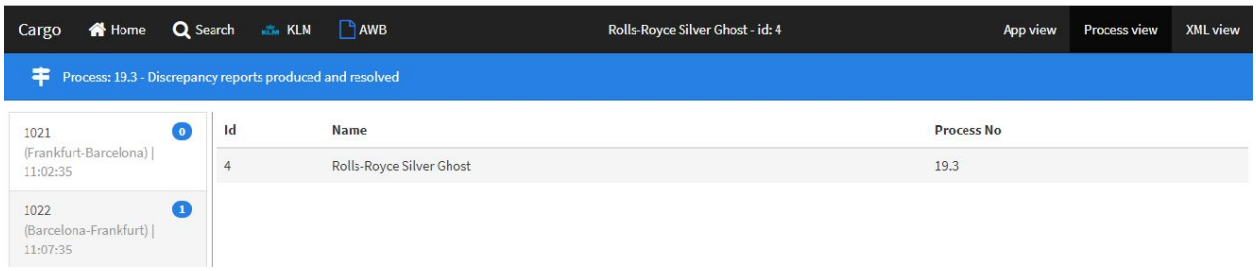

Go to **Home > Freight Forwarder** to view the following screen:



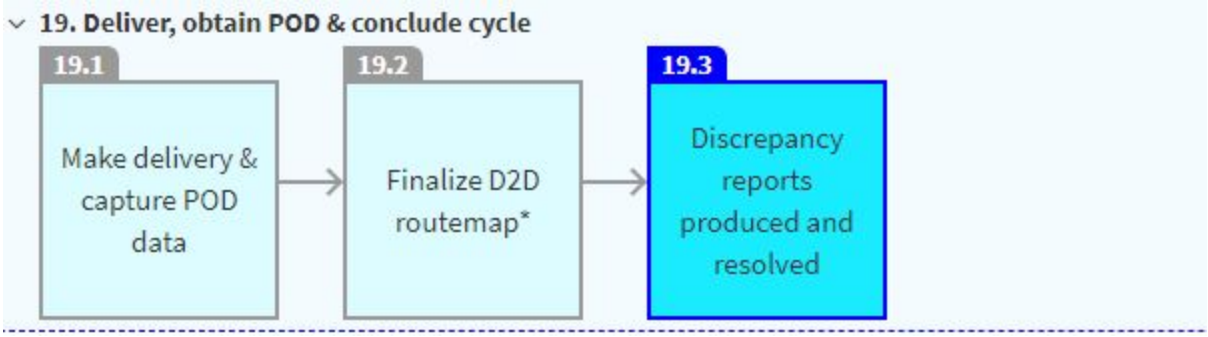

Click **Send selected shipments to consignee** to reach the following screen:




This is the view from the carrier's phase of the cycle:



You have now reached 19.3 in the process and the end of the shipment cycle.




## Unit Load Devices

A unit load device (ULD) is (usually) a metallic container used to load luggage, freight, and mail on wide-body aircraft and specific narrow-body aircraft. It allows a large quantity of cargo to be bundled into a single unit. Thus several shipments going to the same destination can be packed inside a ULD, and loaded inside an aircraft, saving a lot of time and effort. Each ULD has its own packing list (or manifest) so that its contents can be tracked.

Each airline has a unique ULd numbering system, as this link will show: https://docs.google.com/spreadsheets/d/1_WNFotOtrcz5hrVFdJBpiQvh2eEeN5FDucUVIa2VJkQ/edit#gid=0

Do explore this spreadsheet at length and familiarise yourself with the codes.

**Congratulations! You have completed the third scenario of the e-Cargo training, that is, understanding the FDPS and Customs views**.

**Note:** To demonstrate a variety of shipments, there may be several screens being shown alternatively, such as Rolls - Royce Silver Ghost,  gray sailboat maroon fridge etc. The student is encouraged to create various shipments on one's own and complete the various processes.

## Scenario 4:  e-Cargo workflow of Customs with Dangerous Goods

To ship dangerous goods, consignors are required to prepare a form certifying that the cargo has been packed, labeled and declared according with the IATA Dangerous Goods Regulations (DGR). You may use the following tool to categorize the dangerous goods.

**Important:** Do study the Hazmat tool, to familiarise yourself with dangerous goods, their categorisation and the action to be performed when you locate a dangerous goods, in your role as the GHA. Please consider that local law is also relevant in this case.

**Step 1: the Experiment Master starts off the process**

The experiment master, in the role of the consignor passes the following packaging list to the origin shipper:

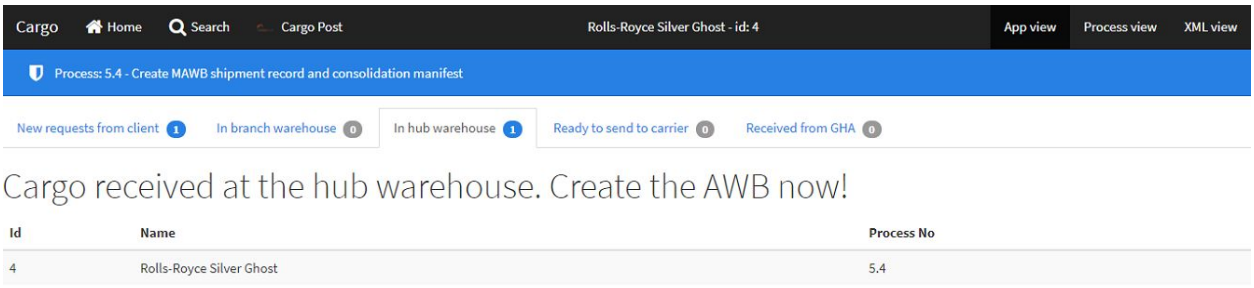
| PACKAGING LIST | |
|---|---|
| Consignor:<br>Sandy Mount Wholesalers<br><br>53, Aungler Street<br><br>DO2 PT 67<br><br>Dublin 2<br><br>Telephone: 014.4782607 | Consignee:<br>Restaurant El Gran<br><br>Plaza Reial, 8<br><br>Barcelona, 08002<br><br>Telephone: 034.931798491 |
| Date: [26/09/2017]<br>25 bags of potatoes (10 kg each)<br>10 bags of rice (10 kg each)<br>500 bottles of water, 0.5litres each | |

**Step 2: The origin forwarder creates the eAWB**

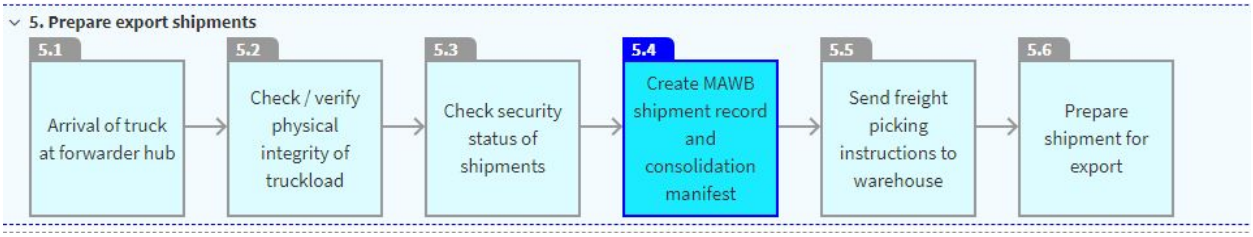
The student with the role origin shipper creates an eAWB, booking the consignment into the next available aircraft to Barcelona. He gets the flight data from the Flight data processing system FDPS. He also has to fill out the Dangerous Goods Declaration.

Complete the processes from booking a consignment to the point of having to creating the airway bill. If in doubt, refer to the first training scenario.

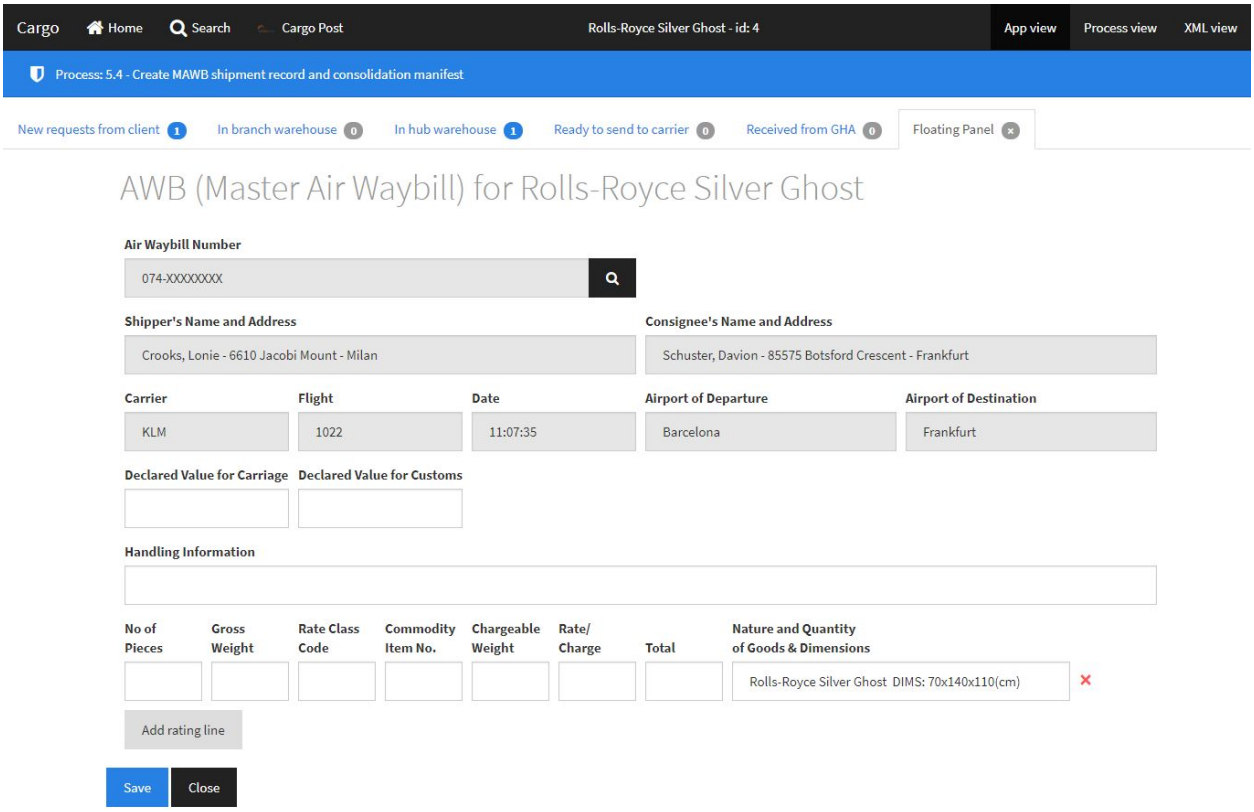
As the freight forwarder, you have reached the shipment to the hub warehouse:




You are now in process 5.4 as seen here:




**Click** the **Rolls-Royce Silver Ghost** row in In hub warehouse, to generate the air waybill template, as seen here:




The air waybill is the most important document in the whole shipping cycle. Without it, no transhipment will be complete. Populate the following fields, including the generation of the air waybill number:

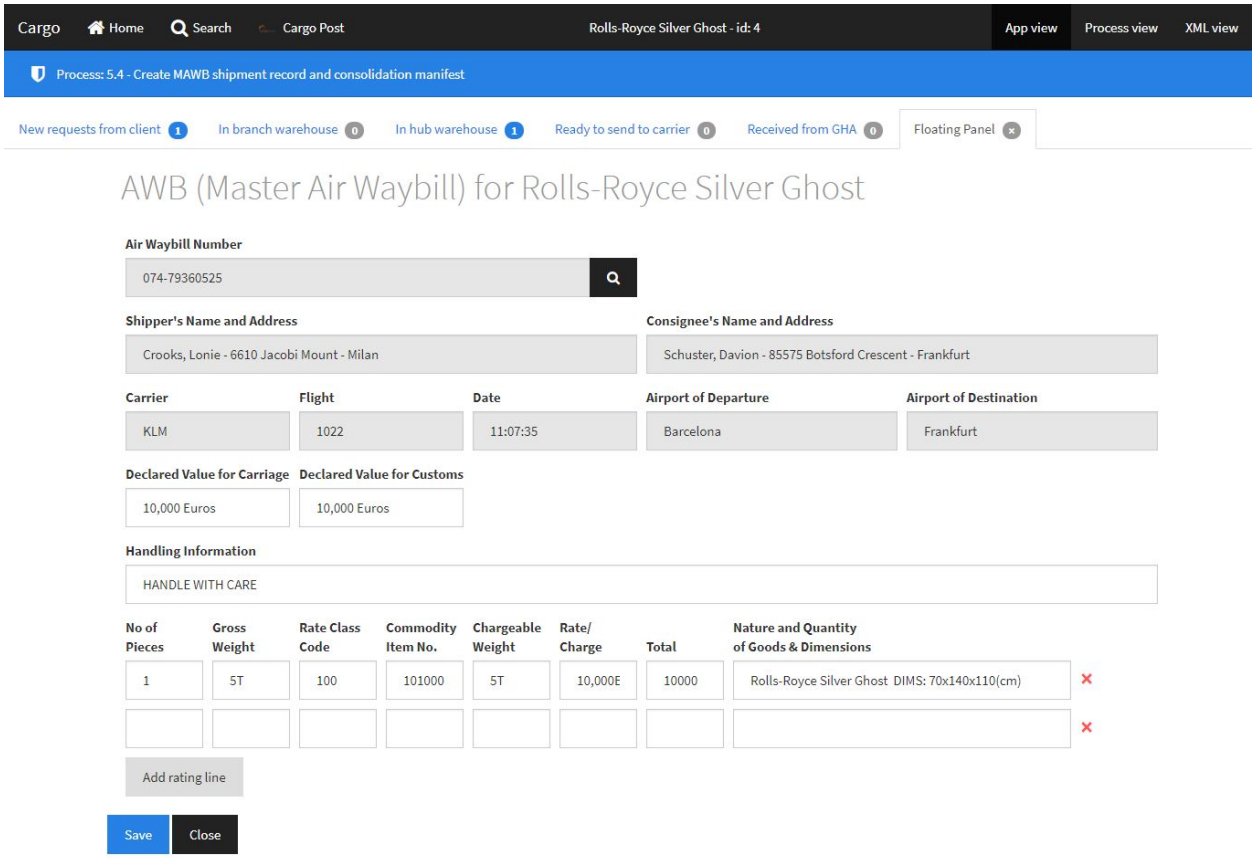
1. **Air Waybill number**: The system will generate the 11 digit air waybill number.
2. **Shipper's name and address**: Enter the name, address, city, postal code, country and telephone number of the shipper.
3. **Consignee's name and address**: Enter the name, address, city, postal code, country and telephone number of the consignee.
4. **Carrier**: Enter the three letter code for the airline, for example, KLM
5. **Flight**: Enter the flight number, for example, KL0932.
6. **Date**: Enter the date of the flight.

7. **Airport of departure**: Enter the three letter city code, for example, VIE, for Vienna.
8. **Airport of destination**: Enter the three letter city code, for example, FRA for Frankfurt.
9. **Declared Value for Carriage**: Enter the declared value for carriage as specified by the shipper. For example, 39,000 euros for a Rolls Royce Silver Shadow 2017 edition. If there is no value, enter NVD (NO VALUE).
10. **Declared Value for Customs**: Enter a value for customs purposes as declared by the shipper as applicable. For example, 40,000 euros for a Rolls Royce Silver Shadow 2017 edition. Otherwise, leave the field blank.
11. **Handling Information**: Enter handling remarks, special instructions, identifying marks and numbers which appear on the consignment, method of packing, attachments, or instructions.
12. **Number of Pieces**: Indicate the number of pieces. Where there is more than one entry, enter the total number of pieces in the bottom row.
13. **Gross Weight**: Enter the actual gross weight of the pieces. When a ULD is used, indicate the actual tare weight as an additional line entry. Where there is more than one entry, enter the total gross weight of the shipment in the bottom row. For example, 4100.56 kilos. (Gross is net+tare. Tare is the weight of the container, or packing).
14. **Rate Class Code**: Enter the tariff level (rate class) under any of these six codes, as applicable:
    - **M**:Minimum freight
    - **C**:SCR (Specific Commodity Rates)
    - **S**:Surcharge on the shipment. This is higher than the general cargo tariff.
    - **R**:Reduced tariff, which is lesser than the general cargo tariff.
    - **N**:Normal, for example 45 kilos or under.
    - **Q**:Quantity, for example, 45 kilos or above

    **Important:** Consult the carrier's agent for more information on rate class code.

15. **Commodity Item Number**: Enter the commodity item number, for example, “9 UN1845” for Carbon Dioxide.
16. **Chargeable Weight**: Enter the actual weight or the dimensional weight, whichever is greater. For example, 124.5 kilos.
17. **Rate/Charge**: Enter the rate per unit, such as or a litre, kilogram or pound, for example, 0.5 euros per litre.
18. **Total Rate**: Enter the total rate of the shipment, that includes charges and surcharges, as applicable. For example, 2330 euros.
19. **Nature and Quantity of Goods & Dimensions**: Enter the description of a shipment, such as “Carbon dioxide, solid, 9 UN1845, 2 X 25 kg.”
20. **Signature of Shipper or Agent**: Get the the signature and stamp of the shipper or agent.
21. **Signature of Issuing Carrier:** Get the signature and stamp of the concerned airline authority.

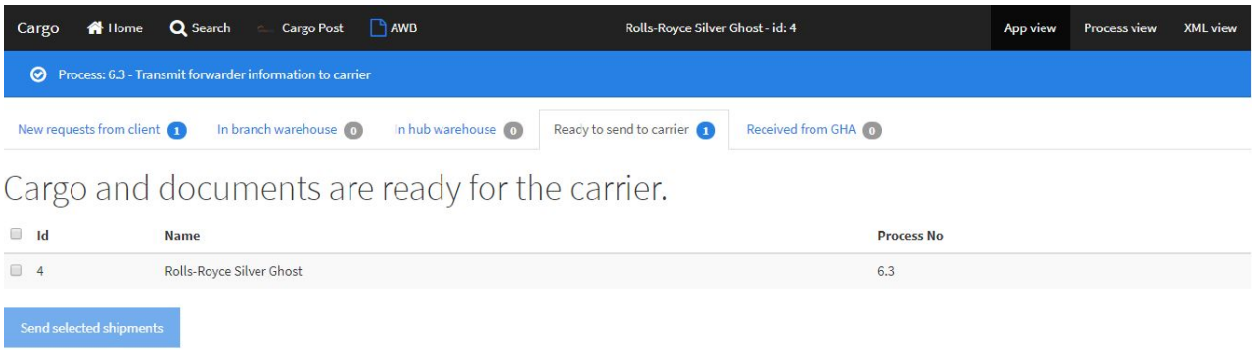
**Note**: **Click Add rating line**, to add relevant information to the air waybill. More rows will appear, as seen below:



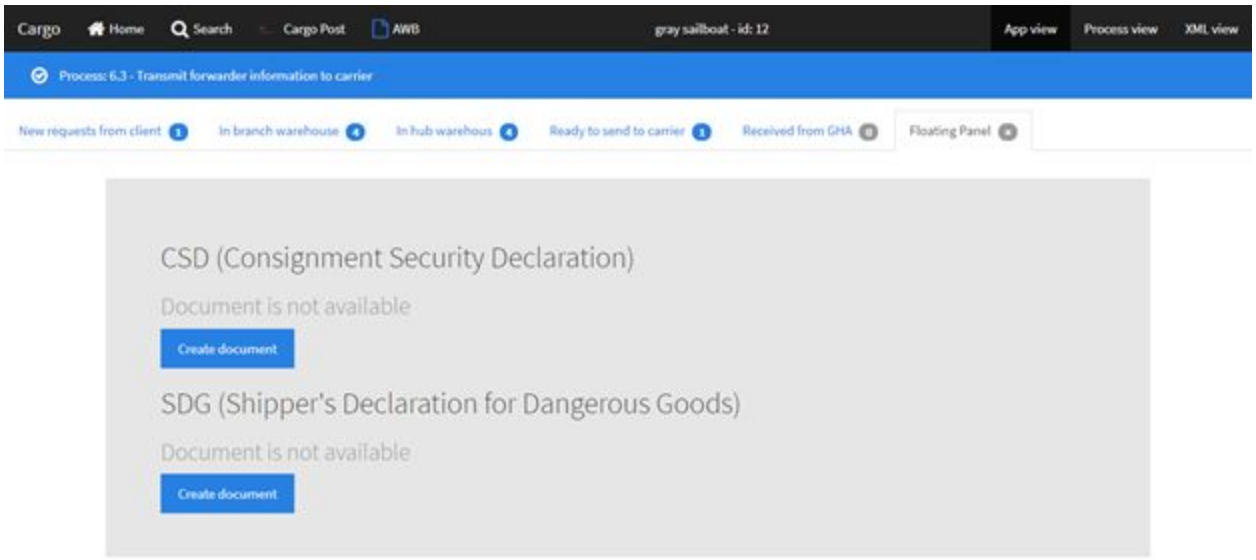

**Click Save > Submit > Close** to get the final MAWB, as seen here:

Click **Save, Submit and Close**.

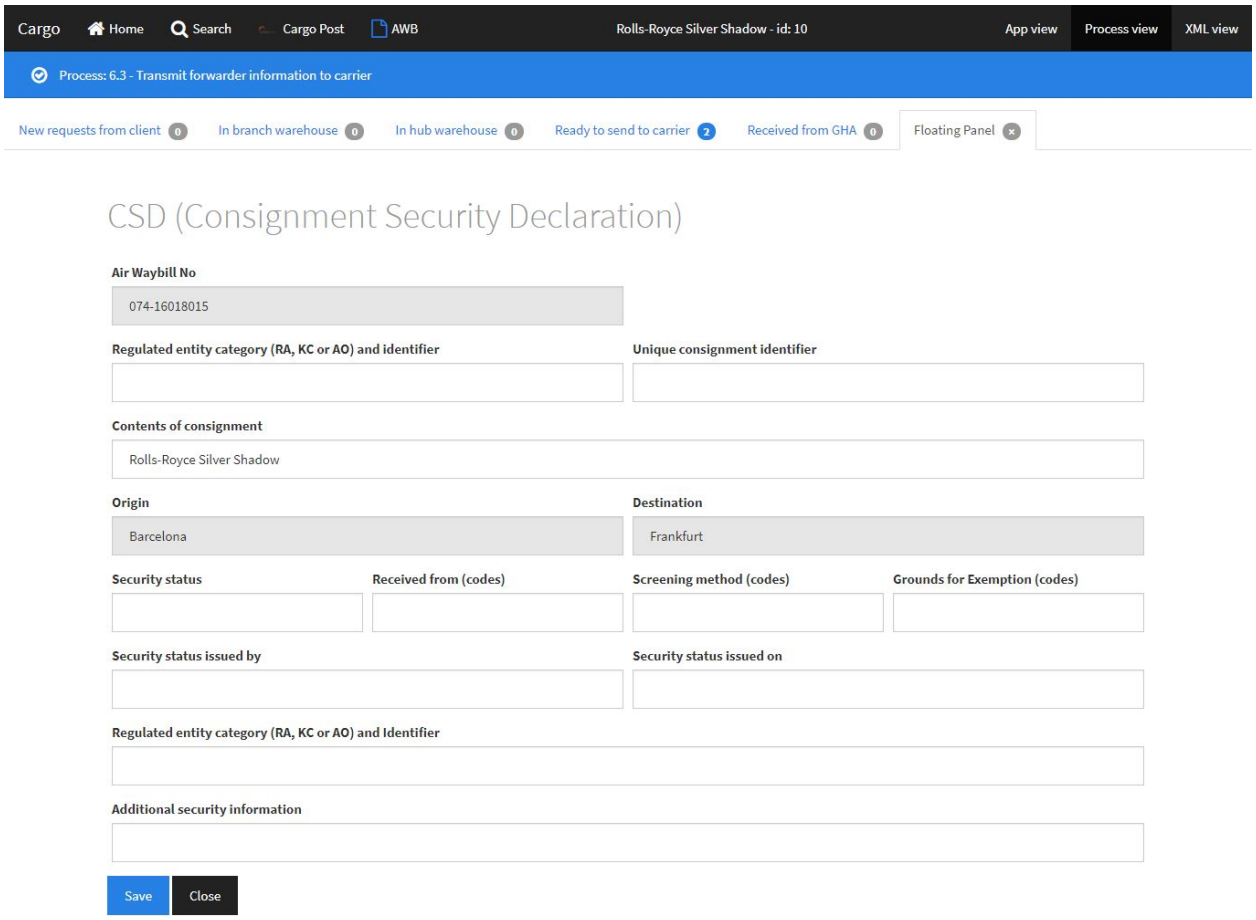
The freight forwarder readies the shipment for the carrier:




You are now ready to create the SDG and the CSD documents, as seen below:




**Click CSD** to create the Consignment Security Declaration (CSD) and **click SDG** to create the Shipper's Declaration for Dangerous Goods (SDG) template, as seen here:




In the CSD template, make sure to populate fill out the following fields:

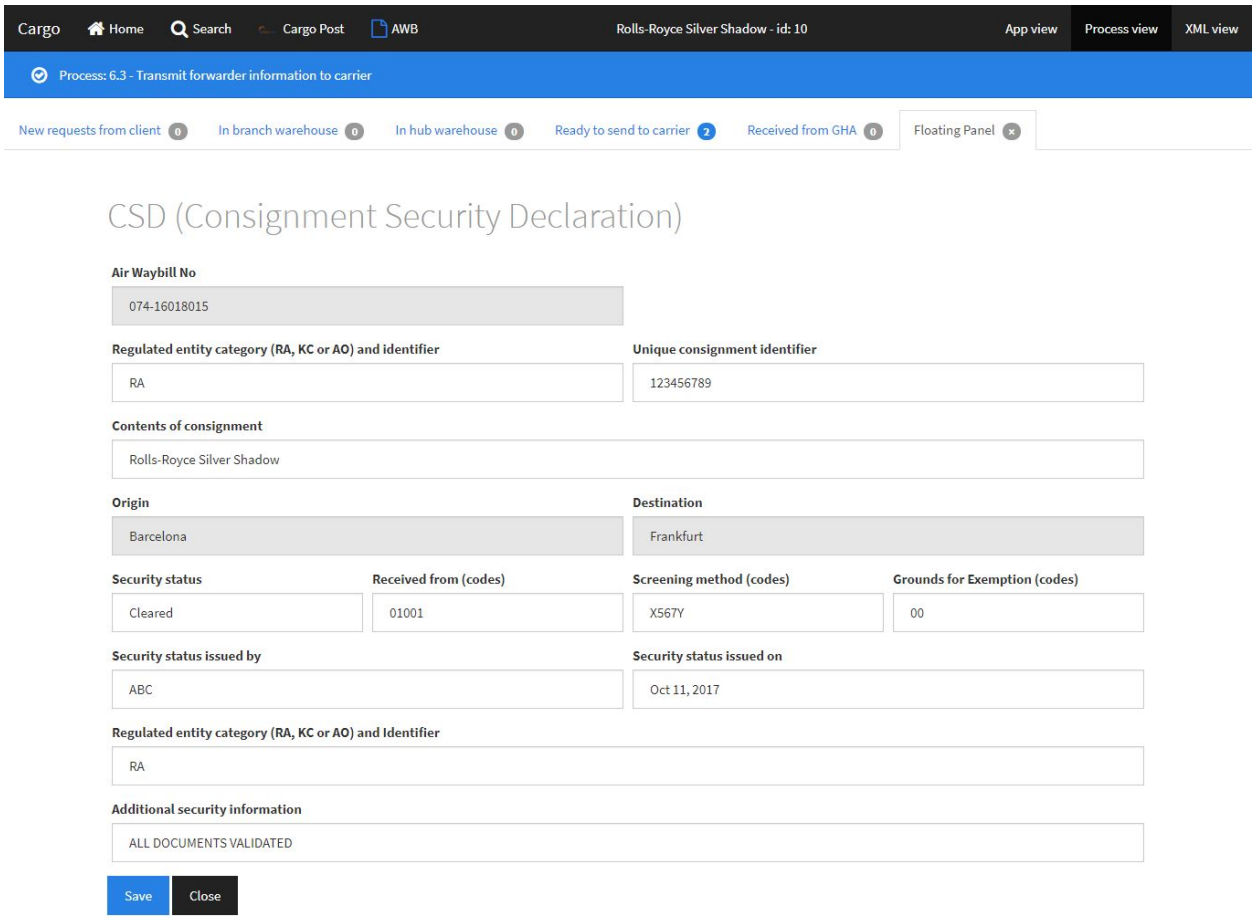
1. **Regulated entity category (RA, KC or AO) and identifie**r: Enter the unique entity code for RA, KC or AO, as applicable. (RA = Regulated Agent, KC= Known Consignor, and AO= Aircraft Operator.)
2. **Unique consignment identifier**: Enter the identification of the consignment. This may be an air waybill (format is nnn nnnnnnnn), a house bill or a mail consignment identifier. But in a majority of cases, it is the air waybill.

3. **Contents of consignment**: Enter the consignment details, for example, 1 Rolls Royce Silver Shadow. Cobalt blue.
4. **Origin**: Enter the IATA three letter airport code, from where the consignment has originated, for example, VIE for Vienna.
5. **Destination**: Enter the destination IATA three letter airport code, for example, FRA for Frankfurt.
6. **Transfer/Transit points**: Enter the three letter transit airport code, if any. For example, MUN, (Munich) if the flight is VIE-MUN-FRA.
7. **Security Status**: Enter any of these three codes, as applicable:
    i. SPX, if it is a regular passenger, cargo and mail aircraft.
    ii. SCO, if it is an all cargo and all mail aircraft.
    iii. SHR, if it is a high risk requirement all cargo and all mail aircraft.
8. **Received from (codes)**: Enter the code from whom received, for example, RA, KC or AO. (RA = Regulated Agent, KC= Known Consignor, and AO= Aircraft Operator.)
   **Note**:If the fields, “Grounds for Exemption” and “Other Screening Method” are not filled, then you cannot leave the “Received from” field blank.
9. **Screening Method (codes)**: This entry identifies codes assigned to the application of screening methods and technologies that are used to prevent act of unlawful interference. Enter any or more of these IATA specified codes, as applicable:
    - **PHS**-Physical Inspection and/or hand search
    - **VCK**-Visual check
    - **XRY**-Xray equipment
    - **EDS**-Explosive detection system
    - **RES**-Remote explosive scent tracing explosive detection dogs
    - **FRD**-Free running explosive detection dogs
    - **VPT**-Vapor trace
    - **PRT**-Particle trace
    - **MDE**-Metal Detection Equipment

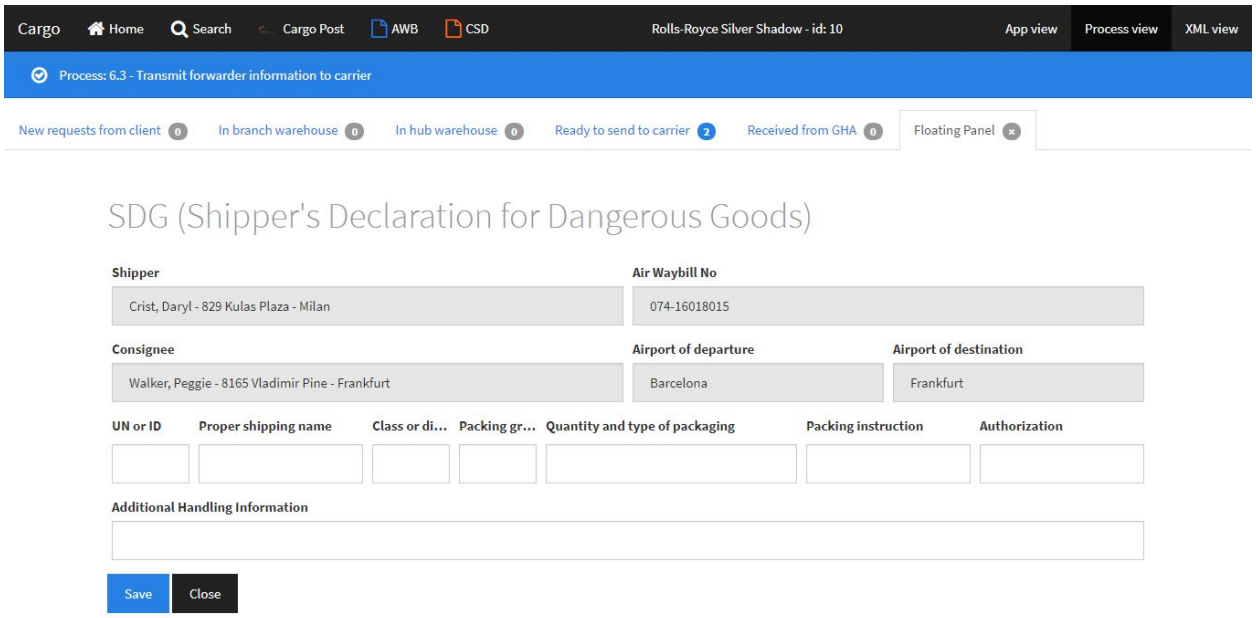
- **AOM**-Subjected to any other means. You must complete this entry by using free text that specifies what other mean was used to secure the shipment. For example, the use of a hand held scanner.

10. **Grounds for Exemption (codes)**: Enter free text, if there is exemption, for example, "*free shipment of study material to under-privileged children in Germany*."
11. **Other Screening Method(s)**: Enter free text, if you encounter any screening situation, not covered under point 11, i.e, Screening Method (codes). For example, the shipment "*is too large for a scanner and was thus manually scanned and physically checked*."
12. **Security status issued by**: Enter the employee code of the RA, KC or AO.
13. **Security status issued on**: Enter the date of creating the CSD.
14. **Regulated entity category (RA, KC or AO) and Identifie**r: Enter the identifier that takes custody of the cargo and accepts the security status originally issued by the RA, KO or AO. For example, this can be the employee code of a security official, accepting responsibility for the security of the shipment.
15. **Additional security information**: Enter any additional security information that may be required by an ICAO Member State, for example, a national regulation, applicable to the responsibilities in the event of a false declaration, or any applicable emergency amendment. For example, the attachment of SAD (Single Administrative Document) required for custom purposes into the European Union.

This is how the fully populated CSD template will appear:




**Click SDG** to generate a SDG template, as seen here:



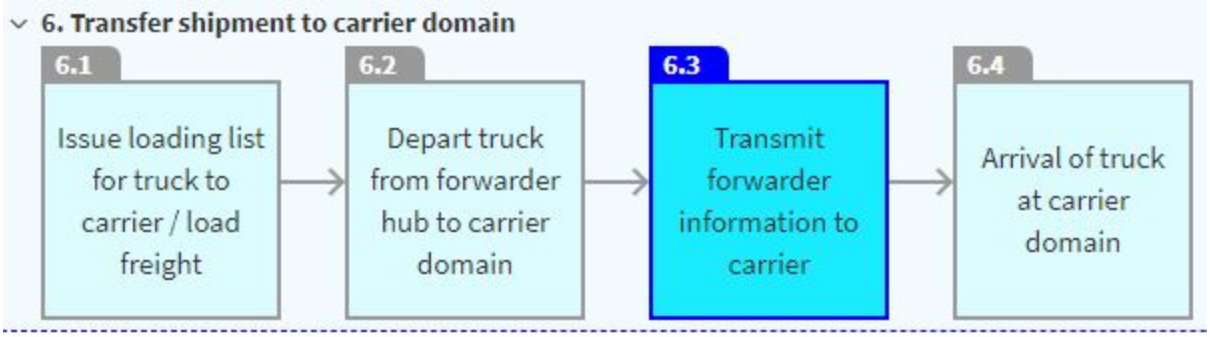

Make sure you you populate the following fields i the SDG form, as seen below:

1. **Shipper**: Enter the full name and address of the shipper.
2. **Air Waybill number**: The system will generate the airway bill.
3. **Consignee**: Enter the full name and address of consignee.
4. **Transport Details**: Specify if there are aircraft limitations, such as the *"the consignment complies with the limitations for passenger and cargo aircraft, or if the consignment is limited to cargo aircraft only*." Strike out the box that does not apply.
5. **Airport of Departure**:Enter the full name of the airport or city of departure. The three-letter airport code is not acceptable. This information can be left blank and completed by the agent or airline.
6. **Airport of Destination**: Enter the full name of the airport or city of destination. The three-letter airport code is not acceptable. This information can be left blank and completed by the agent or airline.

7. **Shipment Type**: Specify if the shipment is Non-Radioactive or Radioactive. strike out the box that does not apply.
8. **UN or ID**: Specify the UN or ID number from Column A in Section 4.2 of the DG (Dangerous Goods) list, that records over 4,000 Dangerous Goods. Note that all entries begin with UN with one exception, which applies to consumer commodities, which is ID 8000. (https://www.unece.org/fileadmin/DAM/trans/danger/publi/unrec/English/part3.pdf)
9. **Proper shipping name**: Specify the proper shipping name found in Column B of Section 4.2 of the DG list. For example, AMMONIUM PICRATE dry or wetted with less than 10% water, by mass. Note that some entries may require you to add the technical name of the product in parenthesis after the proper shipping name. This requirement is indicated by a star.
10. **Class or division**: Enter the Class or division as specified in column 3 of section 4.2 of the DG list. For example, “1.1D” for the above mentioned example of a shipment of ammonia.
11. **Packaging group**: Enter the packing group as per column 6 of the DG list. In most cases, the DG list does not specify the UN packing group. Then you may leave the field blank.
12. **Quantity and type of packaging**: Enter the quantity and type of packaging. For example, 125 kilos of ammonium picrate in 25 kg glass jars.
13. **Packing instruction**: Enter the packaging instruction as specified in column 8 of the DG list. For example, "P112(a)  (b) or (c)" for a shipment of ammonia, as mentioned in the earlier points.
14. **Authorization**: Get or attach the required authorization to ship the consignment by air. In the European Union, EASA (European Aviation Safety Agency) is one such body (https://www.easa.europa.eu/), like the DOT (Department of Telecommunication) in the US.

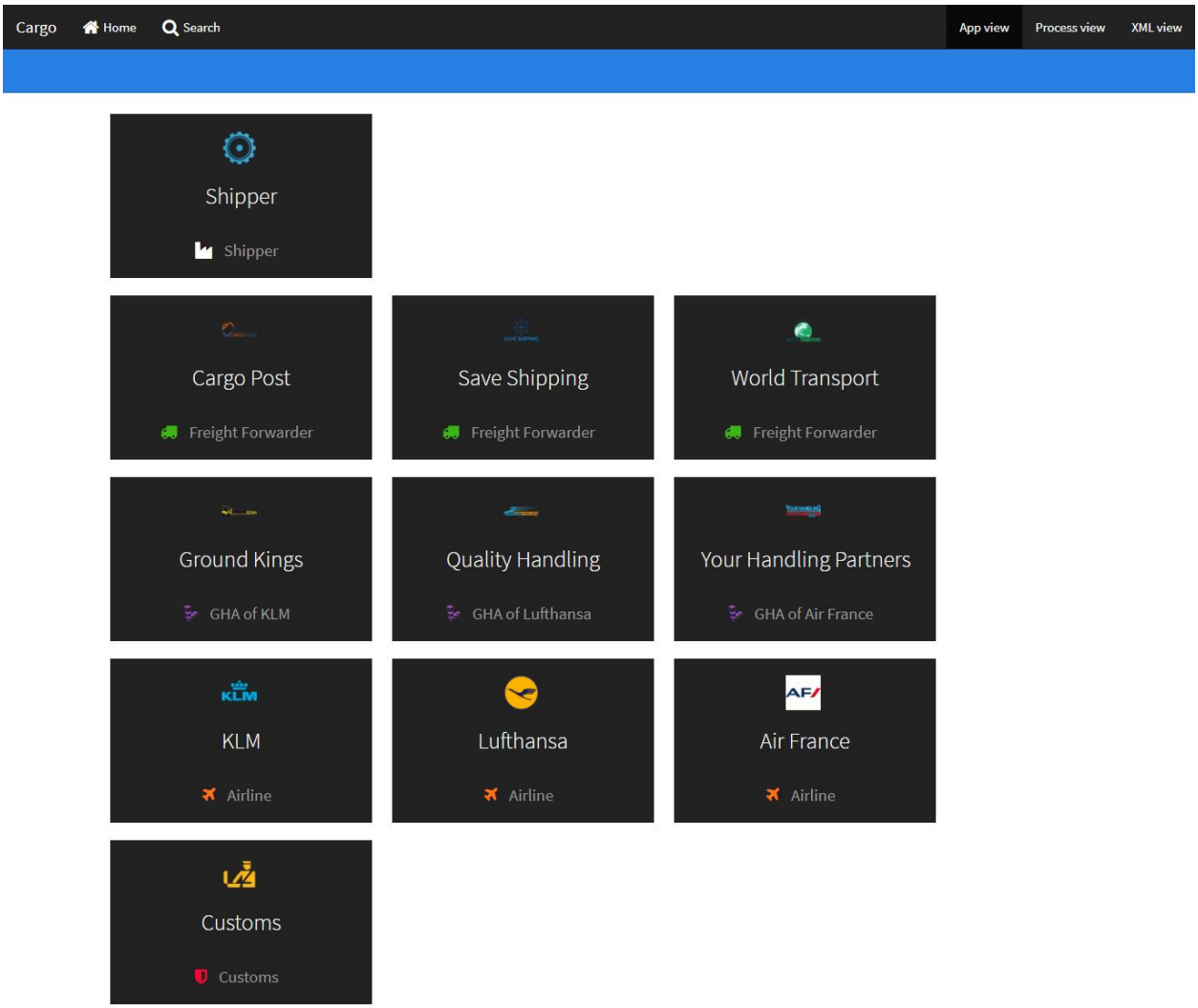
15. **Additional Handling Information**: Enter any specific handling information relevant to the consignment, such as the emergency response telephone number for shipments, for large quantities, or high value items, or dangerous goods, such as ammunition cartridges. Or "*explosive material. Store away from sunlight*." Or *Infectious substance for laboratory testing.Do not open*"
16. **Declaration**: This will be printed in the SDG in its standard global format.
17. **Name of Signatory**: Enter the name of the person actually signing the shipper's declaration.
18. **WARNING**: This is a statutory warning that appears in the SDG, by default. You do not have to fill out any information.

You are now in process 6.3, as seen here:

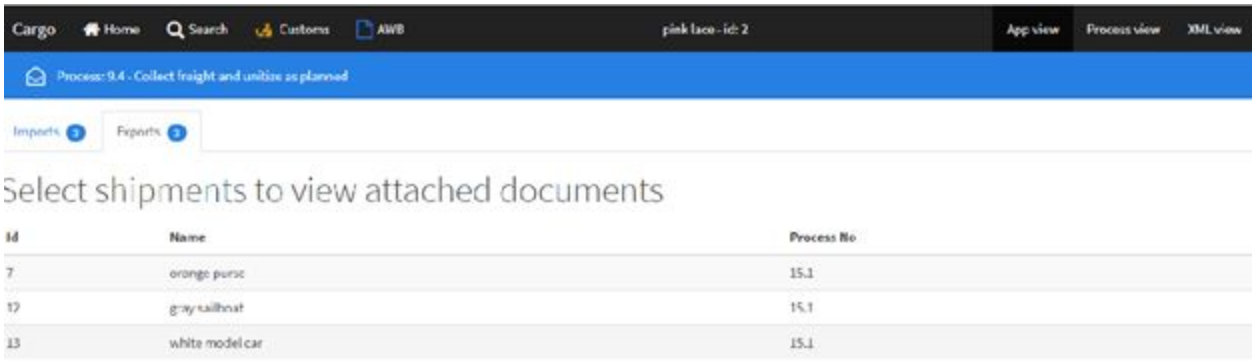



You have now understood the shipping documentation flow - creating the air waybill, CSD and DSG.

In the coming section, you will see the interaction of the Customs in the e-Cargo workflow.


Cargo
Home
Search
App view
Process view
XML view
Shipper
Shipper
Cargo Post
Freight Forwarder
Save Shipping
Freight Forwarder
World Transport
Freight Forwarder
Ground Kings
GHA of KLM
Quality Handling
GHA of Lufthansa
Your Handling Partners
GHA of Air France
KLM
Airline
Lufthansa
Airline
Air France
Airline
Customs
Customs

Click **Customs,** to view the following screen:

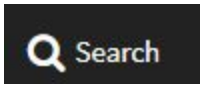



There are two tabs for **Imports** and **Exports.** Depending on which end, your role as a Customs official is, you can see there are three shipments ready for export, such as orange purse, gray sailboat and white model car.

Imports are for shipments coming into an airport, like Frankfurt. Customs officials will be able to view documents and shipments reaching into this airport.

Exports are for shipments going out of an airport, like Frankfurt. Customs officials will be able to view documents and shipments leaving this airport.  For the sake of this simulation, let us explore the Export option.

To reach this page, you will perform the following steps:

Go to the Home page and click 

. The process page appears:

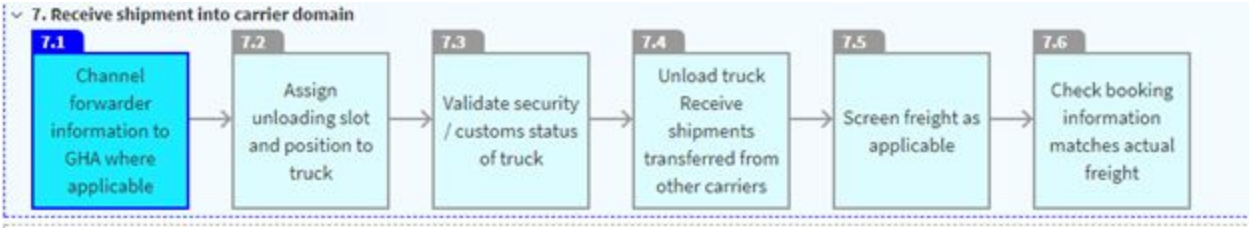
Cargo | Home | Search | Customs | AWB | maroon fridge - id: 9 | App view | Process view | XML view

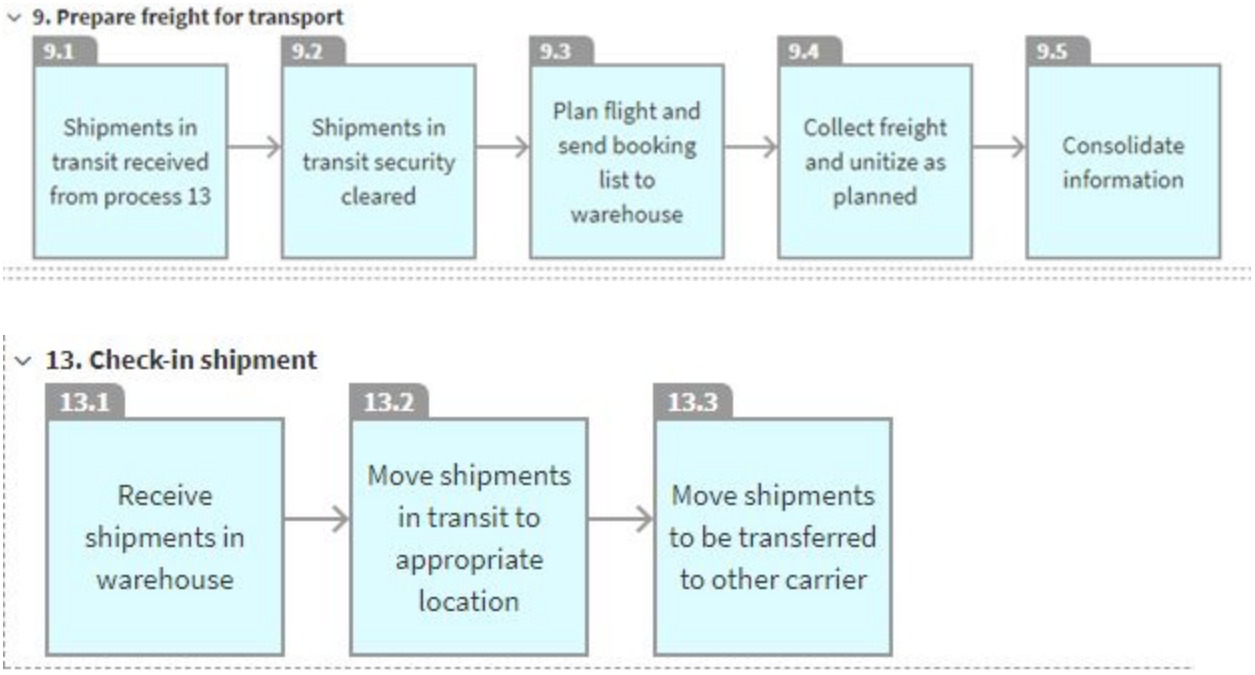
Process: 7.1 - Channel forwarder information to GHA where applicable

| Id | Name | Process No |
|---|---|---|
| 21 | old-fashioned mp3 player | 1.4 |
| 20 | aquamarine table | 1.4 |
| 19 | zesty door | 2.1 |
| 18 | Yellow table | 2.1 |
| 17 | olive bed | 2.1 |
| 16 | brown chapter book | 2.1 |
| 15 | black tree | 5.4 |
| 14 | gray keyboard | 19.3 |
| 13 | white model car | 15.1 |
| 12 | gray sailboat | 15.1 |
| 11 | big table | 13.1 |
| 10 | maroon credit card | 5.4 |
| 9 | maroon fridge | 7.1 |
| 8 | black remote | 5.4 |
| 7 | orange purse | 15.1 |
| 6 | white slipper | 7.1 |
| 5 | tan chocolate | 3.5 |
| 4 | cyan clock | 3.5 |
| 3 | shiny helmet | 7.1 |
| 2 | pink lace | 9.4 |
| 1 | blue sponge | 19.3 |

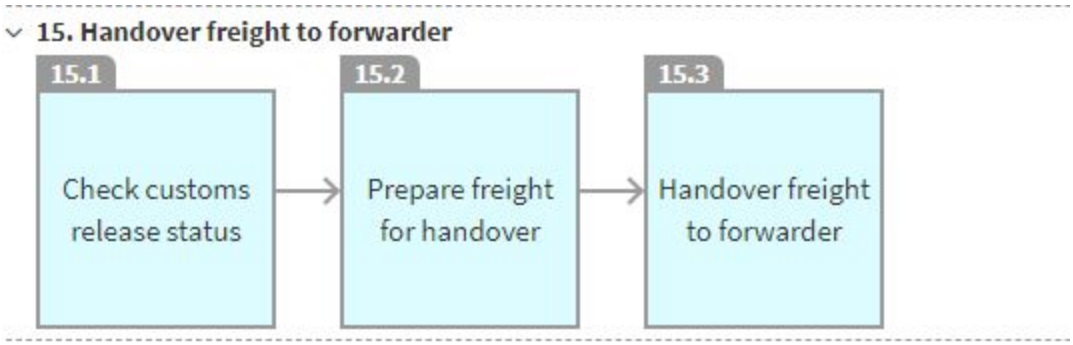
View all processes with the “7.1 status”.  They are maroon fridge, white slipper, shiny helmet etc.

Click on any of the rows, for example, maroon fridge, to view these processes:

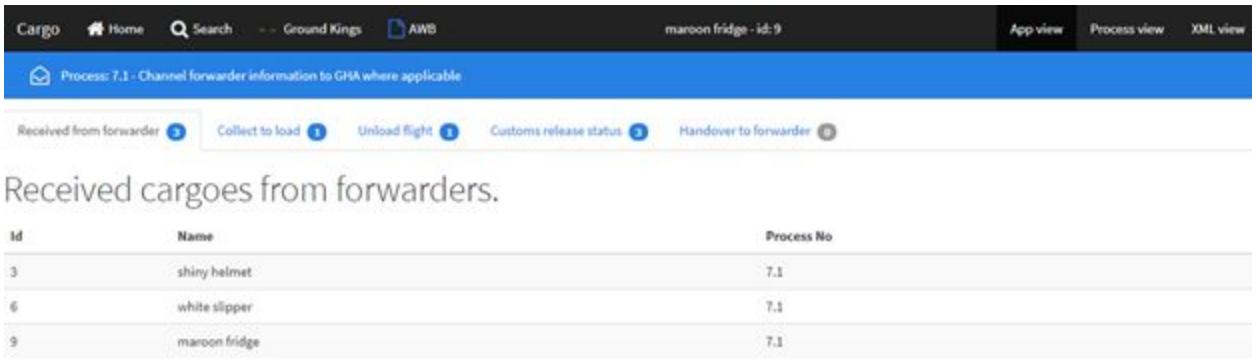





**Note:** During any stage in the e-Cargo application, you can select the **Process View,** to understand the relevant steps and to co-ordinate where you are, in the workflow.

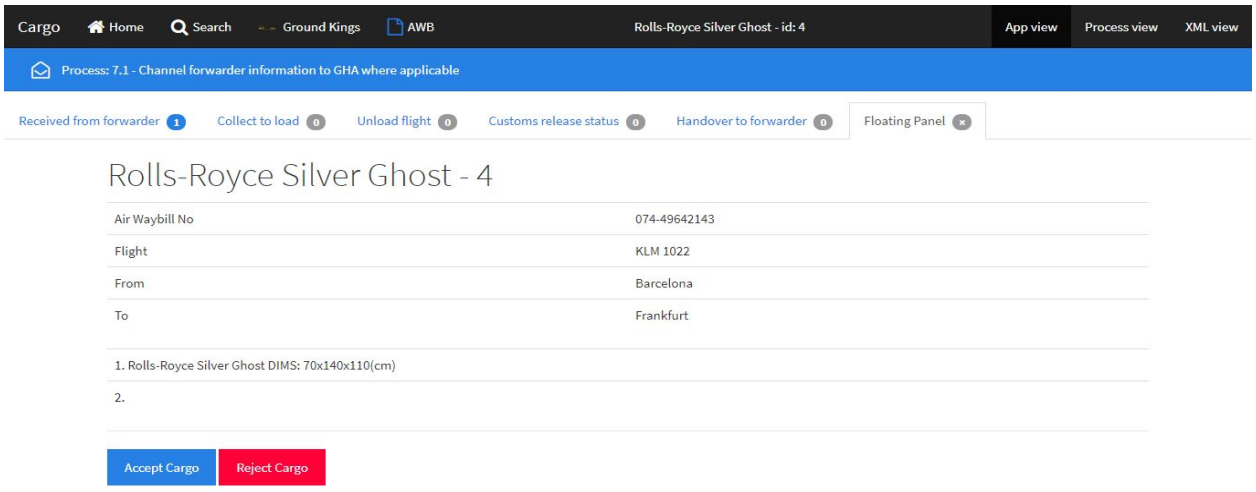



The involved processes are 7.1, 9.4, 13.1 and 15.1 for export and import process.




There is an acknowledgement that these shipments have been received from the freight forwarder.

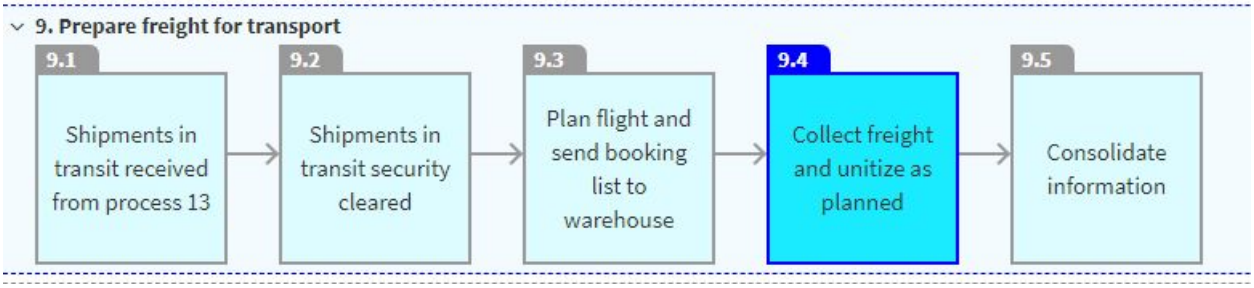
**Click** any row, to get the following screen:




As the GHA, you have the option to either accept the cargo, or reject it, if need be.

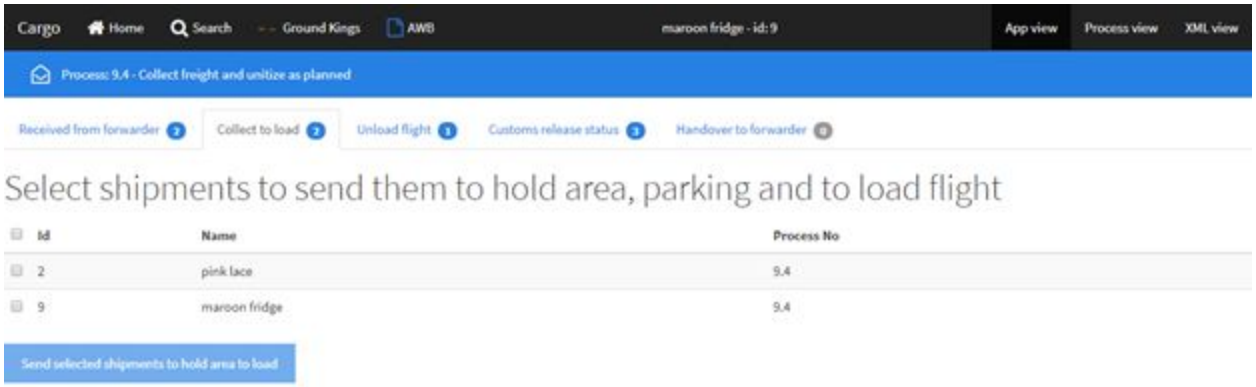
When you click **Accept Cargo**, you will get the **Accepted! Close this panel** tab. **Click this tab**, to get the  Rolls-Royce Silver Ghost row in the Collect to load Pane.

You are now in process 9.4, as seen here:



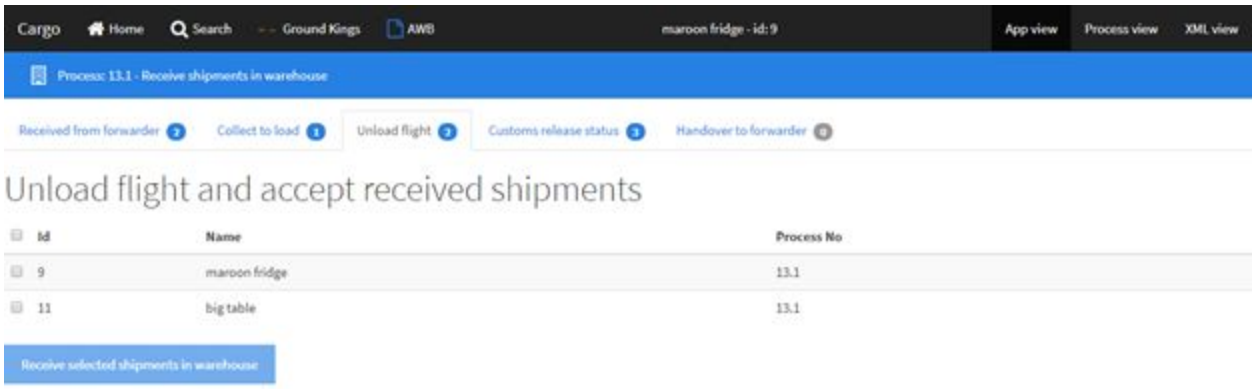

**Note:** A shipment can also get rejected, for various reasons. In such a case, the rejected item will be archived, for reference. You can view the list of rejected shipments by using the Search option.

Click **Collect to Load**, to view the following screen:

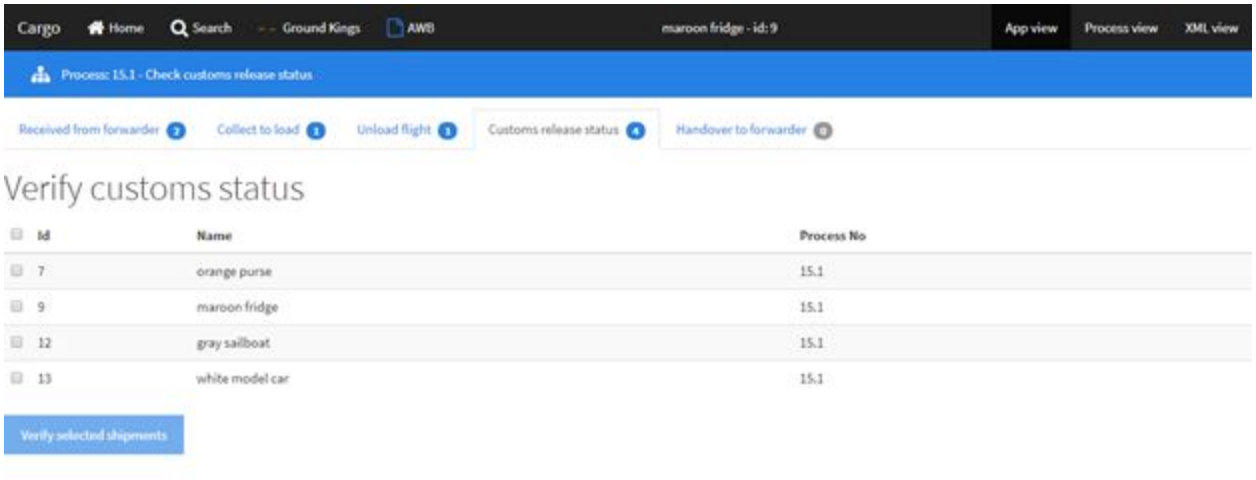



The shipment, maroon fridge has moved from the forwarder to the loading area. From here, the shipment will be sent to the hold area, parking and load flight.

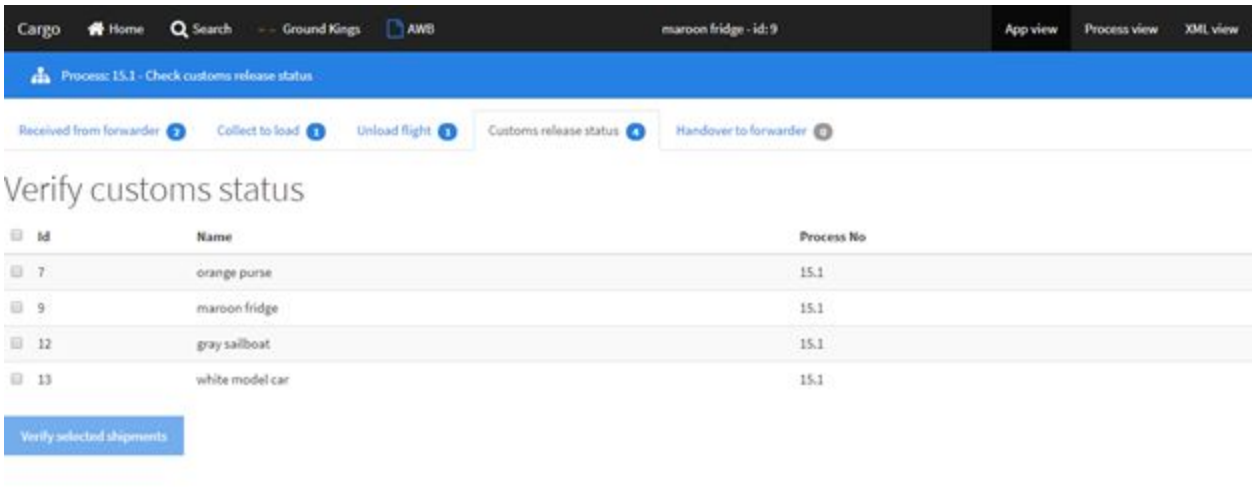
**Select** the maroon fridge row and send it for shipment, as seen below:




As you can see, we have moved through the processes of 7,1, 9.4 and 13.1. In the Customs release status, there are four shipments awaiting inspection, including the maroon fridge.



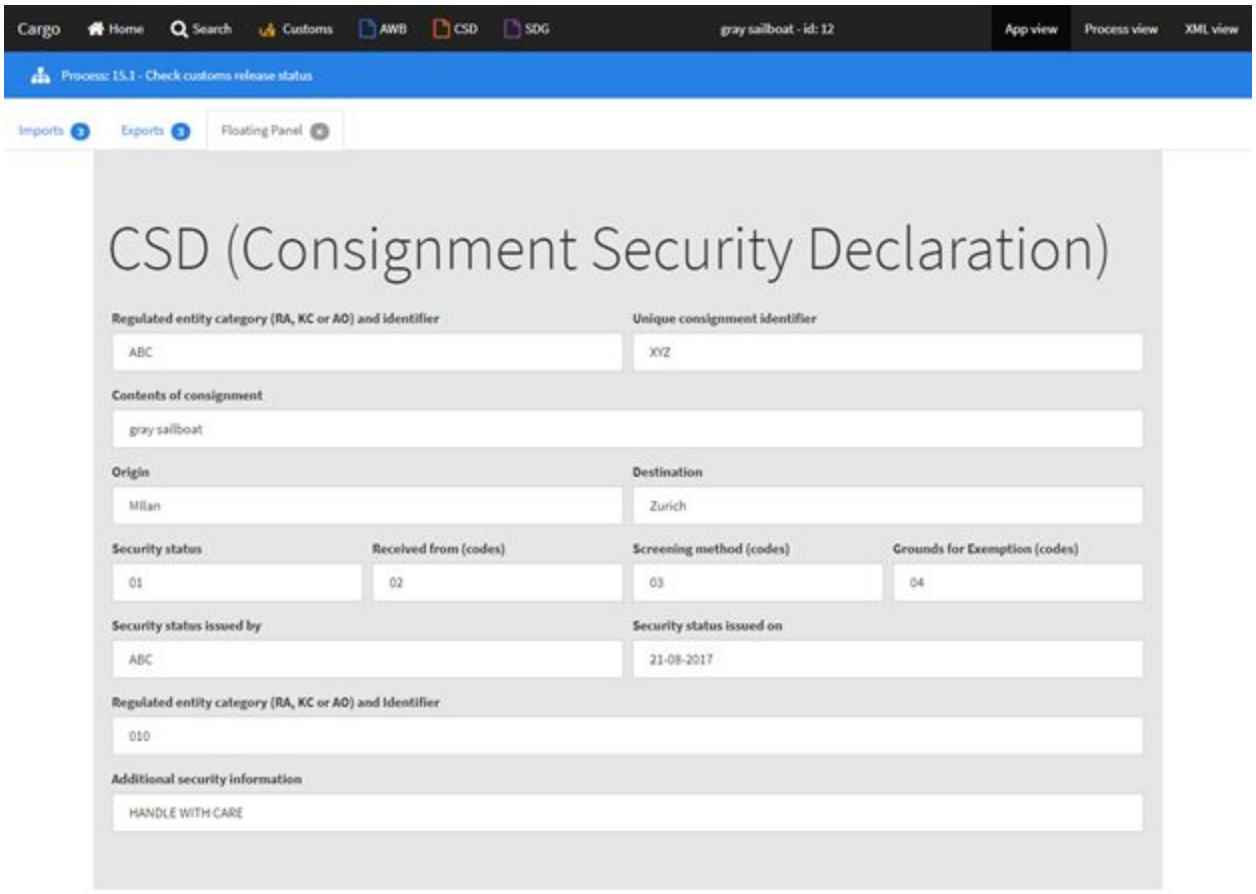

**Select** the maroon fridge row and click **Verify Selected Shipments**, to get the following screen:

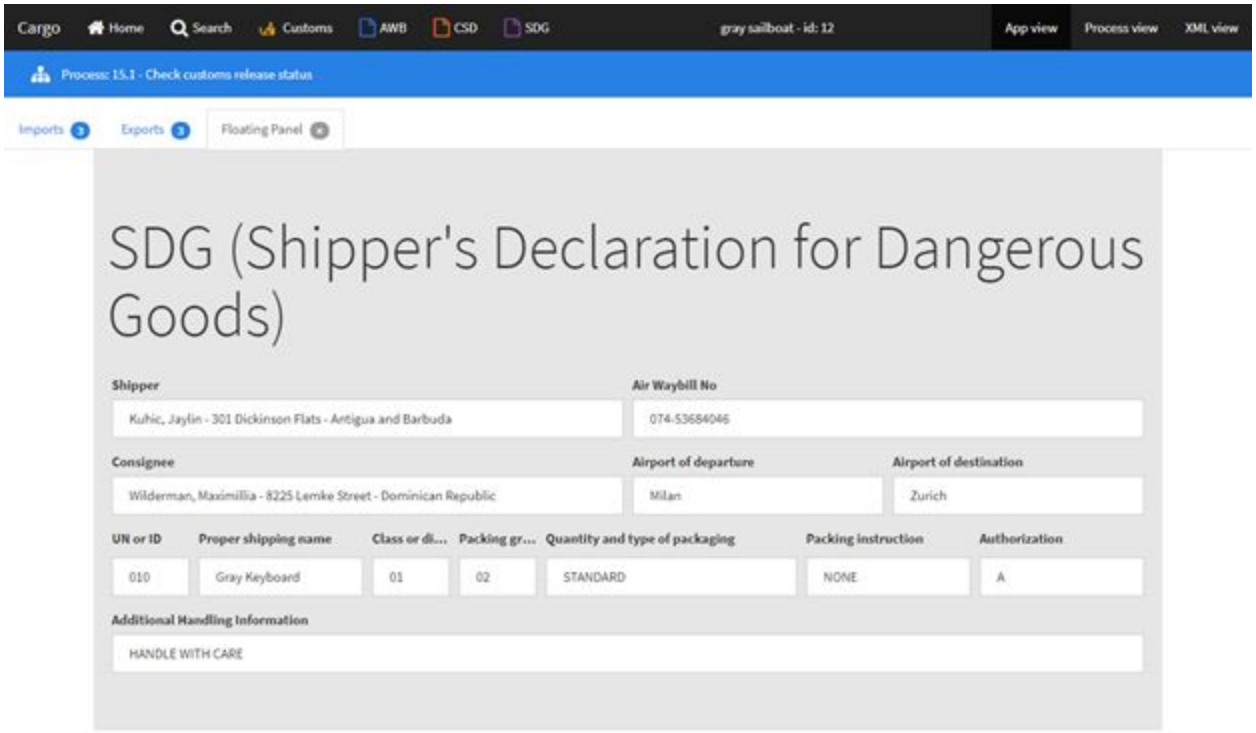



Back in the Customs page in the role of a Customs official, you can view the documents related to a shipment.

**Click** any row, to view, on the top of the screen, the tabs for **AWB**, **CSD** and **SDG**. Click these to get the following three screens:

Cargo
Home
Search
Ground Kings
AWB
Rolls-Royce Silver Ghost - id: 4
App view
Process view
XML view
Process: 16.3 - Check shipment details against expected (after breakdown)
Received from forwarder 0
Collect to load 0
Unload flight 0
Customs release status 0
Handover to forwarder 0
Floating Panel
AWB (Master Air Waybill) for Rolls-Royce Silver Ghost
Air Waybill Number
074-49642143
Shipper's Name and Address
Crooks, Lonie - 6610 Jacobi Mount - Milan
Consignee's Name and Address
Schuster, Davion - 85575 Botsford Crescent - Frankfurt
Carrier
KLM
Flight
1022
Date
11:07:35
Airport of Departure
Barcelona
Airport of Destination
Frankfurt
Declared Value for Carriage
Declared Value for Customs
Handling Information
No of Pieces
Gross Weight
Rate Class Code
Commodity Item No.
Chargeable Weight
Rate/ Charge
Total
Nature and Quantity of Goods & Dimensions
1
5T
100
101000
5T
10,000
10000
Rolls-Royce Silver Ghost DIMS: 70x140x110(cm)


Cargo
Home
Search
Customs
AWB
CSD
SDG
gray sailboat - id: 12
App view
Process view
XML view
Process: 15.1 - Check customs release status
Imports 3
Exports 3
Floating Panel
CSD (Consignment Security Declaration)
Regulated entity category (RA, KC or AO) and identifier
ABC
Unique consignment identifier
XYZ
Contents of consignment
gray sailboat
Origin
Milan
Destination
Zurich
Security status
01
Received from (codes)
02
Screening method (codes)
03
Grounds for Exemption (codes)
04
Security status issued by
ABC
Security status issued on
21-08-2017
Regulated entity category (RA, KC or AO) and identifier
010
Additional security information
HANDLE WITH CARE




Refresh the application and go to **Home > Customs**, to view the final status:

Refresh the application and go to **Home > Customs**, to view the final status:

**Congratulations! You have completed the fourth scenario of the e-Cargo training, that is, understanding the shipper's declaration of dangerous goods.**

**Note:** To demonstrate a variety of shipments, there may be several screens being shown alternatively, such as Rolls-Royce Silver Ghost, gray sailboat maroon fridge etc. The student is encouraged to create various shipments on one's own and complete the various processes.

## Scenario 5: Working with the MOP

Cargo iQ is an IATA not-for-profit membership initiative, set up with an objective to create and implement quality standards for the worldwide air cargo industry.

The group comprises about 80 major airlines, freight forwarders, ground-handling agents, trucking companies and IT solution providers. On a recent estimate, 10 million A2A ( airport to airport) shipments and Six million D2D (Door to Door) shipments measured annually, while the annual data exceeds 110 million lines per year. The industry standard is endorsed by TIACA, the Airport Services Association (ASA), the Cool Chain Association (CCA), and ULD Care, a non profit Canadian organization whose scope encompasses any aircraft unit load device (ULD) activity.

Cargo iQ Members recognized the need to develop a Master Operating Plan (MOP) to support implementation of quality management processes and metrics, using standard approaches. The Cargo iQ members work together to define the processes behind the air transport of cargo to measure success and continuously improve the value of airfreight for customers.

In simple terms, the MOP records each shipment process from the shipper to the consignee that comprises 19 main processes and 78 sub-processes.

MOP describes the key processes and sub-processes involved in transporting air cargo from shipper to consignee in a systematic and harmonized manner.

The Industry MOP is a generic description of the air transportation process, intended to be used by the whole industry. The document provides the air cargo supply chain with the first, industry-endorsed, standard description of the end-to-end process of transporting cargo by air with the objectives of:

1. Serving as the foundation for developing industry standards and best practices in areas such as e-freight, security, quality, and standardisation

2. Facilitating discussions with regulators
3. Simplifying communication with partners in the supply chain

IATA recommends to all participants in the supply chain to use the Industry MOP when defining internal processes and in discussions with business partners. The following document has already been adopted by leading industry organizations: http://www.iata.org/whatwedo/cargo/cargoiq/Documents/cargoiq-industry-mop.pdf

## The importance of MOP

There have been several significant developments in the way cargo shipments are processed in recent years.  The areas addressed for improvement include, for example,  air security, electronic freight management, paperless workflow and global compatibility compatibility across various IT systems and country regulations.

The Cargo iQ management recognized the need to evolve a MOP in an up-to-date and user friendly format to navigate the processes listed therein. The complete process has been summed up in a graphical workflow that is easy to understand and implement. Users can easily and rapidly access and navigate the MOP format. It is natural to expect that any process is an evolution and the MOP thus incorporates an enhanced method to present and control future adjustments.

Additionally, the MOP is available for access by all participants in the air transport supply chain from shippers to consignees, as well as all service providers, involved in the actual transport of cargo and related activities.

The value of an Industry MOP however goes beyond this particular goal and this Industry MOP will provide all industry participants as well as air cargo representative organizations and associations with a common reference document useful for a number of activities, including:

- Support to the development and implementation of new industry standards and practices, in areas such as quality management, paperless operation, security, customs compliance, special cargo transportation, and others.
- Support to discussions with regulators, when a description of the generic industry transportation process is required.
- Support to air cargo industry participants looking for a reference to improve their internal processes and/or developing common processes with supply chain partners.

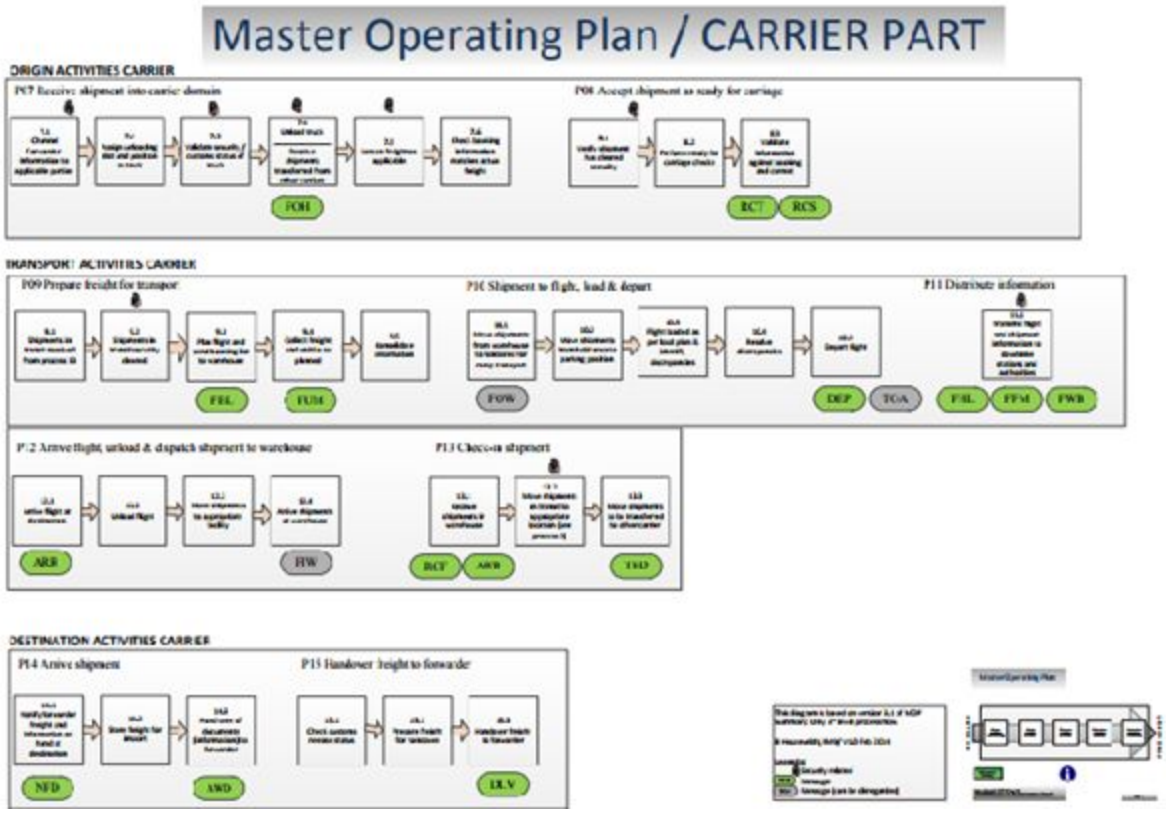
The MOP guidelines recognize that the processes and sub-processes contained herein may not describe the exact processes applied by each air cargo participant in their own operations. It does represent, however, a good description of the process that the air cargo industry can aim towards, with a view to harmonizing procedures across stakeholders, improving overall quality, and responding to regulatory requirements.

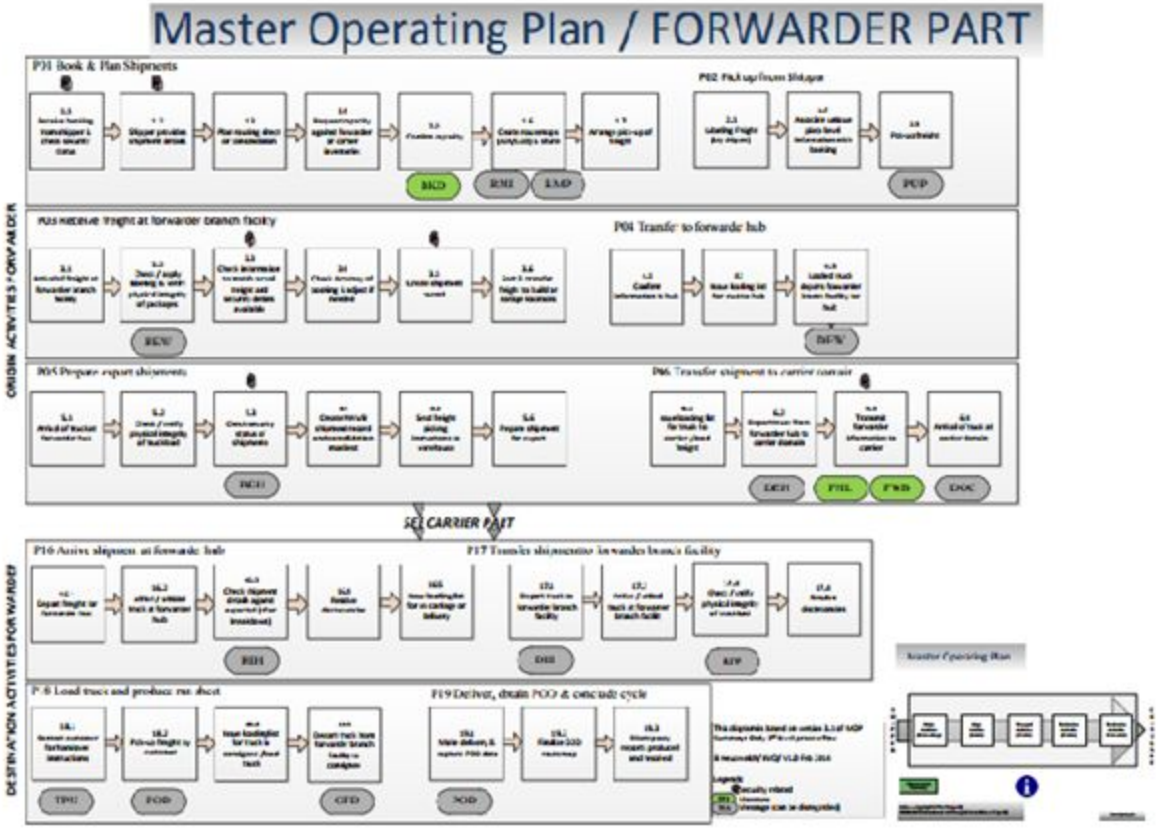
It is anticipated that this MOP will continue to evolve over time as requirements and industry processes evolve.

A total of 19 main processes have been identified in this MOP, from shipper's door to consignee's door. These processes belong to one of five categories of activities as follows:

1. Origin Forwarder
2. Origin Carrier
3. Transport Carrier
4. Destination Carrier
5. Destination Forwarder

The Carrier part and the forwarder part screens capture the essence of the MOP:






That ws MoP in brief. The student is encouraged to print out the document in this link and study it:

https://www.iata.org/whatwedo/cargo/cargoiq/Documents/MOP%20summary%20v1.1.pdf

**End of Document**