

7.0 Logistics

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7.1 Introduction and Scope of Effort

Logistics defines the exchange of data that is required to enable the transmission of data regarding shipments for chemicals, plastics products, and related services.

To fully understand the context for the messages in this section the reader should consult the following additional sections in this publication:

- Section 1 - Introduction
- Section 2 - Design Guidelines
- Section 3 - Common Data Elements
- Data Dictionary, Version 3.0

7.1.1 Logistics Messages

The following business transactions are discussed in this section:

Load Tender Motor	<p>The Load Tender Motor transaction is used to offer the transport of a specific motor shipment from place of Origin to final Destination. The information that is transmitted contains all shipment information (e.g., product description including hazardous classification, if applicable, weight, and pickup and delivery dates).</p> <p>This message is part of a request/response pair and anticipates a Load Tender Response message in reply.</p>
Load Tender Rail	<p>The Load Tender Rail transaction is used to offer the transport of a specific rail shipment from place of Origin to final Destination. The information that is transmitted contains all shipment information (e.g., rail car number, product description including hazardous classification codes).</p> <p>This message is part of a request/response pair and anticipates a Load Tender Response message in reply.</p>
Load Tender Ocean	<p>The Load Tender Ocean transaction is used to offer the transport of a specific export shipment from place of Origin to final Destination. The information transmitted contains all shipment information (e.g., container number, product description).</p> <p>This message is part of a request/response pair and anticipates a Load Tender Response message in reply.</p>
Load Tender Response	<p>The Load Tender Response message is used to respond to any of the offered Load Tender transactions, Motor, Ocean or Rail. The transaction is used to transmit information that either accepts or rejects the offer to transport.</p>
Carrier Weights	<p>The Carrier Weights transaction is used to convey weights and scale information between interested parties. There is no requesting message for this transaction.</p>

Shipment Instructions	<p>The Shipment Instructions transaction is used to convey all of the pertinent information about a shipment to a third-party agency (warehouse or terminal) that will ship the material. This may also be used to convey shipment information to a customs broker or freight forwarder.</p> <p>This message would expect a Ship Notice message when shipment has occurred. Should the third party agency not be able to comply, a telephone call or e-mail would normally be expected.</p>
Ship Notice	<p>The Ship Notice transaction is used to inform the receiver what has been shipped in a shipment.</p> <p>This is expected as a reply for a Shipment Instruction message from a third party agency, but would also be a normal request from a seller's ERP system to the Buyer and/or Consignee (or possible other interested party).</p> <p>This message is part of a request/response pair and anticipates a Delivery Receipt message (see Section 9 – Forecasting) in reply.</p>
Shipment Status Request	<p>The Shipment Status Request transaction is a pull message used to request an update to the status of the shipment from the carrier.</p> <p>This message is part of a request/response pair and anticipates a Shipment Status message in reply.</p>
Shipment Status	<p>The Shipment Status transaction is used to report the whereabouts of a Tendered and Accepted shipment. The information that is transmitted indicates the location of the shipment (e.g., In Transit, Delivered). This transaction is often pushed from the originator of this transaction to the receiver. It may also be the response message to a Shipment Status Request message.</p>
Freight Bill	<p>The Freight Bill transaction is used to charge the BillTo party the cost of the transport charges incurred. This transaction includes charges for actual transportation along with additional charges, called Accessorial Charges (e.g., demurrage, detention, fuel surcharge).</p> <p>This message is part of a request/response pair and anticipates a Invoice Response message (see Section 8 – Financials) in reply.</p>
Receipt Notice	<p>The Receipt Notice is a message used to convey information from one party to another after a receipt of a shipment has been made. The message may be used between a Seller and a Buyer or between any two parties (i.e. Forwarder to Seller, Warehouse or Terminal to a Seller). This message is intended to convey receipt information back to Seller or to a Consignor the fact that a shipment has been received in its entirety or to inform the shipping party that discrepancies exist and to enumerate where these differences exist.</p>

7.1.2 Key Scope Assumptions

- The messages developed concentrate on the major business functions between Shipper, Carrier, and Customer/Consignee (e.g., Load Tender, Load Tender Response, Freight Bill). The Marketplace may be used by either Buyer or Seller when either feels that the Marketplace may be able to provide better rates. The messages developed thus far are not to be considered all-inclusive.
- Load Tendering messages are specific for each mode of Transportation (e.g., Motor, Ocean, Rail). The messages are separate because the minimum information required by a specific mode may differ (e.g., Rail may require railcar number at the time of the Load Tender if used to request movement of a railcar).
- Freight Bill messages can be used for Motor, Rail and Ocean carriers, and for Freight Forwarder activities.
- Air Shipments are out of the scope of this document unless handled through a Freight Forwarder for an Export shipment (in which case the Load Tender Ocean could be used).
- The messages can be used bi-directionally.
- RosettaNet originally had no messages to support the Logistics process and could not be used for the development of the original CIDX messages.

7.1.3 Key Business Model Assumptions

Assumptions that govern the Logistics messages:

- Messages are generally B2B, although a Marketplace could be involved.
- Notice should be taken that the message content may not change regardless of the originating party. In other words, the developed messages support bi-directional communication.
- ISO, UN/EDIFACT, and ANSI ASC X12 code lists are used throughout the data elements within the Logistics messages.

Business assumptions that govern the exchange of messages:

- Partners are identified by D-U-N-S numbers. Additional codes may be communicated between parties.
- A carrier may retender a load to another carrier without first notifying the shipper of this intent. In this case, additional information may be added to the original Load Tender by the carrier retendering the load.
- Some Carriers perform the function of a third party logistics firm and communicate with alternate Carriers. The message remains the same regardless of the originator, although additional data may be added (e.g. a booking number).
- The methodology supports both contracted and non-contracted Carrier messages.

7.2 Business Process Descriptions and Diagrams

The Logistics section is concerned with all communications relating to the shipment of goods, regardless of mode of transportation. Also within the scope of Logistics is the movement of product to and from a 3PL agency, warehouse or terminal.

The process begins with the requirement to procure transportation as follows:

- From the Seller who uses the shipment created in its ERP system to develop the Load Tender messages for shipments where the transportation services are prepaid.
- From the Buyer who uses the purchase order created in its ERP system to develop the Load Tender messages where the transportation services are collect.

The Marketplace may be used when offers to buy or sell product are sent to the Marketplace with the intention that the Marketplace is also responsible for procuring transportation services. The Marketplace may also be used when the Buyer or Seller does not have established contracts with carriers in the lanes involved in this particular shipment.

The Carrier who receives the Load Tender may accept or reject the load on a timely basis. Often a Carrier may be a third party logistics company (3PL) who contracts with other carriers (Alternate Carrier) to actually haul the load. When this occurs, the Carrier is responsible for settling with the Alternate Carrier and, is the party who will deal directly with the party originally tendering the load.

A Load Tender Response message is used to convey acceptance of a load, or a rejection with a reason provided back to the originator of the Load Tender.

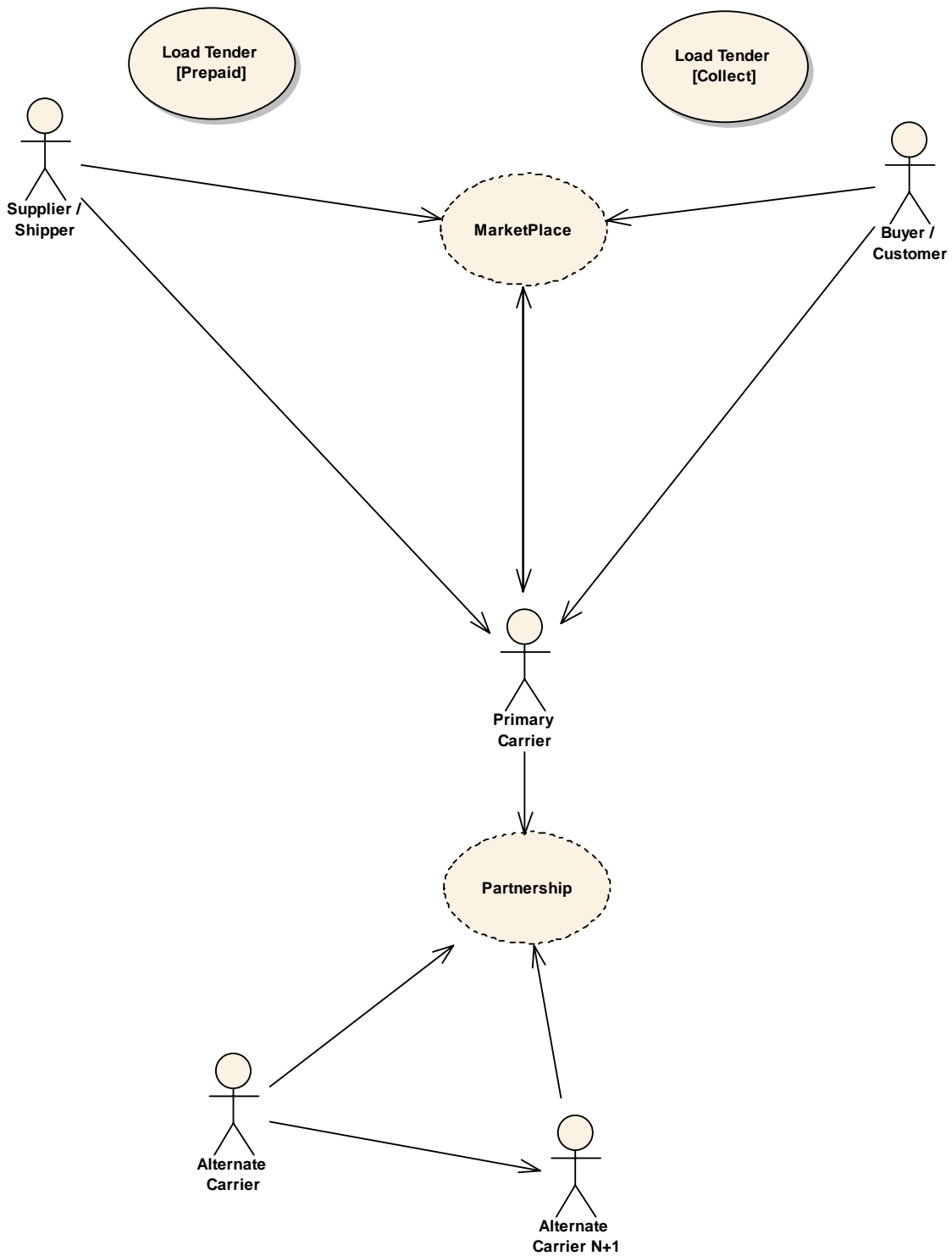
At times, the actual weight of loads may not be known during the original Load Tender process and must be conveyed after the carrier has left. The Carrier Weights may be used to convey this information, or a replacement Load Tender may be used (common with the railroads).

The Seller is responsible for sending the Ship Notice to the Buyer and the Consignee and, at times, to other interested parties (i.e. a Freight Forwarder). The Shipper may use the Ship Notice to notify the Seller that the product has been shipped, but is not responsible to any other party for this message. The Seller has the ultimate responsibility for this message to the Buyer because of the "cum total" requirement of some Buyers. The "cum total" factor requires the Seller to advise the Buyer that the quantity of this shipment is now a part of a grand total for this particular product to that Buyer during some predetermined contract period, regardless of shipping point. Since some Sellers may ship from multiple shipping points, including public warehouses or terminals, each shipping point might only be knowledgeable of the total shipped from that site and not by the Seller from all sites.

Shipment Status Request messages and Shipment Status messages may occur at anytime during the event, such as the carrier's arrival or departure at the pickup point, en route information and arrival at the destination.

Since at times the Seller may have product strategically placed at 3PLs around a country, a Shipment Instructions message is used to convey shipment particulars so that the 3PL can ship on a timely and accurate basis to the Seller's customers.

Finally, a Freight Bill message is used to request payment for the transportation services provided.



Message flow starts with the Seller/Shipper or Buyer/Consignee placing a Load Tender Motor message with a Carrier or with the Marketplace to find a Carrier who commits to picking up and delivering a load (or series of loads). The Carrier itself may commit, or it may broker the load by re-sending this message to an Alternate Carrier to get the Alternate Carrier's commitment. The Carrier (or Alternate Carrier, if used) responds back through the chain, either accepting or rejecting the load using a Load Tender Response message. If rejecting the load, the Carrier, Seller or Buyer or marketplace must re-tender the load to another Carrier. If the Carrier accepts the load, the Seller's system is updated with the name of the Carrier (and Alternate Carrier, if applicable).

After the load has been tendered and accepted, there are a series of steps where a Carrier may send a Shipment Status message to the Seller/Shipper (and Buyer/Consignee, if appropriate). Examples of this are arrival at the Shipper's location, locations en route, and arrival at the Consignee's location. This may be done with or without the use of the Shipment Status Request message.

After the Carrier departs the Shipper's location, a Ship Notice is generated by the Seller to the Buyer, Consignee, and other interested parties.

Upon arrival, the Consignee transmits a Delivery Receipt message to the Seller. Any discrepancies between units transmitted on the Ship Notice and actual receipt are noted. The seller may reply with a Delivery Receipt Response.

At the conclusion, the Carrier submits a Freight Bill message to the partner liable to pay freight. The Alternate Carrier (if applicable) would also send this message to the Carrier who brokered the load.

Marketplaces and B2B transactions may have different business models:

Marketplace Model	<p>The Marketplace provides intermediary services between Shipper and Carrier. It may solicit bids from carriers, or may provide the following:</p> <ul style="list-style-type: none"> • Communications / translations • Application Service Provider (ASP) • Third/fourth party logistics provider (3PL/4PL)
B2B Model	<p>Most of the activity is carried out between the Seller/Shipper or Buyer/Consignee and the Carrier via a predetermined Carrier selection process. In addition, shipment status can be provided to either or both the Seller/Shipper and Buyer/Consignee to advise of events such as departure, location en route, and arrival. Finally, a freight invoice is submitted to Buyer or Seller, or agents of these parties.</p>

7.2.2 Load Tender Motor

The Load Tender Motor message begins with either the Seller/Shipper or the Marketplace initiating a request to pick up and deliver a load to a Buyer or Consignee. The transaction may go to the Marketplace or directly to a predetermined Carrier. The Carrier, shown below may be

the actual Carrier that handles the load, or it may broker it to an Alternate Carrier with which it subcontracts.

The Approved Carrier responds to Shipper/Seller with an acceptance or rejection of tender.

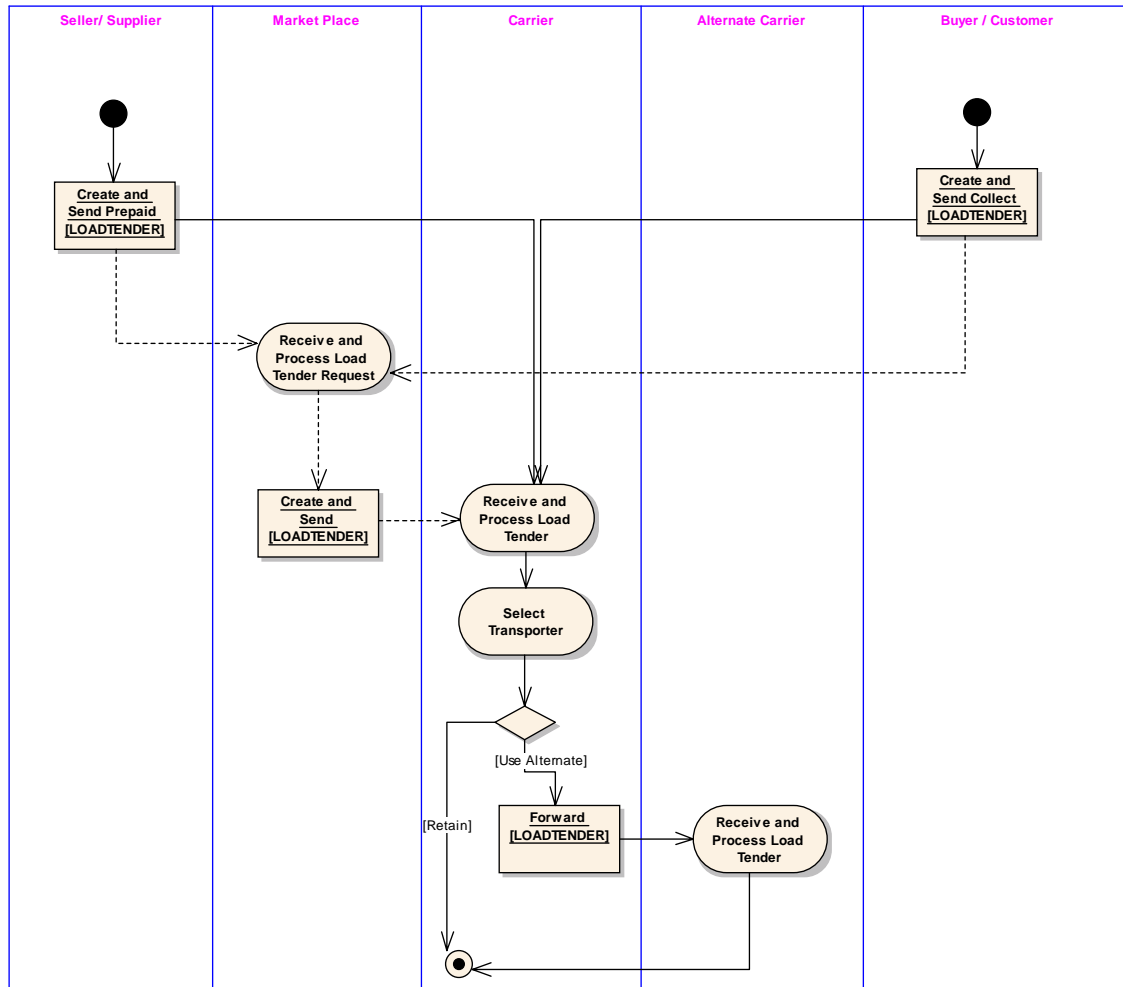


Figure 7.2.2.a: Load Tender Motor messages

This diagram illustrates the process of a Seller/Shipper sending a Load Tender Motor message to a Carrier or to the Marketplace to find a Carrier to commit to picking up and delivering a load (or series of loads). The Marketplace itself could initiate this message. The Carrier may commit, or it may broker the load by re-sending this message to an Alternate Carrier to get the Alternate Carrier's commitment.

Business Scenarios for Load Tender Motor

The following scenarios depict the ways a Load Tender shall be initiated and accepted or rejected by the receiving partner. These scenarios are consistent for Load Tender Motor and Load Tender Rail. The Seller/Shipper directly tenders the order for transportation to an approved Carrier.

- **Business Scenario 1**

Seller/Shipper tenders the order for transportation to the Marketplace, and the Marketplace acts as the Shipper.

Required to offer a shipment to a Carrier for transport

The Marketplace acts as the Shipper by tendering the shipment to the participating approved identified member Carrier within the Marketplace for acceptance or rejection. The Carrier responds via the Load Tender Response. If the Carrier rejects, the Marketplace re-tenders the load to other approved participating carriers until load tender is received and accepted.

Marketplace can be made up of third party logistics companies (3PLs), Freight Forwarders, online exchanges, electronic marketplaces and transportation brokers.

- **Business Scenario 2**

Seller/Shipper tenders the shipment to a Carrier and the Carrier acts as the Shipper responding with the Load Tender Response.

Required to offer a shipment to a Carrier for transport

- **Business Scenario 3**

The Seller/Shipper tenders the order for transportation to a Carrier; in turn, the Carrier acts as a sub-contractor and tenders the order to an approved alternate Carrier.

Required to offer a shipment to a Carrier for transport

- **Business Scenario 4**

Buyer/Consignee tenders the shipment to a Marketplace to arrange transport.

Required to offer a shipment to a Carrier for transport

Buyer/Consignee tenders order for transportation to Marketplace, which in turn tenders to the participating approved member Carrier within the Marketplace. If Carrier rejects, the Marketplace re-tenders the load to other participating approved Carriers until load tender is received and accepted. Once accepted, the Marketplace responds via the Load Tender Response to the Buyer/Consignee.

- **Business Scenario 5**

Buyer/Consignee directly tenders the order for transportation to an approved Carrier.

Required to offer a shipment to a Carrier for transport

This is typically done when the freight cost to transport the shipment is paid by the Buyer/Consignee. In this case the Buyer/Consignee acts as the Shipper.

- **Business Scenario 6**

Buyer/Consignee tenders the shipment to an approved Carrier; in turn, the Carrier acts as a sub-contractor and tenders the order to an approved alternate Carrier.

Required to offer a shipment to a Carrier for transport

- **Business Scenario 7**

Marketplace, acting as a Buyer or Seller tenders the shipment to an approved carrier.

Required to offer a shipment to a Carrier for transport

The Marketplace acts as either the Buyer or Seller by tendering the shipment to the participating approved identified member Carrier within the Marketplace for acceptance or rejection. The

Carrier responds via the Load Tender Response. If the Carrier rejects, the Marketplace re-tenders the load to other approved participating carriers until load tender is received and accepted.

Sample Message: [LoadTenderMotor](#) (See 7.3.2.1)

7.2.3 Rail Transactions

The following diagram shows a series of messages between the Seller/Shipper, Marketplace, Carrier, Scales, and Buyer/Consignee. It begins with a Load Tender Rail (Bill of Lading) that has a series of data to adequately inform the Carrier of all of the information known about a pending shipment. It is generally sent directly to a Carrier. It may begin with a loaded railcar to be moved and can be resent when the actual loaded weight is known. The Shipper can also inform the Buyer/Consignee of the various status steps, as well as providing that entity with data concerning the shipment.

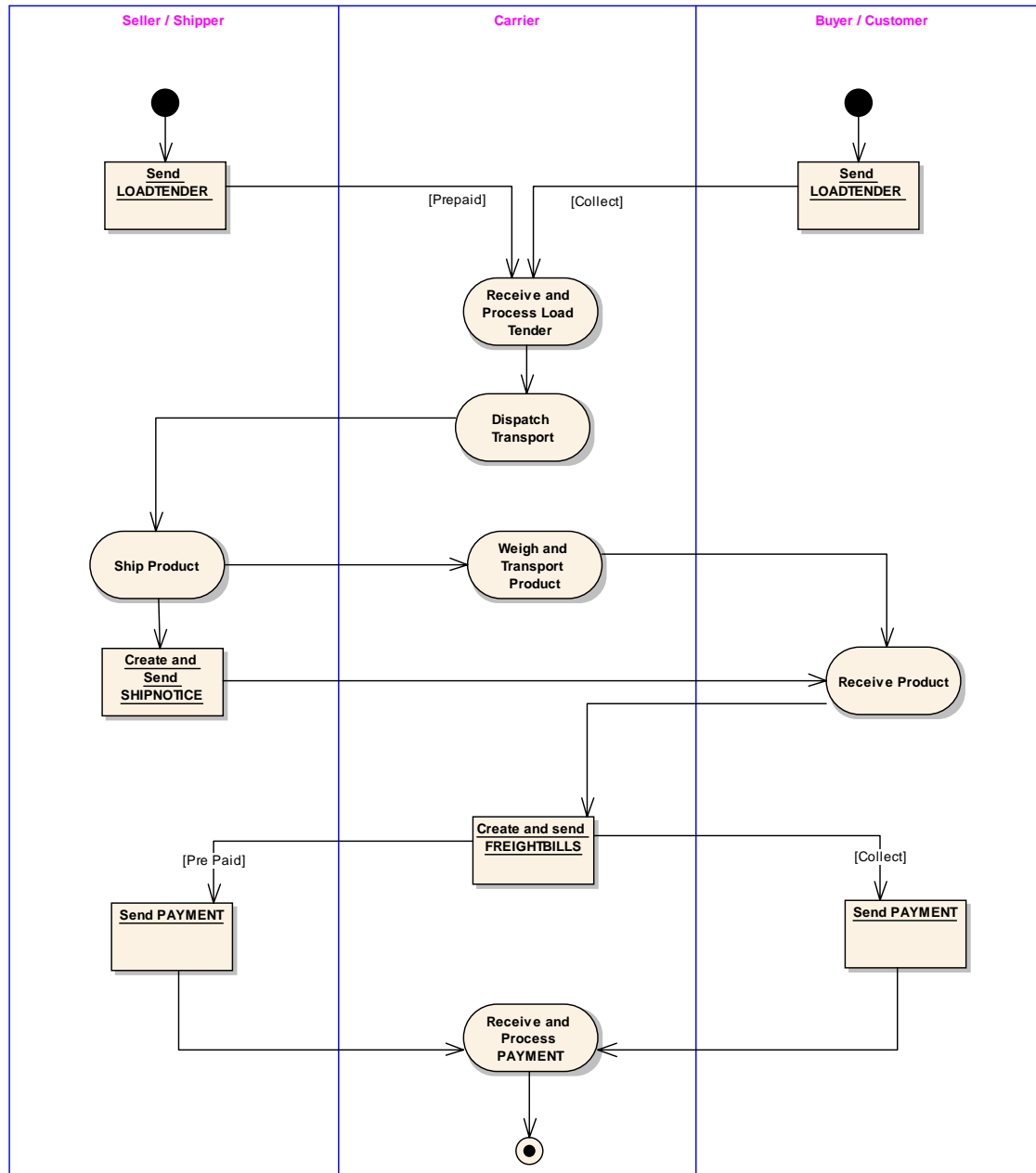


Figure 7.2.3.a: Rail transactions

Figure 7.2.3.a depicts the message flow within the Rail Carrier arena. Solid thick lines illustrate transactions between the Marketplace and Other Business Communications supported in this standard. Dashed thick lines indicate the Buyer/Seller Communications supported in this standard. Solid thin lines illustrate non-XML methods of communication (ie: via phone, fax, or e-mail) that are not included in these standards, or logical sequencing of events.

Message flows start with a Seller/Shipper, or a Buyer/Consignee, or a Marketplace placing a Load Tender Rail message with a Carrier to pick up and deliver a load (or series of loads). For the railroads, this is commonly known as the Bill of Lading. Due to the limited number of

railroads and the relatively small number of shippers who are served by more than one Carrier, bidding between various railroads is much less common than between motor Carriers.

After the load has been tendered and accepted, there are a series of steps where a Carrier may send a Shipment Status message to the Seller/Shipper (and Buyer/Consignee or other third party, if appropriate). Examples of this are arrival at and departure from the Shipper's location, locations en route, and arrival at and departure from the Consignee's location.

Often the official weights are not known prior to the departure of the train. Once the train has pulled the car over a "weigh-in-motion" set of scales, the actual weights are transmitted using the Carrier Weights message. If the scales are located on the Shipper's property, the Shipper sends this message to the railroad replacing the estimated weights on the Load Tender Rail with these actual weights. It could also be used by the railroad sending these weights back to the Shipper when scaling off site.

After the Carrier departs the Shipper's location, and once the actual weights are known, the Seller generates a Ship Notice to the Buyer/Consignee and other interested parties.

Upon arrival, the Consignee transmits a Delivery Receipt message to the Seller, noting any discrepancies between units transmitted on the Ship Notice and actual receipt. The seller may reply with a Delivery Receipt Response.

Finally, the Carrier submits a Freight Bill message to the partner liable to pay the freight.

Marketplaces and B2B transactions may have different business models:

Marketplace Model	<p>The Marketplace may be the Buyer or Seller of rail services and may act in its own behalf.</p> <p>It may also provide intermediary services between the Shipper and Carrier for the following:</p> <ul style="list-style-type: none"> • Communications / translations • Application Service Provider (ASP)
B2B Model	<p>Most of the activity is carried out between the Seller/Shipper and the Carrier via a predetermined selection process.</p> <p>In addition, the shipment status can be provided either to the Seller/Shipper or to both the Seller/Shipper and Buyer/Consignee to advise of events such as departure, location en route, and arrival.</p> <p>Finally, a freight invoice is submitted to the Buyer or Seller, or agents of these parties.</p>

7.2.4 Load Tender Rail

The Load Tender Rail message originates from the Seller/Shipper or the Buyer/Consignee or the Marketplace and is sent directly to a rail Carrier to notify the Carrier that a load is ready to be pulled. It may also be resent after the railcar has been pulled to advise the Carrier of the final weight if the Carrier Weights message is not used to convey this information to the Carrier.

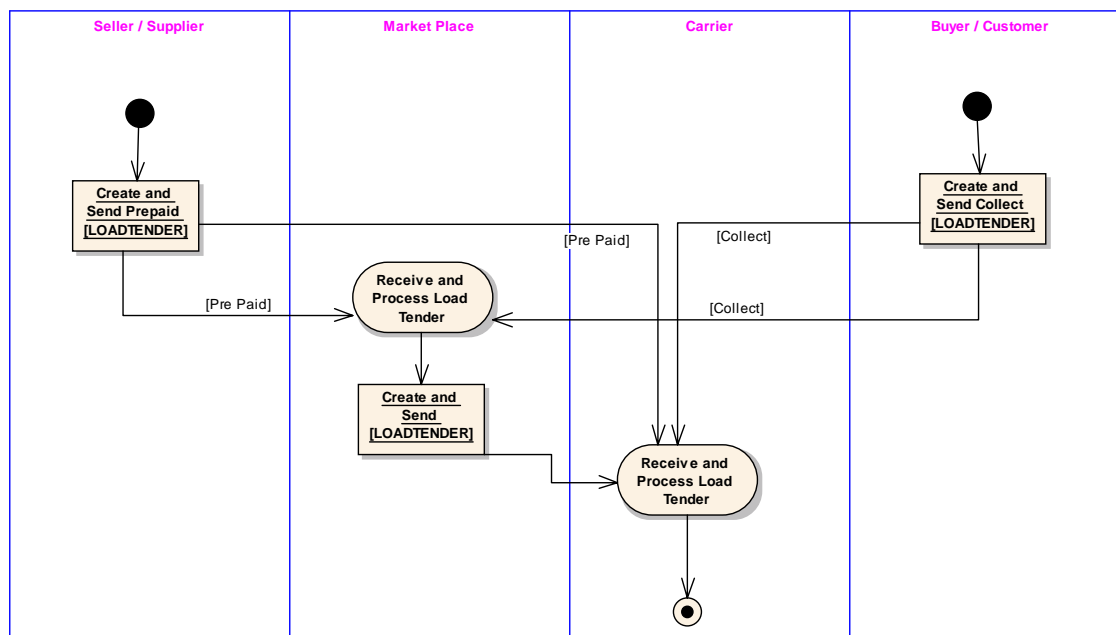


Figure 7.2.4.a: Load Tender Rail message

Figure 7.2.4.a depicts the message flow within the Rail Carrier arena. Solid thick lines illustrate transactions between the Marketplace and Other Business Communications supported in this standard. Dashed thick lines indicate the Buyer/Seller Communications supported in this standard.

Message flow starts with the Seller/Shipper or the Buyer/Consignee or the Marketplace placing a Load Tender Rail message with a Carrier to pick up and deliver a load (or series of loads). For the railroads, this is commonly known as the Bill of Lading. Since rail carriers have territorial jurisdictions, there is usually no bidding between various railroads.

Business Scenarios for Load Tender Rail

The following scenarios depict the ways a Load Tender Rail shall be initiated and accepted or rejected by the receiving partner.

- **Business Scenario 1**

Seller/Shipper tenders the order for transportation to the Marketplace, and the Marketplace acts as the Shipper.

Required to offer a shipment to a Carrier for transport

The Marketplace acts as the Shipper by tendering the shipment to the participating approved identified member Carrier within the Marketplace for acceptance or rejection. The Carrier responds via the Load Tender Response. If the Carrier rejects, the Marketplace re-tenders the load to other approved participating carriers until load tender is received and accepted.

- **Business Scenario 2**

Seller/Shipper tenders the shipment to a Carrier and the Carrier responds with the Load Tender Response.

Required to offer a shipment to a Carrier for transport

- **Business Scenario 3**

Buyer/Consignee tenders the shipment to a Marketplace to arrange transport.

Required to offer a shipment to a Carrier for transport

Buyer/Consignee tenders order for transportation to Marketplace, which in turn tenders to the participating approved member Carrier within the Marketplace. Once accepted, the Marketplace responds via the Load Tender Response to the Buyer/Consignee. However, it should be noted that many locations have only one carrier available to pick up the load, so this would be used mainly to pick an appropriate contract that offers lowest cost.

- **Business Scenario 4**

Buyer/Consignee directly tenders the order for transportation to an approved Carrier.

Required to offer a shipment to a Carrier for transport

This is typically done when the freight cost to transport the shipment is paid by the Buyer/Consignee. In this case the Buyer/Consignee acts as the Shipper. Buyer's contract may provide more favorable pricing than the Shipper's contract.

- **Business Scenario 5**

Marketplace, acting as a Buyer or Seller tenders the shipment to an approved carrier.

Required to offer a shipment to a Carrier for transport

The Marketplace acts as the Buyer or Seller by tendering the shipment to the participating approved identified member Carrier within the Marketplace for acceptance or rejection. The Carrier responds via the Load Tender Response. If the Carrier rejects, the Marketplace re-tenders the load to other approved participating carriers until load tender is received and accepted.

Sample Message: [LoadTenderRail](#) (See 7.4.2.1)

7.2.5 Ocean Transactions

The following diagram shows a series of messages between the Seller/Shipper, Carrier, (or Forwarder), Marketplace and Buyer/Consignee. It begins with a Load Tender Ocean that has enough data to adequately inform the Carrier (or Forwarder) of all the information known about a pending shipment. It could be directed to the Marketplace for a bid on services, or sent directly to a Carrier (or Forwarder). The Forwarder, acting as an agent of the Shipper, can inform the Buyer/Consignee (or vice versa) of the various status steps as well as to provide that entity with data concerning the shipment. Finally, an invoice is tendered for haulage, duty, and Forwarder's service charge.

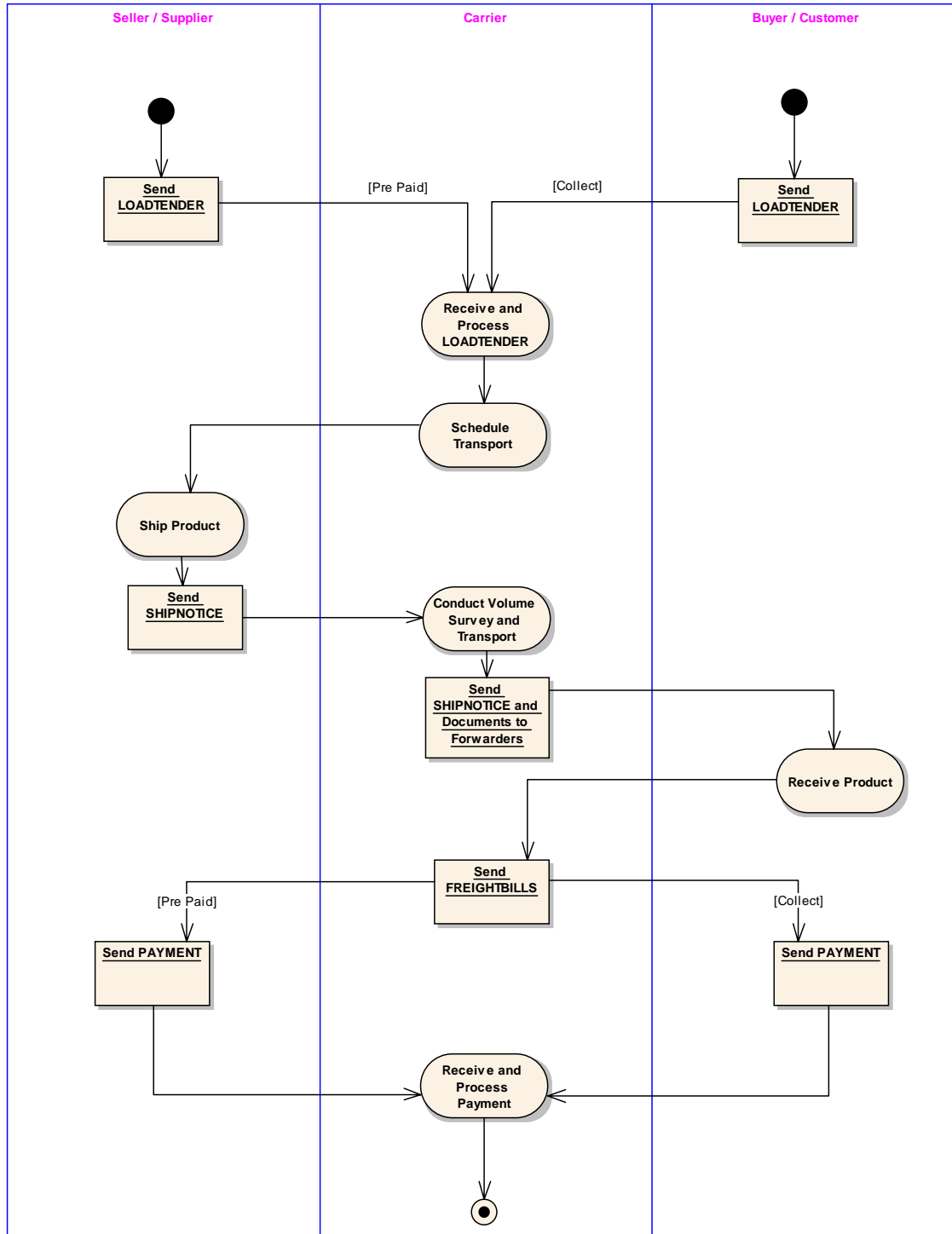


Figure 7.2.5.a: Ocean transactions

Figure 7.2.5.a depicts the message flow within the Import/Export arena and typically depicts messages between the Shipper and Freight Forwarder, who completes the activities on behalf of the Shipper. Solid thick lines illustrate transactions between the Marketplace and Other Business Communications supported in this standard. Dashed thick lines indicate the Buyer/Seller

Communications supported in this standard. Solid thin lines illustrate non-XML methods of communication (ie: via phone, fax, or e-mail) that are not included in these standards, or logical sequencing of events.

Message flows start with the Seller/Shipper placing a Load Tender Ocean message with the Forwarder or to the Marketplace to find a Forwarder who commits to finding a vessel to haul the load. When the Carrier accepts the load, the Seller's system is updated with the name of the Carrier, vessel name, voyage number, and booking number.

Weights are generally determined for bulk shipments after the vessel has departed and are obtained from data derived from strapping tables and are adjusted for temperature or pressure. The surveyor appointed to determine these values to the Shipper conveys these.

After the load has been tendered and accepted, there are a series of steps where a Carrier may send a Shipment Status message to the Seller/Shipper (and Buyer/Consignee, if appropriate). Examples of this are departure from the dock, arrival at the destination port, and ultimate arrival at the Consignee's location.

The Forwarder typically transmits notifications to the Buyer/Consignee while en route; these are out of scope at this time.

Upon arrival, the Consignee transmits a Delivery Receipt message to the Seller. Any discrepancies between units transmitted on the Ship Notice and actual receipt are noted.

At the conclusion, the Carrier submits a Freight Bill message to the Forwarder. The Forwarder transmits a Freight Bill to the partner liable to pay freight. The Forwarder's Freight Bill includes charges for duty, insurance, and its service charge in addition to freight.

It should be also noted that these messages could also be used for air transportation of goods where a Forwarder is involved.

Marketplaces and B2B transactions may have different business models:

Marketplace Model	<p>The Marketplace may be the Buyer or Seller of ocean services and may act in its own behalf.</p> <p>The Marketplace provides intermediary services between the Shipper (or Buyer) and Carrier for the following:</p> <ul style="list-style-type: none"> • Communications / translations • Application Service Provider (ASP)
B2B Model	<p>Most of the activity is carried out between the Seller/Shipper and Freight Forwarder. The Load Tender Ocean is typically used first when a shipment has been created and is used by freight forwarder to select (nominate) a vessel.</p> <p>The Load Tender Ocean is resent again to the Forwarder when either the vessel has been loaded (bulk) or a container is ready for drayage, as the Forwarder prepares all the legal documentation to the Carrier, customs, and the Buyer.</p> <p>The shipment status can be provided to either the Seller/Shipper or to both the Seller/Shipper and</p>

Buyer/Consignee to advise of events such as departure, location en route, and arrival.
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7.2.6 Load Tender Ocean

The Load Tender Ocean can be sent originally to the Marketplace for shipment consolidation and bidding, or can be sent directly from the Seller/Shipper or Buyer/Consignee to an Ocean Freight Forwarder or a 3PL, who arranges for a shipment through a nomination process, weeks in advance of the actual shipping date.

This message may also occur after shipment (once the actual weights, package marks, and pricing is known), so that the forwarder can prepare the Bill of Lading and any other legal documents. This message may occur between the Shipper's Freight Forwarder and another Freight Forwarder selected by the Buyer.

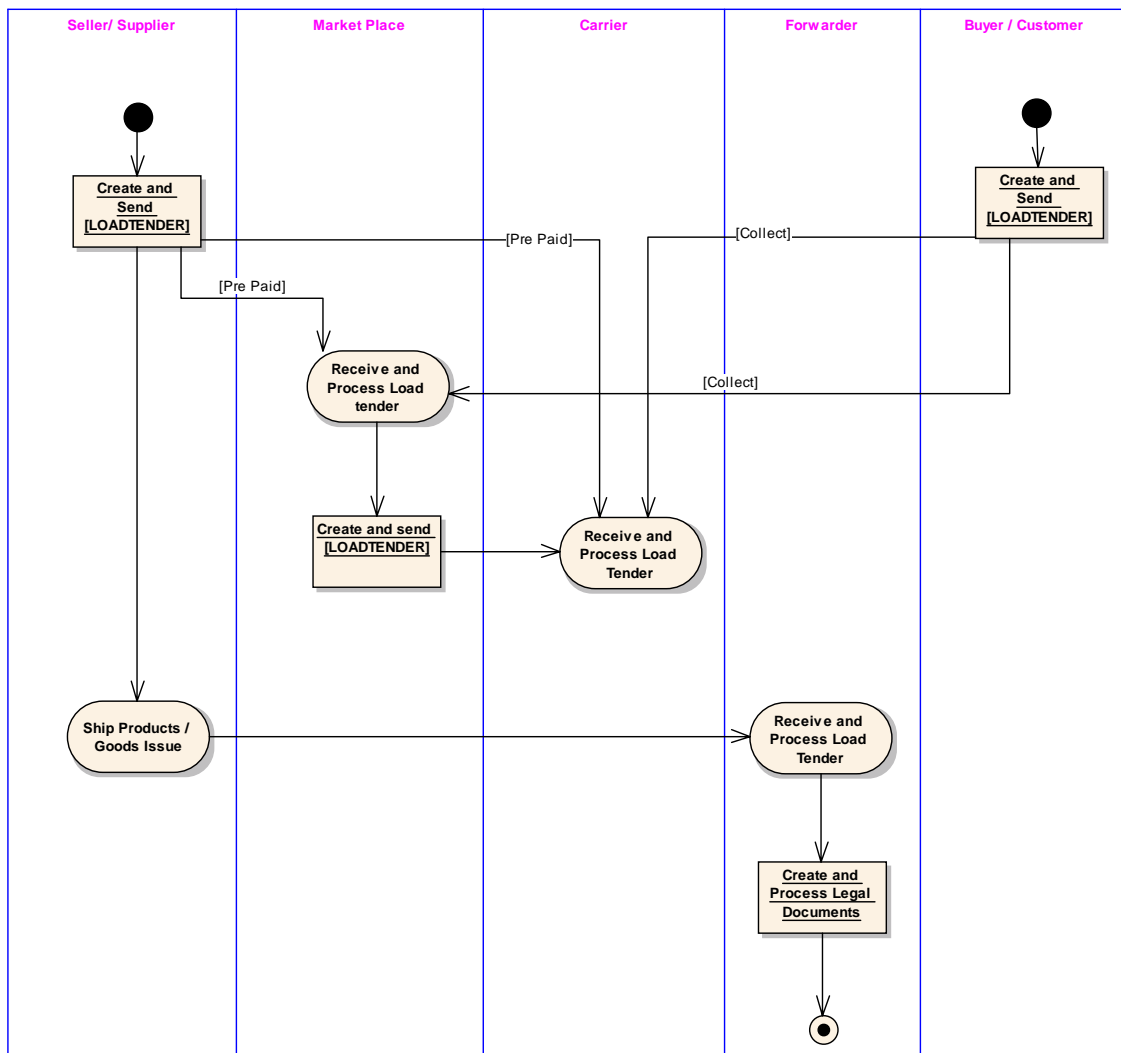


Figure 7.2.6.a: Load Tender Ocean message

Figure 7.2.6.a depicts the message flows within the Import/Export arena and typically depicts the Seller/Shipper or the Buyer/Consignee placing a Load Tender Ocean message with the Forwarder or to the Marketplace to find a forwarder to commit to finding a vessel to haul the load. The Marketplace may also originate this message to the Forwarder.

It also depicts a final transmission from the Seller to the Forwarder once the vessel has departed; updated with the name of the Carrier, vessel name, voyage number, and booking number; and would contain final weights, seal numbers, container numbers, etc.

Business Scenarios for Load Tender Ocean

The following eight scenarios depict the ways a Load Tender Ocean can be initiated and accepted or rejected by the receiving partner.

Business Scenario 1

The Seller/Shipper directly tenders the order for transportation to an approved Carrier.

Required to offer a shipment to a Carrier for transport

Business Scenario 2

Seller/Shipper tenders order for transportation to the Marketplace which in turn tenders the order to the participating approved member Carrier within the Marketplace.

Required to offer a shipment to a Carrier for transport

Once accepted, the Marketplace responds via the Load Tender Response to the Seller/Shipper. This would be used mainly to pick an appropriate contract that offers lowest cost.

Business Scenario 3

Seller/Shipper tenders the shipment to a Freight Forwarder to arrange transport.

Required to offer a shipment to a Freight Forwarder for transport

Freight Forwarder responds back with a Load Tender Response with all of the details concerning the vessel, voyage, dates, etc. Shipper/Seller then sends either another Load Tender Ocean message or a Shipment Instructions message complete with all of the details once the product has been shipped to the dock.

Business Scenario 4

Marketplace directly tenders the order for transportation to an approved Carrier.

Required to offer a shipment to a Carrier for transport

This is typically done when the Marketplace's contract with a Carrier is more favorable than that of either a Seller/Shipper or a Buyer/Consignee.

Business Scenario 5

Marketplace directly tenders the shipment for transportation to an approved Freight Forwarder.

Required to offer a shipment to a Freight Forwarder for transport

This is typically done when the Marketplace's contract with a Freight Forwarder is more favorable than that of either a Seller/Shipper or a Buyer/Consignee.

Business Scenario 6

Buyer/Consignee directly tenders the order for transportation to an approved Carrier.

Required to offer a shipment to a Carrier for transport

This is typically done when the freight cost to transport the shipment is paid by the Buyer/Consignee. Buyer's contract may provide more favorable pricing than the Shipper's contract.

Business Scenario 7

Buyer/Consignee tenders the shipment to a Freight Forwarder to arrange transport.

Required to offer a shipment to a Freight Forwarder for transport

This is typically done when the freight cost to transport the shipment is paid by the Buyer/Consignee. Buyer's contract may provide more favorable pricing than the Shipper's contract.

Business Scenario 8

Buyer/Consignee tenders order for transportation to the Marketplace which in turn tenders the order to the participating approved member Carrier within the Marketplace.

Required to offer a shipment to a Freight Forwarder for transport

Once accepted, the Marketplace responds via the Load Tender Response to the Buyer/Consignee.

Sample Message: [LoadTenderOcean](#) (See 7.5.2.1)

7.2.7 Load Tender Response

The Load Tender Response is the reply from the Carrier (or alternate Carrier), either accepting the load or rejecting it. If the load is being brokered, and the response is from a North American carrier, the response message conveys the actual Carrier's Standard Carrier Alpha Code (SCAC) and a booking number.

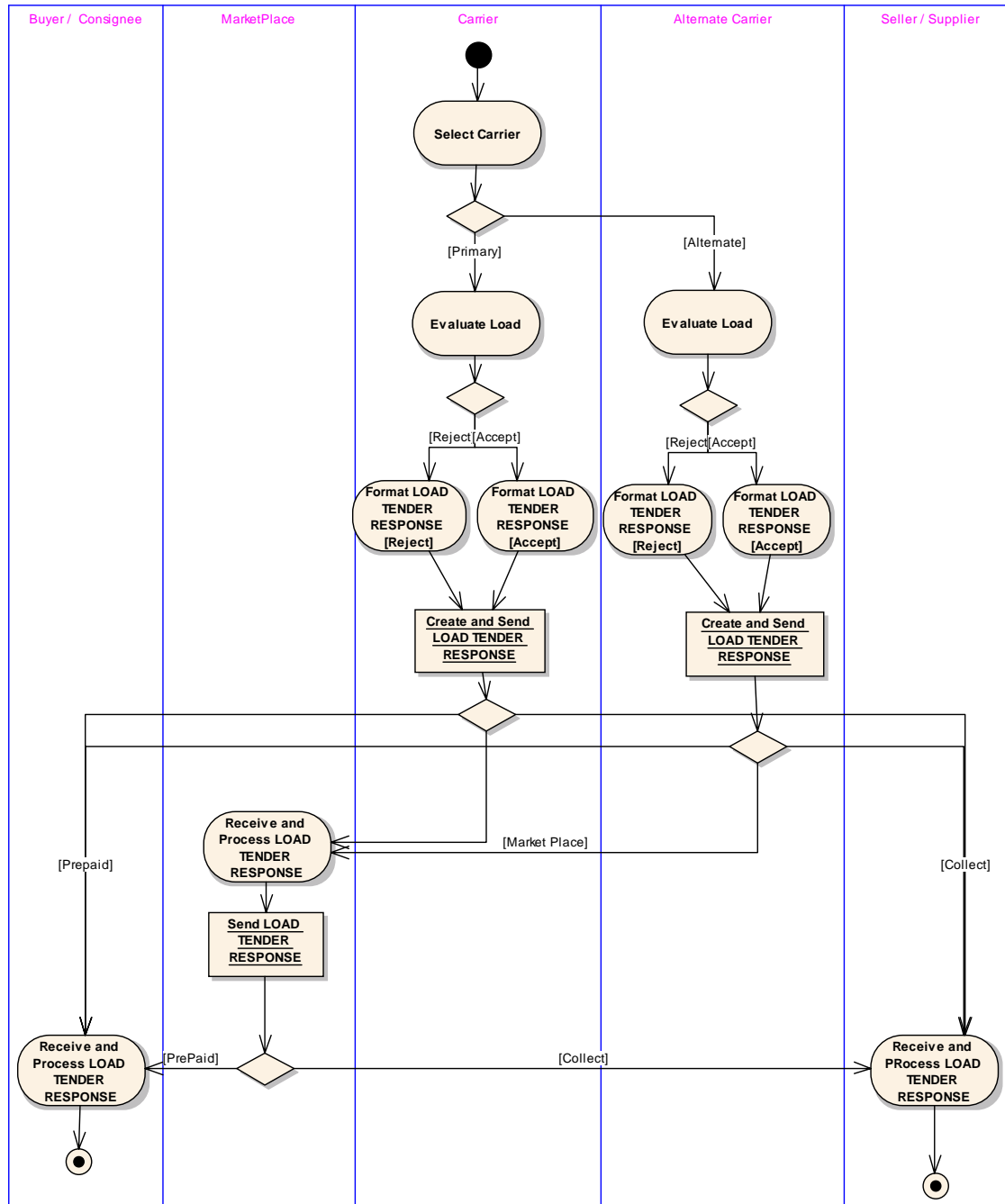


Figure 7.2.7.a: Load Tender Response message

Figure 7.2.7.a depicts the message flow of the Load Tender Response. The Carrier (or Alternate Carrier, if used) responds back through the chain, either accepting or rejecting the load using a Load Tender Response message.

If rejecting the load, the Seller, Buyer or Marketplace must re-tender the load to another Carrier. If the Carrier accepts the load, the Seller's or Buyer's ERP system is updated with the name of the Carrier (and Alternate Carrier, if applicable).

Business Scenarios for Load Tender Response

Specific scenarios that initiate a Load Tender Response message are presented below, along with sample messages that illustrate the use of this message.

The following four scenarios depict the ways a Load Tender Response can be used.

Business Scenario 1

Approved Carrier responds to Shipper/Seller with an acceptance or rejection of tender.

Required to complete tender and release shipment

Business Scenario 2

Approved Carrier responds to Marketplace with an acceptance or rejection of tender.

Required to complete tender and release shipment

Business Scenario 3

Approved Carrier responds to Buyer/Consignee with an acceptance or rejection of tender.

Required to complete tender and release shipment

Business Scenario 4

Approved alternate Carrier responds to the Primary Carrier with an acceptance or rejection of the tender.

Required to complete tender and release shipment

Sample Message: [LoadTenderResponse](#) (See 7.6.2.1)

7.2.8 Carrier Weights

The Carrier Weights message can be used with a Rail, Motor, or Ocean Carrier, but is most frequently used in Rail. It is used for those instances where the Shipper does not have the actual weight and does not obtain it until the vehicle or vessel leaves the origin and is sometimes obtained en route.

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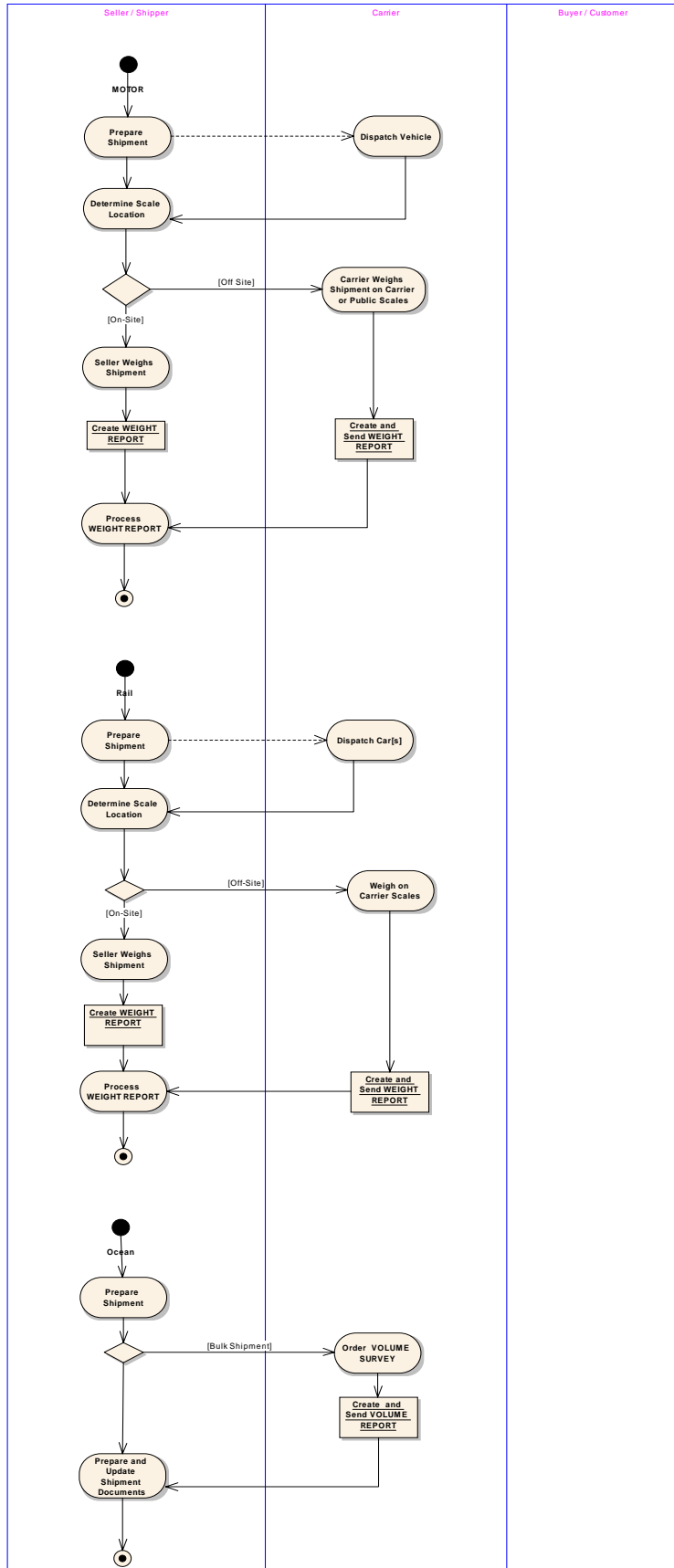


Figure 7.2.8.a: Carrier Weights message

Figure 7.2.8.a depicts the flows of the Carrier Weights message. Often, the official weights are not known prior to departure. The solid thick line illustrates transactions between the Seller/Shipper and Other Business Communications supported in this standard. Solid thin lines illustrate transactions (ie: communications via phone, fax, or e-mail) that are not included in these standards.

Business Scenarios for Carrier Weights

The following two scenarios depict the ways that Carrier Weights can be used.

Business Scenario 1

Scales are located off site.

Required for Carrier to receive payment

Carrier weights are established off site when the originating pickup facility does not have on site scales. The Carrier weighs off site and sends the weights to the Shipper/Seller.

Business Scenario 2

Scale is located on site, but weight is unknown before the vehicle leaves.

Required for Carrier to receive payment

This is a common scenario for a rail movement where the site has coupled-in-motion scales, but actual weights are not included on the Load Tender prior to it being sent. Some rail carriers will insist on receiving a Carrier Weights message where others will require a replacement Load Tender Rail. This may also be true of bulk ocean vessels where the vessel sails before the surveyor completes the analysis and calculates the quantity shipped.

Sample Message: [CarrierWeights](#) (See 7.7.2.1)

7.2.9 Warehouse/Terminal Transactions

The following diagram shows a series of messages between the Seller/Shipper and warehouses and terminals that it uses. The transaction series begins with the notification of a replenishment stock order and its receipt. Subsequent activity centers on Shipping Instructions and its completion. An Inventory Adjustment is also shown in the diagram, but has not been developed.

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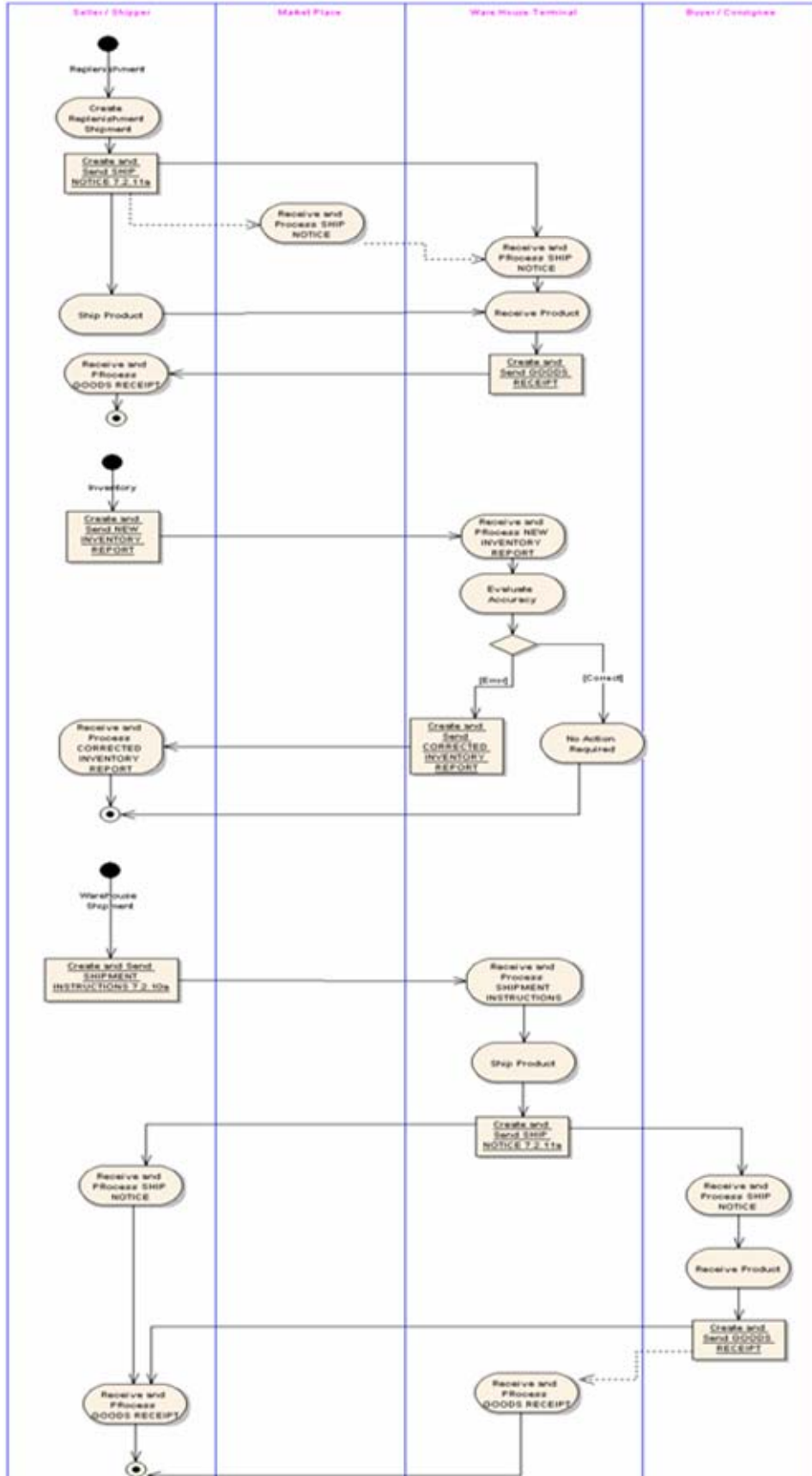


Figure 7.2.9.a: Warehouse Terminal transactions

Figure 7.2.9.a illustrates the logical flow of product to and from warehouses and terminals, and the message transmitted at each step. Solid thick lines illustrate transactions between the Marketplace and Other Business Communications supported in this standard. Dashed thick lines indicate the Buyer/Seller Communications supported in this standard. Solid thin lines illustrate transactions (ie: communications via phone, fax, or e-mail) that are not included in these standards.

The Seller/Shipper generates a Ship Notice to the Warehouse/Terminal to advise personnel that a replenishment has been sent. Once this replenishment shipment has arrived, the Warehouse/Terminal advises the Seller of its arrival with a Delivery Receipt message so that the inventory in the Seller's system is accurate. Should any adjustments be required, an Inventory Adjustment message is also sent to the Seller to update the Seller's system. The Inventory Adjustment message needs to be developed, but is quite simple in nature as long as batch or lot number and product code changes are recognized within.

When a shipment is ordered against a warehouse or terminal, a Shipment Instructions message is sent to the Warehouse/Terminal.

The Ship Notice is often used today for a shipping advice. A Shipping Advice is a notification (Warehouse Shipping Advice = X12 945) from the warehouse or terminal to the Seller that a shipment has occurred.

Once the shipment has occurred, the Ship Notice is transmitted to the Seller so that the Seller can transmit a Ship Notice to the Buyer/Consignee or other interested parties. The Ship Notice is not often generated by the Warehouse /Terminal to the Buyer because many customers desire cumulative totals that could reflect product shipped from multiple locations.

Marketplaces and B2B transactions may have different business models:

Marketplace Model	The Warehouse/Terminal (W/T) transactions are normally not used with the Marketplace due to the restrictions placed by the Seller on the W/T responsible for the inventory.
B2B Model	This series of messages occurs between the Seller/Shipper and the W/Ts to move replenishment product to the W/Ts, and then to inform the W/Ts about shipments that are required. In turn, the W/Ts advise the Seller of the shipment made and of any inventory adjustments that may be required (e.g., relotting of a tank where the previous lot number must be zeroed out and a new lot number created). Ship Notices are not sent from the W/Ts to the Buyer, but rather from the Seller because of the cumulative total requirement.

See individual messages Shipment Instructions and Ship Notice for business scenarios involving Warehouse transactions.

7.2.10 Shipment Instructions

The Shipment Instructions message is used to convey all of the information about a given shipment to a 3rd party warehouse or terminal. It contains all of the pertinent data to allow the location to print a load or pick list, a packing list and a bill of lading. This message could also be used by a Seller/Shipper to a Freight Forwarder and vice-versa.

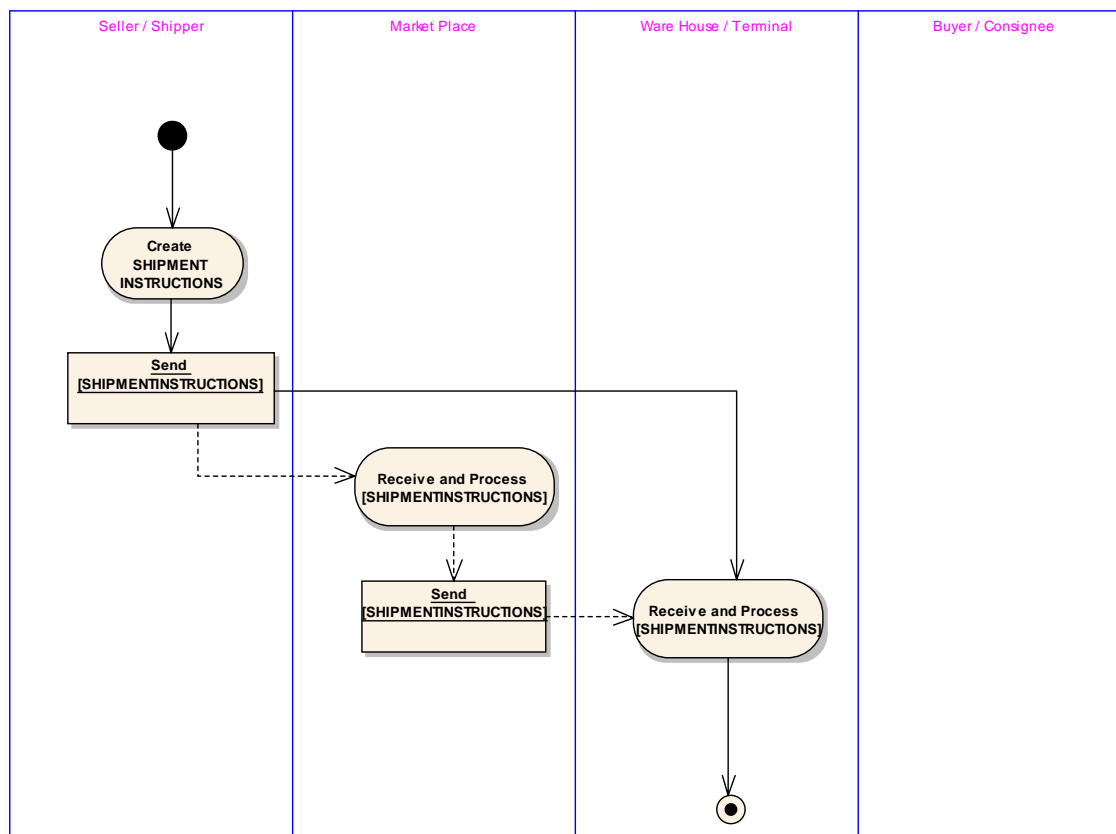


Figure 7.2.10.a: Shipment Instructions message

Figure 7.2.10.a depicts the flows of a Shipment Instructions message to a 3rd party warehouse or terminal. It is a direct transmission between the shipper and the 3rd party and ignores the Marketplace.

Business Scenarios for Shipment Instructions

The following three scenarios depict the ways Shipment Instructions can be used.

Business Scenario 1

Seller requests a warehouse or terminal to make a shipment on its behalf.

Required to inform the warehouse or terminal of all of the particulars about a shipment that the Seller requires the warehouse or terminal to make.

Business Scenario 2

Seller/Shipper sends pertinent information to a Freight Forwarder upon arrival of product to vessel

Required for Freight Forwarder to arrange for an export shipment for the Seller.

Business Scenario 3

Freight Forwarder sends pertinent information to a Seller/Shipper upon completion of an export shipment.

Required for Freight Forwarder to notify the Seller to update its ERP system.

Sample Message: [ShipmentInstructions](#) (See 7.8.2.1)

7.2.11 Ship Notice

The Ship Notice is a message used to convey information from one party to another after a shipment has been made. While the diagram below shows a message between a Seller and a Buyer, it could also be between any two parties (i.e. Forwarder to Seller, Warehouse or Terminal to a Seller). This information includes vehicle identification, product weights and lot numbers, bar coded serial numbers of the packages and cumulative totals (amount of this product sent to this Buyer during a specific period). This must be done in a timely manner to insure that the Ship Notice arrives at the Buyer/Consignee's location(s) prior to the arrival of the vehicle or vessel.

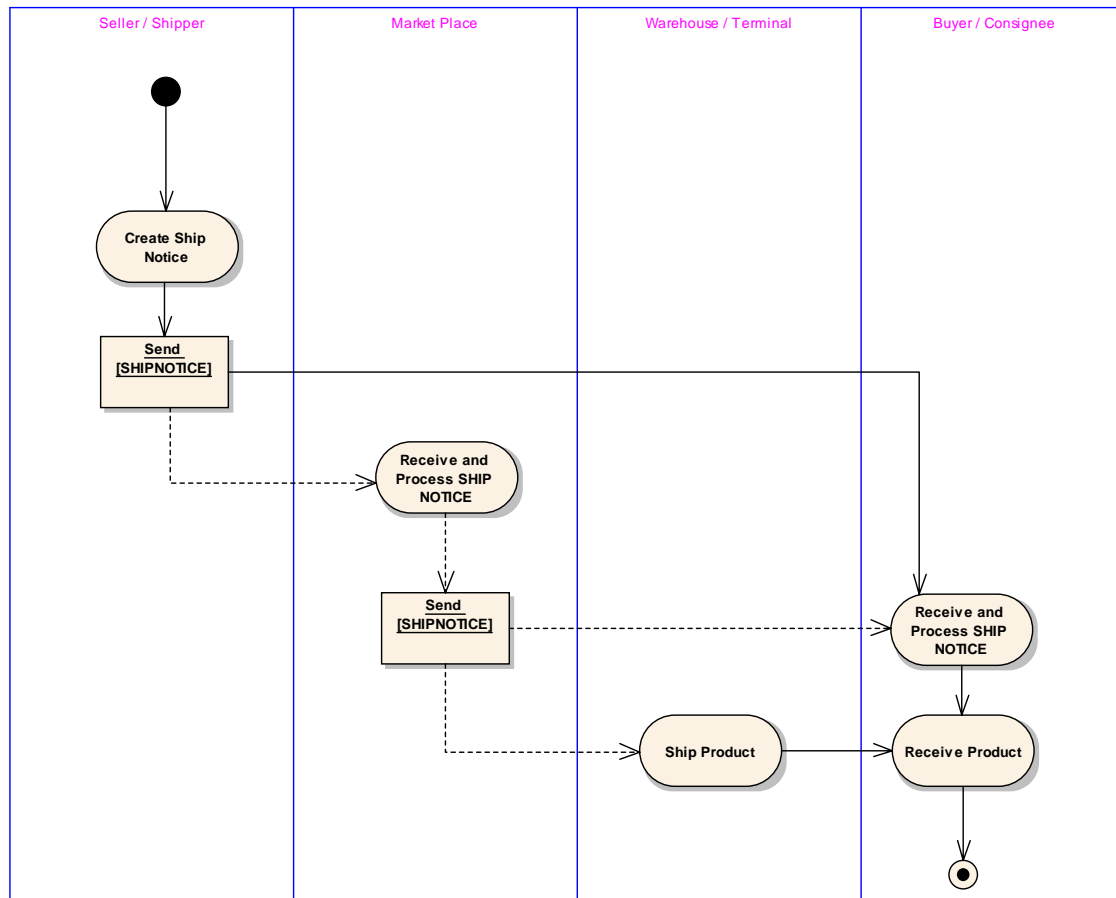


Figure 7.2.11.a: Ship Notice message

Figure 7.2.11.a depicts the flows of the Ship Notice. After the Carrier departs the Shipper's location, the Seller generates a Ship Notice to the Buyer/Consignee and other interested parties.

This message contains all pertinent information that the Buyer/Consignee needs to appropriately plan for the arrival and recognize the shipment when it arrives. Often bar-coded serial numbers are transmitted when required by the Buyer/Consignee. A cumulative total representing the total quantity shipped during this contract period (either inclusive or exclusive of this shipment) may also be required.

Business Scenarios for Ship Notice

The following five scenarios depict the ways a Ship Notice can be used.

Business Scenario 1

Shipper/Seller notifies the Buyer/Consignee when the shipment has left the point of origin.

Required to notify the Buyer of the specifics about the order in transit

Business Scenario 2

Shipper/Seller notifies the Marketplace when shipment has left the point of origin.

Required to notify the Buyer of the specifics about the order in transit

Once the Shipper notifies the Marketplace, the Marketplace notifies the Buyer/Consignee when the shipment has left the point of origin through the Marketplace notification process.

Business Scenario 3

Freight Forwarder notifies the financial institution when the shipment has left the point of origin.

Required to begin the invoice process for the order

This is one of the triggers to invoice the Buyer for the placed order. This transaction notifies the Buyer of the exact products and quantities that are in transport.

Business Scenario 4

Freight Forwarder or 3PL notifies the Shipper/Seller when the shipment has left the point of origin.

Required to notify the Seller of the specifics about the order in transit

Business Scenario 5

Freight Forwarder or 3PL notifies the Buyer/Consignee when shipment has left the point of origin.

Required to notify the Buyer / Consignee of the specifics about the order in transit

Sample Message: [ShipNotice](#) (See 7.9.2.1)

7.2.12 Receipt Notice

The Receipt Notice is a message used to convey information from one party to another after a receipt of a shipment has been made. While the diagram below shows a message between a Seller and a Buyer, it could also be between any two parties (i.e. Forwarder to Seller, Warehouse or Terminal to a Seller). This message is intended to convey receipt information back to Seller or to a Consignor the fact that a shipment has been received in its entirety or to inform the shipping party that discrepancies exist and to enumerate where these differences exist

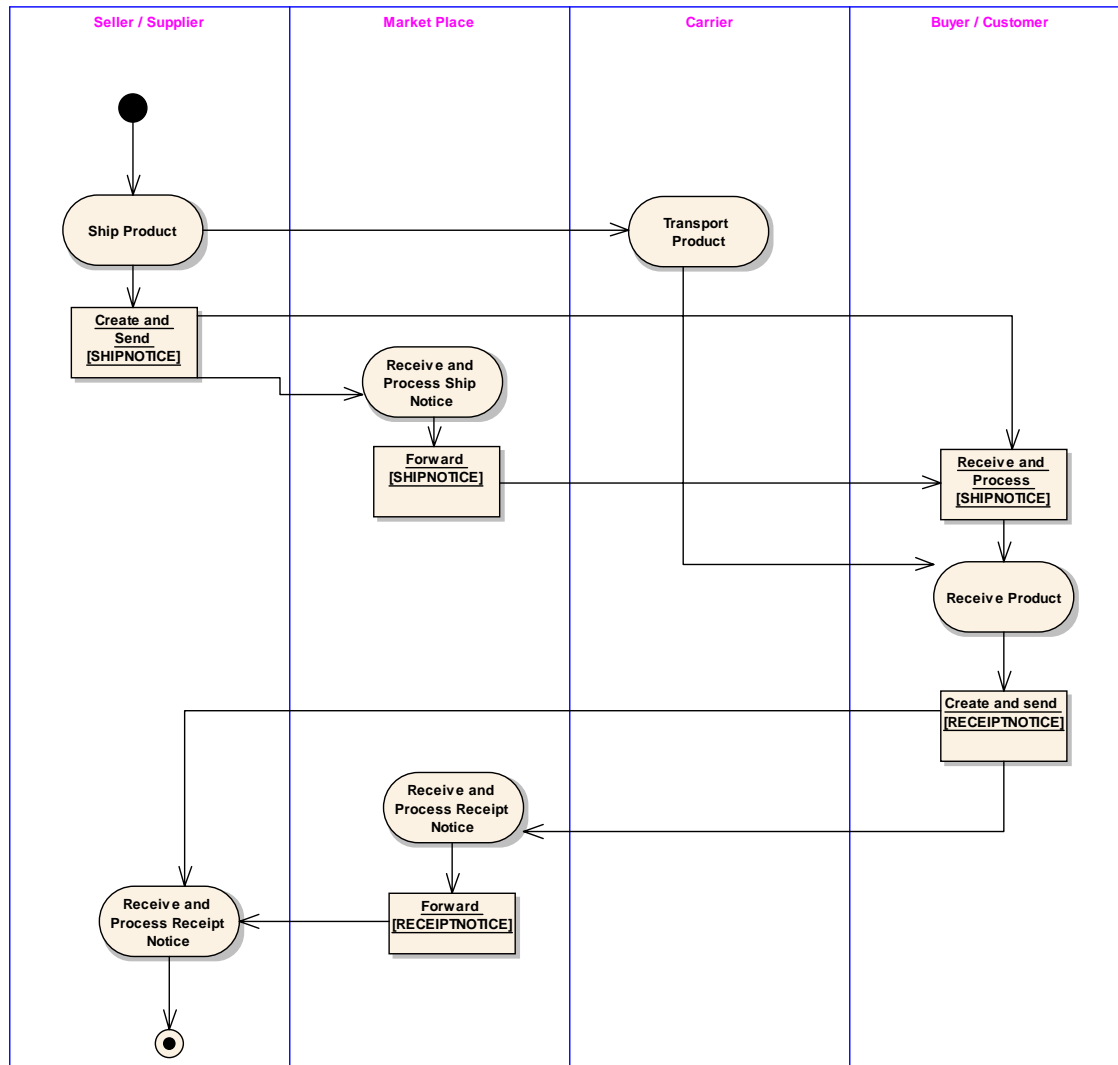


Figure 7.2.11.a: Receipt Notice message

Figure 7.2.11.a depicts the flows of the Receipt Notice. After the Ship Notice has been received, and then the physical shipment has arrived, been weighed, counted or measured, This message may be sent to the Seller and other interested parties. In all 3PL situations this message must be sent, but in a normal Seller-Buyer situation, it may be agreed between the two partners that the message will only be sent if discrepancies exist.

This message contains all pertinent information that the Seller needs to appropriately account for inventory on an off-site location, or to assist with discrepancy reconciliation.

Business Scenarios for Receipt Notice

The following five scenarios depict the ways a Receipt Notice can be used.

Business Scenario 1

Buyer/Consignee notifies the Shipper/Seller when the shipment has arrived at the point of destination.

Required to notify the Seller that the shipment has arrived

Business Scenario 2

Buyer/Consignee notifies the Marketplace when shipment has left the point of origin.

Required to notify the Seller that the shipment has arrived where the Marketplace is involved

Once the Buyer/Consignee notifies the Marketplace, the Marketplace notifies the Seller when the shipment has reached the point of destination through the Marketplace notification process.

Sample Message: [ReceiptNotice](#) (See 7.9.2.1)

7.2.13 Shipment Status Request

While the Shipment Status had originally been designed as a “push” message, there was also a request for a party to request a shipment status for Version 3.0. The Shipment Status Request message is designed for this purpose and is normally sent by the partner to a carrier so that the partner can review the events of a given transport.

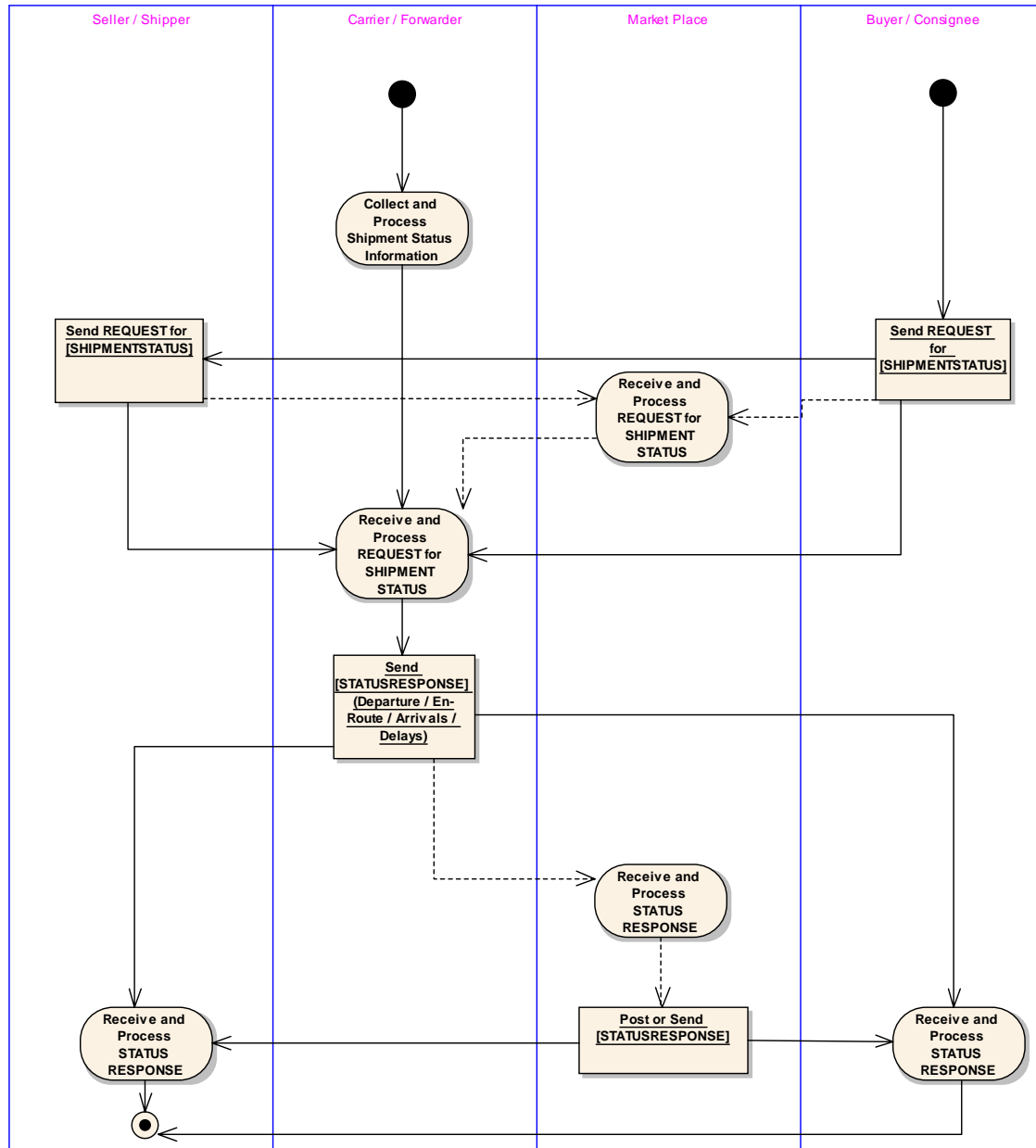


Figure 7.2.12.a: Shipment Status Request message

Business Scenarios for Shipment Status Request

The following two scenarios depict ways that a Shipment Status Request can be used.

Business Scenario 1

Buyer wishes an update.

This usually occurs once a Ship Notice has been received and the buyer wishes to track the shipment.

Business Scenario 2

Seller wishes an update.

This usually occurs prior to a Delivery Receipt Advice to track a shipment, or after a Delivery Receipt Advice to track an empty vehicle being returned.

Sample Message: [ShipmentStatusRequest](#) (See 7.10.2.1)

7.2.14 Shipment Status

The Shipment Status message is used to convey Carrier information to the Seller/Shipper and/or Buyer/Consignee. While there are many statuses that can be conveyed to either/both parties, the most common occurs at arrival at origin, en route location, and arrival at destination. The Buyer/Consignee may or may not receive the Shipment Status message. This message may be a response to a Shipment Status Request message.

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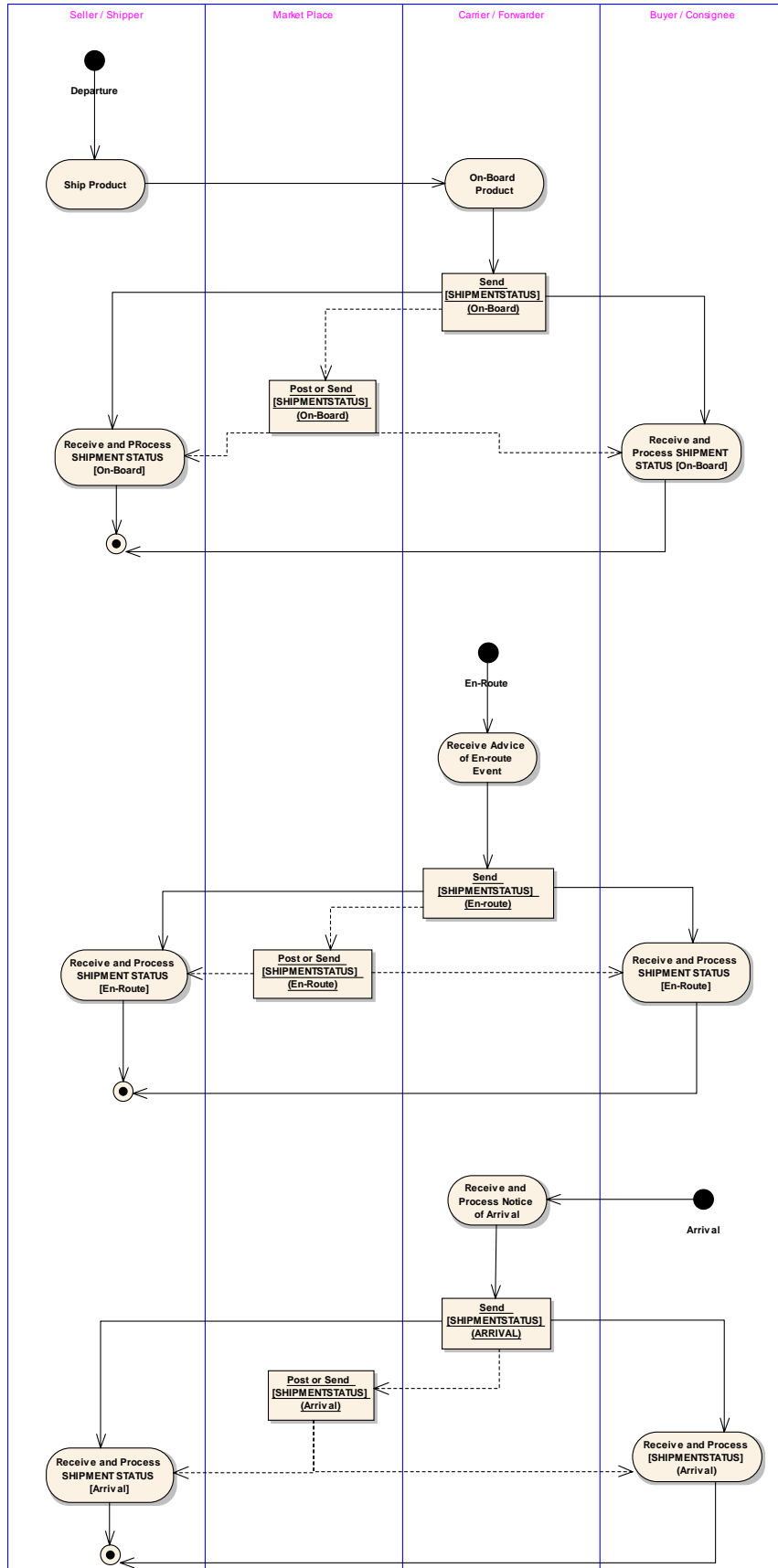


Figure 7.2.13.a: Shipment Status message

Figure 7.2.13.a depicts the flow of the Shipment Status. After the load has been tendered and accepted, there are a series of events where a Carrier may send a Shipment Status message to the Seller/Shipper (and Buyer/Consignee, if appropriate). Examples of this are arrival at the Shipper's location, locations en route, and arrival at the Consignee's location for motor and rail. Examples of this for Ocean are departure from the dock, arrival at the destination port, and ultimate arrival at the Consignee's location.

Business Scenarios for Shipment Status

The following five scenarios depict the ways Shipment Status can be used.

Business Scenario 1

Shipper/Seller requests the status of shipment from an approved primary Carrier.

Required to determine the location or status of the shipment

After a Shipment Status Request is made, the carrier responds to the Seller/Shipper as to the status (location) of the shipment.

Business Scenario 2

The Marketplace requests from an approved primary Carrier the status of the shipment.

Required to determine the location or status of the shipment

After a Shipment Status Request is made, the carrier responds to the Marketplace as to the status (location) of the shipment. The Marketplace will then advise the Shipper/Seller or the Buyer/Consignee, or both, of this status.

Business Scenario 3

Buyer/Consignee requests from an approved primary Carrier the status of shipment.

Required to determine the location or status of the shipment

After a Shipment Status Request is made, the carrier responds to the Buyer/Consignee as to the status (location) of the shipment.

Business Scenario 4

The Buyer/Consignee requests the Status from the Shipper/Seller.

Required to determine the location or status of the shipment

After a Shipment Status Request is made, the carrier responds to the Seller/Shipper who then advises the Buyer/Consignee as to the status (location) of the shipment.

Business Scenario 5

The Shipper/Seller requests from the Buyer/Consignee the status of the shipment.

Required to determine the location or status of the shipment

After a Shipment Status Request is made, the carrier responds to the Buyer/Consignee who then advises the Seller/Shipper as to the status (location) of the shipment.

Sample Message: [ShipmentStatus](#) (See 7.11.2.1)

7.2.15 Freight Bill

The Freight Bill is a message whereby the Carrier bills the Seller or Buyer or Marketplace, depending upon the freight terms. Included in the Freight Bill is the charge for the line haul as well as for any accessorial or detention charges. These charges may go directly to the Seller or Buyer or Marketplace, or to a payment agency designated by that party through the ShipmentMethodOfPaymentCode data element contained in the Load Tender Motor, Load Tender Rail, or Load Tender Ocean.

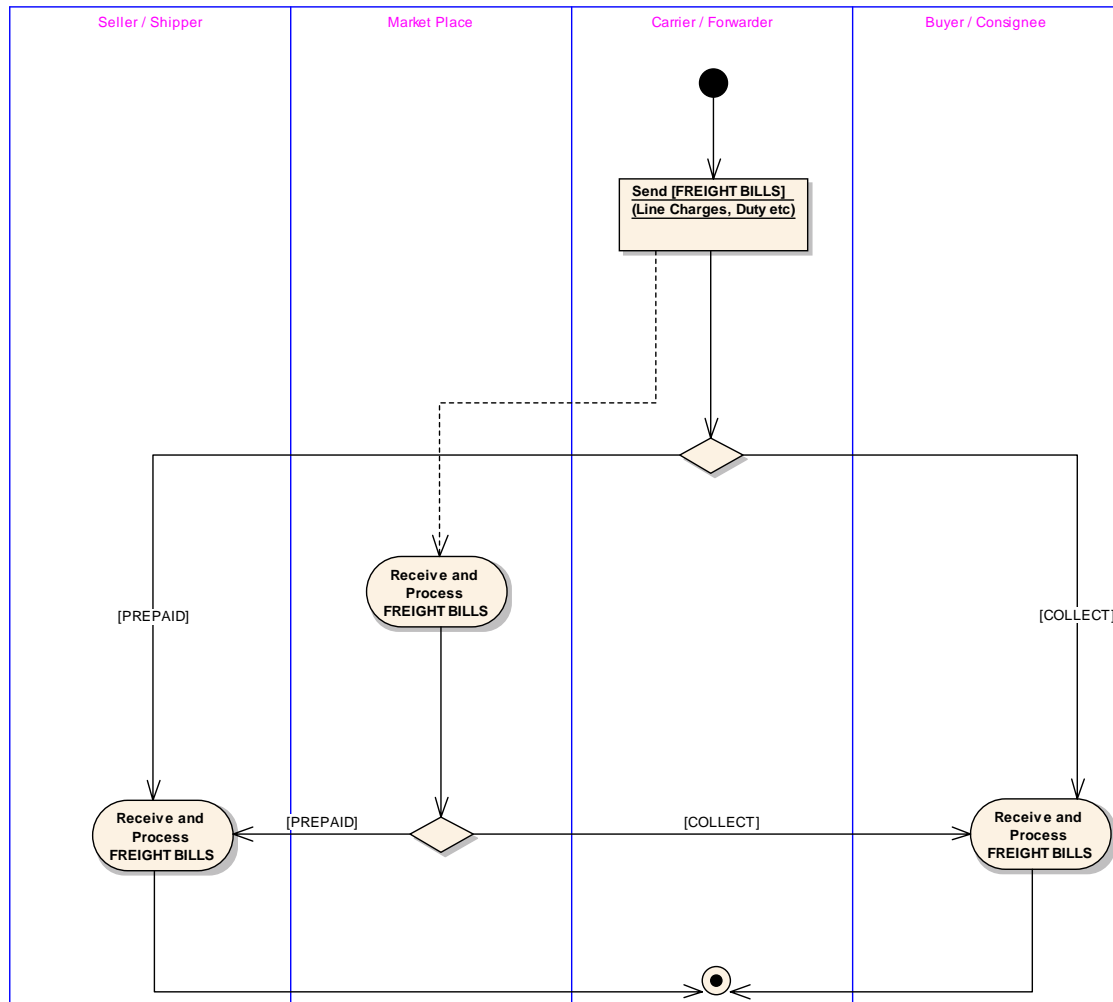


Figure 7.2.14.a: Freight Bill message

Figure 7.2.14.a depicts the Freight Bill flows. Upon completion of the shipment, the Carrier transmits a Freight Bill message to the liable party for the freight (depending upon the payment terms specified on the Load Tender messages). This message goes to the Bill-To party, which can be the Seller or Buyer or Marketplace, or an agent of the responsible party. Line haul charges and special services charges (e.g., hose charge, detention charge, fuel surcharge) are normally sent within the Freight Bill message for motor and rail. Duties, insurance, port charges, and forwarder service charges, as well as ocean freight are contained within the Freight Bill message for Ocean (and Air) exports.

Business Scenarios for Freight Bill

The following ten scenarios depict the ways a Freight Bill can be used.

Business Scenario 1

Carrier invoices Shipper/Seller when freight terms are prepaid.

Required for Carrier to receive payment

Business Scenario 2

Carrier invoices the Shipper/Seller and, in turn, the Shipper/Seller invoices the Buyer/Consignee when the terms in freight are prepaid and add.

Required for Carrier to receive payment

Business Scenario 3

Carrier invoices Marketplace. The Marketplace invoices the Shipper/Seller when the terms are prepaid.

Required for Carrier to receive payment

Business Scenario 4

Carrier invoices Marketplace and the Marketplace invoices Buyer/Consignee when the Buyer/Consignee freight terms are collect.

Required for Carrier to receive payment

Business Scenario 5

Carrier invoices Buyer/Consignee when freight terms are collect.

Required for Carrier to receive payment

Business Scenario 6

Freight Forwarder invoices Shipper/Seller when freight terms are prepaid.

Required for Freight Forwarder to receive payment

Business Scenario 7

Freight Forwarder invoices the Shipper/Seller and, in turn, the Shipper/Seller invoices the Buyer/Consignee when the terms in freight are prepaid and add.

Required for Freight Forwarder to receive payment

Business Scenario 8

Freight Forwarder invoices Marketplace. The Marketplace invoices the Shipper/Seller when the terms are prepaid.

Required for Freight Forwarder to receive payment

Business Scenario 9

Freight Forwarder invoices Marketplace and the Marketplace invoices Buyer/Consignee when the Buyer/Consignee freight terms are collect.

Required for Freight Forwarder to receive payment

Business Scenario 10

Freight Forwarder invoices Buyer/Consignee when freight terms are collect.

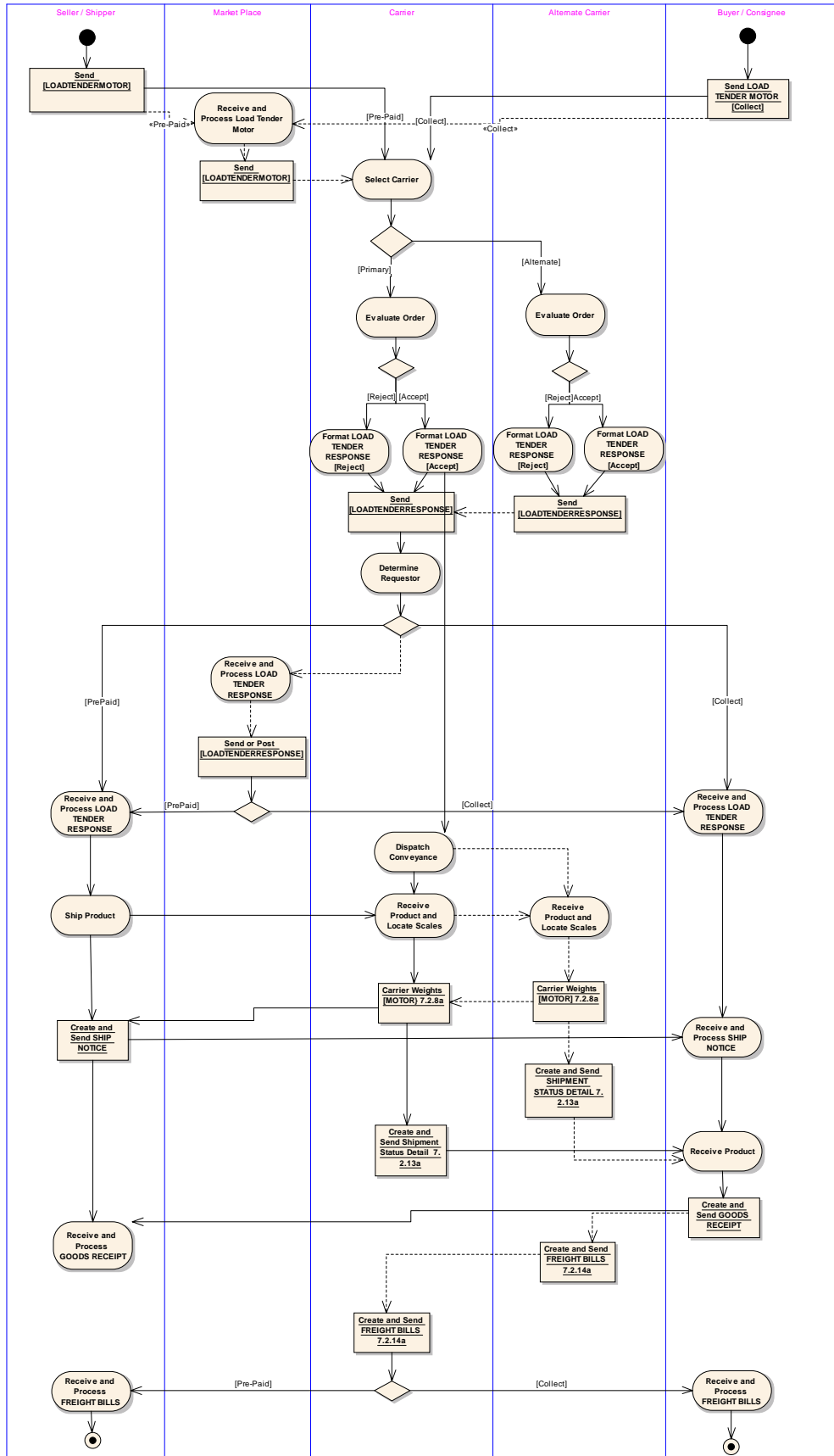
Required for Freight Forwarder to receive payment

Sample message: [FreightBill](#) (See 7.12.2.1)

7.3 Business Process Flows

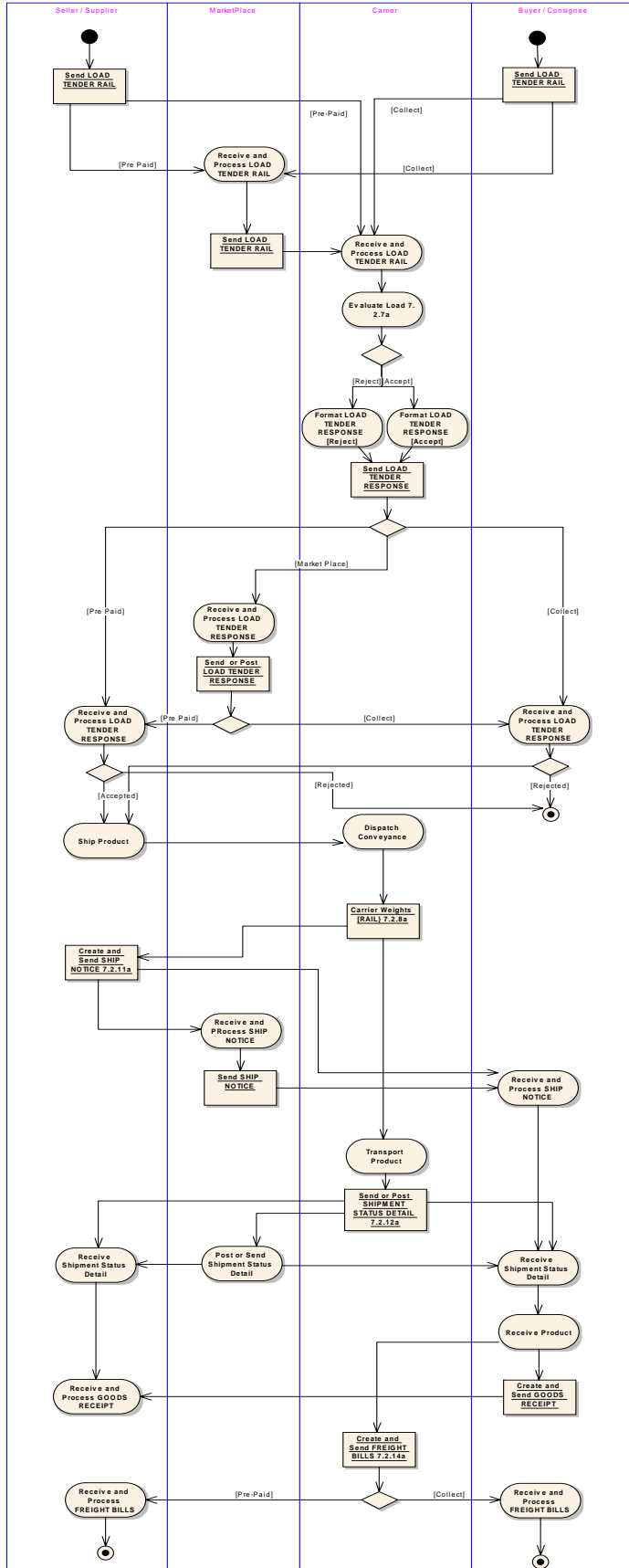
7.3.1 Motor Transactions

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7.3.2 Rail Transactions

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7.3.3 Ocean Transactions

7.4 End of Document