

9.0 Forecasting

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1.1 Introduction and Scope of Effort

This section of the document defines the data exchange necessary to support the business processes of Demand Forecasting, Collaborative Planning, and Vendor Managed Inventory (VMI) between Buyers and Sellers directly or via a Marketplace.

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

The business transactions listed below are supported and discussed in detail in this section of the document.

1.1.1 Forecasting Messages

The following business transactions are discussed in this section:

Demand Forecast	Seller sends forecast and forecast updates to the Buyer. Buyer sends forecast and forecast updates to Seller.
Demand Forecast Response	Seller sends functional response to the Buyer to confirm receipt of forecast and receipt of forecast updates; Buyer sends functional response to Seller to confirm receipt of forecast and receipt of forecast updates.
Supply Plan	Seller sends supply plan to Buyer to initiate a collaborative planning process.
Supply Plan Response	Buyer sends functional response to Seller to confirm receipt of supply plan.
Demand Plan	Buyer sends demand plan to Seller to initiate a collaborative planning process.
Demand Plan Response	Seller sends functional response to Buyer to confirm receipt of demand plan.
Replenishment Proposal Request	Seller sends proposed replenishment to Buyer for approval before creating and executing the replenishment order.
Replenishment Proposal Response	Buyer sends response to Seller to approve creation and execution of a replenishment order.
Replenishment Proposal Change	Buyer sends replenishment proposal change to Seller.
Replenishment Proposal Cancel	Buyer sends replenishment proposal Cancel to Seller.
Inventory Actual Usage	Buyer sends inventory position and/or actual usage to Seller.

Inventory Actual Usage Response	Seller sends functional response to Buyer to confirm receipt of inventory position and actual usage.
Delivery Receipt	Buyer sends delivery receipt to Seller.
Delivery Receipt Response	Seller sends functional response to Buyer to confirm receipt of delivery receipt.

1.1.2 Key Scope Assumptions

- Transactions are included for the following business processes: Demand Forecasting, Collaborative Planning, and Vendor Managed Inventory.
- All transactions are designed for use in Business-to-Business (B2B) and Business to Marketplace communications.
- Transactions were designed based on North American and European business processes. Regional implications outside of North America and Europe were not considered.
- Internal business processes for Buyers, Sellers, and Marketplaces have been considered in the transaction design, ~~however business processes are not included as part of transaction standards.~~
- Possible manipulation and data extraction by the Marketplace has been considered and assumed to have no impact on the transaction sent Buyer to Seller or Seller to Buyer via the Marketplace.

DemandForecasting / DemandForecastingResponse

- Demand Forecast is always a forecast of the Buyer's demand, whether the Seller or the Buyer provides it.
- The Buyer has the capability to review and send updates to the forecast that was generated by the Seller.
- It is not necessary for the Buyer to acknowledge acceptance of the Seller generated demand forecast. It is assumed that a non-response within a set time period agreed upon by the Buyer and Seller indicates acceptance.
- It is not necessary for the Seller to acknowledge acceptance of the Buyer generated demand forecast. It is assumed that a non-response within a set time period agreed upon by the Buyer and Seller indicates acceptance.
- A request transaction is not necessary to trigger the sending of the demand forecast by either the Buyer or the Seller.
- Demand Forecast transactions will replace an existing forecast; therefore no separate transactions are required to add, delete, or replace data.

DemandPlan / DemandPlanResponse

- There is no request transaction necessary to trigger the sending of the demand and supply plans by either the Buyer or Seller.
- Since the demand and supply plans are rolling, there is no separate transaction for updates.
- It is not necessary for the Seller to acknowledge acceptance of the Buyer's demand plan or for the Buyer to acknowledge acceptance of the Seller supply plan. It is assumed that a non-response within a set time period agreed upon by the Buyer and Seller indicates acceptance.
- Confirmation transactions strictly acknowledge receipt and content of the transactions, not acceptance.

ReplenishmentProposalRequest / ReplenishmentProposalResponse

- The frequency of this transaction cycle is defined by Seller's planned replenishments to Buyer. Alternate VMI processes may not require this transaction process at all.
- The Buyer has the capability, manual or otherwise, to review the original Replenishment Proposal Request and respond with either a Replenishment Proposal Response, Replenishment Proposal Change or Replenishment Proposal Cancel transaction to the Seller.
- Alternate VMI processes may require the Seller to request "lists" of (Buyer) Purchase Order numbers from the Buyer. These requests made by the Seller and responses from the Buyer are made off-line via e-mail, fax, or phone. No economic value can be derived from the automation of this process.
- Buyer initiated order proposals are Order Create transactions. Order Create transactions are not discussed in this section of the document.
- Replenishment Proposal Request and Replenishment Proposal Response transactions do not contain price and/or price terms. It is assumed that a contractual agreement between the Buyer and Seller establishes price and terms.

ReplenishmentProposalChange and ReplenishmentCancel

- Replenishment Proposal Change and Replenishment Proposal Cancel transactions do not contain price and/or price terms.
- The Replenishment Proposal Cancel transaction cancels all line items included on the original Proposal submitted by the Seller. Deletion of a single line item on a Replenishment Proposal Request requires a Replenishment Proposal Change transaction.

InventoryActualUsage / InventoryActualUsageResponse

- The inventory and actual usage transaction can also be used for non-VMI processes.
- A request (pull) transaction is not required. It is assumed that the Buyer and Seller have agreed on the timing and frequency of the updates and the Buyer has set the appropriate internal triggers.
- Inventory types such as storage tank, on-site and in-transit for a given product have the same package type.
- Different package types require additional line items within the transaction.

DeliveryReceipt / DeliveryReceiptResponse

- The Delivery Receipt and confirmation transaction can also be used for non-VMI processes.
- The Delivery Receipt transaction and its response relate to a physical delivery by any transportation mode.
- Although the initial purpose of the delivery receipt transaction is to reconcile inventory levels for VMI, it may also facilitate the billing process.
- There will be only one Delivery Receipt transaction per order and per delivery.

9.1.3 Key Business Model Assumptions

Pre-Conditions that exist prior to generating a Forecasting transaction:

- Business process decisions related to the transfer of demand forecast, collaborative planning, and vendor managed inventory information, including what transactions to use as well as what data elements to populate have been agreed upon in advance by the Buyer and Seller.

Business assumptions that govern the exchange of messages:

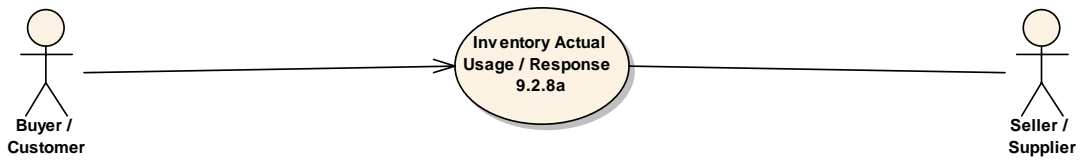
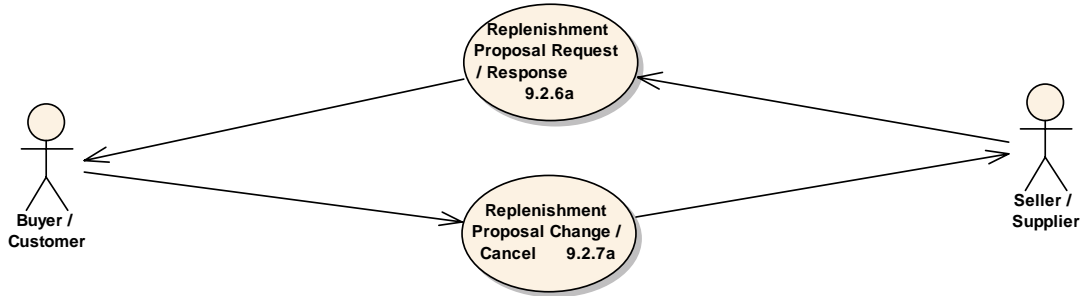
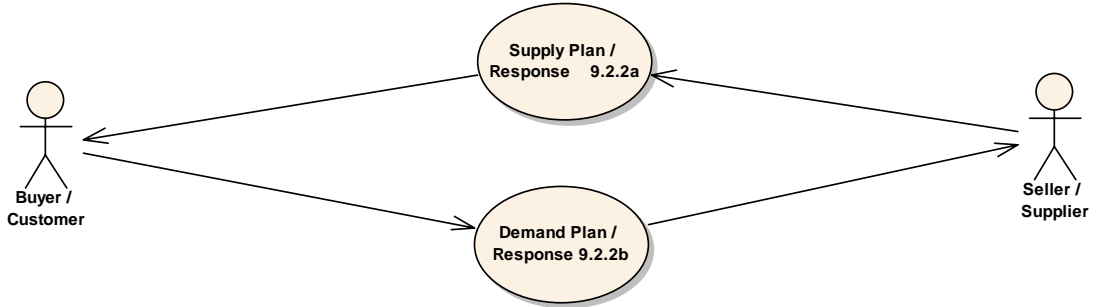
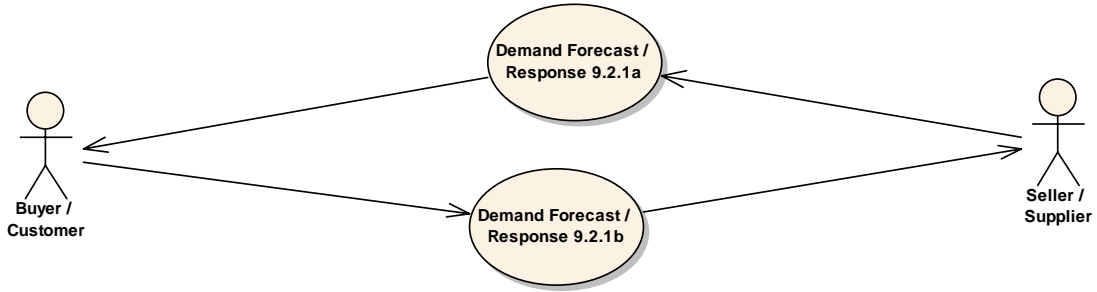
- The Buyer and Seller may not necessarily be the sender or receiver of the transactions. The sender and receiver data are included in the header or envelope. The transaction header and/or envelope should accommodate Marketplace data if the Marketplace is included in the scenario.

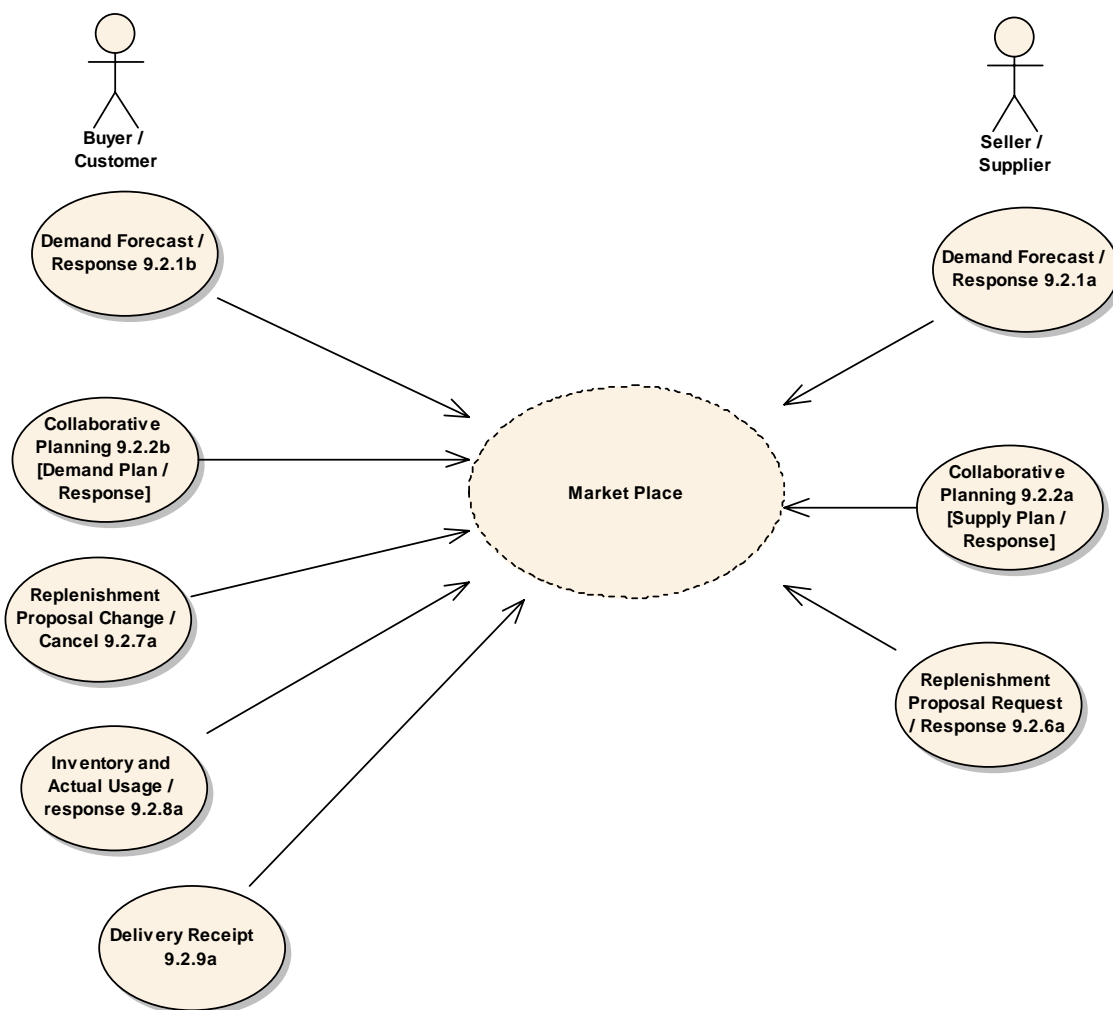
Post-Conditions that ~~that~~ are anticipated after messages are sent:

- Transaction confirmations are functional responses that acknowledge data content receipt but not acceptance. All transaction confirmations are optional and are not intended to replace technical responses.

Errors and exceptions to any transaction may be addressed off-line via phone/fax/mail and/or by re-sending the transaction.

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1.2 Business Process Descriptions and Diagrams

This section describes the business process of Demand Forecasting, Collaborative Planning and Vendor Managed Inventory.

1.2.1 Demand Forecast / Demand Forecast Response

The general business process model for the DemandForecast and DemandForecastResponse transaction is depicted in the following diagram. Solid thick lines illustrate the transaction

between the Marketplace and Buyer/Seller; the dashed thick lines indicate the Buyer and Seller transactions. Solid thin lines illustrate the transactions (i.e.: communications via phone, fax, or e-mail) that are not included in these standards.

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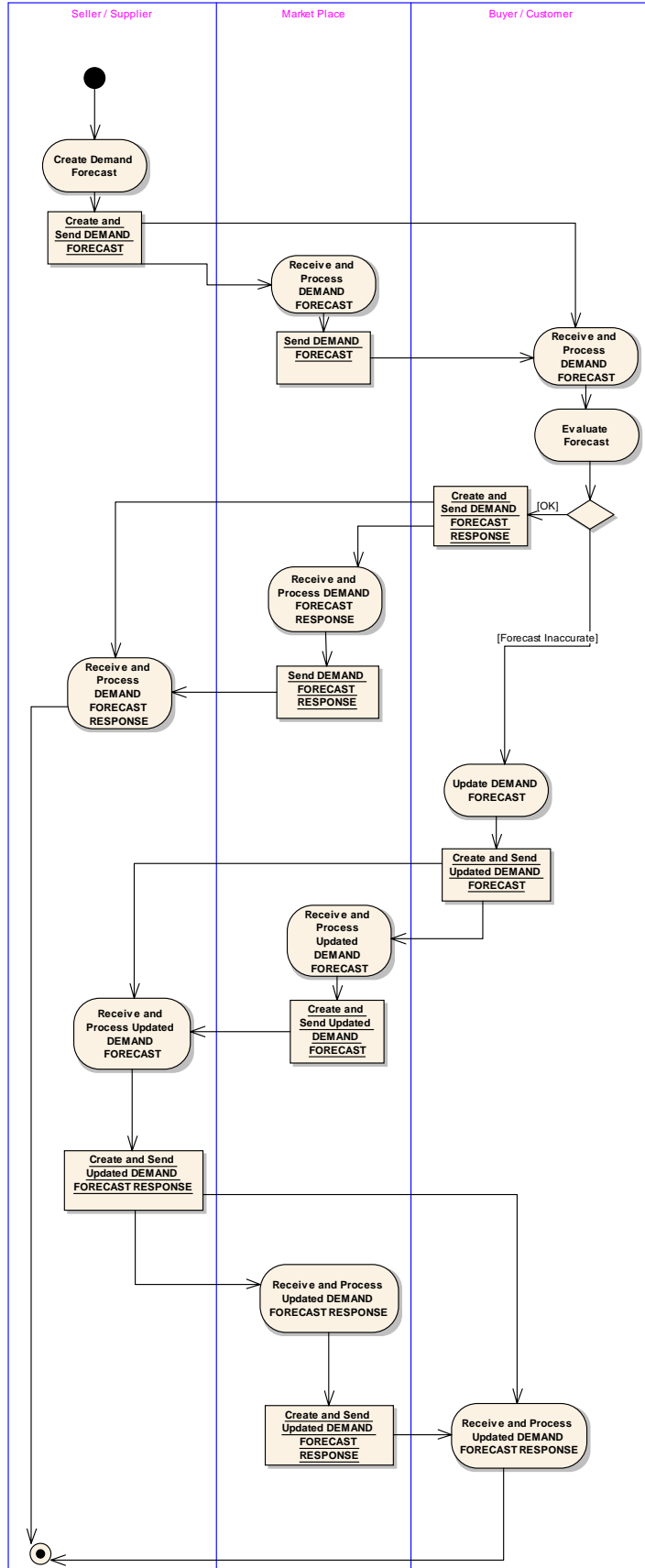


Figure 9.2.1.a: Demand Forecast / Demand Forecast Response transactions (Seller Initiated)

Marketplaces and B2B transactions may have different business models:

<p>Marketplace Model</p>	<p>In a Marketplace model, the Seller creates and sends the Demand Forecast transaction to the Marketplace. The Marketplace processes and sends the Demand Forecast transaction to the Buyer. The Seller has the option to receive a receipt acknowledgment. If the Buyer and Seller agree, the Buyer creates and sends a Demand Forecast Response transaction to the Marketplace.</p> <p>The Marketplace forwards the confirmation transaction to the Seller. The Buyer has the option of updating the Seller initiated forecast and sending the updated Demand Forecast transaction to the Marketplace.</p> <p>The Marketplace processes and sends the forecast transaction to the Seller. The Buyer has the option to receive a receipt acknowledgment. If the Buyer and Seller agree, the Seller creates and sends a Demand Forecast Response to the Marketplace. The Marketplace forwards the confirmation transaction to the Buyer.</p>
<p>B2B Model</p>	<p>In a B2B situation, the Seller creates and sends the Demand Forecast transaction to the Buyer. The Seller has the option to receive a receipt acknowledgment. If the Buyer and Seller agree, the Buyer creates and sends a Demand Forecast Response transaction to the Seller.</p> <p>The Buyer also has the option of updating the Seller-initiated forecast by sending an updated Demand Forecast transaction directly to the Seller. The Buyer has the option to receive a receipt acknowledgment. If the Buyer and Seller agree, the Seller creates and sends a Demand Forecast Response to the Buyer.</p>

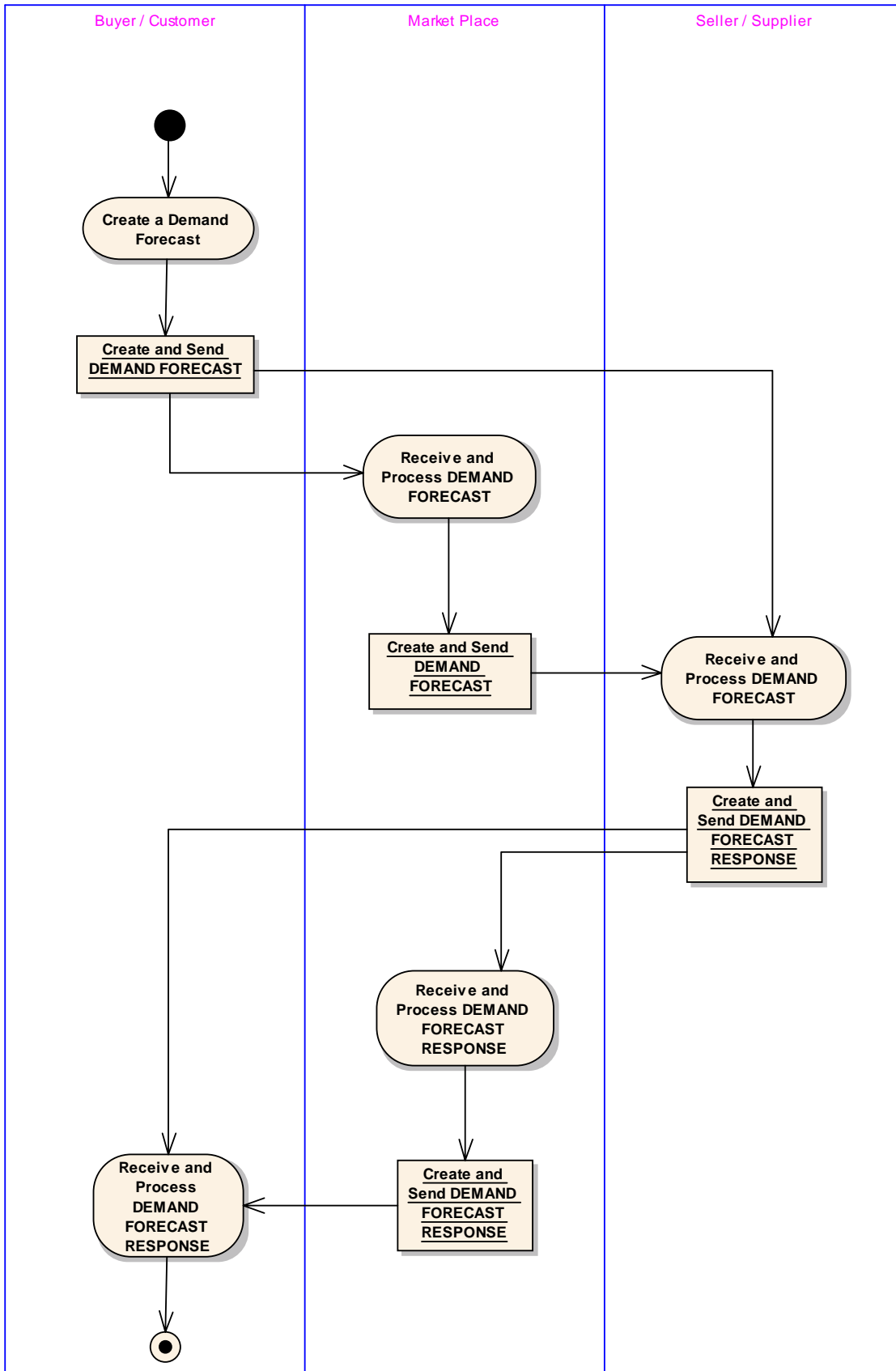


Figure 9.2.1.b: Demand Forecast / Demand Forecast Response transactions (Buyer Initiated)

Marketplaces and B2B transactions may have different business models:

Marketplace Model	In the Marketplace model, the Buyer creates and sends the Demand Forecast transaction to the Marketplace. The Marketplace processes and sends the Demand Forecast transaction to the Seller. The Buyer has the option to receive a receipt acknowledgment. If the Buyer and Seller agree, the Seller creates and sends a Demand Forecast Response transaction to the Marketplace. The Marketplace forwards the confirmation transaction to the Buyer.
B2B Model	In the B2B situation, the Buyer creates and sends the Demand Forecast transaction to the Seller. The Buyer has the option to receive a receipt acknowledgment. If the Buyer and Seller agree, the Seller creates and sends a Demand Forecast Response transaction to the Buyer.

Business Scenarios for DemandForecast / DemandForecastResponse

Specific scenarios that initiate a DemandForecast transaction and its corresponding DemandForecastResponse are presented below.

The transaction standards created enable the following:

- Seller sends demand forecast to Buyer
 - Buyer sends demand forecast to Seller
 - Seller confirms receipt of Buyer's demand forecast
 - Buyer confirms receipt of Seller's demand forecast
 - Buyer sends updates (can be adds, changes, and deletes for products, locations, time periods) to Seller's forecast of Buyer's demand
 - Buyer's and Seller's product IDs can be used in the demand forecast
 - Demand forecast can be sent as frequently as needed (hourly, daily, weekly, etc.)
 - Demand forecast can be in various buckets (daily, weekly, monthly, etc.)
 - Demand forecast and the corresponding confirmation transaction can be directly exchanged between a Buyer and Seller or via a Marketplace
- **Business Scenario 1 – Demand Forecasting**
 Seller initiates the demand forecast, which is accepted by the Buyer
Each step occurs within an agreed upon window of time as determined by the business partners
 The Seller generates a demand forecast for the Buyer based on historical demand and market intelligence. The Seller sends the demand forecast to the Buyer. The Buyer receives, reviews, and agrees with the demand forecast. No further action is required.
 - **Business Scenario 2 – Demand Forecasting**
 Seller initiates the demand forecast, which is revised by the Buyer

Each step occurs within an agreed upon window of time as determined by the business partners

The Seller generates a demand forecast for the Buyer based on historical demand and market intelligence. The Seller sends the demand forecast to the Buyer. The Buyer receives, reviews, updates and resends the demand forecast. The Seller receives the updated demand forecast.

- **Business Scenario 3 – Demand Forecasting**

Seller initiates the demand forecast and sends via the Marketplace, which is revised by the Buyer.

Each step occurs within an agreed upon window of time as determined by the business partners

The Seller generates a demand forecast for the Buyer based on historical demand and market intelligence. The Seller sends the demand forecast to the Marketplace. The Marketplace receives and resends the demand forecast to the Buyer. The Buyer receives, reviews, updates and resends the demand forecast to the Marketplace. The Marketplace receives and resends the demand forecast to the Seller. The Seller receives the demand forecast. The Marketplace may aggregate, extract, or simply transmit the transaction.

- **Business Scenario 4 – Demand Forecasting**

Buyer initiates the demand forecast, which is accepted by the Seller.

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a demand forecast based on historical demand and market intelligence. The Buyer sends the demand forecast to the Seller. The Seller receives and processes the demand forecast. No further action is required.

- **Business Scenario 5 – Demand Forecasting**

Buyer initiates the demand forecast and sends via the Marketplace

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a demand forecast for the Seller based on historical demand and market intelligence. The Buyer sends the demand forecast to the Marketplace. The Marketplace receives and resends the demand forecast to the Seller. The Seller receives, reviews, updates and resends the demand forecast to the Marketplace. The Marketplace receives and resends the demand forecast to the Buyer. The Buyer receives the demand forecast. The Marketplace may aggregate, extract or simply transmit the transaction.

- **Business Scenario 6 - Demand Forecasting Response**

Buyer creates and sends the Demand Forecast Response

Each step occurs within an agreed upon window of time as determined by the business partners

Upon receipt of the Seller-initiated demand forecast, the Buyer sends the Demand Forecast Response to the Seller. The Seller receives the functional confirmation that acknowledges receipt and content of the transaction.

- **Business Scenario 7 - Demand Forecasting Response**

Seller initiates the Demand Forecast Response

Each step occurs within an agreed upon window of time as determined by the business partners

Upon receipt of the Buyer updated or Buyer initiated demand forecast, the Seller sends the Demand Forecast Response to the Buyer. The Buyer receives the functional confirmation that acknowledges receipt and content of the transaction. No further action is required.

1.2.2 Collaborative Planning

The Collaborative Planning business process uses the Chem eStandards messages SupplyPlan / SupplyPlanResponse and DemandPlan and DemandPlanResponse

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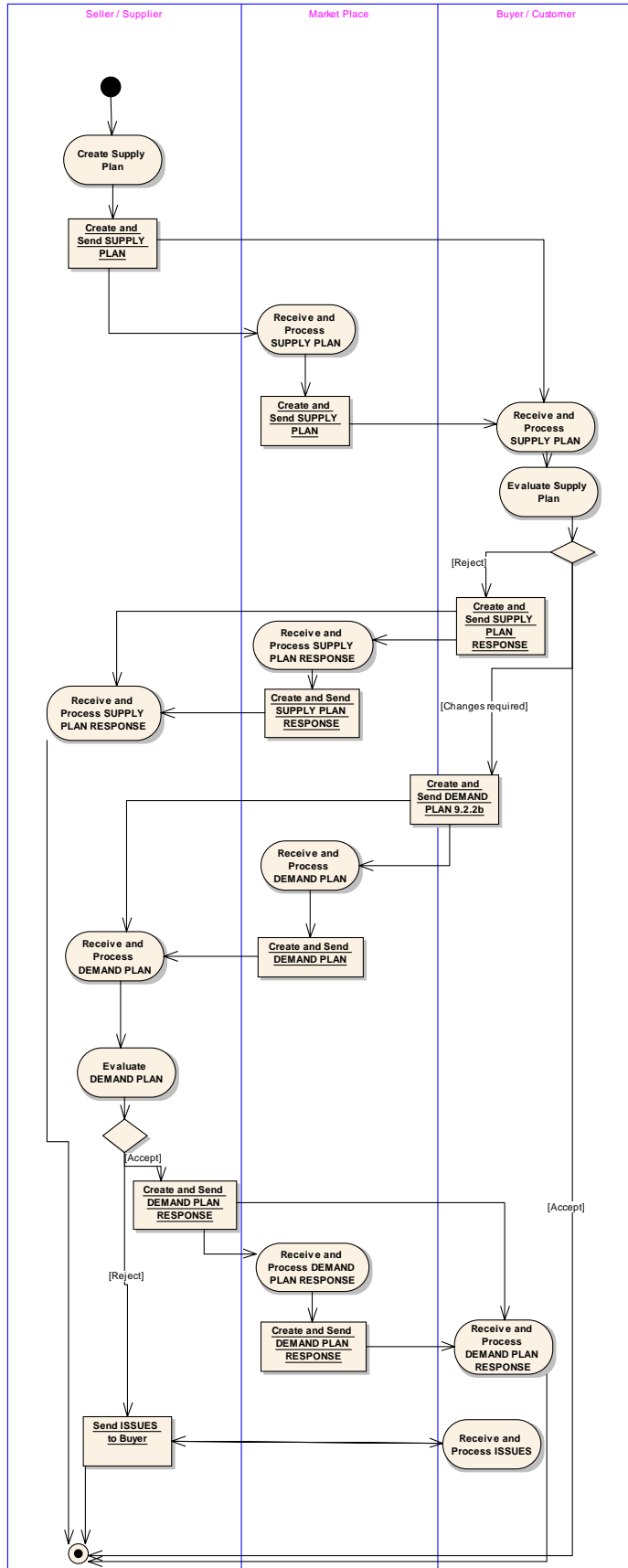


Figure 9.2.2.a: Collaborative Planning - Seller Initiated

Marketplaces and B2B transactions may have different business models:

<p>Marketplace Model</p>	<p>In a Marketplace model, the Seller creates and sends the Supply Plan transaction to the Marketplace. The Marketplace processes and sends the Supply Plan transaction to the Buyer.</p> <p>The Seller has the option to receive a receipt acknowledgment. If the Buyer and Seller agree, the Buyer creates and sends a Supply Plan Response transaction to the Marketplace. The Marketplace forwards the confirmation transaction to the Seller.</p> <p>The Buyer also has the option to request an update to the Seller-initiated supply plan by generating and sending an updated Demand Plan transaction to the Marketplace. The Marketplace processes and sends the Demand Plan transaction to the Seller.</p> <p>The Buyer has the option to receive a receipt acknowledgment. If the Buyer and Seller agree, the Seller creates and sends a Demand Plan Response to the Marketplace. The Marketplace forwards the confirmation transaction to the Buyer.</p>
<p>B2B Model</p>	<p>The most likely scenario is that the Seller creates and sends the Supply Plan transaction to the Buyer. The Seller has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Buyer creates and sends a Supply Plan Response transaction to the Seller.</p> <p>The Buyer also has the option to request an update to the Seller-initiated Supply Plan by generating and sending an updated Demand Plan transaction to the Seller. The Buyer has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Seller creates and sends a Demand Plan Response to the Buyer.</p>

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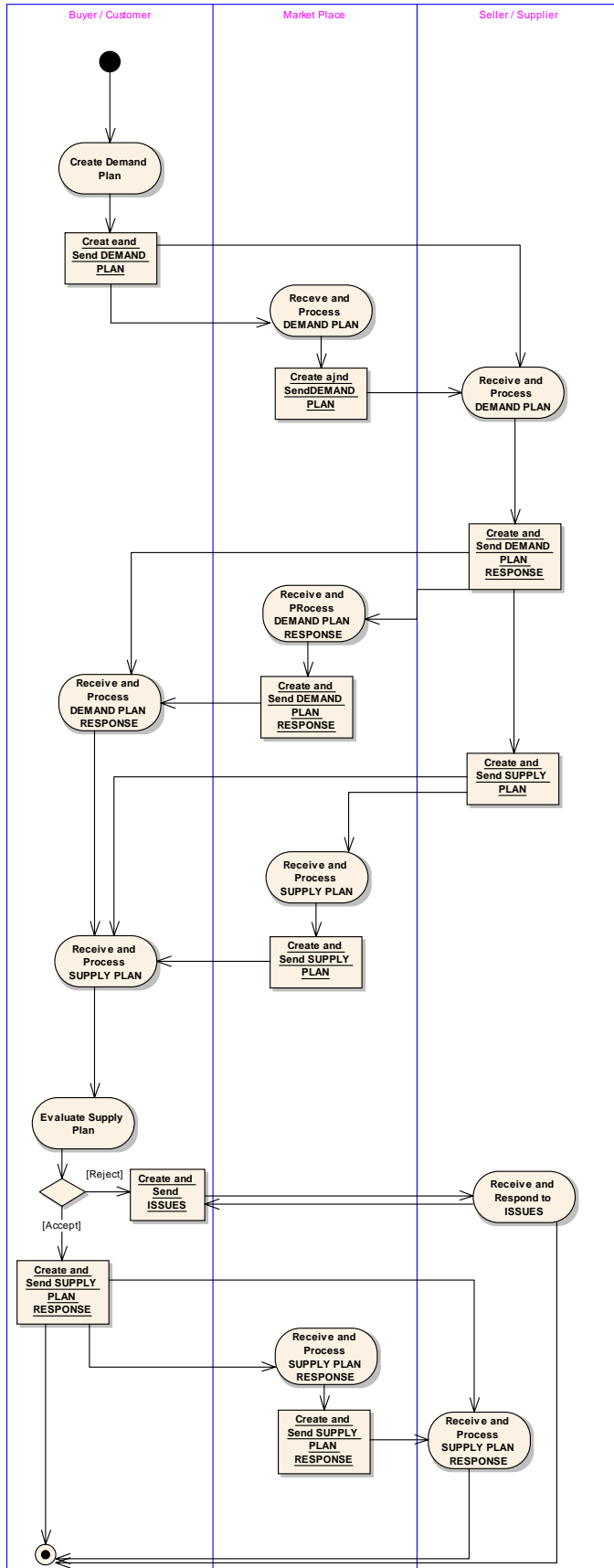


Figure 9.2.2.b: Collaborative Planning – Buyer Initiated

Marketplaces and B2B transactions may have different business models:

<p>Marketplace Model</p>	<p>In the Marketplace model, the Buyer creates and sends the Demand Plan transaction to the Marketplace. The Marketplace processes and sends the Demand Plan transaction to the Seller. The Buyer has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Seller creates and sends a Demand Plan Response transaction to the Marketplace. The Marketplace forwards the confirmation transaction to the Buyer.</p> <p>The Seller develops a supply plan using the Buyer's demand plan, and then creates and sends a Supply Plan transaction to the Marketplace. The Marketplace processes and sends the Supply Plan transaction to the Buyer. The Seller has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Buyer creates and sends a Supply Plan Response transaction to the Marketplace. The Marketplace forwards the confirmation transaction to the Seller.</p>
<p>B2B Model</p>	<p>In the B2B situation, the Buyer creates and sends the Demand Plan transaction to the Seller. The Buyer has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Seller creates and sends a Demand Plan Response transaction to the Buyer.</p> <p>The Seller develops a supply plan based on the Buyer's demand plan, and then creates and sends a Supply Plan transaction to the Buyer. The Seller has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Buyer creates and sends a Supply Plan Response transaction to the Seller.</p>

1.2.3 SupplyPlan / SupplyPlanResponse

The Seller-initiated Collaborative Planning process begins with the Seller sending a SupplyPlan message to the Marketplace or Buyer, who may optionally send a SupplyPlanResponse message in reply.

Business Scenarios for SupplyPlan / SupplyPlanResponse

- **Business Scenario 1 - Supply Plan**

Seller initiates the supply plan, which is accepted by the Buyer

Each step occurs within an agreed upon window of time as determined by the business partners

The Seller generates a supply plan for the Buyer based on a forecast and market intelligence. The Seller sends the supply plan to the Buyer. The Buyer receives, reviews, and agrees with the supply plan. No further action is required.

- **Business Scenario 2 - Supply Plan**

Seller generates supply plan based on Buyer generated demand plan, Buyer accepts supply plan
Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a demand plan for the Seller based on forecast and market intelligence. The Buyer sends the demand plan to the Seller. The Seller receives, reviews, and sends an updated supply plan. The Buyer receives, reviews, and agrees with the supply plan. No further action is required.

- **Business Scenario 3 - Supply Plan**

Seller generates supply plan based on Buyer generated demand plan - Buyer does not accept supply plan
Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a demand plan for the Seller based on forecast and market intelligence. The Buyer sends the demand plan to the Seller. The Seller receives, reviews, and sends an updated supply plan. The Buyer receives, reviews and does not accept the supply plan. The Buyer intervenes by communicating with the Seller via phone, e-mail, or fax.

- **Business Scenario 4 - Supply Plan**

Seller initiates the supply plan and sends via the Marketplace, Buyer accepts Supply Plan.
Each step occurs within an agreed upon window of time as determined by the business partners

The Seller generates a supply plan for the Buyer based on a forecast and market intelligence. The Seller sends the supply plan to the Marketplace. The Marketplace receives and resends the supply plan to the Buyer. The Buyer receives and reviews the supply plan. No further action is required. The Marketplace may aggregate, extract or simply transmit the transaction.

- **Business Scenario 5 - Supply Plan Response**

Buyer initiates the Supply Plan Response
Each step occurs within an agreed upon window of time as determined by the business partners

Upon receipt of the Seller-initiated supply plan, the Buyer sends the Supply Plan Response to the Seller. The Seller receives the functional confirmation that acknowledges receipt and content of the transaction.

9.2.4 DemandPlan / DemandPlanResponse

The Buyer-initiated Collaborative Planning process begins when a Buyer sends a DemandPlan message to the Marketplace or Seller, who may optionally send a DemandPlanResponse message in reply.

Business Scenarios for DemandPlan / DemandPlanResponse

Specific scenarios that initiate DemandPlan, SupplyPlan transactions and their corresponding messages DemandPlanResponse, SupplyPlanResponse are presented below.

- **Business Scenario 1 – Demand Plan**

Buyer initiates the demand plan

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a demand plan for the Seller based on forecast and market intelligence. The Buyer sends the demand plan to the Seller. The Seller receives, reviews and utilizes the demand plan to generate a supply plan.

- **Business Scenario 2 – Demand Plan**

Buyer revises Seller generated supply plan and sends an updated demand plan, Seller accepts demand plan

Each step occurs within an agreed upon window of time as determined by the business partners

The Seller generates a supply plan for the Buyer based on a forecast and market intelligence. The Seller sends the supply plan to the Buyer. The Buyer receives, reviews and sends an updated demand plan. The Seller receives, reviews, and agrees with the demand plan. No further action is required.

- **Business Scenario 3 - Demand Plan**

Buyer revises Seller generated supply plan and resends as a demand plan, Seller does not accept demand plan

Each step occurs within an agreed upon window of time as determined by the business partners

The Seller generates a supply plan for the Buyer based on a forecast and market intelligence. The Seller sends the supply plan to the Buyer. The Buyer receives, reviews, and sends an updated demand plan. The Seller receives, reviews and does not accept the demand plan. The Seller intervenes by communicating with the Buyer via phone, e-mail, or fax.

- **Business Scenario 4-Demand Plan**

Buyer initiates the demand plan and sends via the Marketplace, Seller accepts the demand plan.

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a demand plan for the Seller based on forecast and market intelligence. The Buyer sends the demand plan to the Marketplace. The Marketplace receives and sends an updated

demand plan to the Seller. The Seller receives and reviews the demand plan. No further action is required. The Marketplace may aggregate, extract or simply transmit the transaction.

- **Business Scenario 5 - Demand Plan Response**

Seller initiates the Demand Plan Response

Each step occurs within an agreed upon window of time as determined by the business partners

Upon receipt of the Buyer-initiated demand plan, the Seller sends the Demand Plan Response to the Buyer. The Buyer receives the functional confirmation that acknowledges receipt and content of the transaction.

9.2.5 Vendor Managed Inventory

The Vendor Managed Inventory business process uses the Chem eStandards messages of Replenishment Proposal Request and Response, the Inventory Actual Usage and Response, the Replenishment Proposal Change and Replenishment Proposal Cancel messages, and upon actual receipt of inventory, the Delivery Receipt and Delivery Receipt Response messages.

1.2.6 Replenishment Proposal Request / Replenishment Proposal Response

The Seller initiates a Replenishment Proposal Request to provide replacement inventory in order to keep current inventory at an agreed-upon level or to change or cancel a previously created replenishment order.

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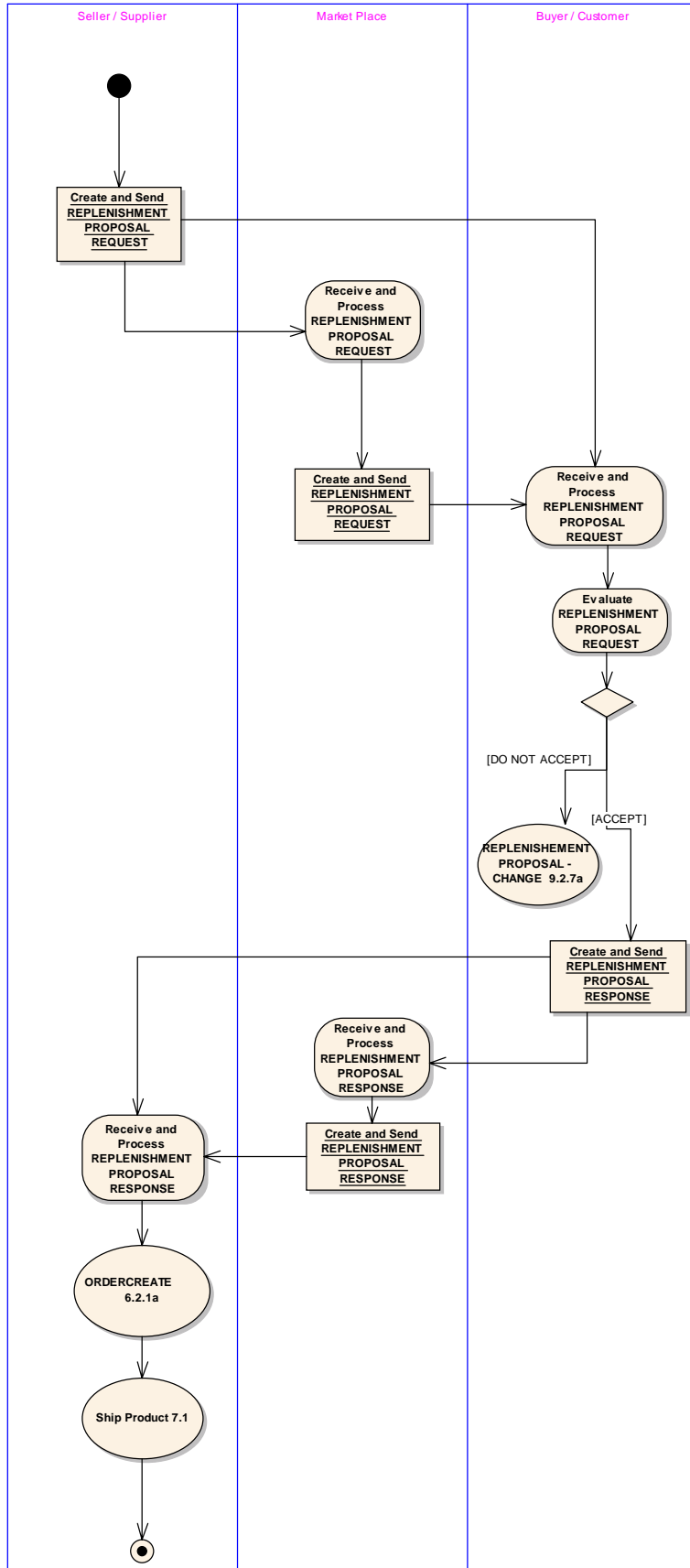


Figure 9.2.6.a: ReplenishmentProposalRequest / ReplenishmentProposalResponse transactions

Marketplaces and B2B transactions may have different business models:

Marketplace Model	<p>A Seller creates and sends a Replenishment Proposal Request transaction to the Marketplace. The Marketplace processes and sends the Proposal transaction to the Buyer. The Buyer receives the transaction and sends a Replenishment Proposal Response transaction to the Marketplace.</p> <p>The Buyer's response acknowledges acceptance of the order proposed by the Seller. The Marketplace processes and sends the Response transaction to the Seller.</p>
B2B Model	<p>A Seller creates and sends a Replenishment Proposal Request transaction directly to the Buyer. The Buyer receives the transaction and creates and sends a Replenishment Proposal Response directly back to the Seller.</p> <p>The Buyer's response acknowledges acceptance of the order proposed by the Seller.</p>

Business Scenarios for ReplenishmentProposalRequest / ReplenishmentProposal Response

Specific scenarios that initiate a ReplenishmentProposalRequest transaction and its corresponding message ReplenishmentProposalResponse are presented below.

- **Business Scenario 1 - Replenishment Proposal Request**

Seller initiates the Replenishment Proposal Request, which is accepted by the Buyer

Each step occurs within an agreed upon window of time as determined by the business partners

The Seller generates a Replenishment Proposal Request for the Buyer based on current on-hand inventory, agreed upon safety stock levels and forecasted demand. The Seller sends the Replenishment Proposal Request to the Buyer. The Buyer receives, reviews and agrees with the Replenishment Proposal Request. Refer to the Replenishment Proposal Response transaction scenarios for the next step.

- **Business Scenario 2- Replenishment Proposal Request**

Seller initiates the Replenishment Proposal Request, which is not accepted by the Buyer

Each step occurs within an agreed upon window of time as determined by the business partners

The Seller generates a Replenishment Proposal Request for the Buyer based on current on-hand inventory, agreed upon safety stock levels, and forecasted demand. The Seller sends the Replenishment Proposal Request to the Buyer. The Buyer receives, reviews and does not agree with the Replenishment Proposal Request. Refer to Replenishment Proposal Change transaction

scenarios for adding to or changing the Replenishment Proposal Request. Refer to Replenishment Proposal Cancel transaction scenarios for canceling the Replenishment Proposal Request.

- **Business Scenario 3- Replenishment Proposal Request**

Seller initiates the Replenishment Proposal Request and sends via the Marketplace

Each step occurs within an agreed upon window of time as determined by the business partners

The Seller generates a Replenishment Proposal Request based on current on-hand inventory, agreed upon safety stock levels, and forecasted demand. The Seller sends the Replenishment Proposal Request to the Marketplace. The Marketplace receives and resends the Replenishment Proposal Request to the Buyer. The Buyer receives and reviews the Replenishment Proposal Request. The Marketplace may aggregate, extract or simply transmit the transaction.

- **Business Scenario 4 – Replenishment Proposal Response**

Buyer initiates the replenishment proposal response

Each step occurs within an agreed upon window of time as determined by the business partners

Upon receipt of the Buyer-initiated replenishment proposal response, the Seller executes the replenishment order.

1.2.7 Replenishment Proposal Change / Replenishment Proposal Cancel

The Buyer initiates a Replenishment Proposal Change or a Replenishment Proposal Cancel to notify the Seller to change or cancel a previously created replenishment order.

SECTION 9 - FORECASTING

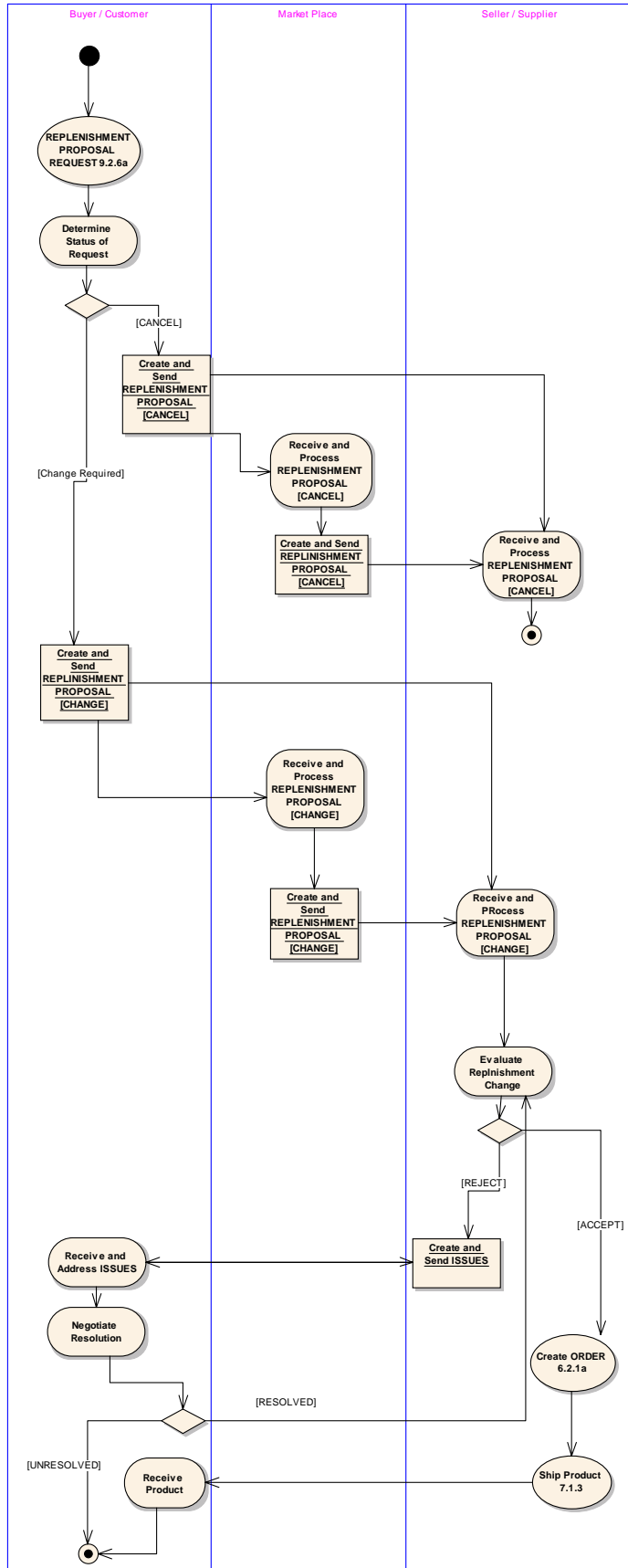


Figure 9.2.7.a: Replenishment Proposal Change and Replenishment Proposal Cancel transactions

Marketplaces and B2B transactions may have different business models:

Marketplace Model	<p>A Buyer creates and sends a Replenishment Proposal Change transaction to the Marketplace. The Marketplace processes and sends the Proposal Change transaction to the Seller.</p> <p>The Seller receives the transaction and either internally changes a replenishment order to be shipped to the Buyer or communicates off-line (phone, fax, e-mail) to negotiate order requirements with the Buyer.</p> <p>The Buyer may also create and send a Replenishment Proposal Cancel transaction to the Marketplace. The Marketplace receives, processes, and sends the Cancel transaction to the Seller.</p> <p>The Seller receives the Cancel transaction and internally cancels the original Replenishment Proposal Request submitted to the Buyer.</p>
B2B Model	<p>A Buyer creates and sends the Replenishment Proposal Change transaction directly to the Seller.</p> <p>The Seller receives the transaction and either internally creates an order to be shipped to the Buyer or communicates off-line (phone, fax, e-mail) to negotiate order requirements with the Buyer.</p> <p>The Buyer may also create and send a Replenishment Proposal Cancel transaction directly to the Seller.</p> <p>The Seller receives the Cancel transaction and internally cancels the original Replenishment Proposal Request submitted to the Buyer.</p>

Business Scenarios for Replenishment Proposal Change

Scenarios that initiate the ReplenishmentProposalChange transaction are presented below, along with a sample message that illustrates the use of this transaction.

- **Business Scenario 1**

Buyer generates and sends a replenishment proposal change, Seller accepts replenishment proposal change

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a replenishment proposal change. The Buyer sends the replenishment proposal change to the Seller. The Seller receives, reviews and accepts the replenishment proposal change. The Seller proceeds with the execution of the order fulfillment process.

- **Business Scenario 2**

Buyer generates and sends a replenishment proposal change, Seller does not accept replenishment proposal change

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a replenishment proposal change. The Buyer sends the replenishment proposal change to the Seller. The Seller receives, reviews and does not accept the replenishment proposal change. The Seller intervenes by communicating with the Buyer via phone, e-mail, or fax.

- **Business Scenario 3**

Buyer generates and sends a replenishment proposal change via the Marketplace

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a ReplenishmentProposalChange message and sends it to the Marketplace. The Marketplace receives and resends the message to the Seller. The Seller receives and reviews the changes to the replenishment proposal. The Marketplace may aggregate, extract or simply transmit the transaction.

Business Scenarios for ReplenishmentProposalCancel

Scenarios that initiate the ReplenishmentProposalCancel transaction are presented below.

- **Business Scenario 1**

Buyer sends a message to cancel the replenishment proposal directly to the Buyer.

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a replenishment proposal cancel. The Buyer sends the replenishment proposal cancel to the Seller. The Seller receives and internally cancels the original Replenishment Proposal Request.

- **Business Scenario 2**

Buyer sends a message to cancel the replenishment proposal via the Marketplace.

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates a replenishment proposal cancel. The Buyer sends the replenishment proposal cancel to the Marketplace. The Marketplace receives and resends the replenishment proposal cancel to the Seller. The Seller receives and internally cancels the original Replenishment Proposal Request. The Marketplace may aggregate, extract, or simply transmit the transaction.

9.2.8 Inventory Actual Usage / Inventory Actual Usage Response

A Buyer initiates the Inventory Actual Usage message to send a record of the inventory position and/or actual usage of product(s) to a Marketplace or directly to the Seller. The Seller may optionally respond with an Inventory Actual Usage Response message to confirm the actual usage inventory count.

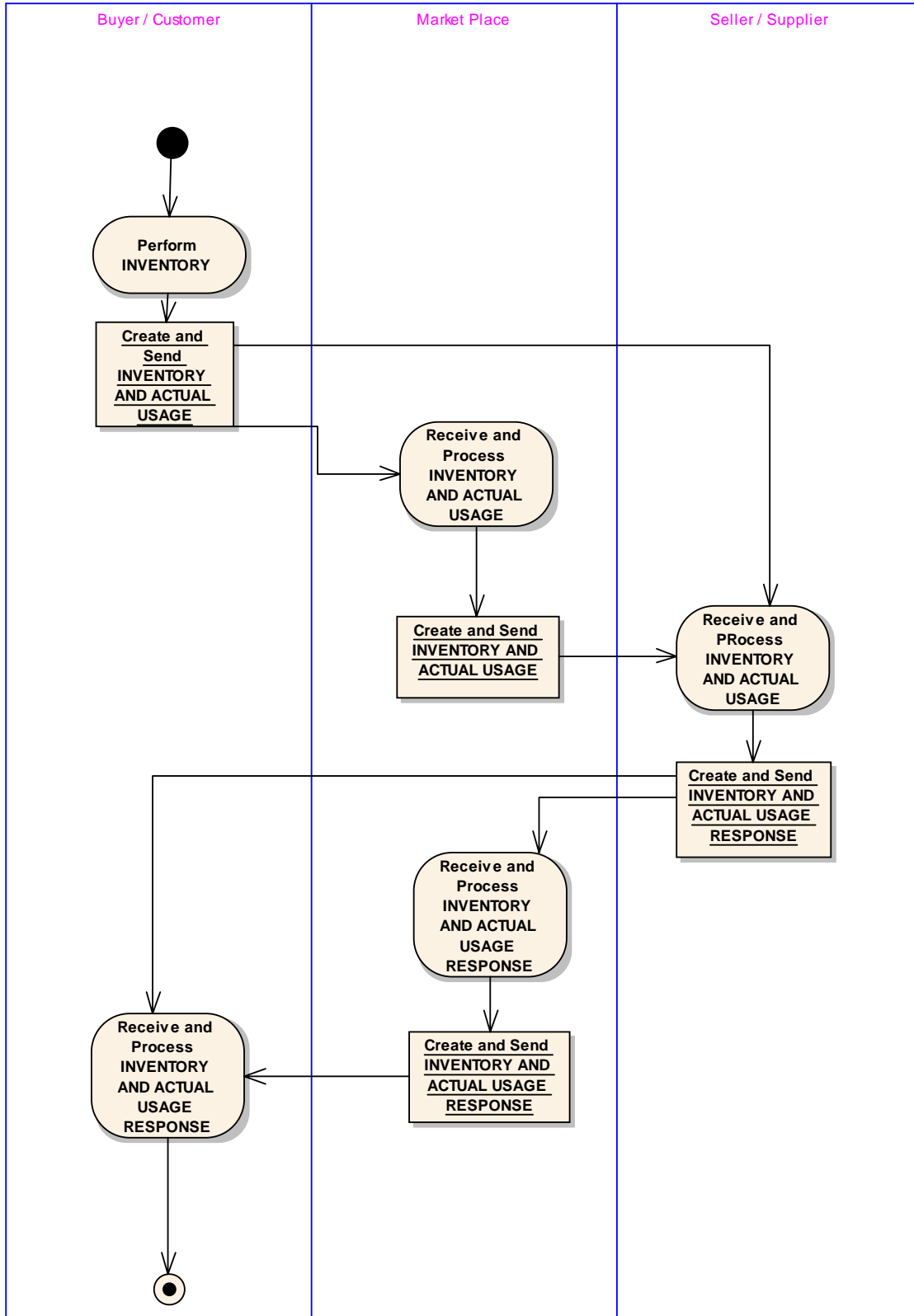


Figure 9.2.&a: InventoryActualUsage / InventoryActualUsageResponse transactions

Marketplaces and B2B transactions may have different business models:

Marketplace Model	<p>The Buyer creates and sends an Inventory and Actual Usage transaction to the Marketplace. The Marketplace processes and sends the Inventory and Actual Usage transaction to the Seller. The Buyer has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Seller creates and sends an Inventory and Actual Usage Response transaction to the Marketplace to confirm the actual usage inventory count. The Marketplace processes and sends the confirmation to the Buyer.</p>
B2B Model	<p>The Buyer creates and sends an Inventory and Actual Usage transaction directly to the Seller. The Buyer has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Seller creates and sends an Inventory and Actual Usage Response transaction to the Buyer.</p>

Business Scenarios for InventoryActualUsage / InventoryActualUsageResponse

Specific scenarios that initiate an InventoryActualUsage transaction and its corresponding message InventoryActualUsageResponse are presented below.

- **Business Scenario 1 - Inventory Actual Usage**

Buyer generates the inventory and actual usage

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates inventory and actual usage for the Seller. The Buyer sends inventory and actual usage to the Seller. The Seller receives and processes the inventory and actual usage.

- **Business Scenario 2 - Inventory Actual Usage**

Buyer generates the inventory and actual usage and sends via the Marketplace

Each step occurs within an agreed upon window of time as determined by the business partners

The Buyer generates inventory and actual usage for the Seller. The Buyer sends the inventory and actual usage to the Marketplace. The Marketplace receives and resends the inventory and actual usage to the Seller. The Seller receives and processes the inventory and actual usage. The Marketplace may aggregate, extract or simply transmit the transaction.

- **Business Scenario 3 - Inventory Actual Usage Response**

Seller generates and sends the inventory and actual usage confirmation

Each step occurs within an agreed upon window of time as determined by the business partners

Upon receipt of the Buyer initiated inventory and actual usage, the Seller sends the inventory and actual usage confirmation to the Buyer. The Buyer receives the functional confirmation that acknowledges receipt and content of the transaction.

9.2.9 Delivery Receipt / Delivery Receipt Response

A Buyer sends a Delivery Receipt message to the Seller upon delivery of product(s) ordered, to confirm the identification and quantity of products received. The Seller may optionally send a Delivery Receipt Response message to provide a comparison of the quantity of products delivered to the amount that was shipped.

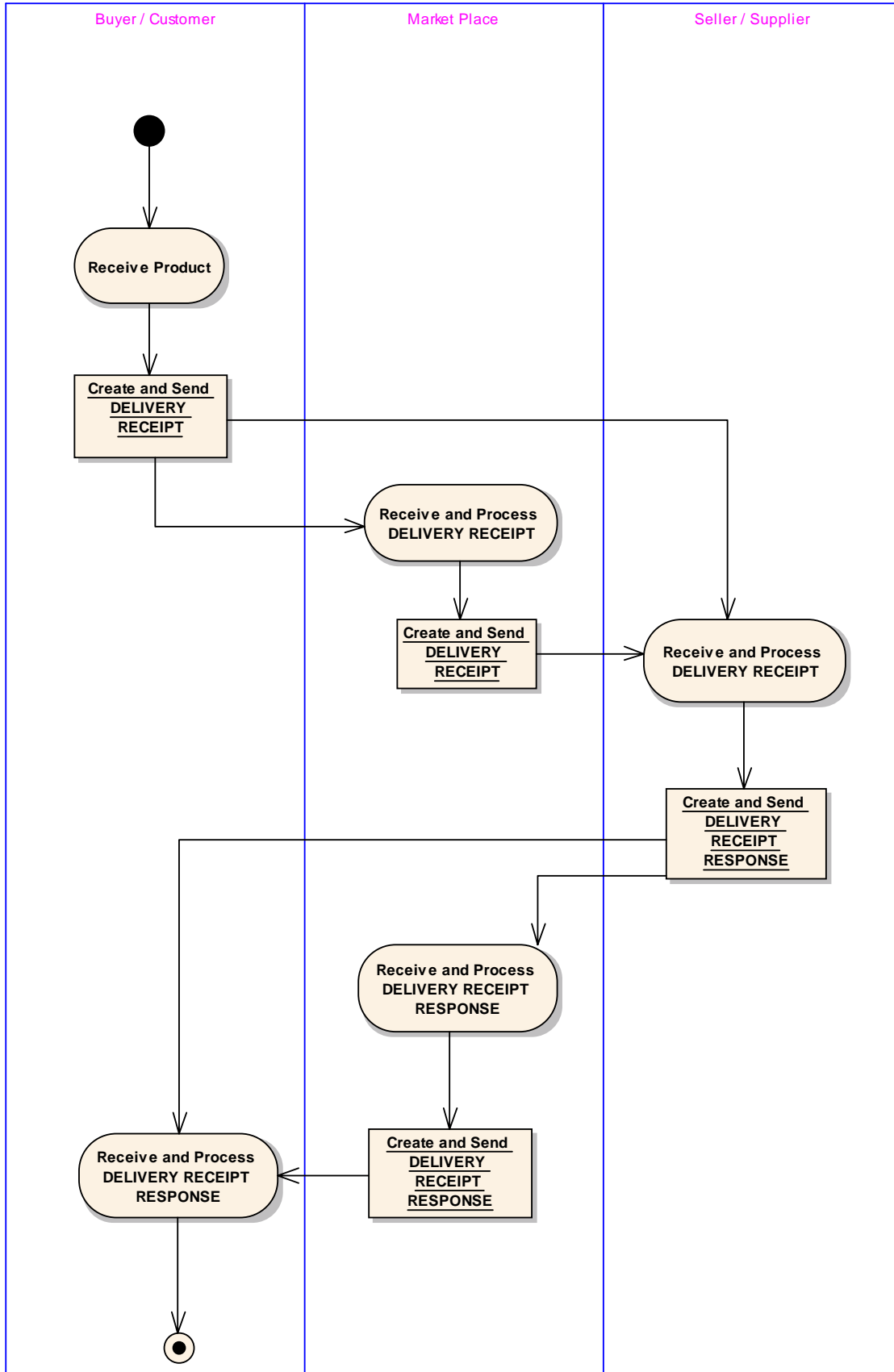


Figure 9.2.9.a: Delivery Receipt / Delivery Receipt Response transactions

Marketplaces and B2B transactions may have different business models:

Marketplace Model	<p>The Buyer receives a shipment and then creates and sends a Delivery Receipt transaction to the Marketplace. The Marketplace processes the Delivery Receipt and sends the transaction to the Seller. The Buyer has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Seller creates and sends a Delivery Receipt Response transaction to the Marketplace. The Marketplace processes and sends the response transaction to the Buyer.</p>
B2B Model	<p>The Buyer receives a shipment and then creates and sends a Delivery Receipt transaction to the Seller. The Buyer has the option to receive a receipt acknowledgment.</p> <p>If the Buyer and Seller agree, the Seller creates and sends a Delivery Receipt Response transaction to the Buyer.</p>

Business Scenarios for Delivery Receipt / Delivery Receipt Response

Specific scenarios that initiate a Delivery Receipt transaction and its corresponding message Delivery Receipt Response are presented below.

- **Business Scenario 1 – Delivery Receipt**

Buyer generates and sends the delivery receipt directly to the Seller.

Each step occurs within an agreed upon window of time as determined by the business partners

Following the physical receipt of goods, the Buyer generates a delivery receipt and sends it to the Seller. The Seller receives and processes the delivery receipt.

- **Business Scenario 2 - Delivery Receipt**

Buyer generates the delivery receipt and sends it to the Seller via the Marketplace.

Each step occurs within an agreed upon window of time as determined by the business partners

Following the physical receipt of goods, the Buyer generates a delivery receipt for the Seller. The Buyer sends the delivery receipt to the Marketplace. The Marketplace receives and resends the delivery receipt to the Seller. The Seller receives and processes the delivery receipt. The Marketplace may aggregate, extract, or simply transmit the transaction.

- **Business Scenario 3 - Delivery Receipt Response**

Seller initiates the Delivery Receipt Response

Each step occurs within an agreed upon window of time as determined by the business partners

Upon receipt of the Buyer-initiated delivery receipt, the Seller sends the Delivery Receipt Response to the Buyer. The Buyer receives the functional confirmation that acknowledges receipt and the content of the transaction.