Infor LN User Guide for Vendor Managed Inventory

Publication Information

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About this document

This document provides an introduction to <u>vendor managed inventory (VMI)</u>, describing the various VMI scenarios, and procedures. The item ownership and administrative warehouses for VMI scenarios are also explained.

Intended audience

This document is intended for persons involved in vendor managed inventory from customers' or suppliers' perspectives. The intended audience can include key users, but also implementation consultants or support specialists.

References

Use this guide as the primary reference for vendor managed inventory. Use the current editions of these documents for information that is not covered in this guide:

- *User Guide for Sales Orders U9845 US*
- *User Guide for Purchase and Sales Schedules U9541 US*
- *User Guide for the Inbound Goods Flow U9788 US*
- *User Guide for the Outbound Goods Flow U9794 US*
- *User Guide for Subcontracting U9361 US*

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Chapter 1
Introducing Vendor Managed Inventory

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Vendor managed inventory

Vendor managed inventory is an inventory management method according to which the supplier usually manages the inventory of their customer or subcontractor. Sometimes, the supplier manages the supply planning as well. Alternatively, the customer manages the inventory but the supplier is responsible for supply planning. Inventory management or inventory planning can also be subcontracted to a logistics service provider (LSP) For more information, refer to Logistic service providers (LSP) - packaging item registration.

The supplier or the customer own the inventory delivered by the supplier. Often, the ownership of the inventory changes from the supplier to the customer when the customer consumes the inventory, but other ownership transfer moments occur, which are laid down by contract.

Vendor managed inventory reduces internal costs associated with planning and procuring materials, and allows the vendor to better manage their inventory through higher visibility to the supply chain.

VMI scenarios

Though perfectly adjustable to all types of industries, LN 's VMI solution focuses on the supply chain of the electronics industry. In practice, you can distinguish numerous scenarios, all labeled VMI, in which the supplier's role goes beyond mere selling and delivering goods to the customer. For more information, refer to *Overview of VMI business scenarios (p. 13)* Logistic service providers (LSP) - packaging item registration.

Parties involved

In most VMI scenarios, you can distinguish the following parties:
- Supplier
- Contract manufacturer
- Customer

The supplier supplies components to the contract manufacturer. The contract manufacturer uses the components to produce items for the customer. Therefore, the contract manufacturer plays two roles:

the customer of the (component) supplier, and the supplier of the (item) customer. In LN, the flow between the component supplier and the contract manufacturer, and the flow between the contract manufacturer and the end item customer is defined as a supplier - customer relation. The contract manufacturer is defined as customer of the component supplier and as supplier of the end item customer.

Some scenarios involve yet another party, the logistics service provider or LSP. The LSP performs various activities related to warehouse management.

Roles

All of these scenarios revolve around the following questions:
- Who performs warehouse management?
- Who performs supply planning?
- Who is the financial owner of the goods?

In LN, you must define the responsibilities of your organization, suppliers and other business partners. The contracts that are defined by item, business partner, and warehouse include data that is relevant to these responsibilities. To set up VMI functionality, refer to:
- *VMI customer role - setup (p. 33)*
- *VMI supplier forecast - setup (p. 38)*

In a full VMI scenario, for example, the supplier is responsible for supply planning and warehouse management. Supply planning is based on the customer's outstanding sales orders and forecasted demand. For further information about LN functionality that supports supply planning by the supplier, refer to the User's Guide for Supply Planning by Supplier, (U9482A US).

The supplier is the owner of the goods until the customer consumes them. At the moment of consumption, the customer becomes the owner and payment is due. Typically, the customer uses a self-billing process to make aggregated payments at fixed intervals, such as once a month.

The supplier uses sales orders or sales schedules to sell their goods to the customer, which correspond to the customer's purchase orders or purchase schedules.

Example

The supplier knows their customer's requirements and plans to supply 1000 items X once a week. The supplier delivers item X at warehouse A, which is located at the customer's, but managed by the supplier. The customer performs a call-off for the issue of item X from warehouse A at regular intervals; the supplier then outbounds the goods and brings them to the customer's production plant. This is the moment the customer becomes the owner of the goods and payment is due.

VMI warehouse

In the previous example, warehouse A is the VMI warehouse. In the VMI scenarios that LN supports, the VMI warehouse is defined in the customer's ERP system and the supplier's ERP system.

For the party responsible for warehouse management, the VMI warehouse is defined as a regular warehouse that supports full warehouse functionality. For the party not responsible for warehouse management, the VMI warehouse is defined as an <u>administrative warehouse</u>.

Note

Administrative warehouse is not one of the warehouse types that you can define in LN. To define a warehouse as an administrative warehouse, in the Warehouses (whwmd2500m000) session, clear the **Inventory Management** check box.

Therefore, in the previous example, warehouse A is modeled as a regular warehouse in the supplier's ERP system. In the customer's ERP system, warehouse A is modeled as an administrative warehouse.

Because the VMI warehouse and the administrative warehouse reside in separate systems managed by different parties, they are not synchronized.

For more information, refer to *VMI warehouse settings (p. 52)*.

Inventory ownership

In non-VMI supply chains, a customer becomes the owner of the goods they have purchased when the customer receives them in their warehouse. In various VMI scenarios, the supplier remains the owner of the goods after delivery in the VMI warehouse until the customer uses the goods.

The moment at which the ownership of the goods changes from the supplier to the customer is laid down in the contract drawn up between the supplier and the customer. In the Terms and Conditions module of the Common package, you can define ownership change rules. For more information, refer to *Inventory ownership in Warehouse Management (p. 45)* and Overview of terms and conditions.

Chapter 2
Vendor Managed Inventory scenarios

<div style="text-align: right">**2**</div>

Overview of VMI business scenarios

LN supports numerous vendor managed inventory (VMI) scenarios. The following table lists the main scenarios. For each scenario, the responsibilities of the parties involved are displayed.

In each scenario, the customer is a contract manufacturer who builds end items for their end item customers. To build the end items, the contract manufacturer purchases components from the supplier. The end item customer is not included in these scenarios.

Scenario	Financial owner-ship	Warehouse man-agement	Supply planning	For more informa-tion, see:
Full VMI	Supplier	Supplier	Supplier	■ *Full VMI (p. 14)* ■ *Full VMI - pro-cedure (p. 27)*
Planning by cus-tomer	Supplier	Supplier	Customer	*Supply planning by customer (p. 16)*
Planning by supplier	Customer	Customer	Supplier	*Planning by supplier (p. 17)*
Warehouse manage-ment by customer	Supplier	Customer	Supplier	■ *Warehouse management by customer (p. 19)* ■ *Warehouse management by customer -*

				procedure (p. 30)
Financial ownership by supplier	Supplier	Customer	Customer	*The consignment procedure (p. 31)*

To set up VMI functionality, see:

- *VMI customer role - setup (p. 33)*
- *VMI supplier forecast - setup (p. 38)*

Full VMI

As a customer, the contract manufacturer retrieves components from stock that is managed and owned by the component supplier. In this scenario, the supplier manages the <u>VMI warehouse</u>, which is modeled as a regular warehouse in their ERP system. Supply planning of the components is also performed by the supplier. In the customer's ERP system, the VMI warehouse is modeled as an <u>administrative warehouse</u> in which inventory levels are maintained for financial reasons. Usually, the ownership change rule is consumption based or time based. For further information, see *Consumption-based ownership change (p. 46)* or *Time-based ownership change (p. 48)*.

Supply is based on either minimum/maximum inventory level replenishment or more detailed supply planning, in which the supplier is required to commit themselves to the scheduled supply quantities.

Step 1: Customer sends planned consumption to supplier

The customer sends their requirements to the supplier. The requirements are based on the customer's current inventory, outstanding sales orders or <u>sales schedules</u>, and forecasted demand. Usually, the customer sends the total required quantities without specifying the information on which the required quantities are based.

If the customer and the supplier have agreed on replenishment based on minimum/maximum replenishment levels, the customer also sends the required inventory levels.

Step 2: Supplier plans supply

The supplier checks whether they can fulfill the customer's requirements, and creates a supply plan based on the information from the customer, thus converting their planned supply orders to actual supply orders.

The planning is based on the customer's current inventory, the firm demand, that is, outstanding sales orders or sales schedules, and the unconfirmed forecasted demand.

The resulting supply plan consists of a range of dates and times on which particular quantities are to be delivered. Ths supply plan includes a firm part and a planned, that is, unconfirmed part. In the contract

between the supplier and the customer, the dividing line between firm and planned demand is laid down. Typically, the demand dated before a particular time fence is to be regarded as firm demand.

If the supply plan includes firm and planned demand, the customer typically uses purchase schedules. If it only includes firm demand, the customer uses purchase orders.

In some full VMI scenarios, the supplier is required to commit themselves to the quantities that they will forward to the customer. In such cases, before the supplier replenishes the customer's stock, the following takes place, which is discussed in *Supply planning by customer (p. 16)*:

- Supplier commits to supply plan.
- Customer sends call-off.

Step 3: Customer approves supply

This is an optional step. Berore the supplier replenishes the customer's stock, the customer approves the supply confirmed by the supplier.

Step 4: Supplier replenishes the customer's stock

The supplier replenishes the VMI warehouse as required. The supplier issues components for the customer as agreed in the contract, usually based on minimum/maximum replenishment levels.

Because the supplier manages the VMI warehouse, the receipts are registered in their ERP system. To notify the customer of the receipts, the supplier sends RosettaNet-XML message Inventory Report to the customer. This message triggers an automatic receipt in the customer's administrative warehouse. Other means of communication are also used, in which case the customer manually enters the receipt in their administrative warehouse.

Often, the customer does not need frequent detailed information on the inventory levels, because aggregated receipt information at regular intervals will be sufficient to update the administrative warehouse.

If the ownership change rule is consigned, the customer becomes the owner when the items are issued for consumption.

Step 5: Supplier issues stock for customer

The supplier issues stock for the customer as agreed in the contract, usually based on minimum/maximum replenishment levels or call-offs from the customer. The supplier and the customer register the issue in the VMI warehouse in their ERP systems.

If the ownership change rule is consigned, the customer becomes the owner when the items are issued for consumption.

Step 6: Invoicing

The supplier records the consumption in their system. This results in an open amount that the customer is to pay. Usually, invoices are created periodically, and sent.

Either the supplier or the customer initiates the billing process. If the supplier triggers the invoicing process, they send a RosettaNet Notify of Invoice message to the customer. Typically, the customer uses a underline self-billing underline process to make aggregated payments at fixed intervals, such as once a month. The supplier matches the self-billed invoices with the open amounts. The aggregation level of the invoices is laid down in the contract drawn up between the supplier and the customer.

Step 7: Payment

The supplier matches the customer's payments, based on self-billing or invoices from the supplier, with the open amounts.

Supply planning by customer

The customer receives components from stock managed and owned by the supplier. The customer performs supply planning for the components. In this scenario, the supplier manages the VMI warehouse, which is modeled as a regular warehouse in their ERP system. In the customer's ERP system, the VMI warehouse is modeled as an administrative warehouse in which inventory levels are maintained for planning reasons. Usually, the ownership change rule is time based or consumption based. For further information, see *Consumption-based ownership change (p. 46)* or *Time-based ownership change (p. 48)*.

Step 1: Customer plans supply

The customer plans the component supply required for production. The planning is based on the customer's current inventory, the firm demand, that is, outstanding sales orders or sales schedules, and the unconfirmed forecasted demand.

The resulting supply plan consists of a range of dates and times on which particular quantities are to be delivered. Ths supply plan includes a firm part and a planned, that is, unconfirmed part. In the contract between the supplier and the customer, the dividing line between firm and planned demand is laid down. Typically, the demand dated before a particular time fence is to be regarded as firm demand.

If the supply plan includes firm and planned demand, the customer typically uses purchase schedules. If it only includes firm demand, the customer uses purchase orders.

The customer will not request replenishment while having sufficient owned stock. If the owned stock partially covers the demand, the customer allocates owned stock before supplier-owned stock. Another example is if the customer has issued or consumed more components than required for production, and brings the surplus back to the VMI warehouse, while remaining the owner of these components.

The customer sends the supply plan to the supplier.

Step 2: Supplier commits to supply plan

The supplier checks whether they can fulfill the customer's requirements and commits themselves to the quantities that they can deliver according to the date/time schedule of the supply plan.

Optionally, the supplier commits themselves to the firm demand and the planned demand. For the planned demand, the supplier commits themselves to days rather than times. The supplier typically stores the committed and planned quantities as a sales schedule in their ERP system.

The supplier notifies the customer of the quantities they can commit themselves to. If the supplier cannot commit themselves to all requested quantities, the customer can look for other or additional suppliers, or alternative items.

Step 3: Customer sends call-off

In the purchase schedule, the customer enters a call-off against the committed quantities. In this scenario, replenishment of the component stock is triggered by purchase schedules or purchase orders and EDI/Rosettanet messages.

Step 4: Supplier replenishes the customer's stock

The supplier replenishes the VMI warehouse as required.

Because the supplier manages the VMI warehouse, the receipts are registered in their ERP system. To notify the customer of the receipts, the supplier sends RosettaNet-XML message Inventory Report to the customer. This message triggers an auto receipt in the customer's administrative warehouse. For more information, refer to *Automatic receipts (p. 67)*.

Other means of communication are also used, in which case the customer manually enters the receipt in their administrative warehouse. The received quantities are inserted in the customer's purchase schedule for each supplier.

If the ownership change rule is consigned, the customer becomes the owner when the items are issued for consumption.

The remaining steps are identical to the following steps in the full VMI scenario:

1. Supplier issues stock for customer.
2. Invoicing.
3. Payment.

Planning by supplier

The customer retrieves components from stock that is owned and managed by themselves. The supplier is responsible for supply planning. Therefore, the supplier determines the stock levels in the warehouse, but does not remain the financial owner of the goods.

The VMI warehouse is modeled as a regular warehouse in the customer's ERP system because they perform warehouse management. Furthermore, the customer is the owner of the goods. To enable adequate supply planning, the VMI warehouse is modeled as an administrative warehouse in the supplier's ERP system. The advantage for the supplier is that they can allocate goods to their customers at the latest moment, and enhance flexibility and reliability.

Just as in the full VMI scenario, in this scenario supply planning is based on either minimum/maximum inventory level replenishment or more detailed supply planning, in which the supplier is required to commit themselves to the scheduled supply quantities.

Step 1: Customer sends planned consumption to supplier

Customer sends planned consumption to supplier

Step 2: Supplier plans supply

Supplier plans supply

Step 3: Supplier replenishes the customer's stock

The supplier replenishes the VMI warehouse as required.

The customer registers the receipt of the goods in the VMI warehouse.

To notify the supplier of the receipts, the customer sends RosettaNet-XML message Inventory Report/ Receipt to the supplier. This message triggers an inventory receipt to update the inventory levels in the supplier's administrative warehouses, which allows the supplier to adequately perform supply planning.

Other means of communication are also used, in which case the receipts are manually entered in the customer's administrative warehouse and the supplier's administrative warehouse. The received quantities are inserted in the customer's purchase schedule for each supplier.

Step 4: Supplier sends invoice to customer

Because the customer owns the components on receipt, the supplier invoices the customer at regular intervals; self-billing by the customer is not practicable in this scenario.

Step 5: Customer issues stock

The customer issues components for production or sales, because the customer is responsible for warehouse management for the VMI warehouse.

Step 6: Customer notifies supplier of issues

The customer notifies the supplier of the stock issues by means of RosettaNet-XML message Distribute Inventory Report. The supplier needs this information to effectively perform supply planning.

Step 7: Customer pays supplier

The customer pays the supplier.

Warehouse management by customer

The customer retrieves components from stock that is owned and planned by the supplier, but managed by themselves.

The <u>VMI warehouse</u> is modeled as an <u>administrative warehouse</u> in the supplier's ERP system because they perform supply planning and is they are owners of the goods. In the customer's ERP system, the VMI warehouse is modeled as a regular warehouse, because they are responsible for warehouse management.

Just as in the full VMI scenario, in this scenario supply planning is based on either min/maximum inventory level replenishment or more detailed supply planning, in which the supplier is required to commit themselves to the scheduled supply quantities.

Step 1: Customer sends planned consumption to supplier

Customer sends planned consumption to supplier

Step 2: Supplier plans supply

Supplier plans supply

Step 3: Supplier replenishes the customer's stock

The supplier replenishes the <u>VMI warehouse</u> as required.

The customer registers the receipt of the goods in the VMI warehouse.

Step 4: Customer sends inventory update message to supplier

To notify the supplier of the receipts, the customer sends RosettaNet-XML message Inventory Report/Receipt to the supplier. This message triggers an inventory receipt to update the inventory levels in the supplier's <u>administrative warehouses</u>, which allows the supplier to adequately perform supply planning.

Other means of communication are also used, in which case the receipts are manually entered in the customer's and the supplier's administrative warehouses. The received quantities are inserted in the customer's purchase schedule for each supplier.

Step 5: Customer issues stock

The customer issues components for production or sales, because the customer is responsible for warehouse management for the VMI warehouse.

Step 6: Customer notifies supplier of issues

The customer notifies the supplier of the stock issues by means of RosettaNet-XML message Distribute Inventory Report. The supplier needs this information to effectively perform supply planning.

Step 7: Customer pays supplier

The customer pays the supplier.

Consignment

Consignment functionality applies if inventory ownership and storage are handled by various parties.

In case of consignment, at least one of the following situations applies:

- Supplier-owned inventory is stored at a user warehouse.
- User-owned inventory is stored at a customer warehouse.

Consignment inventory is, therefore, one of the following:

- Inventory you store that still belongs to a supplier. This type of inventory is also called consignment (not owned) inventory.
- Inventory you own that is stored and controlled by a customer. This type of inventory is also called consignment (owned) inventory.

Warehouses

You can specify a warehouse for owned consignment inventory and not-owned consignment inventory in the Warehouses (tcmcs0103s000) session based on the following warehouse types:

- **Consignment (Not Owned)**
  A warehouse that is used for storing not-owned consignment inventory. Not-owned consignment inventory are goods owned by a supplier but stored in your warehouse without being paid for until after the goods are used or sold. You register the goods as consignment inventory.

- **Consignment (Owned)**
  A warehouse that is used for storing owned consignment inventory. Owned consignment inventory are goods owned by your company and stored in a customers warehouse without receiving payment until after the goods are used or sold. You do not register the goods as consignment inventory because the goods are still part of your inventory.

You can define multiple consignment owned warehouses for one ship-to business partner. It is recommended that you apply the following rules:

- The warehouses have different addresses.
- One of the warehouses has the same address as the ship-to business partner.

Public warehousing

Public warehousing is a situation in which you pay a business partner to store your goods in their warehouse. Public warehousing also refers to a situation in which a business partner pays you to keep goods in your warehouse.

Consignment (not owned) inventory

Receipts

Usually, you receive consignment inventory based on a purchase order of type consignment replenishment. You can specify the purchase order type in the Purchase Order Types (tdpur0194m000) session. If the received inventory concerns consignment inventory, a consignment inventory line with status **Received** is created in the Consigned Receipts (whwmd2550m000) session.

> **Note**
>
> As an exception, you can also receive items in a warehouse as consignment inventory by creating a warehouse order with order origin **Purchase (Manual)** and the **Consignment** check box in the Warehousing Orders (whinh2100m000) details session selected.

Consignment inventory is almost always stored in a warehouse of type **Consignment (Not Owned)**. Consignment inventory can also be stored in a warehouse of type **Normal**.

Issues

The value of the **Issue Priority** check box in the Item - Warehousing (whwmd4600m000) session determines which type of inventory is issued first. If consignment inventory is issued, LN creates:

- A purchase order of type consignment payment in the Purchase Orders (tdpur4100m000) session. Afterwards the purchase order is processed in the Process Delivered Purchase Orders (tdpur4223m000) session. As a result, Financials is instructed to pay for the used goods. In Accounts Payable, an invoice must be created manually and matched with the purchase order of type consignment payment.
- A consignment inventory line with the **Processed** status in the Consigned Receipts (whwmd2550m000) session.

If a shipment procedure is linked to the warehousing order type, LN determines whether and how much consignment inventory is concerned with the issue, when the shipment line is confirmed. If the confirmed shipment line contains quantity not shipped, and if the **Automatic Adjustment of Quantity Not Shipped** check box in the Shipment Lines (whinh4131m000) session is cleared, LN does not determine wether and how much of the not shipped quantity concerns consignment inventory. If the confirmed shipment line contains quantity not shipped and the **Automatic Adjustment of Quantity Not Shipped** check box in the Shipment Lines (whinh4131m000) session is selected, LN generates an adjustment order and determines whether and how much of the not shipped items on the adjustment order concern consignment inventory.

If no shipment procedure is linked to the warehousing order type, and the last specified activity in the warehousing order type's outbound advice procedure is:

- The Picking List (whinh4525m100) session, LN determines whether and how much of the picked items concern consignment inventory if you indicate that picking can take place for a picking list.

- The Warehouse Inspections Overview (whinh3122m000) session, LN determines whether and how much of the approved items concern consignment inventory if you approve the inspected items during outbound inspection. If you reject inspected items during outbound inspection, LN generates an adjustment order and determines whether and how much of the rejected items on the adjustment order concern consignment inventory.

Return consignment not-owned inventory

To return consignment not-owned inventory, you must create a purchase order of type consignment replenishment with a negative quantity. If the purchase order is released to Warehousing, and you generate an outbound advice for this order, LN creates a consignment inventory line with the **Allocated** status in the Consigned Receipts (whwmd2550m000) session.

If you return consignment inventory and the items are issued, LN does the following:

- Changes the status of the consignment inventory line from **Allocated** to **Processed**.
- Does not create a purchase order of type **Consignment Payment**.

However, if the last activity to be carried out for the warehousing order's order type is:

- Warehouse Inspections Overview (whinh3122m000) and you reject items, LN reduces the quantity on the allocated consignment inventory line. If the entire quantity of the allocated consignment inventory line is rejected, LN deletes this line. LN also creates an adjustment order for the rejected items.
- Freeze/Confirm Shipments/Loads (whinh4275m000) and the confirmed shipment line contains quantity not shipped, LN reduces the quantity on the allocated consignment inventory line. If the entire quantity of the allocated consignment inventory line is not shipped, LN deletes this line. If the **Automatic Adjustment of Quantity Not Shipped** check box in the Shipment Lines (whinh4131m000) session is selected, LN also creates an adjustment order for the not shipped items.

Because the rejected or not shipped items are not returned to the supplier, you must pay for these items. Therefore, LN creates for the rejected items or not shipped items:

- A purchase order of type consignment payment in the Purchase Orders (tdpur4100m000) session.
- A consignment inventory line with the **Processed** status in the Warehousing Orders History (whinh2550m000) session.

Consignment (owned) inventory

If you deliver goods to a customer under a consignment agreement, you remain the owner of the goods (acting as supplier), but the goods are stored in the customer's warehouse.

Transfer

To put own inventory in a customer's warehouse, you must create a sales order of type consignment replenishment. You can specify the sales order type in the Sales Order Types (tdsls0594m000) session. This sales order results in a warehousing order of <u>inventory-transaction type</u> **Transfer** because goods are transferred from one warehouse to another, where the receiving warehouse is a warehouse of type **Consignment (Owned)**.

Invoicing of used consignment (owned) inventory

The customer pays for the consignment (owned) inventory at the time of use.

To get the correct balance sheet, you must create a sales order of type consignment invoicing to match the payment. You can specify the sales order type in the Sales Order Types (tdsls0594m000) session. This sales order reduces the inventory in the **Consignment (Owned)** warehouse, but physical shipment does not take place for this sales order. You can match the sales order of type consignment invoicing and the payment in the Accounts Receivable module.

Consignment in Sales and Procurement

You can use <u>consigned</u> inventory, for which inventory ownership and storage are handled by different parties, and select either a basic or extended consignment setup.

Note

Both setups can be used in <u>vendor managed inventory (VMI)</u>. For more information, refer to *Vendor managed inventory (p. 9)*.

Extended consignment

In an extended consignment setup, <u>vendor managed inventory (VMI)</u> settings are laid down in a <u>terms and conditions agreement</u> between business partners. Therefore, if you want the item ownership to be <u>consigned</u>, in the Order Terms and Conditions (tctrm1130m000) session, set the **Payment** field to **Pay on Use** for a combination of item, <u>business partner</u>, and <u>warehouse</u> (Procurement) or **Ship-to Warehouse** (Sales).

When a (replenishment) order/schedule is created for the defined combination of item, business partner, and (ship to) warehouse, the **Payment** field on the order line/ schedule (line) is **Pay on Use**, as retrieved from the terms and conditions. When consignment inventory is consumed, the consumption can be linked to an existing order/schedule.

For each consumption, the following is generated:

- **Procurement**
  A <u>purchase payable receipt</u> that is linked to an existing receipt in the Purchase Payable Receipts (tdpur4130m000) or Purchase Payable Receipts for Schedules (tdpur3118m000) session.

- **Sales**
  A <u>consumption</u> line that is linked to an existing delivery in the Inventory Consumption (tdsls4640m000) session. After the consumption line is processed in the Process Inventory Consumptions (tdsls4290m000) session and invoicing is required, in the Sales Order Invoice Lines (tdsls4106m100) or the Sales Schedule Invoice Lines (tdsls3140m200) session, an invoice line linked to the sales order/schedule line is created for the consumption.

With extended consignment, you directly link the payment/invoicing for a consumption of consignment inventory to the replenishment order or schedule. The price for the payment/invoicing of consigned inventory is based on the price that is valid at the moment of replenishment or consumption, which you can specify in the **Price Determination Based on** field of the Order Terms and Conditions (tctrm1130m000) session.

Note

If LN cannot link the consumption of consigned inventory to an existing order or schedule, the following happens:

- **Procurement**
  A **Purchase Payment** order is automatically generated. If no receipt is available yet, based on the number group for warehouse receipts, a receipt is generated in Procurement and a <u>purchase payable receipt</u> is created.

- **Sales**
  A **Consumption** order is automatically generated based on the **Consignment Invoicing Order Type** field in the Sales Order Parameters (tdsls0100s400) session.

For more information on:

- Terms and conditions, see Overview of terms and conditions.
- Inventory ownership, see *Inventory ownership in Warehouse Management (p. 45)*.

Basic consignment

In a basic consignment setup, the order and schedule procedures are split into a replenishment part and a payment/invoicing part.

Specify the following:

- **Purchase order procedure**
  In the Purchase Order Type (tdpur0694m000) session, create separate **Consignment Replenishment** and **Consignment Payment** order types and define their activities. Enter the order types in the **Order Type for Consignment Replenishment** and **Order Type for Consignment Payment** fields of the Purchase Order Parameters (tdpur0100m400) session.

- **Purchase schedule procedure**
  Select the **Consigned** check box in the Purchase Contract Lines (tdpur3101m000) session.
- In the **Price Determination Based on** field of the Purchase Order Parameters (tdpur0100m400) session, define how the price for the payment of consignment inventory is determined.
- **Sales order procedure**
  In the Sales Order Type (tdsls0694m000) session, create separate **Consignment Replenishment** and **Consignment Invoicing** order types and define their activities.

Consignment replenishment

If consigned inventory must be replenished:

- **Procurement**
  You handle the purchase orders/schedules up to the receipt of the goods. You need not pay for the goods before consumption, so no invoice is created yet.
- **Sales**
  You handle the sales order up to the delivery of the goods. You need not invoice the goods before the customer uses them, so no invoice is created yet.

You can only use the consignment replenishment part of the order/schedule procedure to replenish the consignment inventory.

Consignment payment/invoicing

If consigned inventory is used:

- **Procurement**
  You must pay for it. Carry out the consignment payment part of the purchase order/schedule procedure. When you consume consigned inventory, a **Purchase Payment** order is automatically generated. For each consumption, a purchase payable receipt is linked to the purchase order line in the Purchase Payable Receipts (tdpur4130m000) session.
- **Sales**
  You must invoice the customer for it. You must manually create a **Consignment Invoicing** sales order.

For more information, refer to *Consignment (p. 20)*.

Chapter 3
Procedures

3

Full VMI - procedure

The following procedure outlines the steps that the supplier and the customer take to communicate demand, plan supply, supply stock, consume stock, send invoice, and pay for the goods. These steps comprise the full VMI scenario, but some of these steps also apply to various other scenarios, and some steps can be carried out by the customer instead of the supplier or vice versa, which is indicated where applicable.

For some of these steps, you can use other sessions or options to use different functionality, but the following procedure is recommended for most situations, which is described in:

- *VMI customer role - setup (p. 33)*
- *VMI supplier forecast - setup (p. 38)*

Step 1: Customer sends planned consumption to supplier

1. In the Sales Orders (tdsls4100m000) session, the customer generates a sales order for the items that they will sell to *their* customer.

2. In the Generate Order Planning (cprrp1210m000) session, the customer performs an MRP run to make an estimate of the item or component quantities that they must purchase from the supplier to fulfil the order generated in the previous step.

3. In the Approve Forecast to Supplier (cpvmi0202m000) session, the customer approves the <u>forecast</u> data before sending this information to the supplier.

4. In the Forecast to Supplier (cpvmi0102m000) session, the customer sends the <u>forecast</u> data to the supplier.

This step can also apply to other scenarios in which the supplier performs supply planning, such as:

- *Warehouse management by customer (p. 19)*
- *Planning by supplier (p. 17)*

Step 2: Supplier plans supply

1. In the Accept Forecast from Customer (cpvmi0206m000) session, the supplier accepts the forecast data that they receive from the customer. For this purpose, ensure that the cluster is inserted in the cluster segment (the outer left section) of the plan item fields.

2. In the Forecast Revisions from Customer (cpvmi0506m000) session, the supplier checks and approves any forecast revisions that they receive from the customer.

3. In the Generate Planned Supply based on Forecast (cpvmi1211m000) session, the supplier generates planned distribution orders based on the approved forecast. If no planned orders are generated, rerun this session and select the **Print Exception Messages** check box.

4. In the Generate Confirmed Supply (cpvmi1210m000) session, the supplier generates confirmed supply based on the planned orders generated in the Generate Planned Supply based on Forecast (cpvmi1211m000) session.

    This step is required if, in the Terms and Conditions Line (tctrm1620m000) session, on the **Planning** tab, the **Confirm Supply** check box is selected for the relevant terms and conditions agreement.

5. In the Planned Orders (cprrp1100m000) session, the supplier transfers the planned distribution orders to warehouse transfer orders using the **Transfer Order Planning** option on the appropriate menu. Note that the supplier does not execute the transfer orders until the supplier has approved and sent the confirmed supply to the customer and the customer has approved the confirmed supply from the supplier.

6. The supplier approves the confirmed supply using one of the following methods:
    - In the Approve Confirmed Supply to Customer (cpvmi0208m000) session, approve the confirmed supply for a range of items. Specify which checks the session must apply before approving the confirmed supply.
    - In the Confirmed Supply to Customer (cpvmi0108m000) session, click **Approve** to approve the confirmed supply for one particular item.

This step can also apply to other scenarios in which the supplier performs supply planning, such as:
- *Warehouse management by customer (p. 19)*
- *Planning by supplier (p. 17)*

For more information, refer to Performing supply planning for your customer - Procedure in the *User Guide for Supply Planning by Supplier (U9482)*.

Step 3: Customer approves supply

1. In the Accept Confirmed Supply from Supplier (cpvmi0205m000) session, the customer approves the confirmed supply from the supplier.

2. In the Item Supplier Plan (cpvmi0530m000) session, the customer views the item-business-partner plan created for the current item and supplier.

Step 4: Supplier replenishes the customer's stock

1. After the customer approves the confirmed supply from the supplier (see previous step), in the Warehousing Order (whinh2100m100) session, the supplier performs the required outbound and inbound steps to execute the transfer order from the supplier's warehouse to the VMI warehouse, which is a regular warehouse in the supplier's system. Refer to the online Help of the Warehousing package for details.

2. In the Initiate Automatic Receipts (whinh3223m000) session, the *customer* initiates automatic receipts to update the VMI warehouse, which is set up as an administrative warehouse in their ERP system. For more information, refer to *To update the administrative warehouse (p. 65)*.

Step 5: Supplier issues stock for customer

The supplier issues stock for the customer, usually based on call-offs from the customer. The customer will consume the issued stock for sale or production.

The supplier and the customer register the issue in the VMI warehouse in their ERP systems.

In the customer's ERP system, a payable receipt and a consumption record are created. The consumption record is stored in the Consigned Consumptions (whwmd2551m000) session and linked to the purchase order and the receipt for which the consumed goods were originally received in the warehouse. For more information, refer to Consumption records.

In the supplier's ERP system, the supplier creates a sales order with payment type **Pay on Receipt** after they issue the goods for consumption. This sales order will initiate the invoicing process (see the following step).

This step can also apply to other scenarios in which the supplier performs inventory management, such as *Supply planning by customer (p. 16)*.

Step 6: Invoicing

Either the supplier or the customer initiates the billing process. If the supplier triggers the invoicing:

1. For the sales order with payment type **Pay on Receipt**, the supplier creates invoice lines in the Sales Order Invoice Lines (tdsls4106m100) session.

2. In the Release Sales Orders/Schedules to Invoicing (tdsls4247m000) session, the supplier releases the invoice lines to Invoicing.

3. In the Invoicing Batches (cisli2100m000) session, the supplier creates an invoicing batch.

4. In the Compose/Print/Post Invoices (cisli2200m000) session, the supplier creates the invoice. As a result, LN processes the originating sales orders.

Alternatively, the customer employs a self-billing process to make aggregated payments at fixed intervals, such as once a month. For more information, refer to Self billing or the online Help of the Financials package.

Invoicing initiated by the customer or the supplier applies to all VMI scenarios.

Step 7: Payment

The supplier matches the customer's payments, based on self-billing or invoices from the supplier, with the open amounts. For more information, refer to Payment and receipt methods or the online Help of the Financials package.

Warehouse management by customer - procedure

The steps involved in the *Warehouse management by customer (p. 19)* scenario are identical to those of the *Full VMI (p. 14)* scenario, except for Step 5, Supplier issues stock for customer, and Step 6, Invoicing. These steps are outlined below. For the other steps of this scenario, refer to *Full VMI - procedure (p. 27)*.

Step 5. Customer issues stock

1. The customer issues stock for <u>consumption</u>.

2. The supplier and the customer register the issue in the VMI warehouse in their ERP systems.

    In the customer's ERP system, a payable receipt and a consumption record are created. The consumption record is stored in the Consigned Consumptions (whwmd2551m000) session and linked to the purchase order and the receipt for which the consumed goods were originally received in the warehouse. For more information, refer to Consumption records.

    In the supplier's ERP system, a consumption record is created in the Inventory Consumptions (tdsls4140m000) session, either electronically after a <u>BOD</u> message from the customer or manually. This consumption record reduces the inventory levels in the administrative warehouse and handles the invoicing in the Invoicing module for the supplier. LN links the consumption record to the originating sales order to the customer. For more information, refer to *Inventory consumption handling (p. 72)*.

Step 6. Invoicing

1. In the Process Inventory Consumptions (tdsls4290m000) session, the supplier processes the consumption record to create an invoice line linked to the originating sales order line. The invoicing lines are shown in the Sales Order Invoice Lines (tdsls4106m100) session.

    If during the process no originating sales order line is found that can be linked to the consumption record, LN generates a sales order of type **Consignment Invoicing** to create invoicing lines.

2. Either the supplier or the customer initiates the billing process. If the supplier triggers the invoicing:

    a. In the Invoicing Batches (cisli2100m000) session, the supplier creates an <u>invoicing batch</u>.

    b. In the Compose/Print/Post Invoices (cisli2200m000) session, the supplier creates the invoice. As a result, LN processes the originating sales orders.

3. Alternatively, the customer employs a <u>self-billing</u> process to make aggregated payments at fixed intervals, such as once a month. For more information, refer to Self billing or the online Help of the Financials package.

Invoicing initiated by the customer or the supplier applies to all VMI scenarios.

The consignment procedure

The customer retrieves components from stock that is owned by the supplier, but managed and planned by themselves.

The <u>VMI warehouse</u> is modeled as an <u>administrative warehouse</u> in the supplier's ERP system because they are the owners of the goods. In the customer's ERP system, the VMI warehouse is modeled as a regular warehouse, because they are responsible for warehouse management.

Step 1: Customer plans supply

The customer plans the component supply required for production. The planning is based on the customer's current inventory, the firm demand, that is, outstanding sales orders or sales schedules, and the unconfirmed forecasted demand.

The resulting supply plan consists of a range of dates and times on which particular quantities are to be delivered. Ths supply plan includes a firm part and a planned, that is, unconfirmed part. In the contract between the supplier and the customer, the dividing line between firm and planned demand is laid down. Typically, the demand dated before a particular time fence is to be regarded as firm demand.

If the supply plan includes firm and planned demand, the customer typically uses <u>purchase schedules</u>. If it only includes firm demand, the customer uses purchase orders.

The customer will not request replenishment while having sufficient owned stock. If the owned stock partially covers the demand, the customer allocates owned stock before supplier-owned stock.

The customer sends the supply plan to the supplier.

Step 2: Supplier commits to supply plan

The supplier checks whether they can fulfill the customer's requirements and commits themselves to the quantities that they can deliver according to the date/time schedule of the supply plan.

Optionally, the supplier commits themselves to the firm demand and the planned demand. For the planned demand, the supplier commits themselves to days rather than times. The supplier typically stores the committed and planned quantities as a <u>sales schedule</u> in their ERP system.

The supplier notifies the customer of the quantities they can commit themselves to. If the supplier cannot commit themselves to all requested quantities, the customer can look for other or additional suppliers, or alternative items.

Step 3: Customer sends call-off

In the purchase schedule, the customer enters a call-off against the committed quantities. In this scenario, replenishment of the component stock is triggered by purchase schedules or purchase orders and EDI/Rosettanet messages.

Step 4: Supplier replenishes the customer's stock

The supplier replenishes the VMI warehouse as required.

The customer registers the receipt of the goods in the VMI warehouse.

To notify the supplier of the receipts, the customer sends RosettaNet-XML message Inventory Report/ Receipt to the supplier. This message triggers an inventory receipt to update the inventory levels in the supplier's administrative warehouses.

Also, in the supplier's ERP system, a consumption record can be created in the Inventory Consumptions (tdsls4140m000) session, either manually or electronically after a call-off message from the customer. This consumption record handles the invoicing in the Invoicing module for the supplier. LN links the consumption record to the originating sales order to the customer. For more information, refer to *Inventory consumption handling (p. 72)*.

Step 5: Supplier sends invoice to customer

Because the supplier owns the components on receipt, the supplier invoices the customer at regular intervals; self-billing by the customer is another option in this scenario.

Step 6: Customer issues stock

The customer issues components for production or sales, because the customer is responsible for warehouse management for the VMI warehouse.

In the Process Inventory Consumptions (tdsls4290m000) session, the supplier processes the consumption record to create an invoice line linked to the originating sales order line. The invoicing lines are shown in the Sales Order Invoice Lines (tdsls4106m100) session.

If during the process no originating sales order line is found that can be linked to the consumption record, LN generates a sales order of type **Consignment Invoicing** to create invoicing lines.

Step 7: Customer pays supplier

The customer pays the supplier.

Chapter 4
To set up Vendor Managed Inventory

4

VMI customer role - setup

Modelling the VMI scenarios relevant to your organization requires various parameter settings. If your organization buys goods on a VMI basis, set up the customer role. If it sells goods on a VMI basis, set up the supplier role.

The most important settings for the customer role are described below.

Organizations that use warehouses of type **Consignment (Not Owned)** or **Consignment (Owned)** can continue to do so, but then the VMI functionality is unavailable.

To set up the customer role:

Step 1: Implemented software components

In the **Modules** tab of the Implemented Software Components (tccom0500m000) details session:

- Select the **Terms and Conditions** check box.
- Clear the **Ownership Internal** check box.
- Clear the **Use Confirmation (Purchase)** check box.
- Select the **Ownership External** and the **VMI (customer side)** check boxes.

These settings are relevant to all VMI scenarios. For more information, refer to *Overview of VMI business scenarios (p. 13)*.

Step 2: Clusters

In the Planning Clusters (tcemm1135m000) session, clear the **External** check box and leave the **Sold-to Business Partner** and **Ship-to Business Partner** fields empty for all scenarios, because these settings relate to the supplier role.

Step 3: Warehouses

In the Warehouses (whwmd2500m000) session, set up the VMI warehouse. In the *Supply planning by customer (p. 16)* and the *Full VMI (p. 14)* scenarios, this is modeled as an administrative warehouse. Consider the following fields and check boxes:

- **Include in Enterprise Planning**
  We recommend that you select this check box for scenarios in which the customer performs supply planning for the VMI warehouse, otherwise clear this check box.

  If the VMI warehouse is also used for storage and inventory handling of goods belonging to business partners outside the current VMI relationship, such as other suppliers or the customer's own customers, clear this check box.

- **Inventory Management**
  Select this check box if the customer performs inventory management:
  - *Planning by supplier (p. 17)*
  - *Warehouse management by customer (p. 19)*
  - *Consignment (p. 20)*
  For more information, refer to *Overview of VMI business scenarios (p. 13)*.

- **Business Partner**
  If you cleared the **Inventory Management** check box, in this field, select the business partner who is to carry out inventory management. This applies to the following scenarios:
  - *Full VMI (p. 14)*
  - *Supply planning by customer (p. 16)*

- **External Site**
  In this field, select **No** for all scenarios, because being the customer, the VMI warehouse belongs to your company.

- Also, leave the corresponding business partner fields empty:
  - **Buy-from**
  - **Ship-from**
  - **Sold-to**
  - **Ship-to**

Step 4: Item

To set up items:

- In the Items (tcibd0501m000) session, select **Purchased** or **Product** in the **Item Type** field and select **Planned** in the **Order System** field for all scenarios.
- In the **General** tab of the Items - Planning (cprpd1100m000) session, consider the following fields:
  - **Supply Source**
    Select **Item Source** for all scenarios. Therefore, the value of the **Actual Supply Source** field changes to **Purchase**.
  - **Ordering Warehouse**
    For all scenarios, enter the VMI warehouse specified in the previous step.

- **Master Plan**
  We do not recommend to select this check box for VMI scenarios. For other scenarios, the organization's planning requirements determine whether to choose master planning. For more information, refer to the online Help of the Enterprise Planning package.
- In the **Registration Level** field in the **General** tab of the Item - Warehousing (whwmd4600m000) session, you can specify whether and how the ownership of the inventory must be registered.

  For scenarios in which the supplier or an LSP performs warehouse management, and therefore the VMI warehouse is an <u>administrative warehouse</u> in the customer's ERP system, ownership registration on warehouse level should be sufficient.

  Otherwise, the required ownership registration level depends on whether the VMI warehouse contains owned and not-owned inventory, or inventory owned by various business partners. The scenarios in which the customer performs warehouse management are:
  - *Planning by supplier (p. 17)*
  - *Warehouse management by customer (p. 19)*
  - *Consignment (p. 20)*
- In the **Registration Level** field in the Item Data by Warehouse (whwmd2510m000) details session, you can specify whether and how the ownership of the inventory must be registered for a warehouse - item combination. See the previous list item for information about the ownership registration levels for each scenario.

Step 5: Terms and conditions

- In the Terms and Conditions (tctrm1600m000) session, consider the following fields relevant to all scenarios:
  - In the **Terms and Conditions Type** field, select **Purchase**.
  - For search level 1, the recommended attribute for **Search Attribute 1** is **Item Group**, for **Search Attribute 2** it is **Warehouse**. In this way the terms and conditions apply to all items of the item group. Other attributes used to group items for a particular set of terms and conditions are **Product Type** or **Product Class**.

    For search level 2, to set up terms and conditions for specific items, the recommended attribute for **Search Attribute 1** is **Item**, and for **Search Attribute 2** it is **Warehouse**. In the **Priority** field, set a higher priority than the one for search level 1.

    For search level 3, to set up general terms and conditions for items not covered by the terms and conditions that match search levels 1 and 2, do not define any attributes.

  Preferably select the following check boxes for all scenarios:
  - **Planning**
  - **Order**
  - **Logistics**
  - **Invoicing**
  - **Demand Pegging**

  For example, setting up planning terms and conditions might not be necessary for scenario *Supply planning by customer (p. 16)*. The availability of these check boxes depends on the search attributes selected for the above search levels.

- In the **Payment** field of the Order Terms and Conditions (tctrm1130m000) session, select **Pay on Receipt** for scenario *Planning by supplier (p. 17)*. Otherwise, we recommend to select **Pay on Use**.

- In the Planning Terms and Conditions (tctrm1135m000) session, consider the following fields:

General

- **Supply Planning by Supplier**
  For the following scenarios, preferably clear this check box, because the customer performs supply planning:
  - *Consignment (p. 20)*
  - *Supply planning by customer (p. 16)*
  Otherwise, select this check box.

- **Send Forecast to Supplier**
  For the following scenarios, preferably clear this check box, because the customer performs supply planning, so the supplier does not need a forecast:
  - *Consignment (p. 20)*
  - *Supply planning by customer (p. 16)*
  Otherwise, select this check box.

- **Aggregation Level**
  For scenario *Full VMI (p. 14)*, preferably select **Detail**. For the following scenarios, the value is **Not Applicable**:
  - *Consignment (p. 20)*
  - *Supply planning by customer (p. 16)*
  For the *Planning by supplier (p. 17)* scenario, set the aggregation level as required in your business environment.

- **Forecast Horizon**
  For scenario *Full VMI (p. 14)*, set the widest possible horizon. For the following scenarios, this field is unavailable because the **Send Forecast to Supplier** check box is cleared:
  - *Consignment (p. 20)*
  - *Supply planning by customer (p. 16)*
  For the *Planning by supplier (p. 17)* scenario, set the forecast horizon as required in your business environment.

Confirmed Forecast

- **Use Confirmed Forecast**
  For the following scenarios clear this check box, because the customer performs supply planning and the supplier does not use forecasts:
  - *Consignment (p. 20)*
  - *Supply planning by customer (p. 16)*
  Otherwise, select this check box.

- **Specify Confirmed Forecast by**
  For scenario *Full VMI (p. 14)*, the preferred value is **Message**. For the following scenarios, this field is unavailable because the **Use Confirmed Forecast** check box is cleared:
  - *Consignment (p. 20)*

- *Supply planning by customer (p. 16)*

    For scenario *Planning by supplier (p. 17)*, select the value required in your business environment.

- **Base Confirmed Forecast on**

    For scenario *Full VMI (p. 14)*, the preferred value is **All Forecast**. For the following scenarios, this field is unavailable because the **Use Confirmed Forecast** check box is cleared:

    - *Consignment (p. 20)*
    - *Supply planning by customer (p. 16)*

    For the *Planning by supplier (p. 17)* scenario, select the value required in your business environment.

Confirmed Supply

- **Use Confirmed Supply**

    For scenario *Full VMI (p. 14)*, select this check box. For the following scenarios, this check box is unavailable because the **Send Forecast to Supplier** check box is cleared:

    - *Consignment (p. 20)*
    - *Supply planning by customer (p. 16)*

    For the *Planning by supplier (p. 17)* scenario, select or clear this check box as required in your business environment.

- **Confirm Supply Horizon**

    For scenario *Full VMI (p. 14)*, set the widest possible time fence. For the following scenarios, this field is unavailable because the **Send Forecast to Supplier** check box is cleared:

    - *Consignment (p. 20)*
    - *Supply planning by customer (p. 16)*

    For scenario *Planning by supplier (p. 17)*, set the time fence as required in your business environment.

Planning

- **Replenishment Based On**

    For scenario *Full VMI (p. 14)*, select **Confirmed Supply**. For the following scenarios, this field is unavailable because the **Send Forecast to Supplier** check box is cleared:

    - *Consignment (p. 20)*
    - *Supply planning by customer (p. 16)*

    For scenario *Planning by supplier (p. 17)*, select the value required in your business environment.

- The Logistics Terms and Conditions (tctrm1140m000) session allows you to specify how LN updates the <u>administrative warehouse</u> with the inventory levels of the "real" VMI warehouse for the following scenarios:

    - *Full VMI (p. 14)*
    - *Supply planning by customer (p. 16)*

    Consider the following fields:

    - **Method of Inventory Update**

- **Receiving Process**
- **Delivery Moments**

   For more information, refer to *To update the administrative warehouse (p. 65)*.

- The Invoicing Terms and Conditions (tctrm1145m000) session allows you to determine how to perform invoicing. Fill the fields as required in your business environment. The **Receive Invoice** field only applies to the supplier role.

Step 6: Purchase contracts

Terms and conditions are linked to purchase contracts. When you create a purchase contract, in the Purchase Contracts (tdpur3100m000) session:

1. In the **Buy-from Business Partner** field, insert the supplier.

2. In the **Terms and Conditions ID** field, link the appropriate terms and conditions.

VMI supplier forecast - setup

Modelling the VMI scenarios relevant to your organization requires various parameter settings. If your organization buys goods on a VMI basis, set up the customer role, if it sells goods on a VMI basis, set up the supplier role.

The most important settings for the supplier role are described below.

Organizations that use warehouses of type **Consignment (Not Owned)** or **Consignment (Owned)** can continue to do so, but then the VMI functionality is unavailable.

To set up the supplier role:

Step 1: Implemented software components

In the **Modules** tab of the Implemented Software Components (tccom0500m000) details session:

- Select the **Terms and Conditions** check box.
- If Enterprise Planning must allocate inventory based on forecasted demand from the customer, but replenishment is based on call-off, select the **Demand Pegging** check box.
- Clear the **Ownership Internal** check box.
- Select the **Ownership External** check box if the ownership of the goods is <u>consigned</u>.
- Select the **VMI (supplier side)** check box.
- Preferably clear the **Use Confirmation (Sales)** check box, unless the supplier performs inventory planning and the items involved are crucial to the customer's production process, as can be the case in scenario *Planning by supplier (p. 17)*.

Step 2: Clusters

In the Planning Clusters (tcemm1135m000) session, consider the following fields:

- **External**
  Select this check box if the supplier performs supply planning such as in the *Full VMI (p. 14)*, *Planning by supplier (p. 17)*, and *Warehouse management by customer (p. 19)* scenarios. Otherwise, we recommend to clear this check box.

- **Sold-to Business Partner**
  If the cluster is external (check box **External** is selected) insert the customer.

- **Ship-to Business Partner**
  Insert the appropriate ship-to business partner if the customer has various ship-to business partners.

Step 3: Warehouses

In the Warehouses (whwmd2500m000) session, set up the <u>VMI warehouse</u>. In the *Consignment (p. 20)*, *Warehouse management by customer (p. 19)*, and *Planning by supplier (p. 17)* scenarios, this is an <u>administrative warehouse</u>. Consider the following fields and check boxes:

- **Planning Cluster**
  If the supplier performs supply planning, insert the external cluster defined in the Planning Clusters (tcemm1135m000) session. This typically applies to the *Full VMI (p. 14)*, *Planning by supplier (p. 17)*, and *Warehouse management by customer (p. 19)* scenarios.

- **Include in Enterprise Planning**
  Preferably select this check box if the supplier performs supply planning for the VMI warehouse.

- **Inventory Management**
  Preferably select this check box if the supplier performs inventory management, as in scenarios:
  - *Full VMI (p. 14)*
  - *Supply planning by customer (p. 16)*
  For more information, refer to *Overview of VMI business scenarios (p. 13)*.

- **Business Partner**
  If you cleared the **Inventory Management** check box, select the business partner (customer) who must carry out inventory management. This applies to scenarios:
  - *Planning by supplier (p. 17)*
  - *Warehouse management by customer (p. 19)*
  - *Consignment (p. 20)*

- **External Site**
  Preferably select **Yes**, because being the supplier, the VMI warehouse belongs to the customer.

- **Business Partner**
  If you selected **Yes** in the **External Site** field, in the current field (located directly below the **External Site** field) enter the business partner who represents the customer.

- **Buy-from and Ship-from**
  Leave these fields (located in the **External Site** group box) empty.

- **Sold-to**
  If you selected **Yes** in the **External Site** field, in the current field (located in the **External Site** group box), enter the business partner who represents the customer.
- **Ship-to**
  If you selected **Yes** for **External Site** and the customer has various ship-to business partners for whom the supplier performs supply planning, insert the appropriate ship-to business partner.

Step 4: Item

To set up items:

- In the Items (tcibd0501m000) session, preferably select **Planned** in the **Order System** field for scenarios in which the supplier performs supply planning:
  - *Full VMI (p. 14)*
  - *Planning by supplier (p. 17)*
  - *Warehouse management by customer (p. 19)*
- In the **General** tab of the Items - Planning (cprpd1100m000) session, consider the following fields:
  - **Plan Item**
    In the cluster segment (outer left) of this field, select the external cluster defined in Clusters if the supplier performs supply planning.
  - **Supply Source**
    Preferably select **Distribution** if the supplier performs supply planning. For <u>direct deliveries</u>, value **Item Source** is required.
  - **Ordering Warehouse**
    For all scenarios, enter the VMI warehouse specified in Warehouses.
  - **Master Plan**
    It is not required to select this check box for VMI scenarios. For other scenarios, the organization's planning requirements determine whether to choose master planning. For more information, refer to the online Help of the Enterprise Planning package.
- In the **Registration Level** field in the **General** tab of the Item - Warehousing (whwmd4600m000) session, you can specify whether and how the ownership of inventory is registered.

  If the customer performs warehouse management, so the VMI warehouse is an <u>administrative warehouse</u> in the supplier's ERP system, ownership registration on warehouse level is sufficient.

  Otherwise, the required ownership registration level depends on whether the VMI warehouse contains owned and not-owned inventory, or inventory owned by various business partners. The scenarios in which the customer performs warehouse management are:
  - *Planning by supplier (p. 17)*
  - *Warehouse management by customer (p. 19)*
  - *Consignment (p. 20)*
- In the **Registration Level** field in the Item Data by Warehouse (whwmd2510m000) details session, you can specify whether and how the ownership of the inventory must be registered

for a warehouse - item combination. For information about the ownership registration levels relevant to each scenario, see above.

Step 5: Terms and conditions

- In the Terms and Conditions (tctrm1600m000) session, consider the following fields relevant to all scenarios:
  - In the **Terms and Conditions Type** field, select **Sales**.
  - For search level 1, the recommended attribute for **Search Attribute 1** is **Item Group**, and for **Search Attribute 2** it is **Ship-to Business Partner**. In this way the terms and conditions apply to all items of the item group. Other attributes used to group items for a particular set of terms and conditions are **Product Type** or **Product Class**.

    For search level 2, to set up terms and conditions for specific items, the recommended attribute for **Search Attribute 1** is **Item** and for **Search Attribute 2** it is **Ship-to Business Partner**. In the **Priority** field, set a higher priority than the one for search level 1.

    For search level 3, to set up general terms and conditions for items not covered by the terms and conditions that match search levels 1 and 2, do not define any attributes.
  - For most scenarios, preferably select the following check boxes:
    - **Planning**
    - **Order**
    - **Logistics**
    - **Invoicing**
    - **Demand Pegging**

    For example, setting up planning terms and conditions might not be necessary for scenario *Consignment (p. 20)*. The availability of these check boxes depends on the search attributes selected for the above search levels.
- In the **Payment** field of the Order Terms and Conditions (tctrm1130m000) session, select **Pay on Receipt** for scenario *Planning by supplier (p. 17)*. Otherwise, select **Pay on Use**.
- In the Planning Terms and Conditions (tctrm1135m000) session, consider the following fields:

  General
  - **Responsible for Supply Planning**
    For the following scenarios, preferably select this check box, because the supplier performs supply planning:
    - *Full VMI (p. 14)*
    - *Planning by supplier (p. 17)*
    - *Warehouse management by customer (p. 19)*

    Otherwise, clear this check box.
  - **Forecast received from Customer**
    For the following scenarios, preferably select this check box if the supplier performs supply planning and the supplier is to receive a demand forecast from the customer:
    - *Full VMI (p. 14)*
    - *Planning by supplier (p. 17)*

- *Warehouse management by customer (p. 19)*

Confirmed Forecast

- **Use Confirmed Forecast**
  Select this check box if the customer is to specify which part of the forecast is confirmed. This field is unavailable if the **Forecast received from Customer** check box is cleared.

- **Specify Confirmed Forecast by**
  For scenario *Full VMI (p. 14)*, select **Message**. For the following scenarios, this field is unavailable because the **Use Confirmed Forecast** check box is cleared:
  - *Consignment (p. 20)*
  - *Supply planning by customer (p. 16)*
  For scenario *Planning by supplier (p. 17)* select the value required in your business environment.

Confirmed Supply

- **Confirm Supply**
  Preferably select this check box if the supplier is to send a confirmation of the forecast to the customer.

- **Confirmed Supply Based On**
  Preferably select **Confirmed Forecast** if you must define the type of demand on which a supplier's confirmed supply is based.

- **Confirm Supply Horizon**
  For scenario *Full VMI (p. 14)*, preferably set the widest possible time fence. Otherwise, set the time fence as required in your business environment.

Planning

- **Replenishment Based On**
  For the *Full VMI (p. 14)* scenario, preferably select **Confirmed Supply**. Otherwise, select the value required in your business environment.

- The Logistics Terms and Conditions (tctrm1140m000) session allows you to specify how LN updates the administrative warehouse with the inventory levels of the "real" VMI warehouse. This applies to the following scenarios:
  - *Planning by supplier (p. 17)*
  - *Warehouse management by customer (p. 19)*
  - *Consignment (p. 20)*
  Consider the following fields:
  - **Method of Inventory Update**
  - **Receiving Process**
  - **Delivery Moments**
  For further information on these fields, see *To update the administrative warehouse (p. 65)*.

- The Invoicing Terms and Conditions (tctrm1145m000) session allows you to determine how to perform invoicing. You can fill the fields as required by your organzisation. For further information on these fields, see the online Help of the Terms and Conditions module of Common.

Step 6: Sales contracts

Terms and conditions are linked to sales contracts. When you create a sales contract, in the Sales Contracts (tdsls3500m000) session:

1. In the **Sold-to Business Partner** field, insert the customer.
2. In the **Terms and Conditions ID** field, link the appropriate terms and conditions.

Chapter 5
Ownership

5

Inventory ownership in Warehouse Management

When the ownership of an item changes, payment is due and invoicing is initiated.

In traditional, non-VMI business scenarios, the ownership of an item changes from the supplier to the customer after the customer has received the item from the supplier. The customer must pay for the item on receipt of the goods.

In various subcontracting scenarios, ownership will not change during any of the inbound or outbound warehousing processes. In such cases, the ownership is customer owned. For further information on subcontracting scenarios, see Overview of subcontracting.

In vendor managed inventory (VMI) scenarios, the ownership can be consigned. If the ownership is consigned, the ownership change is either time based or consumption based.

- **Consumption based**
  The ownership changes if the customer issues the goods to sell them or to consume them.
- **Time based**
  The ownership changes some time after:
  - The customer receives the goods.
  - The last issue or receipt of the goods.

If a supplier delivers various items to a customer, a separate agreement or separate legal requirements may apply to each type of item. For time-based ownership change, the period of time is laid down in the terms and conditions of the contract between the customer and the supplier.

For further information, see:

- *Consumption-based ownership change (p. 46)*
- *Time-based ownership change (p. 48)*

Terms and conditions

Ownership behavior, that is, if or when the ownership of the goods changes from the supplier to the customer, is laid down in the contract between the business partners. The terms and conditions of the

contracts can be defined by <u>item</u>, <u>business partner</u>, and/or <u>warehouse</u>. For more information, refer to Overview of terms and conditions in the User Guide for Terms and Conditions (/guides/U9499AUS).

Ownership behavior is defined in the **Payment** field of the Order Terms and Conditions (tctrm1130m000) session and the **Time-based Ownership Change after Receipt** and **Time-based Ownership Change after last Transaction** fields of the Logistics Terms and Conditions (tctrm1140m000) session.

The Warehousing package uses the terms and conditions settings to determine how to deal with ownership in warehouse handling.

Note that the terminology used in the terms and conditions defined in Common differs from the Warehousing terminology:

Usage in Common	Usage in Warehousing
Pay on Receipt	<u>Company owned</u>
Pay on Use	<u>Consigned</u>
No Payment	<u>Customer owned</u>

Consumption-based ownership change

If the ownership change is consumption based according to the contract drawn up between the supplier and the customer, the ownership of the goods changes from the supplier to the customer when the customer consumes the items for production or sale. After the customer becomes the owner, the customer must pay for the goods.

Issues of <u>consigned</u> items from the VMI warehouse involved in <u>warehouse transfers</u> might or might not be consumptions that make the ownership of the goods change from the supplier to the customer.

For information on updating the supplier's <u>administrative warehouse</u> with consumption details, see *Inventory consumption handling (p. 72)* and *To update the administrative warehouse (p. 65)*. For information on updating the customer's administrative or "real" VMI warehouse, see Consumption records and *To update the administrative warehouse (p. 65)*.

Consumption criteria

Usually, the contract between the supplier and the customer determines whether a warehouse issue is a consumption. In the **Usage at Warehouse Transfer** field of the Logistics Terms and Conditions (tctrm1140m000) session, you can specify whether a <u>warehouse transfer</u> is a consumption.

For warehouse issues not covered by contracts, you can specify whether an issue is a consumption in:

- The **Usage at Warehouse Transfer** field of the Item Data by Warehouse (whwmd2110s000) session, for specific items in specific warehouses.

- The **Usage at Warehouse Transfer** field of the Warehouses (whwmd2500m000) session, for specific warehouses.

- The **Usage at Warehouse Transfer** field of the Outbound Order Lines (whinh2120m000) session, for a specific outbound order line.

For example, if the **Usage at Warehouse Transfer** field of the Logistics Terms and Conditions (tctrm1140m000) session is set to **Only between Clusters**, and consigned stock is transferred from the VMI warehouse to another warehouse within the same cluster before being consumed, the supplier remains the owner. If the stock is transferred from the VMI warehouse to a shop floor warehouse in another cluster for production, this transfer is a consumption and, therfore, the customer becomes the owner.

Consumption records

If the issue is a consumption according to the **Usage at Warehouse Transfer** parameter, LN creates a consumption record when the outbound order for which the goods will be issued for consumption is created. Consumption records are displayed in the Consigned Consumptions (whwmd2551m000) session.

When the shipment containing the consumed goods is confirmed or, if no shipment procedure is defined for the outbound order lines, outbound advice is released, the consumption record is updated. The status of the consumption record then changes from **Allocated** to **Used**.

The consumption records are linked to the purchase order and the receipt for which the consumed goods were originally received in the warehouse.

LN uses this information together with the shipment ownership records or outbound advice ownership records to create:

- A purchase payable receipt that handles the payments for the consumed goods that the customer is to make to the supplier. Based on the purchase payable receipts, the invoicing procedures start up. Purchase payable receipts are displayed in the Purchase Payable Receipts (tdpur4130m000) session.
- Integration transactions in Financials.

For further details on outbound advice or shipment ownership records, see Outbound Advice Ownership (whinh4128m000) and Shipment Line Ownership (whinh4138m000).

The purchase price that the customer must pay the supplier is determined by the setting of the **Price Determination Based on** field of the Order Terms and Conditions (tctrm1130m000) session.

For information on how LN decides which stock is to be issued, see *To determine the stock to be issued (p. 52)*.

Note

If an issue for a consumption is performed on the sales side, that is, in the supplier's <u>administrative warehouse</u>, LN creates a consumption record in the Inventory Consumptions (tdsls4140m000) session. For more information, refer to *Inventory consumption handling (p. 72)*.

Time-based ownership change

If the ownership change for consigned goods is time based according to the contract drawn up between the supplier and the customer, the ownership of the inventory changes:

- After receipt, according to legal requirements.
- After receipt, as specified in the contract drawn up between the supplier and the customer.
- After the latest transaction. The ownership changes after a number of days in which no receipts or issues have taken place. This applies if the basic ownership rule is <u>consigned</u>, and no receipts or issues (consumptions) have taken place in a particular period specified in the contract.

The **Time-based Ownership Change after Receipt** and **Time-based Ownership Change after last Transaction** fields of the Logistics Terms and Conditions (tctrm1140m000) session determine whether the inventory ownership change for a (combination of) item, warehouse, or business partner is after the last receipt or after the last transaction.

To register time-based ownership changes, LN uses <u>inventory ownership change orders</u>.

Inventory ownership change orders

To change the ownership of consigned inventory for which the ownership change is time based, you must generate inventory ownership change orders. You can generate inventory ownership change orders in the Generate Time Based Ownership Change Orders (whinh1200m100) session. This session can run automatically at specified intervals.

The resulting change orders, change order lines, and, if applicable, line handling details are displayed in the following sessions:

- Inventory Ownership Change Orders (whinh1100m000)
- Inventory Ownership Change Order Lines (whinh1110m000)
- Inventory Ownership Change Order - Inventory Movement (whinh1115m000)
- Handling Unit Process for Inventory Change Orders (whinh1113m000)

In the Inventory Ownership Change Orders (whinh1100m000) session, you can also create individual change orders.

To make the ownership changes effective and initiate invoicing, you must process the change orders. You can process individual change orders in the Inventory Ownership Change Orders (whinh1100m000) session, or by batch in the Process Inventory Ownership Change Orders (whinh1200m000) session.

For more information, refer to:

- To generate inventory ownership change orders
- To process inventory ownership change orders

To generate inventory ownership change orders

To generate inventory ownership change orders, LN proceeds as follows:

1. From the Consigned Receipts (whwmd2550m000) session, select receipts whose owner, warehouse, and item match the selection ranges entered in the Generate Time Based Ownership Change Orders (whinh1200m100) session.

2. For matching receipts for which the ownership change is after the latest transaction, see To determine the ownership change date after latest transaction. If the ownership change is after the latest receipt, check if:

    - The **Ownership Transfer Date** is present.
    - The **Ownership Transfer Date** is before the **Transaction Date**.
    - The status is lower than **Processed**.
    - The ownership is **Consigned**.
    - The owner is identical to the buy-from business partner.

3. For matching receipts, create inventory ownership change orders for received quantities not allocated to an outbound order for which outbound advice is present.

    If outbound advice is present, LN creates no change order. The ownership of these quantities changes when the shipment created for the outbound order is confirmed. In such cases, the ownership change process is in fact *Consumption-based ownership change (p. 46)*.

4. For the newly created change orders:

    - If the ownership registration level in the warehouse is **Location**, **Physical Item**, or **Physical Item and Location**, you must allow the user to specify the destination location of the items and adjust the handling unit structure if it contains items belonging to various owners. To do this, create a change order handling line in the Inventory Ownership Change Order - Inventory Movement (whinh1115m000) session.

    - Create a consumption record in the Consigned Consumptions (whwmd2551m000) session. This record is identical to the change order. The **Consumption Type of Order** field and the **Consumption Order** field refer to the change order. The status of the consumption record is **Allocated**.

    - If the **Directly Process Created Orders** check box is selected, To process inventory ownership change orders.

    .

To determine the ownership change date after latest transaction

To determine the ownership change date if the ownership change is after the latest transaction according to the terms and conditions, LN proceeds as follows:

1. For each receipt, from the receipt and consumption dates, select the latest receipt or consumption date.

2. To the receipt or consumption date found, add the period specified in the **Period** field of the Logistics Terms and Conditions (tctrm1140m000) session.

3. If the resulting date is on or before the date specified in the **Up to Date** field, generate an inventory ownership change order.

For the remainder of the procedure, see To generate inventory ownership change orders, from step 3 onwards.

To process inventory ownership change orders

You can process individual change orders in the Inventory Ownership Change Orders (whinh1100m000) session, or by batch in the Process Inventory Ownership Change Orders (whinh1200m000) session.

To process individual change orders, in the Inventory Ownership Change Orders (whinh1100m000) session, select the change orders you want to process and, from the appropriate menu, select **Process**.

To process change orders by batch, in the Process Inventory Ownership Change Orders (whinh1200m000) session, use the selection range fields to select the change orders to be processed, and click **Process**.

To process inventory ownership change orders, LN proceeds as follows:

1. Change the ownership for the selected change orders.

2. Update the consumption record in the Consigned Consumptions (whwmd2551m000) session. The status changes from **Allocated** to **Used**.

3. Create a purchase payable receipt to initiate payment of the items.

4. Create integration transaction in Financials.

5. If the ownership registration level in the warehouse is **Location**, **Physical Item**, or **Physical Item and Location**:

   - Change the owner on the handling unit and split the handling unit if specified by the user in the Inventory Ownership Change Order - Inventory Movement (whinh1115m000) session.

   - Print handling unit labels if specified on the Process Inventory Ownership Change Orders (whinh1200m000) session.

   - Generate and process easy inventory movements to move the items or handling units to not-owned destination locations, as specified by the user in the Inventory Ownership Change Order Lines (whinh1110m000) session.

   - In the from-location and the destination location, adjust the item quantities.

Note

If internal and external payment relations are present, you must run the Process Inventory Ownership Change Orders (whinh1200m000) session several times to process all change orders within the selection range.

For example, the following payment relations of type Pay on Use are present between:

- External business partner A and the internal business partner of purchase office B.
- Purchase office B and consignment warehouse C.

According to the terms and conditions, the ownership change for business partner A is 10 days after receipt.

If 200 item X from business partner A is received in consignment warehouse C, two receipts are generated in the Consigned Receipts (whwmd2550m000) session:

Receipt	Item	Qty	Owner	Buy-from business partner	Receipt date	Ownership change date	Destination owner
1	X	200	Business partner A	BP A	March 12	March 22	Purchase office B
2	X	200	Business partner A	Internal BP of purchase office B	March 12	March 22	Warehouse C

When the change orders are processed on March 22nd, the change order for receipt 1 is processed. The change order for receipt 2 cannot be processed, because ownership change is not allowed if the buy-from business partner and the owner are not identical.

After the change order for receipt 1 is processed, purchase office B has become the owner. As a result, for receipt 2, the owner is now the internal business partner of purchase office B, and therefore the owner and the buy-from business partner are identical. The next time you process the change orders for the same selection range, the change order for receipt 2 is included.

Ownership registration setup in Warehousing

To enable ownership registration for an individual item, the item must be contained in a <u>handling unit</u>. You can view individual handling units in a warehouse, and handling unit data includes a reference to the owner of the item.

Ownership data for items are listed on handling units. Handling units obtain the ownership data from the Receipt Line Ownership (whinh3521m000) session. Therefore, to trace the owner of an item through warehousing processes and in inventory, automatic generation of handling units is required.

Note that for this setting to work, you must select the **Physical Item** or the **Physical Item and Location** value in the **Registration Level** field of the following sessions:

- Item Data by Warehouse (whwmd2110s000)
- Item - Warehousing (whwmd4600m000)
- Item - Warehousing Defaults (whwmd4101s000)

In addition, handling units must be in use for receipts, inbound and outbound inspections, and shipping for warehouse - item combinations.

> **Note**
>
> If the ownership registration level is not **Location** or **Physical Item and Location**, and locations or stock points are blocked, LN cannot determine whether the inventory of a specific owner is blocked. If the ownership registration level is not **Location**, **Physical Item** or **Physical Item and Location**, and handling units are blocked, LN cannot determine whether inventory of a specific owner is blocked. In general, if the ownership registration level is **Warehouse**, manual blockings do not block inventory of specific owners.

VMI warehouse settings

To specify who performs warehouse management for the VMI warehouse, the customer or the supplier, you can select or clear the **Inventory Management** check box in the Warehouses (whwmd2500m000) session. In a full VMI scenario, this check box is selected in the supplier's ERP system, and cleared in the customer's ERP system (for the customer, this is an administrative warehouse). In addition, in the customer's system, the business partner representing the supplier would be entered in the **Business Partner** field of the Warehouses (whwmd2500m000) session.

To determine the stock to be issued

To determine from which stock the items listed on an outbound order must be issued, LN checks the following fields:

1. **Ownership fields**
   The settings of the ownership fields in the Outbound Order Lines (whinh2120m000) session and the **Issue Priority** field in the Item Data by Warehouse (whwmd2110s000) session determine whether company owned, consigned, or customer owned inventory must be picked for an outbound order line. For consigned and customer owned inventory, these fields also determine from which business partner's inventory the goods are picked. For more information, refer to *Finding available stock for ownership (p. 55)*.

2. **Usage at Warehouse Transfer**
   The value of the **Usage at Warehouse Transfer** field determines whether the item issues are consumptions, in which case the ownership of the issued items changes from the supplier to the customer. For more information, refer to *Consumption-based ownership change (p. 46)*.

3. **Sourcing fields**
   If an item is supplied by more than one supplier, the values of the sourcing fields determine from which business partner's inventory an issue for a consumption is to take place. For more information, refer to Sourcing rules for consumptions.

4. **Outbound Method**
   The outbound method determines which inventory must be issued based on the inventory date or the outbound priority defined for the locations of a warehouse, while taking the values of the ownership fields (see first item of this list) into account.

Note

Committed or allocated stock is exclusively reserved for the orders or business partners relevant to the inventory commitments or allocations concerned. For further information, see Inventory commitment and To specify the minimum and maximum inventory.

Inventory from various owners on outbound order line

An outbound order line can contain items from various owners. For example, if the issue strategy value is **Preferred** and the available inventory of the preferred owner is insufficient for a particular outbound order line, inventory from other owners or the own company is issued. Ownership of items listed on outbound order lines is maintained in the Outbound Advice Ownership (whinh4128m000) session. In this session, and in the Shipment Line Ownership (whinh4138m000) session, you can manually adjust the outbound order line or shipment line ownership determined by the field settings mentioned above.

Sourcing rules for consumptions

Sometimes, various suppliers supply the same item, and the inventory owned by these business partners is stored in the warehouse. To determine from which supplier a consumption is to take place, LN checks the **priority**, the sourcing percentages, and the **cumulative consumption percentages** of the business partners supplying the item. In addition, LN checks the issue strategy.

Issue strategy determines the use of sourcing percentages

If several business partners supply the same item, and the value of the **Issue Strategy** field on the outbound order line is:

- **Free**, the sourcing percentage and the cumulative consumption percentage of the buy-from business partners determine the next business partner from whose inventory items for consumption are issued.

- **Preferred** and no inventory owned by the preferred business partner is available, the sourcing and consumption percentages determine the business partner from whose inventory the issue for consumption will take place.
- **Restricted**, the sourcing and consumption percentages are not used to determine the business partner.

Sourcing and consumption percentages

Sourcing priorities and sourcing percentages are based on agreements between the business partners. You can maintain sourcing percentages and sourcing priorities in the Items - Purchase Business Partner (tdipu0110m000) session. For further information, see Sourcing and Using sourcing percentages. In the Consumption Percentages by Business Partner (whinr1135m000) session, you can view actual business partner consumption percentages.

As a rule, consumptions are issued from business partners with priority 1 according to the business partners' sourcing percentages in relation with their cumulative consumption percentages. Each issue involves the inventory of only one business partner.

When a consumption is due, LN selects the business partner whose sourcing percentage exceeds the actual cumulative consumption percentage the most. This means that their actual consumption is the farthest below the agreed consumption percentage of the business partners involved. Therefore, to increase the actual consumption percentage to meet, or at least approach, the agreed sourcing percentage, this business partner must supply the next consumption. This is described in *Select business partner for consumption issue (p. 57)*.

No stock or insufficient stock owned by selected business partner available

If no stock owned by the selected priority 1 business partner is available, LN selects a business partner without applying the sourcing rules.

If insufficient stock owned by the selected priority 1 business partner is available, the available stock is issued, and for the remainder, LN allocates inventory owned by other business partners without applying the sourcing rules.

Issue by other than priority 1 business partner

If none of the priority 1 business partners have sufficient stock for some reason, the customer must be supplied by another, non-priority 1 business partner. This stock must be used up before the regular issues from the priority 1 business partners can resume.

Example

Because company A's regular priority 1 suppliers are out of stock, company A buys from supplier X. If the regular supplies from the priority 1 business partners are resumed according to the sourcing rules before all of supplier X's stock is consumed, supplier X's stock would never be used up.

Finding available stock for ownership

The following fields determine whose inventory is to be picked for an outbound order line:

Outbound Order Lines (whinh2120m000)
- **Payment**
- **Internal Payment**
- **Ownership**
- **Issue Strategy**
- **Issue Ownership**
- **Issue from Business Partner**

Item Data by Warehouse (whwmd2110s000)
- **Issue Priority**

The values of the **Payment** or the **Internal Payment** fields determine whose stock must be issued in the sense that they deterimine the value of the **Ownership** field. In turn, if the value of the **Ownership** field is Customer Owned, LN only issues inventory owned by the business partner that the user specified in the **Issue from Business Partner** field.

For information on the values of the payment fields and the corresponding value of the ownership fields, see The Payment and Internal Payment fields.

The other values of the **Ownership** field have no impact on determining the ownership of the stock to be issued. This is determined by the values of the following fields:
- **Issue Strategy**
- **Issue from Business Partner**
- **Issue Ownership**
- **Issue Priority**

For more information, refer to The Issue Strategy, Issue Ownership, and Issue Priority fields.

The Payment and Internal Payment fields

Value in Payment or Internal Payment field	Corresponding value in Ownership field
Pay on Receipt	**Company Owned**
Pay on Use	**Consigned**
No Payment	**Customer Owned**

The Issue Strategy, Issue Ownership, and Issue Priority fields

The following table shows the interdependence of the **Issue Strategy**, **Issue Ownership**, and **Issue Priority** fields, and the resulting outbound advice.

Value in field:	Corresponding value in fields:	
Issue Strategy	**Issue Ownership**	**Issue Priority**
Free	**Company Owned or Consigned**	■ **Free** Outbound advice without ownership restrictions. ■ **Owned Inventory First** Outbound advice for company-owned inventory first, then not-owned inventory, if insufficient owned inventory available. ■ **Not Owned Inventory First** Outbound advice for not-owned inventory first, then company-owned inventory, if insufficient not-owned inventory available.
	Consigned Outbound advice for inventory with ownership <u>consigned</u>.	The issue priority is overruled.
	Company Owned Outbound advice for inventory with ownership <u>company owned</u>.	The issue priority is overruled.

Preferred	Company Owned or Consigned	• **Free** Outbound advice for consigned inventory of specified business partner, then company-owned inventory, if insufficient not-owned inventory available. • **Owned Inventory First** Outbound advice for consigned inventory of specified business partner first, then company-owned inventory, if insufficient consigned inventory for specified business partner is available. • **Not Owned Inventory First** Outbound advice for consigned inventory of specified business partner, then consigned inventory, if insufficient owned inventory for specified business partner is available. If insufficient consigned inventory is available, outbound advice without ownership restrictions.
	Consigned 1. Outbound advice for consigned inventory of specified business partner. 2. If not available, outbound advice for consigned inventory.	The issue priority is overruled.
Restricted	**Restricted** Outbound advice for customer owned inventory from the business partner specified in the **Issue from Business Partner** field.	The issue priority is overruled.

Select business partner for consumption issue

If various suppliers supply the same item, and inventory owned by each of these business partners is stored in the warehouse, LN must determine from whose inventory the items will be issued for consumption. The following example shows how LN selects the business partner.

Item X is supplied by buy-from business partners BP1, BP2, and BP3. For item X, the business partners have the following sourcing percentages:

Buy-from business partner	Sourcing priority	Sourcing percentage
BP1	1	15
BP2	1	35
BP3	1	50

The following table shows the business partners issuing for consumptions, the cumulative consumption quantities and cumulative consumption percentages by business partner. For the first consumption instance, it is presumed that no previous consumptions have taken place.

When a consumption is due, LN selects the business partner whose sourcing percentage exceeds the actual cumulative consumption percentage the most. To increase the actual consumption percentage to meet, or at least approach the agreed sourcing percentage, this business partner must supply the next consumption.

In the following table, this is shown by means of negative differences between actual percentages and sourcing percentages. If the difference between the actual consumption percentage and the sourcing percentage is negative, the sourcing percentage exceeds the actual percentage. The business partner with the largest negative difference will issue for the next consumption.

Consump- tion	Consumed BP1		Consumed BP2		Consumed BP3		Descrip- tion
	Qty	%	Qty	%	Qty	%	
100	0	0%	0	0	**100**	100	Before the first consumption, the consumption percentage for each business partner is 0%. The difference between the actual con-

							sumption percentage and the sourcing percentage is the greatest for BP3 (0 - 50 = -50). Therefore, the first consumption of 100 items X is to be issued from inventory owned by BP3.
150	0	0	**150**	60	100	40	After the first consumption, the difference between the actual consumption percentage and the sourcing percentage is the greatest for BP2: 0-35 = -35. (BP1: 0 - 15 = -15, BP3: 100-50 = 50) Therefore, 150 items X are supplied from BP2.
50	**50**	16.7	150	50	100	33.3	After the second consumption,

							the difference between the actual consumption percentage and the sourcing percentage is the greatest for BP1: 0 - 15 = -15. (BP2: 60 - 35 = 25, BP3: 40 - 50 = -10). Therefore, 50 items X are supplied from BP1.
150	50	11.1	150	33.3	**250**	55.6	After the third consumption, the difference between the actual consumption percentage and the sourcing percentage is the greatest for BP3: 33.3 - 50 = -16.7. (BP1: 16.7 - 15 = 1.7, BP2: 50 - 35 = 15). Therefore, 150 items X are

							supplied from BP3.
75	**125**	23.8	150	28.6	250	47.6	After the fourth consumption, the difference between the actual consumption percentage and the sourcing percentage is the greatest for BP1: 11.1 - 15 = -3.9. (BP2: 33.3 - 35 = - 1.7, BP3: 55.6 - 50 = 5.6). Therefore, 75 items X are supplied from BP1.

Consumption returns

Sometimes, items that were issued for consumption are returned to the warehouse. For example, because the quantity actually used for production was lower than the issued quantity. The items are then returned to the not-owned inventory or the owned inventory. This is based on the effective terms and conditions or settings for specific items stored in specific warehouses.

The not-owned inventory is the <u>customer owned</u> or <u>consigned</u> inventory owned by the supplier from which the items were originally issued.

In the **Ownership for Return to Warehouse** field of the Order Terms and Conditions (tctrm1130m000) session, you can specify whether, according to the contract, items must be returned to owned or not-owned inventory.

In the **Ownership for Return to Warehouse** field located in the sessions listed below, you can specify whether specific items stored in specific warehouses must be returned to owned or not-owned inventory if no active terms and conditions apply.

- Item - Warehousing (whwmd4600m000)
- Item - Warehousing Defaults (whwmd4101s000)
- Item Data by Warehouse (whwmd2510m000)
- Items - Warehousing (whwmd4500m000)
- Items - Warehousing Defaults (whwmd4501m000)
- Update active Parameters in Warehouses and Items (whwmd2200m000)

In the **Return as** field of the Estimated Materials (ticst0101m000) session, for individual production order lines, shop floor engineers can determine whether return items must be stored in owned or not-owned inventory. For example, if a shop floor engineer notices that some of the items issued from the warehouse are damaged, the engineer can decide that these items cannot be returned to the not-owned inventory.

Invoicing consumption returns

If consumed items are returned to not-owned inventory, LN creates a consumption record with a negative value. For example, if a customer issues 200 items and returns 10 items to the not-owned inventory, 190 items are invoiced and a negative consumption of 10 items is created.

Distribute returns among owners

If items are picked from different owners, and some of the items are returned, the returned items are distributed among the owners from whom the items were issued. For example, if a customer issues 190 items from the owned inventory and 10 from not-owned inventory, and returns 10 items, 5 items are returned to the owned inventory and 5 to the not-owned inventory.

LN issues items according to the issue strategy. For more information, refer to *To determine the stock to be issued (p. 52)*.

Ownership records

Ownership records are maintained in ownership sessions that you can access from the appropriate menu of the object session:

Object session	Ownership session
Receipt Lines (whinh3112s000)	Receipt Line Ownership (whinh3521m000)
Outbound Advice (whinh4525m000)	Outbound Advice Ownership (whinh4128m000)
Shipment Lines (whinh4131m000)	Shipment Line Ownership (whinh4138m000)
Cycle Counting Order Lines (whinh5101m000)	Cycle Counting Order Line Ownership (whinh5105m000)
Adjustment Order Lines (whinh5121m000)	Adjustment Order Line Ownership (whinh5125m000)

For example, receipt line A lists 15 items B, and in the Receipt Line Ownership (whinh3521m000) session, the following ownership records are present for receipt line A:

Ownership record sequence number	Item	Quantity	To be received into inventory owned by
1	B	4	Business partner C
2	B	6	Business partner D
3	B	5	Company owned

The sequence number identifies the ownership record. LN generates the ownership sequence number when a new ownership record is created.

Generate or manually create ownership records

Ownership records are generated or manually created. It depends on the ownership settings of the order lines associated with the ownership records whether ownership records are created manually or automatically, or whether changing the ownership records is allowed. For further information, see the session help of the relevant ownership sessions.

Note

The total quantity of the ownership records of an object cannot exceed the quantity of the object. In the previous example, receipt line A lists 15 items B, and the total quantity of the three ownership records is also 15. Therefore, you cannot create any more ownership records for receipt line A. If the total quantity

of the ownership records would be 10, you could create ownership records for the remaining five items for receipt line A.

To manually create ownership records

To create an ownership record:

1. From the appropriate menu of the object session, select **Ownership** to open the ownership session. See the previous table for the object sessions and corresponding ownership sessions.
2. In the ownership session, click ⬚.
3. Enter the ownership, owner, item quantity, and other details as required.
4. Save the data.
5. If required, click ⬚ to enter another ownership record.

Manually created ownership records for adjustment order lines

For manually created adjustment order line ownership records, you can enter negative quantities for ownership type:

- consigned
- customer owned
- company owned

For a negative adjustment of consigned inventory, LN creates a consumption record in the Consigned Consumptions (whwmd2551m000) session. If the **Inventory Discrepancies Paid by Business Partner** check box in the Logistics Terms and Conditions (tctrm1140m000) session is selected for the terms and conditions relevant to the purchase order based on which the consigned inventory was originally received, the customer, that is, the party performing the adjustment, must pay for the adjusted consigned inventory. For information on how invoicing is initiated for the consumption record, see Consumption records.

If the **Inventory Discrepancies Paid by Business Partner** check box in the Logistics Terms and Conditions (tctrm1140m000) session is cleared for the relevant terms and conditions, the supplier pays for the adjusted inventory and reduces their inventory value accordingly. For more information, refer to To process inventory adjustment orders.

Negative adjustments for customer-owned inventory are exceptional. The subcontractor, that is, the party performing the adjustment, must pay the customer for the adjusted customer-owned inventory. In LN, standard functionality to support such situations is unavailable, you must manually perform payment.

Negative adjustments of company-owned inventory are processed as described in To process inventory adjustment orders.

For manually created adjustment order line ownership records, you can enter positive quantities for ownership type:

- consigned
- company owned

Positive adjustments for customer-owned inventory are not allowed.

Chapter 6
The administrative warehouse

To update the administrative warehouse

In various VMI scenarios, the party who manages the <u>VMI warehouse</u> or consignment warehouse defines the warehouse as a regular warehouse in his system. The other party, who owns the inventory in the warehouse or is responsible for supply planning, does not require registering every single activity involved in warehouse handling. For supply planning or invoicing purposes, this party is satisfied with a mere overview of the inventory levels and therefore defines the warehouse as an <u>administrative warehouse</u> in his ERP system.

If the customer manages the warehouse, the warehouse is defined as an administrative warehouse in the supplier's ERP system. If the supplier manages the warehouse, the warehouse is defined as an administrative warehouse in the customer's ERP system.

The administrative warehouse must be updated with the inventory levels of the "real" warehouse on a regular basis. The frequency and the required accuracy level of these updates depends on the applicable VMI scenario. For more information, refer to *Overview of VMI business scenarios (p. 13)*.

In the supplier's administrative warehouse, receipts are usually registered by means of transfer orders or receipt delivery messages after the receipts in the real warehouse are performed.

Consumptions are registered through consumption records triggered by consumption messages from the customer. When you process the consumption records, LN initiates invoicing, if applicable, and reduces the inventory of the administrative warehouse. To register the inventory reduction, LN creates a sales order of type **Sales (Manual)** and a shipment, which you can view in the Item - Warehouse - Inventory Transactions (whinr1510m000) and the Inventory Consumptions (whina1514m000) session. For more information, refer to *Inventory consumption handling (p. 72)*.

The customer's administrative warehouse is updated by automatic receipts triggered by receipt delivery messages after the receipts in the real warehouse are performed. Consumptions are registered through issues for outbound order lines based on the customer's originating production order or sales order. For more information, refer to Method of Inventory Update and Consumption records.

Method of Inventory Update

In the **Method of Inventory Update** field of the Logistics Terms and Conditions (tctrm1140m000) session, the following methods to update the VMI warehouse are available:

- **Receipts and Consumptions**
- **Inventory Balance**
- **Receipts, Consumptions and Inv. Balance**
- **Inventory Balance as Consumption**

Receipts and Consumptions

Selecting this option enables the following fields, which control how receipts and consumptions in the VMI warehouse update the inventory levels of the administrative warehouse:

- **Receiving Process**
- **Inventory Consumption Message Interval**
- **Inventory Consumption Aggregation Level**

Also, in the supplier's ERP system, a consumption record is created when the <u>VMI warehouse</u> is replenished. For more information, refer to *Inventory consumption handling (p. 72)*.

Receiving Process

The options of the **Receiving Process** field determine how receipts in the VMI warehouse are updated in the administrative warehouse:

- **Communication**
  The inventory of the customer's or supplier's administrative warehouse is updated after incoming messages, for example, the ReceiveDelivery message or the InventoryConsumption message. These are OAGIS based XML messages. Receiving these messages in LN can trigger the creation of a receipt, or an issue, respectively, in the administrative warehouse.
  For more information, refer to
  - Receipt delivery messages
  - InventoryConsumption message
  - *Overview of VMI business scenarios (p. 13)*
  .
- **Automatic (Delivery Moments)**
  LN creates and automatically confirms receipts into the customer's administrative warehouse. For more information, refer to *Automatic receipts (p. 67)* and *Setting up automatic receipts (p. 70)*.
- **Automatic (Received is Shipped)**
  The supplier's administrative warehouse is updated by means of transfer orders. For more information, refer to *Automatic receipts (p. 67)*

Inventory Balance

Not used in the current version.

Receipts, Consumptions and Inv. Balance

Inventory levels are updated based on the completed receipts and consumptions and on an inventory report. The latter is mainly used for reconciliation purposes. Note that the inventory balance message is not used in the current version.

Also, in the supplier's ERP system, a consumption record is created when the VMI warehouse is replenished. For more information, refer to *Inventory consumption handling (p. 72)*.

Inventory Balance as Consumption

Not used in the current version.

Automatic receipts

Automatic receipts update the normal (non-administrative) warehouses with the inventory received in the "real" VMI warehouse. Automatic receipts are used to restrict receipt processing.

The customer's administrative warehouse

For automatic receipts into the customer's administrative warehouse, you can generate automatic receipt records in the Initiate Automatic Receipts (whinh3223m000) session.

The generated receipt records are displayed in the Automatic Receipts (whinh3523m000) session. These records include data such as the warehouses in which the receipts are to take place, the item quantities, and the dates on which the automatic receipts are to take place. When the automatic receipt date is due, LN performs the automatic receipts in the administrative warehouse.

Automatic receipts are based on purchase orders, contractual inventory levels, or demand forecast.

If the supplier performs supply planning for the customer, an automatic receipt can be based on the quantities listed in the demand forecast that the customer sends to the supplier, or the confirmed supply based on the demand forecast that the supplier sends to the customer.

For more detailed information about the automatic receipt creation process, see *The automatic receipt process (p. 68)*.

Various parameters determine how LN creates automatic receipts. For more information, refer to *Setting up automatic receipts (p. 70)*.

The supplier's administrative warehouse

In this situation, the supplier plans replenishment and replenishes the warehouse, which is managed by the customer, where the warehouse is a real/ physical warehouse. The warehouse is defined as an administrative warehouse in the supplier's system. The supplier assumes that the quantities that he shipped equal the quantities received by the customer.

The supplier's administrative warehouse is updated by means of transfer orders. When the supplier issues goods to replenish the "real" warehouse, he creates a transfer order that is received into the administrative warehouse. When he confirms the shipments of the transfer order, LN creates a receipt based on the transfer order and automatically confirms the receipt. The receipt quantities are equal to the confirmed quantities of the shipments.

The automatic receipt process

Creating automatic receipt records

To create automatic receipts into the customer's administrative warehouse, LN:

1. Creates combinations of buy-from business partners, warehouses, and items based on the selections specified in the Initiate Automatic Receipts (whinh3223m000) session. LN retrieves this data from the Item Data by Warehouse (whwmd2110s000) session and the Items - Purchase Business Partner (tdipu0110m000) session.

2. Checks the automatic receipt settings in the terms and conditions for these combinations. For more information, refer to *Setting up automatic receipts (p. 70)*.

3. Creates the automatic receipt records in the Automatic Receipts (whinh3523m000) session for these combinations.

   The initial status of an automatic receipt record is **Open**.

Receipt record basis

How LN creates the automatic receipt records, and which data they include depends on the type of data the automatic receipt records are based on. If based on:

- **Purchase orders**
  LN:

  a. Calculates the automatic receipt dates as described in *Setting up automatic receipts (p. 70)*.

  b. Stores these in the automatic receipt records.

  c. Adds the receipt quantities to the automatic receipt records when actually performing the receipt on the automatic receipt date, see Performing automatic receipts.

- **Forecast demand**
  LN:

  a. Retrieves the planned receipt quantities from the Enterprise Planning package.

  b. Stores these in the following fields of the Automatic Receipts (whinh3523m000) session:
     - **Planned Receipt Quantity in Receipt Unit**
     - **Planned Receipt Quantity in Inventory Unit**

  c. Retrieves the automatic receipt dates from Enterprise Planning or the receiving interval from the terms and conditions.

- **Contractual inventory levels**
  LN:

  a. Calculates the automatic receipt dates from the delivery moments defined in the terms and conditions.

  b. Retrieves the planned inventory level for the automatic receipt dates from the terms and conditions.

  c. Stores the automatic receipt dates and planned inventory levels in the **Automatic Receipt Date** field and the **Planned Inventory Level** field, respectively, of the Automatic Receipts (whinh3523m000) session.

Performing automatic receipts

On the automatic receipt date, LN performs receipts for the automatic receipt records as follows:

1. Create warehousing receipt lines for the automatic receipt records.

2. Link the receipt lines to the purchase orders present for the business partners, warehouses, items, and date ranges specified by the user in the Initiate Automatic Receipts (whinh3223m000) session.

3. If no purchase orders are present, create purchase orders according to the **Receipt Triggered Order** field in the Order Terms and Conditions (tctrm1130m000) session. If the value in this field is **Not Allowed**, an error message appears and the automatic receipt is not performed for the automatic receipt record.

   Purchase orders are not present if the automatic receipts are based on forecast demand or contractual inventory levels. For more information, refer to Purchase orders, forecast demand, or inventory levels.

4. Generate low volume lot or serial numbers if not present.

5. Generate High volume scenario lot or serial numbers according to the lot and serial registration templates. For more information, refer to Lot and serial registration templates.

6. Confirm the automatic receipt record.

7. In the Automatic Receipts (whinh3523m000) session, set the status of the automatic receipt record and show the received quantities.

8. Within the date range specified in the Initiate Automatic Receipts (whinh3223m000) session, LN looks for automatic receipt dates. If an automatic receipt date is due, the automatic receipts

for that date are performed. The process lies dormant until an automatic receipt date is due, or if the date range is expired.

Purchase orders, forecast demand, or inventory levels

How LN retrieves the quantities to be received depends on the type of data the automatic receipt records are based on. If based on:

- **Purchase orders**
  LN:

  a. Checks the purchase orders retrieved for the receipt records.

  b. Receives the purchase order quantities as described in Receipt record basis.

- **Forecast demand**
  LN:

  a. Creates receipt triggered purchase orders for the automatic receipt records.

  b. Receives these into the warehouse. The quantities to be received are taken from the **Planned Receipt Quantity in Receipt Unit** field and the **Planned Receipt Quantity in Inventory Unit** field of the Automatic Receipts (whinh3523m000) session. For more information, refer to Receipt record basis.

- **Contractual inventory levels**
  LN:

  a. Creates receipt triggered purchase orders for the automatic receipt records.

  b. Receives these into the warehouse.

  c. Determines the quantities to be received by comparing the planned inventory level from the **Planned Inventory Level** field in the Automatic Receipts (whinh3523m000) session to the inventory on hand from the receiving warehouse. If on the automatic receipt date the inventory level is within the contractual inventory levels, LN performs no receipt.

Setting up automatic receipts

Creating automatic receipts into the customer's administrative warehouse requires the following settings in the Terms and Conditions module of the Common package:

- Terms and conditions must be linked to an active purchase contract.
- The terms and conditions are not expired.

  Multiple valid sets of terms and conditions can be present for the selection ranges that the user specifies in the Initiate Automatic Receipts (whinh3223m000) session. Terms and conditions have effective and expiry dates. If terms and conditions overlap, that is, range effective-expiry dates overlap, LN selects the terms and conditions with most recent effective date.

- In the Logistics Terms and Conditions (tctrm1140m000) session:
  - The value in field **Method of Inventory Update** is either of the following:
    - **Receipts and Consumptions**
    - **Receipts, Consumptions and Inv. Balance**
  - The value in field **Receiving Process** is **Automatic (Delivery Moments)**.
  - The **Delivery Moments** field determines whether creation of automatic receipts is based on purchase orders, demand forecast, or inventory levels. If the value is:
    - **Orders and Schedules**, creation of receipt records is based on purchase orders.
    - **Forecast or Inventory Levels**, creation of receipt records is based on demand forecast or inventory levels.
- In the Items - Purchase Business Partner (tdipu0110m000) session, the **Generate Order for Unexpected Warehouse Receipt** check box is selected.
- In the Order Terms and Conditions (tctrm1130m000) session, the **Receipt Triggered Order** field value is **Purchase Order** or **Purchase (Manual) Order**.

Automatic receipts based on purchase orders

In the Order Terms and Conditions (tctrm1130m000) session:

- If the **Use Confirmation** check box is selected, only confirmed purchase orders are used to create automatic receipts. If this check box is cleared, both confirmed and unconfirmed purchase orders are used.

- If you define a receiving interval in the **Receiving Interval** field of the Logistics Terms and Conditions (tctrm1140m000) session, LN uses this interval to determine the automatic receipt dates. The automatic receipt date is the date on which LN performs an automatic receipt.

  Note that purchase orders created between receipt intervals are not taken into account until the next automatic receipt date.

  If no receipt interval is defined, the planned receipt dates of the purchase orders are used to determine the automatic receipt dates. For more information, refer to *The automatic receipt process (p. 68)*.

Automatic receipts based on demand forecast

In the Planning Terms and Conditions (tctrm1135m000) session, do the following if automatic receipts must be based on demand forecast:

- Select the **Supply Planning by Supplier** check box.

- Select the **Use Confirmed Supply** check box if automatic receipts must only be based on confirmed supply.

- In the **Replenishment Based On** field, do not select **Manual** or **Inventory Level**.

- If you define a receiving interval in the **Receiving Interval** field of the Logistics Terms and Conditions (tctrm1140m000) session, LN uses this interval to determine the automatic receipt dates. The automatic receipt date is the date on which LN performs an automatic receipt.

  If no receipt interval is defined, the planned receipt dates Enterprise Planning are used to determine the automatic receipt dates. For more information, refer to *The automatic receipt process (p. 68)*.

Automatic receipts based on inventory levels

In the Planning Terms and Conditions (tctrm1135m000) session, do the following if automatic receipts must be based on contractual inventory levels:

- Select the **Supply Planning by Supplier** check box.
- Select the **Send Forecast to Supplier** check box.
- In the **Replenishment Based On** field, select **Manual** or **Inventory Level**.
- Select a pattern code in the **Delivery Moments** field.
- Define minimum and/or maximum levels in the fields of the **Inventory Levels** tab.

Inventory consumption handling

In vendor managed inventory (VMI) and subcontracting environments, consumptions are recorded to view and maintain consumption data in the supplier's or manufacturer's administrative warehouse. This warehouse mirrors the customer's or subcontractor's warehouse from which the customer/subcontractor consumes materials supplied by the supplier/manufacturer.

Handling inventory consumptions includes the creation and processing of these consumptions.

Note: In this topic, supplier refers to the supplier or the manufacturer, customer refers to the customer or the subcontractor, and VMI warehouse refers to the customer's or the subcontractor's warehouse from which the customer or the subcontractor consumes goods supplied by the supplier or manufacturer.

Consumption master data

To record inventory consumptions in the supplier's administrative warehouse, to update the inventory levels, and initiate invoicing:

1. In the Implemented Software Components (tccom0100s000) session, select:
   - The **VMI (supplier side)** check box to maintain consumptions in VMI environments.
   - The **Subcontracting with Material Flow** and **Service Subcontracting with Material Flow** check boxes to maintain consumptions in subcontracting environments.
2. In the Terms and Conditions (tctrm1100m000) session, specify terms and conditions for the relevant business partners, warehouses, and items.

3. In the Schedule Terms and Conditions (tctrm1131m000) session, select the **External Packing Slip is Mandatory** check box if the consumption line must include an external packing slip for a schedule. If the **Duplicate External Packing Slip Allowed** check box is selected for a combination of sold-to business partner, ship-to business partner, and item, an external <u>packing slip</u> can be used that is already used.

4. To create consumptions for subcontracting scenarios in the Inventory Consumptions (tdsls4140m000) session, you can set the values in the **Method of Inventory Update** field of the Logistics Terms and Conditions (tctrm1140m000) session to:
    - **Receipts and Consumptions**
    - **Receipts, Consumptions and Inv. Balance**
    - **Inventory Balance as Consumption**

    If, for VMI scenarios, you do not specify this optional field, received quantities are not displayed in the Inventory Consumptions (tdsls4140m000) session; material consumptions are updated through <u>backflushing</u>.

For further information on how to set up the VMI functionality, see *VMI customer role - setup (p. 33)* and *VMI supplier forecast - setup (p. 38)*. For information on subcontracting, see Overview of subcontracting.

Consumptions

Consumption records are generated or manually created. They show the received quantities provided by the supplier and the subsequent consumptions by the customer.

A consumption record includes a header and one or more lines.

- **Consumption header**
  When the <u>VMI warehouse</u> is replenished, LN generates a consumption header. Headers of consumption records contain the name of the customer, the VMI warehouse, and the aggregated received and consumed item quantities. You can view and maintain these headers in the Inventory Consumptions (tdsls4140m000) session.

- **Consumption line(s)**
  When the customer consumes material, a consumption line is created. You can view and maintain details of individual consumptions in the Inventory Consumption Lines (tdsls4141m000) session.

- Consumption lines are generated after receiving the LoadInventoryConsumption <u>Business Object Document (BOD)</u>, or you can manually create them based on an e-mail or phone call from the customer.

After the consumption is specified, it must be processed to:

- Invoice the customer for the consumed quantities, if invoicing is applicable.
- Decrease the inventory levels of the administrative warehouse.

For more information, refer to *Processing consumptions (p. 75)*.

Note

In the customer's LN system, consumptions are generated in the Consigned Consumptions (whwmd2551m000) and Inventory Consumptions (whina1514m000) sessions. For more information, refer to Consumption records.

Prices and discounts

- **Sales order**
  LN determines prices and discounts based on the values of the originating sales order line, using the consumption or replenishment date. This calculation is based on the **Price Determination Based on** parameter setting in the Order Terms and Conditions (tctrm1130m000) session.

- **Sales schedule**
  LN checks the **Link Consumption Invoice Lines To** field in the Sales Schedule Parameters (tdsls0100s500) session, which can be set to **Schedule Header** or **Schedule Requirement Line**.

  Depending on the value of the **Link Consumption Invoice Lines To** field, prices and discounts are retrieved from these lines:

  - **Schedule Header**
    The first schedule line of the sales schedule to which the consumption is linked. Information from successive schedule lines is not considered.

  - **Schedule Requirement Line**
    The schedule line or planned warehouse order line to which the consumption is linked.

Note

- In the Sales Order Invoice Lines (tdsls4106m100) session, consumption invoice lines are linked to a sales order line. In the Sales Schedule Invoice Lines (tdsls3140m200) session, consumption invoice lines are linked to a sales schedule header, or a sales schedule line/planned warehouse order line.
- The price for sales consignment invoicing orders is based on the consumption date.

Pay on Use sales order/schedule lines

Sales order/schedule lines for which the payment type is **Pay on Use** and the activity **Release to Invoicing** is part of the order procedure, can:

- Register consumptions.
- Be invoiced, that is, invoicing lines are created for the consumption lines to which they are linked.
- Have the **Self Billing** check box selected.

Note

This is applicable in an extended consignment setup, in which you directly link the invoicing for a consumption of consignment inventory to the replenishment order or schedule.

In a basic consignment setup, in which the order and schedule procedures are split into a replenishment and invoicing part, these rules apply:

- Invoicing is not available for consignment replenishment orders, which are sales orders for which the **Consignment Replenishment** check box is selected in the Sales Order Types (tdsls0594m000) session.

- Because for consignment replenishment orders **Release to Invoicing** is not part of the order procedure, consumptions can be invoiced using a **Consignment Invoicing** sales order. These are sales orders for which the **Consignment Invoicing** check box is selected in the Sales Order Types (tdsls0594m000) session.

For more information, refer to *Consignment in Sales and Procurement (p. 23)*.

Processing consumptions

To determine whether invoicing is applicable, to start up invoicing for the relevant customer, and to lower the inventory levels in the administrative warehouse, you must process the inventory consumptions. During processing, LN links the consumption to the (replenishment) order or schedule of the item that is received in the VMI warehouse.

You can process:

- Consumption lines, by selecting **Process Consumption Line** from the appropriate menu in the Inventory Consumption Lines (tdsls4141m000) session.
- Consumption lines of an item, by selecting **Process Inventory Consumptions** from the appropriate menu in the Inventory Consumptions (tdsls4140m000) session.
- A range of consumptions in the Process Inventory Consumptions (tdsls4290m000) session.

After the consumptions are processed, the orders and schedules that are linked to the consumptions are displayed in the Orders by Inventory Consumption Line (tdsls4142m000) session.

Note

You can start all of these sessions from the Inventory Consumption (tdsls4640m000) session.

Processing procedure

When processing consumptions:

1. If a **Subcontracting Reference** is specified for the consumption line, the consumption is linked to the corresponding purchase material supply line in the Purchase Order Material Supply Lines (tdpur4116m000) session.

2. If a **Reference**, **Shipment Reference**, or both fields are specified, LN searches for a matching sales schedule for a combination of these fields, and links the consumption to the schedule. If a schedule cannot be located, a message is displayed.

3. If a **Packing Slip** is available, LN searches for a matching sales schedule shipment and links the consumption to the schedule. If a schedule shipment cannot be located, a message is displayed.

4. If a **Customer Order** is available and a matching sales order is located, the consumption is linked to the order using the order's payment conditions.

5. If a matching sales order cannot be located, LN checks whether a matching sales schedule (line) can be linked to the consumption using the **Customer Order** or **Customer Contract Reference**.

6. If the **Invoicing Required** check box is selected, LN searches for a **Pay on Use** sales order line to which the consumption can be linked. If the **Invoicing Required** check box is cleared on the consumption line, LN automatically lowers the inventory level. For more information, refer to Adjusting inventory level in the administrative warehouse.

7. If a **Pay on Use** sales order line cannot be located, LN searches for a **Pay on Use** sales schedule line to which the consumption can be linked.

8. If a **Pay on Use** sales schedule line cannot be located, a consignment invoicing sales order is created to settle the invoicing of the consumed quantity.

For more information, refer to *Linking consumptions to the replenishment order/schedule (p. 77)*.

Processing returns

- If the **Return** check box is selected on the consumption line, no invoicing is required.

- If the sales order found is **Pay on Use**, an invoicing line is created that is not invoiced. On the invoicing line, the returned consumption quantity is displayed in the **Returned Consumption Quantity** field of the Sales Order Invoice Lines (tdsls4106m100) session.

- If the **Subcontracting Reference** is filled or the returned item is a packaging item, the consumption line's **Processed** check box is selected, and no further action is taken.

- To return quantities, you must manually create a sales return order and link it to the relevant order/schedule. For more information, refer to Sales return orders.

Adjusting inventory level in the administrative warehouse

LN automatically updates the inventory levels of the administrative warehouse without performing the outbound and shipment procedures. To register the inventory reduction, a sales order of type **Sales (Manual)** and a shipment are created.

You can view this sales order and shipment in the Item - Warehouse - Inventory Transactions (whinr1510m000) and Inventory Consumptions (whina1514m000) sessions. The ownership of the sales order is **Customer Owned**, because invoicing and payment is performed based on the originating **Pay on Use** sales order/schedule, the consignment invoicing order, or the subcontracting purchase order.

Linking consumptions to the replenishment order/schedule

A consumption record must be linked to a replenishment subcontracting order, or a VMI order or schedule. If a consumption cannot be linked to a replenishment order/schedule, a sales consignment invoicing order is generated to settle the invoicing of the consumed quantity.

Subcontracting order

To link a consumption line to a subcontracting purchase order, LN first utilizes the subcontracting reference, and then the consumed item to locate the relevant material supply line matching the subcontracting purchase order. The material line with an item that matches the inventory consumption line's item is selected.

For costing purposes, the used material must be booked on the correct subcontracting purchase order. Therefore, the **Subcontracting Reference** field in the Inventory Consumption Lines (tdsls4141m000) session is mandatory.

Usually, the subcontractor is not invoiced for material that is supplied by the manufacturer and consumed by the subcontractor to produce the items for the manufacturer.

For consumption lines that are linked to an operation subcontracting, item subcontracting, or service subcontracting material supply line, the **Consumed Quantity** field is updated in the Purchase Order Material Supply Lines (tdpur4116m000) session, after receipt of a consumption message from the subcontractor. Consequently, the inventory levels are updated. For more information, refer to Adjusting inventory level in the administrative warehouse.

VMI order or schedule

To link a consumption line to a vendor managed inventory (VMI) order or schedule, LN uses the combination of reference and shipment reference to search for a matching sales schedule. Next, the packing slip is used to search for a matching sales schedule shipment. Finally, the customer order/schedule reference is included in the search.

In a VMI environment, the customer order or schedule reference is not mandatory. If an inventory consumption line includes a customer order/schedule reference, LN searches for a sales order or sales schedule with a matching **Customer Order** or **Customer Contract Reference**. If a matching reference number is not located, LN searches for the first sales schedule line with a matching **Customer Schedule Number**. Consumption lines are linked to this specific sales schedule, although consecutive schedule lines can have a different customer schedule reference.

If the payment is set to **Pay on Use**, inventory levels are updated and invoicing is triggered. For the order/schedule lines linked to the consumption line, LN creates invoicing lines in the Sales Order Invoice Lines (tdsls4106m100) or the Sales Schedule Invoice Lines (tdsls3140m200) session.

If the payment is set to **Pay on Receipt** or **No Payment**, only the inventory levels are updated. For more information, refer to Adjusting inventory level in the administrative warehouse.

If no packing slip or customer order/contract/schedule reference is available and the **Invoicing Required** check box is selected:

1. LN searches for the oldest sales order/schedule with payment type **Pay on Use** that is not yet fully consumed. If a matching sales order/schedule line is found, LN creates an invoice line linked to that sales order line or sales schedule (line).

2. If no matching line is found, LN creates a consignment invoicing sales order based on the **Consignment Invoicing Order Type** field in the Sales Order Parameters (tdsls0100s400) session.

If a **Pay on Use** sales order/schedule line is used and the total consumed quantity exceeds the ordered quantity, LN creates an invoicing line for the part that "fits". For the remainder, LN searches for other **Pay on Use** sales order/schedule lines to create invoicing lines. For the consumed quantities for which no sales order/schedule line is found, LN creates a consignment invoicing sales order.

For each invoice line created, LN updates the inventory levels with the invoiced quantities. For more information, refer to Adjusting inventory level in the administrative warehouse.

Note

LN searches for **Pay on Use** sales order/schedule lines only if the **Ownership External** check box is selected in the Implemented Software Components (tccom0100s000) session.

Sales consignment invoicing orders with origin **Consumption**

If a consumption cannot be linked to a replenishment order, a sales consignment invoicing order is generated to settle the invoicing of the consumed quantity. For these orders, their origin is **Consumption** and their order type is retrieved from the **Consignment Invoicing Order Type** field in the Sales Order Parameters (tdsls0100s400) session.

Updating inventory levels for these orders is handled by Warehousing, because warehouse activities are part of the order procedure of a sales consignment invoicing order.

After a consignment invoicing order is released to Warehousing, inventory level adjustments are handled by the outbound process. You must set the activities of the warehousing order type that are linked to the consignment invoicing order type to automatic. For more information, refer to To define warehousing procedures.

Note

- The price for sales consignment invoicing orders is based on the consumption date.
- You cannot cancel or delete sales orders for which the origin is **Consumption**, nor cancel, delete, or add corresponding lines or change the item and quantity.

Appendix A
Glossary

A

administrative warehouse

A warehouse that offers a view of a warehouse that is managed by a business partner. An administrative warehouse corresponds with a physical warehouse controlled by the business partner's system. In that physical warehouse, the inbound and outbound processing takes place. The administrative warehouse mirrors the inventory levels present in the business partner's warehouse.

Administrative warehouses are used in situations such as the following:

- The warehouse is at your location, but a supplier manages and possibly owns the inventory until you use the items.
- The warehouse is at the customer's location. You own the inventory until the customer uses the items, but the customer manages the inventory.
- The warehouse is at the subcontractor's location. You own the unfinished goods present in the warehouse, but the subcontractor manages the inventory.

Administrative warehouse is not one of the warehouse types that you can define in LN, setting up an administrative warehouse requires various parameter settings.

allocation

The reservation of inventory against a demand prior to the outbound process.

You can allocate a quantity of inventory to a business partner or a particular demand order.

Note

The documentation sometimes states that a particular demand object, such as a sales order, is *allocated to* a business partner, order, or reference. That phrase actually means that LN must fill the demand object with *supply that was allocated to* that particular business partner, order or reference.

appropriate menu

Commands are distributed across the **Views**, **References**, and **Actions** menus, or displayed as buttons. In previous LN and Web UI releases, these commands are located in the *Specific* menu.

backflushing

The automatic issue of materials from inventory, or accounting for the hours spent manufacturing an item, based on theoretical usage and the quantity of the item reported as complete.

Business Object Document (BOD)

An XML message used to exchange data between enterprises or enterprise applications. The BOD is composed of a noun, which identifies the message content, and a verb, which identifies the action to be taken with the document. The unique combination of the Noun and the Verb forms the name of the BOD. For example, noun ReceiveDelivery combined with verb Sync results in BOD SyncReceiveDelivery.

business partner

A party with whom you carry out business transactions, for example, a customer or a supplier. You can also define departments within your organization that act as customers or suppliers to your own department as business partners.

The business partner definition includes:
- The organization's name and main address.
- The language and currency used.
- Taxation and legal identification data.

You address the business partner in the person of the business partner's contact. The business partner's status determines if you can carry out transactions. The transactions type (sales orders, invoices, payments, shipments) is defined by the business partner's role.

buy-from business partner

The business partner from whom you order goods or services; this usually represents a supplier's sales department. The definition includes the default price and discount agreements, purchase-order defaults, delivery terms, and the related ship-from and invoice-from business partner.

Synonym: supplier

cluster

A group of entities that are not necessarily related to one financial company or logistic company.

In Enterprise Planning, planning clusters are used for groups of warehouses, connected by supplying relationships. See: planning cluster.

company owned

Goods owned by your organization. A type of ownership behavior pertaining to goods in inventory or on order, which is set for standard business processes based on standard attributes such as delivery terms and point of title passage. After your customer receives or stores the goods, the customer will take ownership of the goods. If you purchase goods from your supplier, you become the owner after receipt or storage of the goods.

See also: ownership

consigned

A type of ownership behavior pertaining to goods in inventory or on order.

If you are a customer, consigned goods are goods delivered by the supplier that you do not own and for which you have not paid. You become the owner, and payment is due, when you use or sell the goods, or after a given number of days after you receive the goods.

If you are a supplier, consigned goods are goods that you delivered to your customer, but the customer will not take ownership or pay until he uses or sells the goods, or until a given period of time after receipt of the goods has passed.

The period of time between the receipt of the goods and the date on which the customer becomes the owner, and payment is due, is laid down in the contract drawn up between the supplier and the customer.

See also: ownership

Synonym: Pay on Use

consignment inventory

The goods owned by a third party and that are stored in a warehouse belonging to another party.

Two types of consignment inventory exist:

- **Owned consignment inventory**
  Goods your company owns and stores in a customer's warehouse without receiving payment until the goods are used or sold. You do not register the goods as consignment inventory, because the goods are still part of your inventory.
- **Not-owned consignment inventory**
  Goods a supplier owns, but that are stored in your warehouse without being paid for until the goods are used or sold. You register the goods as consignment inventory.

consignment owned warehouse

A warehouse that is used for storing owned consignment inventory. Owned consignment inventory are goods owned by your company and stored in a customers warehouse without receiving payment until after the goods are used or sold. You do not register the goods as consignment inventory, because the goods are still part of your inventory.

consumption

The issue from the warehouse of <u>consigned</u> items by or on behalf of the customer. The customer's purpose is to use these items for sale, production, and so on. After the items are issued, the customer becomes the owner of the items and the customer must pay the supplier.

customer owned

A type of ownership behavior pertaining to goods in inventory or on order. Customer owned goods are goods whose ownership will not change during any of the inbound or outbound warehousing processes.

For example, a customer sent you some components that you, as a subcontractor, will use to manufacture a product for this customer. The customer owns the components while they are stored in your warehouse and throughout all the logistic and production processes involved in manufacturing and delivering the product to the customer.

See also: ownership

demand forecast

The item quantity that is forecast to be required in a plan period. A demand forecast can be generated based on seasonal patterns or historical demand data.

The demand forecast is part of the demand plan for a plan item or channel.

demand forecast

The level of demand that is expected in future periods.

The demand forecast is based on historical demand data and can be used to determine the optimal safety stock and reorder point.

See: safety stock, reorder point

direct delivery

The process in which a seller orders goods from a buy-from business partner, who must also deliver the goods directly to the sold-to business partner. By means of a purchase order that is linked to a sales order or a service order, the buy-from business partner delivers the goods directly to the sold-to business partner. The goods are not delivered from your own warehouse, so Warehousing is not involved.

In a Vendor Managed Inventory (VMI) setup, a direct delivery is achieved by creating a purchase order for the customer warehouse.

A seller can decide for a direct delivery because:
- There is a shortage of available stock.
- The ordered quantity cannot be delivered in time.
- The ordered quantity cannot be transported by your company.
- Costs and time are saved.

forecast

The demand for an item, calculated by the customer that purchases that item, and aggregated to forecast periods according to the agreed terms and conditions.

The customer sends the forecast to the supplier that plans the item supply.

handling unit

A uniquely identifiable physical unit that consists of packaging and contents. A handling unit can contain items. A handling unit has a structure of packaging materials used to pack items, or is a part of such a structure.

A handling unit includes the following attributes:

- Identification code
- Packaging item (optional)
- Quantity of packaging items (optional)

If you link an item to a handling unit, the item is packed by means of the handling unit. The packaging item refers to the type of container or other packing material of which the handling unit consists. For example, by defining a packaging item such as Wooden Crate for a handling unit, you specify that the handling unit is a wooden crate.

See: handling unit structure

integration transaction

A financial transaction that is generated through LN packages other than Financials. For each logistic transaction that must be reflected in Financials, LN generates an integration transaction, for example, Purchase/Receipt, Production/WIP Transfer, and Project/Costs of Goods Sold. LN posts the integration transaction to the ledger accounts and dimensions defined in the integration mapping scheme.

inventory commitment

The reservation of inventory for an order without taking into account the physical storage of the goods within the warehouse. Previously referred to as hard allocation.

inventory date

A date that is assigned to items when they are stored. You can use inventory dates to retrieve items based on FIFO (First In First Out) or LIFO (Last In First Out), without carrying out extensive lot control.

The meaning of the inventory date is connected to the outbound priority of LIFO, FIFO, or the product expiry date of the item.

With outbound priority LIFO or FIFO, the default for the inventory date is the system date; however, you can overwrite this so that the inventory date does not have to be equal to the storage date. If the item has a particular shelf life, the inventory date is the product expiry date defined for the item.

inventory level

The inventory quantity that can be available in a warehouse. In VMI or subcontracting scenarios, warehouse supply can be based on inventory levels laid down in contracts between suppliers and customers.

inventory ownership change order

A commission to change the ownership of goods from the supplier, that is, the buy-from business partner, to the own company, if the ownership is time based. See also ownership.

An inventory ownership change order consists of an order header providing general information and one or more order lines providing details about the items involved. In addition, if resulting from the ownership change relocation is required involving adjustments of the handling unit structure, line handling information is also provided.

Time based change orders are generated by users for items due for ownership change. LN uses change orders to generate financial transactions related to the ownership change and to track the whereabouts of inventory.

inventory transaction type

A classification that is used to indicate the type of inventory movement.

The following inventory transaction types are available:

- **Issue**
  From warehouse to other entity than warehouse.
- **Receipt**
  From other entity than warehouse to warehouse.
- **Transfer**
  From one warehouse to another.
- **WIP Transfer**
  From one costing work center to another.

invoicing batch

Selects the order types and orders to be invoiced. If you process an invoicing batch, LN selects the invoicing data and generates the invoices for the order types and orders selected through the invoicing batch.

item

The raw materials, subassemblies, finished products, and tools that can be purchased, stored, manufactured, and sold.

An item can also represent a set of items handled as one kit, or which exist in multiple product variants.

You can also define nonphysical items, which are not retained in inventory but can be used to post costs or to invoice services to customers. The examples of nonphysical items:

- Cost items (for example, electricity)
- Service items
- Subcontracting services
- List items (menus/options)

item subcontracting

The entire production process of an item is outsourced to a subcontractor.

item supplier plan

A time-phased overview of the demand and supply for an item related to a specific supplier.

LN provides item supplier plans to work with vendor managed inventory. The item supplier plan displays data such as the forecast you sent to the supplier and the confirmed supply information the supplier sent back to you.

You can compare an item supplier plan with an item order plan. The difference is, that the item order plan displays demand and supply from *all* suppliers and customers and the item supplier plan displays demand and supply for a *specific* supplier.

location

A distinct place in a warehouse where goods are stored.

A warehouse can be divided into locations to manage the available space, and to locate the stored goods. Storage conditions and blocks can be applied to individual locations.

operation subcontracting

The work on one or more operations in an item's production process is outsourced to a subcontractor.

outbound advice

A list generated by LN that advises you the location and lot from which goods must be picked and possibly issued, taking into account factors such as blocked locations and the outbound method.

outbound priority

The information that determines the sequence of locations from which an item must be retrieved.

ownership record

An ownership record specifies the owner of the items listed on any of the following objects:

- Receipt line
- Outbound advice line
- Shipment line
- Cycle counting order line
- Adjustment order line

These objects can include items from various owners, and some of the items can be company owned. A separate ownership record is manually or automatically created for each owner. For example, if a receipt line has inventory for two owners, two ownership records are present for the receipt line.

packaging item

The containers or supports that are used to hold and move goods within manufacturing, distribution processes, and, specifically, within the warehouse. For example: boxes, pallets.

packing slip

An order document that shows in detail the contents of a particular package for shipment. The details include a description of the items, the shippers or customers item number, the quantity shipped, and the inventory unit of the shipped items.

Pay on Use

See: *consigned (p. 81)*

planned distribution order

An order in Enterprise Planning for an internal supplier or sister company to deliver a quantity of an item.

purchase contract

Purchase contracts are used to register specific agreements with a buy-from business partner that concern the delivery of specific goods.

A contract is comprised of:

- A purchase contract header with general business partner data, and optionally, a linked terms and conditions agreement.
- One or more purchase contract lines with (central) price agreements, logistic agreements, and quantity information that apply to an item or price group.
- Purchase contract line details with logistic agreements and quantity information that apply to an item or price group for a specific location (warehouse) of a multicompany corporation. Contract line details can exist only for corporate purchase contracts.

purchase payable receipt

Indicates when billing is applicable for purchased goods and contains the payable and invoicing details for an order or schedule. By means of purchase payable receipts, updates to and from the Accounts Payable module are handled.

If the payment for the purchased goods is set to **Pay on Use**, the payable receipt is generated when inventory related to a purchase order or a purchase schedule is consumed, that is, issued from the warehouse. If the payment is set to **Pay on Receipt**, the payable receipt is generated the moment the purchased goods are received.

purchase schedule

A timetable of planned supply of materials. Purchase schedules support long-term purchasing with frequent deliveries and are usually backed by a purchase contract. All requirements for the same item, buy-from business partner, ship-from business partner, purchase office, and warehouse are stored in one schedule.

RosettaNet

A standards organization that develops and publishes XML-based standards for electronic messaging in the areas of supply chain management, manufacturing, and so on.

sales schedule

A timetable of planned supply of materials. Sales schedules support long-term sales with frequent deliveries. All requirements for the same item, sold-to business partner, ship-to business partner, and delivery parameter are stored in the same sales schedule.

self-billing

The periodic creation, matching, and approval of invoices based on receipts or consumption of goods by an agreement between business partners. The sold-to business partner pays for the goods without having to wait for an invoice from the buy-from business partner.

service subcontracting

Allot the service related work of an item to another company. The entire maintenance or repair process, or only a part of the same, can be allotted. Service subcontracting can be used with or without material flow support.

sourcing percentage

A percentage used to calculate how orders are divided among suppliers.

subcontracting

Hiring certain services from another party, for example the execution of a part of a project or an operation of a production order.

subcontracting

Allowing another company (the subcontractor) to carry out work on an item. This work can concern the entire production process, or only one or more operations in the production process.

subcontracting purchase order

In LN, subcontracting is considered as purchasing a service from a subcontractor. Therefore, when subcontracting, a subcontracting purchase order is generated to record the subcontracted operation(s) and the associated costs.

supplier

See: *buy-from business partner (p. 80)*

supply chain

The physical entities, people, and processes that lead from acquiring raw materials from suppliers to providing finished products to meet customer requirements.

terms and conditions agreement

An agreement between business partners about the sale, purchase, or transfer of goods, in which you can define detailed terms and conditions about orders, schedules, planning, logistics, invoicing, and demand pegging, and define the search mechanism to retrieve the correct terms and conditions.

The agreement includes the following:

- A header with the type of agreement and the business partner(s).
- Search levels with a search priority and a selection of search attributes (fields) and linked terms and conditions groups.
- One or more lines with the values for the search levels' search attributes.
- Terms and conditions groups with detailed terms and conditions about orders, schedules, planning, logistics, invoicing, and demand pegging for the lines.

vendor managed inventory (VMI)

An inventory management method according to which the supplier usually manages the inventory of his customer or subcontractor. Sometimes, the supplier manages the supply planning as well. Alternatively, the customer manages the inventory but the supplier is responsible for supply planning. Inventory management or inventory planning can also be subcontracted to a logistics service provider (LSP).

The supplier or the customer may own the inventory delivered by the supplier. Often, the ownership of the inventory changes from the supplier to the customer when the customer consumes the inventory, but other ownership transfer moments occur, which are laid down by contract.

Vendor-managed inventory reduces internal costs associated with planning and procuring materials and enables the vendor to better manage his inventory through higher visibility to the supply chain.

VMI warehouse

A warehouse for which the supplier of the stored goods performs one or both of the following tasks: manage the warehouse, including activities surrounding inbound and outbound processes, or plan the supply of the goods in the warehouse. The supplier may also be the owner of the inventory in the warehouse. The warehouse is usually located at the customer's premises.

warehouse

A place for storing goods. For each warehouse, you can enter address data and data relating to its type.

warehouse transfer

A warehousing order to move an item between warehouses.

A warehouse transfer consists of a warehousing order of inventory transaction type **Transfer**.

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