Infor LN User Guide for Project Pegging

Publication Information

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About this document

This document explains the process to set up and use pegs in project manufacturing environments. The usage of pegs across LN, the setup and usage of borrow/loan inventory transfers between cost pegs, and the handling of costing breaks, are also described.

Assumed knowledge

Although you need no detailed knowledge of the LN software to read this guide, general knowledge of the Infor LN functionality will help you understand this guide.

Document summary

This table shows the chapters of this guide:

Chapter	Content
Introduction and Setup	Introduction to and setup of project pegging.
Master Data	Setup of project pegging master data.
	The master data for setting up borrow/loan and payback, and costing breaks is explained in the appropriate chapters.
Project	Project pegging and project contracts.
Sales	Project pegging in Sales.
Planning	Project pegging in Enterprise Planning.
Manufacturing	Project pegging in Manufacturing.
Procurement	Project pegging in Procurement.
Warehousing	Project pegging in Warehousing.
Service	Project pegging in Service.
People	Project pegging in People.

Borrow/Loan and Payback	Setup and use of borrow/loan inventory transfers between cost pegs.
Costing Breaks	Setup and use of costing breaks.

How to read this document

This document is assembled from online Help topics.

Text in italics followed by a page number represents a hyperlink to another section in this document.

Underlined terms indicate a link to a glossary definition. If you view this document online, clicking the underlined term takes you to the glossary definition at the end of this document.

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Chapter 1
Introduction

1

Project pegging overview

In project manufacturing environments, to facilitate cost accountability for finished goods within projects, you can implement project pegging and indicate that items are project pegged. If a project-pegged item is specified on a demand order, <u>pegging</u> information is used to allocate, track, trace, register, and supply inventory.

Throughout the entire flow of goods, pegging information is added to items, inventory, and transactions when goods are ordered, received, issued, and consumed. Consequently, you can track the costs at the project, activity, and element level.

Peg distribution information is available for purchase, warehouse and job shop orders to track for which project cost account the goods are ordered. The peg distribution lines include the item, required quantity, unit, configuration, and the project cost account (peg) elements. In addition, the distribution lines contain information on the top demand order, such as customer, contract, prime contractor, and top demand order date. The main purpose of distribution lines is cost distribution and not the physical movement of items.

In case of exceptional situations, such as partial receipts, over issues, rejections, and returns, the quantities are allocated according to the fair, equitable and unbiased accounting principle in which the demand need date is the main driver. Multilevel order pegging inquiries are available to manage dependencies in the supply chain, and requirements of multiple projects can be commingled in one purchase order to leverage volume discounts.

Actual costing and earned value can be reported any time against the project.

To set up project pegging, complete these steps:

Step 1:

Select the **Project Pegging** check box in the Implemented Software Components (tccom0100s000) session.

If you want to use project pegging in combination with <u>costing breaks</u>, also select the **Costing Breaks** check box.

Step 2:

Specify the project pegging parameters in the Project Pegging Parameters (tcpeg0100m000) session.

Step 3:

For each item, specify the peg parameters in the Items (tcibd0501m000) session. Select the **Inherit Project Peg** and/or **Mandatory Project Peg** check boxes.

Note: If you are only using Project to record the cost that is generated from processes in other packages such as Manufacturing or Sales Control, project item data, as specified in the Items - Project (tppdm0505m000) session, is not required.

Project (cost) pegging

Project cost pegging affects multiple LN packages. For more information, refer to the main topics as shown in this table:

Package	Topic
Project	*Linking CLIN to a project structure (p. 21)*
Common	*Cost peg transfers - borrow/loan and payback (p. 101)*
	To set up borrow/loan and payback transfers (p. 102)
	Cost peg transfer rules (p. 15)
	Cost peg transfer settings for specific scenarios (p. 18)
	Use ATT inventory with or without lead time fences (p. 19)
Sales	*Project pegging in Sales (p. 23)*
Enterprise Planning	*Using cost peg supplying relationships (p. 25)*
	Cost peg transfers in Enterprise Planning (p. 28)
Manufacturing	*Project Pegging in Manufacturing (p. 31)*
Procurement	*Project pegging in Procurement (p. 33)*
	Project pegged purchase documents - related processes (p. 36)

Warehousing	*Peg distribution in the inbound and inspection processes (p. 43)*
	Peg distribution in the outbound process (p. 47)
	Peg distribution for cycle counting and adjustment orders (p. 79)
	Peg distribution - gains and losses (p. 80)
	Cost peg transfers in Warehousing (p. 84)
Service	*Project pegging in depot repair (p. 91)*
People	*Costs distribution of production order hours – examples (p. 97)*

Chapter 2
Master Data

2

Cost peg transfer rules

Cost peg transfer rules determine the sources and the destinations that are allowed for cost peg transfers. If no transfer rules are specified in the Cost Peg Transfer Rules (tcpeg1100m000) session, cost peg transfers from and to project cost pegs of all planning groups within the company are allowed.

You can set transfer rules for the following levels:

1. Planning group
2. Project
3. Element
4. Activity

The planning group is the highest level. The rules set for a particular level also apply to the lower levels. You can select the **Inherit Transfer In** and **Inherit Transfer Out** check boxes to inherit the transfer rules from the preceding, higher level. For the highest level, planning group, the inherit options are not available, because this is the highest level.

Note

If you re-assign projects to other planning groups, LN automatically updates the transfer rules. Therefore, manual adjustment of the transfer rules is not required.

Error message

When setting transfer rules, the following error message is displayed if the element and activity setup is not defined as recommended:

"Change the value of the Activity field. Reason: Work Authorization status of Project </Element/Activity/xyz> should be Released."

You can maintain elements and activities in the Activities (tppss2100m000) and Elements (tpptc1100m000) sessions.

Borrow/loan and payback transfers

If you use borrow/loan and payback transfers, ensure that cost peg transfers in and out are allowed for the projects involved in these transfers. For example, to allow project A to borrow and pay back inventory to project B, you must allow transfers in and transfers out for both projects.

Alternatively, if the transfer rules that you specified do not allow transfers out for potential borrowing projects and thus rule out payback transfers, you can select the **Ignore Cost Peg Transfer Rules for Paybacks** check box in the Project Pegging Parameters (tcpeg0100m000) session. For the relevant projects, this allows payback transfers and rules out permanent transfers.

Cost peg transfer type

The **Borrow / Loan** value does not fully exclude permanent cost peg transfers for the specified planning group, project, element, or activity. If **Borrow / Loan** is specified in the **Cost Peg Transfer Type** field:

- The generate outbound advice process will generate borrow/loan transfers if an inventory shortage is identified and ATT inventory if found at other projects. If excess inventory is present, however, the outbound advice process generates permanent transfers.

- Enterprise Planning only considers excess inventory and ignores ATT inventory when generating permanent cost peg transfers.

If **Permanent** is specified, and the **Use Available to Transfer** check box is:

- **Selected**
  Enterprise Planning and the outbound advice process generate permanent transfers from excess inventory, if present. If not, the permanent transfers are based on ATT inventory, if present.

- **Cleared**
  Permanent transfers are generated from excess inventory, if present.

If none of the projects for which the setup allows cost peg transfers has sufficient ATT or excess inventory, LN generates no cost peg transfers and creates an inventory shortage report.

The **Permanent** value excludes borrow/loan transfers.

> **Note**
>
> If the **Use Available to Transfer** check box is cleared, only the **Permanent** value is available in the **Cost Peg Transfer Type** field. If this check box is selected, you can choose **Permanent** or **Borrow / Loan** in the **Cost Peg Transfer Type** field.

Setup example for cost peg transfer rules

Cost peg transfer rules determine the sources and the destinations that are allowed for cost peg transfers. If no transfer rules are specified in the Cost Peg Transfer Rules (tcpeg1100m000) session, cost peg transfers from and to project cost pegs of all planning groups within the company are allowed.

Planning group	Project	Element	Activity	Inherit	Transfer In	Inherit	Transfer Out
A					Within Group		Across Groups

Transfers to project pegs related to planning group A are allowed if the transfers originate from projects within the same planning group. Transfers out from these project pegs to project pegs related to projects across all planning groups of the company are allowed.

Planning group	Project	Element	Activity	Inherit	Transfer In	Inherit	Transfer Out
A					Within Group		Across Groups
A	A1			X	Within Group		Within Project

For project A1, which belongs to planning group A, the rules for transfers to the project are inherited from the planning group. Transfers out of project A1 are now restricted to cost pegs within the project. To all other projects belonging to planning group A, the general rules set for planning group A still apply.

Planning group	Project	Element	Activity	Inherit	Transfer In	Inherit	Transfer Out
A					Within Group		Across Groups
A	A1			X	Within Group		Within Project
A	A1	E1	ACT1		Not Allowed		Not Allowed
		E2	ACT2		Not Allowed	X	Within Project
B					Within Project		Within Project

For cost account A/A1/E1/ACT1, no cost peg transfers in or out are allowed. Transfers to cost account A/A1/E2/ACT2 are not allowed, but transfers out are allowed to cost pegs within project A. The transfer-out rules are inherited from the transfer-out rules set for project A.

Cost peg change reasons

Peg change reasons specify why a user manually adds, changes or removes cost peg transfer lines or cost peg distribution lines.

If the **Manual Project Peg Modification** check box is selected in the Project Pegging Parameters (tcpeg0100m000) session, you can manually add, change, or delete a cost peg transfer line or a cost peg distribution line. However, you must specify the reason before you can make any modifications. For this purpose, the **Peg Change Reason** field is available in the peg sessions.

A status bar message informs you if a peg change reason is required.

Note

- Because you must specify a reason code after each saved change, do not save the peg distribution before you made all necessary changes.
- LN modifies the cost peg transfers, orders, or order lines that affect the related cost peg transfer or cost peg distribution lines. Therefore, users are not required to specify peg change reasons.

You cannot change cost peg transfer lines or cost peg distribution lines that are processed, or cost peg transfer lines that are generated from the outbound advice.

Manual Project Peg Modification

If this check box is selected, you must specify a reason code for a manual change to a project peg transfer line or project peg distribution line.

This reason code, which you can define in the Reasons (tcmcs0105m000) session, must be of the type **Project Peg Audit History**. It is applicable to all pegs in the peg distribution.

Note

Manual changes and reasons for cost peg transfer lines and cost peg distribution lines are saved in the Cost Peg Audit History (tpctm2500m000) session. For cost peg transfer lines, LN creates separate audit history records for the transfer-from and the transfer-to information.

Cost peg transfer settings for specific scenarios

The preferred availability of inventory for transfers determine how you set up cost peg transfers. This topic describes the setup required for a few typical scenarios.

Before setting up these scenarios, the general cost peg transfer and/or borrow/loan and payback setup is required.

Excess inventory only

If only excess inventory must be available for cost peg transfers:

1. Clear the **Use Available to Transfer** check box in the Planning Parameters (cprpd0100m000) session.
2. In the Cost Peg Transfer Rules (tcpeg1100m000) session, clear the **Use Available to Transfer** check box and select **Permanent** in the **Cost Peg Transfer Type** field.

As a result, LN creates only permanent transfers.

Excess and ATT within lead time fences

If you want excess and ATT inventory with safe replenishment lead times to be available for cost peg transfers, you must select the **Use Available to Transfer** check box in the Cost Peg Transfer Rules (tcpeg1100m000) session. Based on this setting, the Enterprise Planning planning engine only creates permanent transfers. The outbound process can also create borrow/loan transfers if you also select transfer type **Borrow / Loan** in the Cost Peg Transfer Rules (tcpeg1100m000) session.

Use ATT inventory with or without lead time fences

You can also ignore the lead time fences while allowing ATT inventory to be available for cost peg transfers. See *Use ATT inventory with or without lead time fences (p. 19)*.

ATT inventory with minimum cost effects – borrow/loan and payback

To handle shortages of project pegged inventory identified during the outbound process, you can use the borrow/loan and payback procedure to temporarily transfer available to transfer (ATT) or excess inventory from other projects with minimum cost impact on either project.

Important

Before setting up these scenarios, the general cost peg transfer and/or borrow/loan and payback setup is required.

Use ATT inventory with or without lead time fences

Sometimes, a demand of a project attains high priority and requires immediate fulfillment, while the project has insufficient inventory and lead time fences for the item prevent the creation of ATT cost peg transfers from other projects.

ATT lead time fences affect the availability of ATT inventory for permanent or borrow/loan cost peg transfers. You can use or ignore the ATT lead time fences. If you use the ATT lead time fences, options are available to extend the time fences.

If you increase the ATT time fence for an item, the availability of transferable inventory is reduced for projects using the item. Although this results in fewer cost peg transfers, it also reduces the inventory available to fulfill short term demands.

Conversely, ignoring the ATT time fence increases the availability of transferable inventory. Also, the number of projects eligible for permanent or borrow/loan transfers increases. Therefore, ignoring the time fences results in an increasing number of cost peg transfers. Each project from which inventory is transferred to another project can easily obtain a transfer from yet another project to fill its own inventory gap.

The ATT lead time fence is calculated based on the order lead time of the item. In the **Planned Order** field of the Items - Planning (cprpd1100m000) session, the order lead time of the item is displayed. The default ATT lead time fence is identical to the order lead time. To increase the ATT time fence, you can specify the required values in the **Use Available to Transfer Lead Time** field of this session.

To enable the creation of ATT cost peg transfers regardless of replenishment lead time fences:

1. In the Project Pegging Parameters (tcpeg0100m000) session, select the **Ignore ATT Time Fence during Outbound** check box.

2. In the Cost Peg Transfer Rules (tcpeg1100m000) session, select the **Use Available to Transfer** check box.

Consequently, the outbound process creates permanent cost peg transfers for all excess or ATT inventory that belongs to other projects, and selects cost pegs to transfer from in the following sequence:

- <u>Excess inventory</u> inventory
- ATT considering lead times
- ATT regardless of lead times

Note

- The Warehousing outbound process can also generate borrow/loan transfers for ATT inventory if:
  - The **Borrow/Loan and Payback** check box is selected in the Project Pegging Parameters (tcpeg0100m000) session.
  - **Borrow / Loan** is selected in the **Cost Peg Transfer Type** field of the Cost Peg Transfer Rules (tcpeg1100m000) session.
- The Enterprise Planning engine ignores the **Ignore ATT Time Fence during Outbound** check box.

Chapter 3
Project

3

Linking CLIN to a project structure

You can link multiple contract lines (CLINs) to a project (element structure/ activity structure). This enables you to track direct costs, compare revenues, and also estimate indirect costs (such as project management or testing) at the CLIN level. This functionality is applicable for all contract types (**Fixed Price**, **Time & Materials** and **Cost Reimbursement**, see Contract types for more information).

The related costs are displayed in the Cost Transactions (tpppc2100m000) and Financial Transactions (tpppc2100m100) sessions.

Note

- You can link a specific project peg (element/activity) to only one contract line.
- You cannot link a project to multiple contract lines, if the contract types are different, because a project can have only one revenue recognition option.

Example
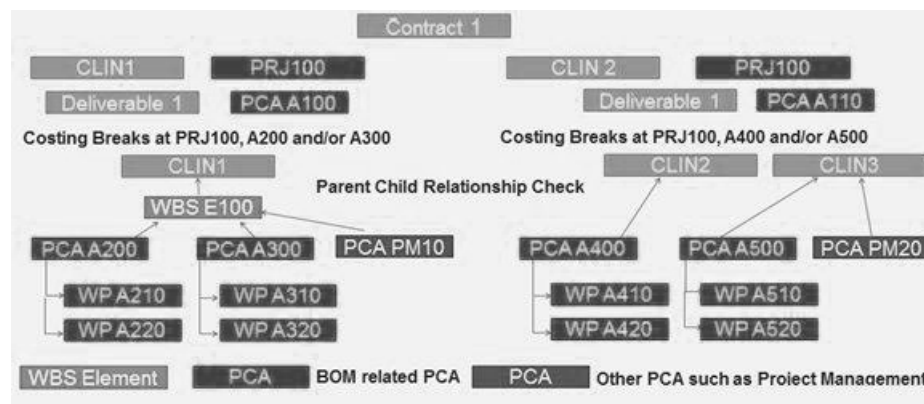
A contract with two contract lines (CLIN1 and CLIN2) is linked to the project PRJ100. Each CLIN has an activity of the type Control Account, linked to a deliverable. However, you can only view the unit costs associated with the activities linked to the deliverable, because the other activities recording the unit

costs are not linked to the CLIN. The WBS element (WBS E100) is the parent to PCA200, PCA300 and PCA PM10. The activities (WP A210, A220, A310, A320) record the unit costs that are associated with costing breaks. Since there is no link between the WBS Element or activities to the CLIN, Infor LN cannot recognize which CLIN must be linked with the unit costs of these activities.

Therefore, for project PRJ100 with activity PCAA100, the WBS Element E100 is linked to CLIN1, effectively all the levels below E100 are also linked to CLIN1, enabling you to view all the related costs.

For the project PRJ100 with activity PCAA100, you can link specific activities to specific CLINs, in case the WBS element (WBS E100) is not considered.

Link a CLIN to an element

A CLIN can be linked to multiple deliverables and each deliverable is linked to an <u>element</u>, which allows you to view the unit costs for the deliverable. However, only elements for which the <u>cost control</u> levels are checked, in the Project Parameters (tppdm0100s000) session, are linked to a CLIN, as unit costs can be collected only for these elements.

Link a CLIN to an activity

<u>Activities</u>, of the type <u>Control Account</u> and <u>Work Package</u>, can only be linked to a CLIN as these activities record the actual costs of the project.

Infor LN links all activities, not linked to a CLIN deliverable, to the related contract line. You can map the WBS of the <u>element type</u> activities to CLINs because, by default, Control Accounts are linked to WBS elements.

If WBS elements are not used, Infor LN determines the CLINs applicable to a Work Package, based on the <u>parent/child relationship</u> between a Control Account and a Work Package.

Link an element and activity structure

A project can also be element and activity controlled. You can link an element with an <u>element structure</u> and then add activities, as required. If the elements are linked to an activity that is cost controlled, both the element and activity, by default, are linked to the contract line.

> **Note**
>
> When the element and activities relationships are not specified, only elements that are cost controlled can be linked to a CLIN.

To see the process to link a CLIN to a project structure, see How to link a CLIN to a project structure.

Chapter 4
Sales

4

Project pegging in Sales

To identify costs, demand, and supply for a project, you can implement project pegging and specify the items for which project pegging is required. For more information, refer to *Project pegging overview (p. 11)*.

To use project pegging in combination with costing breaks, you must select the **Costing Breaks** check box in the Implemented Software Components (tccom0100s000) session. For more information, refer to *Costing Breaks (p. 113)*.

Project pegging in Sales includes the pegging of project costs for sales order and quotation lines. If project pegging is mandatory for the item on the sales order line or quotation line, a peg must be specified in the Sales Order Lines (tdsls4101m000) and Sales Quotation Lines (tdsls1501m000) sessions. A peg is a combination of project/ budget, project element and/or project activity. For example, if demand is pegged for a sales order line, the goods are sold for and the costs are booked to the project, element, and activity on the sales order line.

The peg is mandatory when planned inventory transactions are generated for the sales order line or quotation line. For sales quotation lines this means the peg is not mandatory if the **Probability Percentage** is lower than the value specified in the **Minimum Probability % for Time Phased Inventory** field of the Sales Quotation Parameters (tdsls0100s100) session. However, when you confirm a sales quotation line, the peg is always mandatory.

Note

If an item linked to an opportunity requires a peg, you can specify the peg in the Items by Opportunity (tdsmi1113m000) session. However, using pegs for opportunities is always optional.

When generating a sales quotation line from an opportunity item line, the opportunity's peg is copied to the **Budget**, **Element for Budget**, and **Activity for Budget** fields on the quotation line.

When a sales quotation is processed to a sales order, the peg is copied as follows:

- If the **Budget**, **Element for Budget**, **Activity for Budget**, **Project**, **Element for Project**, and **Activity for Project** fields are specified on a quotation line, the budget related peg fields are ignored and the project peg fields are copied to the sales order line peg fields.

- If only the **Budget**, **Element for Budget**, and **Activity for Budget** fields are specified on a quotation line, these fields are copied to the sales order line peg fields.
- If the **Budget** field is specified on the quotation header, this budget is copied to the project on the sales order header. However, if one of the quotation lines has a project specified that differs from the quotation line budget, the sales order header project is left empty.

The sales peg is copied to all relevant objects further in the process, such as Warehousing, Invoicing, Procurement, or Job Shop Control. If the target object uses peg distributions, the sales peg is copied to a distribution line.

Note

If project pegging is implemented but a project peg is not mandatory for an item, you can optionally specify a peg.

If a project pegged sales order requires supply from a business unit in a different logistical company, a cost peg supplying relationship must be available to keep track of and link the cost peg data of the demand and the supply business units during planning and transfer. For more information, refer to *Using cost peg supplying relationships (p. 25)*.

Chapter 5
Planning

5

Using cost peg supplying relationships

For large enterprises consisting of multiple business units, subassemblies manufactured in one business unit often must be delivered to another business unit in another logistic company. If project cost pegging is required, all costs must be tracked in both business units against their specific projects. In both companies, projects are set up, and a cost peg supplying relationship must be defined to establish a link between them. The cost peg supplying relationship links the demand cost peg from the demand company to the supply cost peg from the supply company.

Master data

Before you can use cost peg supplying relationships, these conditions must be met:

- The **Project Pegging** check box must be selected in the Implemented Software Components (tccom0100s000) session for both companies.
- The **Inherit Project Peg** or **Mandatory Project Peg** check boxes must be selected for the component in the Items (tcibd0501m000) session.
- A supplying relationship must be available for the component in the Supplying Relationships (cprpd7130m000) session of the receiving company.
- Identical item codes must be assigned to the component in both business units.

Note

If the **Use Identical Cost Pegs for Multi-Company Warehouse Transfers** check box is selected in the Project Pegging Parameters (tcpeg0100m000) session, no user involvement is required to create the cost peg supplying relationship. The receiving cost peg will use the same code as the supplying cost peg, and vice versa. However, to use automatic cost peg generation, ensure that the same project, activity, and element codes are used in the receiving and supplying company.

If the **Use Identical Cost Pegs for Multi-Company Warehouse Transfers** check box is cleared in the Project Pegging Parameters (tcpeg0100m000) session, and if delivery of a subassembly from another business unit is required, you must manually specify the cost peg supplying relationship in the Cost Peg Supplying Relationships (tppss3130m000) session of the receiving company. An entry appears in the Cost Peg Supplying Relationships (tppss3130m000) session of the supplying business unit to which

the supplying cost peg data must be added. Additionally, through SocialSpace, a message can be sent to the supplying business unit to notify that the supplying cost peg must be added to this cost peg supplying relationship.

After the supplying cost peg is added by the supplying business unit, the status of the cost peg supplying relationship can be set to **Completed**. A cost peg supplying relationship with the **Completed** status can be used on a planned distribution order or (manual) warehouse transfer.

Planned distribution orders and warehouse transfers

If a demand order needs supply from a business unit in a different logistical company, a multicompany planned distribution order is generated for the project pegged demand using the Generate Order Planning (cprrp1210m000) session.

One planned distribution order can have multiple demand orders with different project pegs, and a peg distribution. For each of these pegs, Enterprise Planning uses the applicable cost peg supplying relationship to retrieve the project pegs for the planned inventory movements in the supplying company.

In the Transfer Order Planning (cppat1210m000) session of the receiving company, you can transfer a multicompany, cost pegged planned distribution order only to a warehouse transfer and not to a purchase order. The warehouse transfer uses the receiving and supplying cost pegs of the planned distribution order.

> **Note**
>
> If the item is not cost pegged in the supplying company (the **Inherit Project Peg** and **Mandatory Project Peg** check boxes are cleared), the supplying cost peg can remain empty.

Planned distribution order		Supplying company		
		Mandatory Project Peg selected	**Inherit Project Peg selected**	**Not cost pegged**
Receiving company	**Cost pegged**	Receiving and supplying cost peg	Receiving and supplying cost peg	Receiving cost peg only
	Not cost pegged	Not supported	No cost peg in both business units	No cost peg in both business units

In case of a planned distribution order, the demand in the receiving company triggers the supply via a warehouse transfer. This table shows the various pegging options supported for this scenario.

You can also manually create a warehouse transfer. In this case, you must manually select a supplying cost peg based on which the receiving cost peg is retrieved. If multiple receiving cost pegs are linked to one supplying cost peg, all linked receiving cost pegs are shown from which you can make your selection. Alternatively, you can select an existing cost peg supplying relationship.

If no cost peg supplying relationship is found for the to be transferred supply, an error message is displayed.

Manual warehouse transfer		Supplying company	
		Cost pegged	**Not cost pegged**
Receiving company	**Mandatory Project Peg selected**	Receiving and supplying cost peg	Not supported
	Inherit Project Peg selected	Receiving and supplying cost peg	No cost peg in both business units
	Not cost pegged	Cost peg in supplying business unit only	No cost peg in both business units

In case of a manual warehouse transfer, the warehouse transfer is created in the supplying company before the receiving side is triggered. This table shows the various pegging options supported for this scenario.

Updating cost peg supplying relationships

Planned distribution order

- If the receiving business unit changes the cost peg on the demand order, you must manually update the existing cost peg supplying relationship. To perform the update, the status of the cost peg supplying relationship must be **Draft**. After the cost peg supplying relationship is changed and the status set to **Submitted**, the supplying business unit can update the supplying cost peg.
- The supplying business unit can change the supplying cost peg on the cost peg supplying relationship if its status is **Draft** or **Submitted**.
- If the cost peg supplying relationship is changed after the warehouse transfer is created, you must manually delete the warehouse transfer or change the cost peg(s) on the warehouse transfer.

Manual warehouse transfer

- If the supplying business unit changes the supplying cost peg on the warehouse transfer, the existing cost peg supplying relationship is not changed. If required, the receiving business unit must manually change the receiving cost peg on the warehouse transfer.
- The supplying business unit can change the supplying cost peg on the cost peg supplying relationship if its status is **Draft**.
- The receiving business unit can change the ship-from or ship-to company on the cost peg supplying relationship if its status is **Draft**. After the cost peg supplying relationship is changed

and the status set to **Submitted**, the supplying business unit can update the supplying cost peg.

- The receiving business unit can change the receiving cost peg on the cost peg supplying relationship if its status is **Draft** or **Submitted**.

Note

You can delete cost peg supplying relationships with the **Draft** or **Closed** status.

Cost peg transfers in Enterprise Planning

These types of cost peg transfers are available in Enterprise Planning:

- **Manual cost peg transfer**
  Orders for this type of transfer are retrieved from Warehousing and are considered firm planned demand. You cannot create, updated, or delete these orders in order planning. You can view these orders in the Item Order Plan (cprrp0520m000) session.

- **Planned cost peg transfer**
  Orders for this type of transfer are created based on the available excess on hand and excess on order. You can view these orders in the Item Order Plan (cprrp0520m000) session. A transfer from a project peg is shown as a demand transaction and a transfer to a project peg is shown as a supply transaction.

  You can also view planned cost peg transfers in the Planned Cost Peg Transfers (cprrp0130m000) session, which shows detailed information about the transfer.

Cost peg transfers in order planning

Order planning takes both manual cost peg transfers and planning cost peg transfers into account. The manual cost peg transfers are treated as demand orders and the excess on hand and excess on order are used to supply these transfers. If there is insufficient excess on hand or on order, a cancel exception message is logged.

Planned cost peg transfers are created, updated, or deleted during the demand and supply matching of the order planning run. The planned cost peg transfers are maintained by the order planning process and cannot be changed.

Creating planned cost peg transfers

When excess on hand or excess on order is available that can be assigned to a cost peg, a planned cost peg transfer is created to show the transfer of the cost peg. Transfer rules that apply to the excess are verified in the Cost Peg Transfer Rules (tcpeg1100m000) session.

Updating and deleting planned cost peg transfers

Planned cost peg transfers that have the **Planned** status cannot be changed. Before the planning of a plan item starts, planned cost peg transfers that have the **Planned** status, are deleted.

Planned cost peg transfers with a status of **Firm Planned** or **Confirmed** cannot be changed by order planning. The procedure for planned cost peg transfers is the same as for manual cost peg transfers.

The default status of a cost peg transfer is **Planned**. You can change the status of a cost peg to **Firm Planned** or **Confirmed**.

Cost peg transfer exception messages

Cancellation exception messages can be logged for cost peg transfers. You can delete or regenerate these exception messages in the Update Exception Messages (cprao1210m000) session.

Temporary cost peg transfers

You can transfer inventory between two projects. If the **Borrow/Loan and Payback** check box is selected in the Project Pegging Parameters (tcpeg0100m000) session, there is no cost or billing impact.

The borrow/loan functionality allows the physical transfer of materials between projects for a limited amount of time. The borrowing projects remain responsible for any additional costs incurred during the time the loan is active.

If the **Aging** check box is selected in the Project Pegging Parameters (tcpeg0100m000) session, you can specify time limits for the return of the borrowed inventory. If the loaned inventory cannot be replenished on time by the borrowing project, the loan is converted into a permanent transfer.

Project Pegging in Manufacturing

Production orders

Production orders with <u>peg</u> information are created as follows:

- **Transferred from Enterprise Planning**
  Peg information from planning is transferred during creation.

- **Created manually**
  You can specify peg information based on the item settings such as **Inherit Project Peg** and **Mandatory Project Peg**. The peg distributions that you specify are checked against commingling rules to verify that the pegs can be on the same production order.

  You can also specify a peg on a production order for an anonymous end item.

Note

When you print production order documents in the Print Production Order Documents (tisfc0408m000) session, peg information is also printed.

Bill of material

Because you can modify the **Inherit Project Peg** setting for an item, inconsistencies in the BOM can occur. To prevent inconsistencies, you must set up a <u>multilevel bill of material</u> that is validated when you change the setting of an item.

Estimated materials

Estimated materials can be updated with peg information from a production order. Each material line requires its own peg distribution that is sent to planned inventory transactions. You cannot change the peg information in the peg distribution for an estimated material line. For each line, the quantity is prorated based on the planned quantity that is required per peg.

Material issue

When parts that are project pegged are issued to a production order, the associated costs are updated in that production order. Because the material costs are already included in the production order, the project costs are not updated.

If there is a shortage of pegged inventory on a peg, and excess inventory is available from another peg, transfer rules determine whether inventory can be transferred between pegs.

When anonymous items are issued to a peg production order, costs are updated in the project ledger and in the production order. When a <u>customer furnished material</u> item is issued to a production order, costs are not updated in the project ledger or production order.

Safety stock calculation

You can, for non-mandatory project pegged items, receive orders for an inventory item to fulfill project pegged demand, and at the same time adjust the <u>safety stock</u>. The supply order is a combined distribution of project pegged demand and safety stock demand (no project peg).

An item that is not project pegged can be used to fulfill project pegged demand and also adjust the <u>safety stock</u> at the same time. In this case, the supply order includes a combined distribution of project pegged demand and safety stock demand (no project peg).

Note

If the supply for a specific project cost account is excluded from commingling, this supply cannot be combined with the supply for safety stock.

Report operations completed

The distribution line to choose when reporting a certain end item quantity complete is based on priority of the different lines. The priority is determined by requirement or need date and by the distribution line sequence of the project pegs. To always work with correct values the Generate Order Planning (Item) (cprrp1220m000) and Generate Pegging Relations Forecast - Confirmed Supply (cpvmi1212m000) sessions must be run regularly.

For a specific production order and project peg, Enterprise Planning can specify *zero*, *one* or *more* requirement dates with a specific quantity for each.

If more than one date exists for a distribution line, they may not be reported completed for the full quantity, but partially per the different requirement dates.

Project pegging in Procurement

To identify costs, demand, and supply for a project, you can implement project pegging. You can also specify the items for which project pegging is required. For more information, refer to *Project pegging overview (p. 11)*.

To use project pegging in combination with costing breaks, you must select the **Costing Breaks** check box in the Implemented Software Components (tccom0100s000) session. For more information, refer to *Costing Breaks (p. 113)*.

Project pegging in Procurement includes pegging of project costs for purchase documents, such as requisitions, requests for quotation, purchase orders, and purchase (push) schedules. If the item specified for the purchase document requires a peg, a peg distribution must be linked to the document. As a result, the required quantity of the parent document is distributed across distribution lines for combinations of project/budget, project element and/or project activity. For example, if a distribution is used to peg the ordered quantity of a purchase order line, the purchased goods and the related costs are booked to these projects, elements, and activities.

Note

If project pegging is implemented but a project peg is not mandatory for an item, you can optionally specify a peg (distribution).

Generating a peg distribution

When you save a purchase document line, a peg distribution can be generated in the Purchase Peg Distribution (tdpur5100m000) session. A peg distribution can be manually specified or automatically defaulted from other documents.

This table shows the documents stored on the distribution line and the related fields:

Document Type for Peg Distribution	Business Object	Document Reference
RFQ Line	RFQ number	position/alternative
RFQ Response	RFQ number	position/alternative/bidder
Requisition Line	requisition number	position
Purchase Order Line	order number	position/sequence
Purchase Order Receipt	order number	position/sequence/receipt sequence
Purchase Order Material Supply Line	order number	position/sequence/material sequence
Stage Payment Line	order number	position/stage payment line
Purchase Schedule Line	schedule number	position
Purchase Schedule Receipt	schedule number	position/receipt sequence

Commingling pegs

If purchase order/schedule lines are project pegged, commingling of pegs is subject to project combination checks. Commingling rules specified in **Project Pegging** in Common, determine if lines with different pegs can be commingled into one purchase order line or purchase schedule. In general, commingling is executed by planning group, which includes the commingling rules for the linked projects. However, commingling for export license required items is restricted by project. This means if projects are different, separate purchase order lines or purchase schedules are created. To further restrict commingling, you can specify commingling exceptions, which are the pegs that must be excluded from commingling.

Example

Project 1 with activity 10 and project 1 with activity 20, have a requirement for an export licensed item.

- Without an exception: One purchase order line with two distribution lines are created.
- With an exception for one or both of the activities: One purchase order line per project peg, one purchase order with two purchase order lines are created.

Note

If commingling of pegs is not allowed, a new purchase schedule header must be created when generating schedule lines from Enterprise Planning. Therefore, multiple active schedules with the same item, buy-from business partner, ship-from business partner, purchase office, and warehouse can be available.

Handling peg data

If the purchased goods and related costs are booked to only one project, the peg is displayed on the purchase document line. When you save the line, LN creates one distribution line for the peg distribution. Peg fields, quantities, or the ordered amount can be updated on both the parent document line and the distribution line, before the lines are synchronized. If additional pegs (distribution lines) are specified in the peg distribution, the peg fields are cleared on the parent document line and the quantities or ordered amount are disabled. The sum of the quantities or ordered amounts on the peg distribution can be updated to the quantities or ordered amount on the parent document line. If the peg distribution's total quantity differs from the quantity on the parent document line, a message with regards to updating the parent document line is displayed: **Peg distribution quantity does not match line total. Click OK to update 'Total'**.

If the **Manual Project Peg Modification** check box is selected in the Project Pegging Parameters (tcpeg0100m000) session, for all manual actions that affect a peg distribution, you must specify a change reason in the pegged purchase document. The project peg changes and reason codes are logged in the Cost Peg Audit History (tpctm2500m000) session for analysis.

Note

- The reason code applies to the entire peg distribution. So, when you change a single line in a peg distribution, the reason code is applied to all pegs in the peg distribution.
- A message is displayed if a change reason is required. Based on the session, you must specify the change reason either in a field or window. If you do not specify a change reason, you cannot save the pegged purchase document.
- Planned inventory transactions, material transactions, and (financial) integration transactions are not generated for the parent document line, but for the peg distribution. Therefore, transactions are booked by peg

If the **Change Requests** check box is selected in the Purchase Order Parameters (tdpur0100m400) session, the peg distribution can be modified after purchase order approval or printing only by using the change request process.

Warehouse receipts

For partial warehouse receipts, pegs with the highest priority receive the quantities. The priority of the peg is based on the required date and quantity, as specified in Enterprise Planning, for the required purchase line. The peg with the earliest required date has the highest priority.

If the required date and quantity cannot be retrieved from Enterprise Planning, the following is applicable:

- **Purchase order lines**
  The priority is based on the dates specified for the inbound order line peg distribution.
- **Purchase schedule lines**
  The priority is based on the dates specified for the purchase schedule line peg distribution. Schedule lines are not linked to individual inbound order lines because, for push schedules, goods are received against a blanket warehouse order, which is linked to the schedule header. During the receipt process for a required quantity, the pegs that match the total quantity to be received for the schedule lines are transferred to Warehousing for use in the receipt process. These schedule lines are transferred, based on line position and the (oldest) planned receipt date. The generated warehouse receipt line peg distribution is a subset of the (aggregated) peg distribution of the schedule lines.

When a receipt is confirmed, the peg distribution (order line) or peg distribution data (schedule line) is copied from the warehouse receipt line to the purchase order/schedule receipt. You cannot update the peg distribution for the purchase order/schedule receipt.

If a receipt correction or an inspection is performed for a receipt line in Warehousing, based on the priority specified for the peg distribution, the peg distribution lines are also updated with the modified quantity. Based on the **Warehouse Receipt Distribution Line** field in Warehousing, the related distribution lines are updated in the Purchase Peg Distribution (tdpur5100m000) session.

Purchase receipts

For partial purchase receipts and invoice handling, priority rules are not used. Partial purchase receipts are proportionally distributed across the peg distribution lines. You cannot update pegging information on the purchase receipt. However, if a parent document line and the linked distribution line(s) include an ordered amount and no ordered quantity, you can change the ordered amount after receipt in the Change Price and Discounts after Receipt (tdpur4122m000) session. If the received amount is changed for the order line, the amount change is proportionally distributed across the peg distribution lines.

Project pegged purchase documents - related processes

If a purchase document requires a peg or is project pegged, the related processes are also affected.

Additional information fields

If a purchase document line, such as a requisition line, RFQ line, or purchase order line is generated or manually created and the line is project pegged, the additional information that is specified for the linked (project) contract line(s), is verified. The information in the additional fields of the project contract line(s) is transferred to the additional fields of the purchase document line, provided identical additional field

names are specified for both tables in the Additional Information Definitions (tcstl2100m000) session. See *Additional information for project pegged purchase documents (p. 39)*.

Backorders

Backorder lines are handled as independent order lines. During backorder creation, the original distribution line number is specified in the **Parent Distribution Line** field of the Purchase Peg Distribution (tdpur5100m000) session. You can change, add, and delete peg distribution lines for a backorder line. The backorder line pegs need not be equal to the parent object line pegs. However, if the backorder line is linked to a purchase line for item subcontracting, you cannot add new pegs or modify the project, element, or activity of a distribution line that is linked to the backorder line.

Landed costs

If landed costs are linked to an order/schedule line with a peg distribution, the landed costs are proportionally calculated by peg and transferred to the Integration Transactions (tfgld4582m000) session, based on the peg distribution that is linked to the order/schedule line.

Requisition generated from catalog

If a purchase requisition line is generated from a catalog and the selected item requires a peg, the requisition line can be inserted without a peg distribution. LN does not check the availability of a purchase distribution before the requisition is submitted for approval.

Return orders

When returning pegged goods, specific conditions are applicable.

Returning pegged inventory

Specific conditions are applicable for returning pegged inventory:

- If a return order line is linked to an original document, the linked peg distribution is defaulted. If a return order line is not linked to an original document, you can manually specify a peg distribution for the return order line.
- You can manually update the defaulted peg distribution. The return order line's pegs can differ from the pegs on the original document.
- If two purchase return order lines are linked to a specific original schedule line/schedule receipt line, the same return order quantity and peg distribution are defaulted for both order lines. As a result, you must manually decrease the return order quantity and update the peg distribution.

Returning pegged rejects

LN takes the peg information for the purchase return order from the order from which the purchase return order was generated. For items rejected during receipt, this is the information from the receipt

line pegs of the warehousing order related to the originating purchase order. For items rejected during issue, this is the information of the outbound order line pegs of the warehousing order related to the purchase return order. LN selects the pegs having a quantity in quarantine.

The quarantine quantities are displayed in the **Quarantine Inventory** field of the Receipt Line Peg Distribution (whinh3528m000) and Outbound Order Line Peg Distribution (whinh2190m000) sessions.

The quantities to be returned are subtracted from the quarantine inventory and subsequently the project inventory.

For the pegs involved, the return quantity is first subtracted from the pegs whose original receipt line or outbound order line peg quantity exceeded the ordered quantity. The overdelivered quantity to be subtracted is equally apportioned to each peg.

If this does not cover the entire return quantity, the remaining quantity to be returned is subtracted from the pegs whose original receipt line or outbound order line peg quantity exceeded the required quantity in sequence of peg line number: first line number 10, then 20, and so on.

Next, if this still leaves a quantity to be returned, the return quantity is subtracted from the remaining pegs starting with the peg with the latest requirement date.

You cannot manually change the quantities to be returned on the purchase return order. You can only change these quantities by changing the purchase return order line pegs.

RFQ response line

After a bidder is linked to an RFQ, a record is inserted in the RFQ Responses (tdpur1506m000) session, but no peg distribution is linked. The RFQ line's peg distribution is copied to the response line when the status is set to **Accepted**. A peg distribution that is linked to a response line with the **Accepted** status cannot be updated.

Subcontracting with material flow

For project pegged orders, operations or items can be subcontracted. In case of a project pegged subcontracting order with material flow, a peg distribution is linked to the **Purchase Order Material Supply Line**. For more information, refer to *Pegging material supply lines for operation and item subcontracting (p. 40)*.

Supplier stage payments

If an item that requires a peg must be invoiced by supplier stage payments, a peg distribution is linked to a **Stage Payment Line** when the stage payment line is approved. For a specific purchase order line and stage payment line, the stage payment line's **Amount** is distributed across distribution lines for combinations of project/budget, project element and/or project activity. The peg information in the Purchase Peg Distribution (tdpur5100m000) session includes the line number for the peg in the distribution, the peg (project, element, activity), and the stage payment amount by peg.

The peg distribution is deleted if the stage payment line is unapproved.

Additional information for project pegged purchase documents

Standards, conditions, and requirements (clauses) between a customer and contractor can be specified as additional information on project contract lines. Because these clauses also affect the suppliers or subcontractors involved, the clauses can be transferred down the supply chain.

If a purchase document line, such as a requisition line, RFQ line, or purchase order line is generated or manually created and the line is project pegged, the additional information that is specified for the linked (project) contract line(s), is verified. The information in the additional fields of the project contract line(s) is transferred to the additional fields of the purchase document line, only if identical additional field names are specified for both the tables in the Additional Information Definitions (tcstl2100m000) session.

Example

This table shows the additional information fields that are applicable for a purchase document line:

Contract line	Purchase order line	Field relevant?
ADI1	ADI1	yes
ADI2	-	no
-	ADI3	yes

If a purchase document line is generated from a source that includes additional information and that also has a peg distribution with additional information, only the additional information of the source document is transferred to the purchase document line that is generated. The additional information of the linked peg distribution is not considered. If an additional information definition is not specified for the source document in the Additional Information Definitions (tcstl2100m000) session, but the source document is linked to a peg distribution with additional information, the additional information from the peg distribution is transferred to the purchase document.

Example

1. A purchase requisition line with a peg distribution is manually specified.
2. When specifying the pegs, the information in the additional fields of the project contract line(s) is transferred to the additional fields of the requisition line.
3. The requisition is converted to an RFQ.
4. The additional information of the requisition line is transferred to the RFQ line/ response line. The additional information for the linked peg distribution is not verified, because the requisition line already includes this information. Modifications made by the buyer to the additional information fields on the requisition line, are also transferred to the RFQ line/ response line.

When a project peg is deleted or modified for the purchase document line peg distribution, the additional information fields are not removed or updated. Buyers must review the additional information to determine if data is missing or redundant and must be manually modified. They can generate reports to view the differences between the additional information fields for the purchase document line and the project contract line(s). Additional information fields with matching content are not displayed.

Depending on the purchase document type, buyers can use these sessions to compare the additional information and print the differences:

- Print Purchase Requisition Additional Information Differences (tdpur2406m000)
- Print Purchase RFQ Additional Information Differences (tdpur1421m000)
- Print Purchase RFQ Response Additional Information Differences (tdpur1426m000)
- Print Purchase Schedule Additional Information Differences (tdpur3411m100)
- Print Purchase Order Additional Information Differences (tdpur4410m000)

Note

- Additional information can be compared only if the purchase document has a linked peg distribution. Each peg in the peg distribution is compared with the document line. Consequently, a document line can be displayed more than once on a report.
- If multiple pegs, related to different project contract lines, are linked to a purchase document line, the clauses (additional information) of all these contract lines are transferred to the purchase document line. Contradicting clauses (additional information with the same field name, but a different field value) lead to loss of information. By setting up planning groups and commingling exceptions in **Project Pegging** in Common, you can avoid this conflict of clauses of different project pegs.

Pegging material supply lines for operation and item subcontracting

For project pegged production orders, operations can be subcontracted. The material delivered to the subcontractor can be project pegged or anonymous. The subassemblies that are sent and retrieved are always project pegged. Costing breaks can apply to direct the costs of the subcontracted operation to a specific project cost account. If (production material) costing breaks are used, a purchase order line's peg can differ from the peg on the material supply line.

For item subcontracting, the subcontracted purchase orders can include materials that inherit the project pegs, or can include anonymous materials. The pegged materials are stored in inventory and are shipped to the subcontractor with project pegged orders.

Note

The **Project Pegged Inventory** check box in the Purchase Order Material Supply Lines (tdpur4116m000) session determines if project pegged or anonymous inventory is utilized when issuing components to the subcontractor. This also determines if pegged or unpegged consumptions are performed.

In case of a project pegged order, a peg distribution is linked to the **Purchase Order Material Supply Line** in the Purchase Peg Distribution (tdpur5100m000) session. For a specific purchase order line (detail) and material sequence, the material supply line's **Order** and **Consumption** quantities are distributed across the peg distribution lines for combinations of project/budget, project element, and/or project activity. The peg information in the Purchase Peg Distribution (tdpur5100m000) session includes the line number for the peg in the distribution, the peg (project, element, activity), and the material supply line quantity by peg. The peg distribution cannot be manually created and must always be generated using the parent.

For <u>operation subcontracting</u>, the purchase order line, the material supply line, and the linked peg distributions are generated by Job Shop Control and can only be updated by JSC.

For <u>item subcontracting</u>, the purchase order line, the material supply line, and the peg distributions are generated by Procurement. A material supply line's peg distribution can be updated only from the parent, that is the purchase order line, the purchase order line peg distribution, or the material supply line. If a purchase order line's distribution line is changed, and no quantities are received or consumed yet, the pegged fields on the linked material supply lines are synchronized to the updated distribution line in the Purchase Order Material Supply Lines (tdpur4116m000) session. However, if a different quantity distribution is applicable, the quantities of the material supply lines' distribution lines are redetermined in the Purchase Peg Distribution (tdpur5100m000) session.

Consuming pegged components

If the **Project Pegged Inventory** check box is selected in the Purchase Order Material Supply Lines (tdpur4116m000) session, pegged consumptions are performed.

For operation subcontracting, consumptions are handled by Job Shop Control. For item subcontracting, consumptions are handled by Purchase Control. The consumptions are updated using <u>backflushing</u>, consumption messages, or through manual consumption.

- **Backflushing**
  The distribution line number constitutes the link between the pegs of the received end item and the components that must be backflushed. Therefore, the received purchase order line-pegs are used to backflush the quantities of the material supply line-pegs.

- **Consumption messages**
  If consumption messages are used to inform the manufacturer about the consumption of components, the subcontractor does not know whether the order is pegged.
  The total consumption quantity of the consumption message is assigned to the following levels, in descending sequence of priority:

  a. Priorities from Enterprise Planning, based on the planning details of the purchase order line receipt. The peg with the oldest need date is consumed first.

  b. Priorities from Enterprise Planning, based on planning data from Enterprise Planning. The peg with the oldest need date is consumed first.

  c. Distribution line number. The peg with the lowest distribution line number is consumed first.

- **Manual consumption**
  If backflushing is used, you can manually adjust the consumed quantity of the material supply lines. The inventory is increased or decreased using the pegs.
  - **Positive adjustment**
    More components are used than calculated by the backflushing mechanism. The total adjustment consumption quantity is divided pro rata across the pegs.
  - **Negative adjustment**
    Backflushed inventory is returned to inventory.
    The adjustment quantity is distributed across the pegs, based on:
    a. Priorities from Enterprise Planning, considering the planning details for the purchase order line receipt: the peg with the lowest priority is returned to the inventory first.
    b. Receipt date: the peg with the latest receipt date is returned to the inventory first.

Chapter 8
Warehousing

8

Peg distributions

Peg distribution in the inbound and inspection processes

Receiving project pegged goods into a warehouse results in inventory transactions that are based on the underlying peg distribution of the related receipt line.

Inbound and pegging

This results in an update of the pegged inventory levels in the Project Pegged Inventory (whwmd2560m000) session. The planned quantity of the inbound order line is updated in the Planned Inventory Transactions (whinp1500m000) session, which also includes the peg data. Planned inventory transactions are also generated for each peg.

If the receipt line is marked for inspection, the received quantity is blocked. Depending on the parameter settings, the quantity can also be blocked for usage by Enterprise Planning. Any quantity, rejected (or destroyed) during receipt inspection are assigned to the pegs having the latest required date to make sure that the approved items are assigned as much as possible to the pegs with the earliest required date in order to meet the demand in time.

Project warehouses

For a ship-from or ship-to warehouse, that is a project or a project-WIP warehouse, no inbound/outbound order line peg distribution is created. Instead, the project fields on the inbound/outbound order lines are used. When however, an inbound/outbound order line is created for a project pegged item related to a normal warehouse, a peg distribution is applicable and the project fields on the inbound/outbound order lines are disabled.

Inbound order line peg distribution

For an inbound order line, the peg distribution data can only be viewed and not maintained. In case of manual transfer orders, the peg distribution can only be maintained (manually) on the outbound order

line. When an outbound transfer line is saved after the peg distribution is modified, the inbound transfer order line peg distribution changes accordingly.

Cost and service Items

For order lines with a cost or service item, also a peg distribution can exist, but assigning the received quantities of these item types to the peg lines is always performed pro-rata. This peg distribution data is only essential for proper cost allocation to projects/pegs and has no logistic purpose as these items are non-physical entities. When ordering zero pieces of a certain cost/service item, also a peg distribution can be created, consisting of only one peg line.

Warehouse receipts

- **Receipt line peg distribution**
  When confirming a receipt line, LN creates a peg distribution under the receipt line. In addition, peg distribution receipt data is recorded for future auditability in the Receipt Line Peg Distribution Audit (whinh3579m000) session if the **Project Peg Receipt Transactions** check box is selected in the Project Pegging Parameters (tcpeg0100m000) session.

  The sequence of assigning received items to pegs is based on the earliest required dates and required quantities retrieved from Enterprise Planning.

  If an inbound line contains multiple pegs and the received quantity deviates from the ordered quantity, the received quantity must be apportioned to the peg distribution lines according to the priority determined by the earliest required date as specified in Enterprise Planning. The peg distribution lines are generated when the receipt is confirmed.

  Sometimes, the order quantity of the order exceeds the total required quantity of the item, resulting in an excess quantity. The excess is determined in Enterprise Planning, in which case the distribution lines have no demand order reference and an empty required date. Any excess on top of the required quantity (not exceeding the ordered quantity) is assigned to the pegs in peg line sequence. Any excess that is received on top of the ordered quantity is proportionally distributed to the peg lines based on the ratio of ordered quantities.

- **Updating planned inventory transactions/inventory levels**
  When confirming a receipt line, the planned inventory transactions are updated, based on the received quantities of the corresponding receipt line peg distribution. So, the planned inventory transactions are recorded on project peg level.

  When confirming a receipt line, the inventory on hand is increased in the Warehouse - Item Inventory (whwmd2515m000) session. Similarly, the inventory on hand must be increased in the Project Pegged Inventory (whwmd2560m000) session, based on the received quantities of the corresponding receipt line peg distribution.

- **Assigning received quantities to project pegs**

  In case of a full, partial or over receipt on an expected inbound order line containing multiple peg lines, LN decides to which pegs the received quantity is assigned, based on the following sequence:

  a. The pegs having the earliest required date are received first, until all required quantities are fulfilled.

  b. The pegs having unfulfilled ordered quantities (and no required quantities anymore) are received in sequence of peg line.

  c. Any excess on top of the ordered quantity is proportionally assigned to the pegs.
  When the full order line quantity is received on the linked receipt line, for each order line peg, a receipt line is created and the total of the received quantities per peg line is equal to the ordered quantity.

- **Back Orders**

  For a confirmed receipt line, if the received quantity is less than the expected quantity, the difference must be resolved in Purchase Control by processing the created back order (if allowed). This back order is received on another inbound line with a peg line distribution for the pegs that are not fully received.

  When the back order line is received and confirmed, a receipt line peg distribution is created for the remaining pegs received.

- **Receipt Corrections**

  You can use the Receipt Correction (whinh3121s000) session to change the confirmed received quantity. Increasing the already received quantity leads to a positive receipt correction. The additional received quantity is assigned to the pegs in the same way as the initial receipt.

  a. The pegs having the earliest required date are received first.

  b. The pegs having unfulfilled ordered quantities are received in sequence of peg line.

  c. Any excess on top of the ordered quantity is proportionally assigned to the pegs.
  Decreasing the already received quantity leads to a negative receipt correction.

  When the received quantity is decreased, the change in received quantity is distributed across the received pegs as follows:

  a. Any excess on top of the ordered quantity is decreased proportionally.

  b. The received excess on top of the required quantity, but less than the ordered quantity, is decreased in sequence of the peg line.

  c. Any remaining received quantity is decreased in the sequence of the latest required date.

Inbound procedure - inspection

The Warehouse Inspections Overview (whinh3122m000) session does not have a peg distribution. Registration of inspected/rejected quantities takes place in the peg distribution available under the receipt lines which roll up into the inbound order line peg distribution.

Generally, inventory subject to warehouse inspections remains blocked. Similarly, the project pegged inventory to be inspected remains blocked. After processing the inspection, the planned inventory transactions and the inventory levels are updated accordingly, by peg level.

Approved quantities are assigned first to peg lines having the earliest required date. Rejected or destroyed quantities are assigned first to the peg lines having the latest required dates. In case of excess quantities, the excess quantities must be utilized first. The rejected or destroyed quantities are distributed based on the actual received quantities of the receipt line (not on the total values of the related inbound order line). The updated receipt line peg information is rolled up to the level of the inbound order line peg distribution.

Outbound procedure - inspection

The Warehouse Inspections Overview (whinh3122m000) session does not have a peg distribution. There is also no specific peg distribution related to the outbound advice. Inspected rejected quantities are registered in the Outbound Order Line Peg Distribution (whinh2190m000) session.

Generally, inventory scheduled for outbound inspections remains blocked. Similarly, the project pegged inventory to be inspected remains blocked. After processing the inspection, the planned inventory transactions and the inventory levels are updated accordingly, by peg level.

Update outbound order line pegs

The **To be Inspectedin Inventory Unit** field in the Outbound Order Line Peg Distribution (whinh2190m000) session includes the advised peg quantity that is already released and is subject to inspection.

The following conditions are applicable to handle the outbound order line pegs during warehouse inspections:

- For each released outbound advice, an inspection line is created. At this point, the **To be Inspectedin Inventory Unit** is defined and apportioned to the pegs in sequence of earliest required date.

- When the advised quantity of the earliest peg is fully assigned as **To be Inspectedin Inventory Unit**, the remainder of the released quantity is assigned to the **To be Inspectedin Inventory Unit** of the next peg with the earliest required date and so on.

- Any approved quantities are assigned to the pegs in sequence of the earliest required date.

- Any rejected quantities are assigned to the pegs in sequence of latest required date. But in case of over delivery (Advised quantity > Ordered Quantity), the excess must be consumed first in sequence of earliest required date.

- The **To be Inspectedin Inventory Unit** of the pegs is blocked for inspection.

- While processing an inspection record, any approved or rejected quantity is apportioned only to the pegs that have a **To be Inspectedin Inventory Unit**. This **To be Inspectedin Inventory Unit** is consumed by the approved and rejected quantities assigned to the peg. Effectively, the blocked quantity is decreased for the quantity processed.

Peg distribution in the outbound process

During the outbound process, issuing project pegged goods from a warehouse results in inventory transactions that are based on the peg distribution.

During the outbound advice and during inspections, the outbound order line cost peg distribution is updated with the advised quantities, approved quantities and the rejected quantities. When the goods arrive at the staging location and are shipped, the actual pegs are created. During the confirmation process, the shipment line peg distribution is created.

Generating outbound advice

While generating an outbound advice for a pegged outbound order line, additional inventory checks are performed to determine the pegged inventory that must be advised. LN first searches for the available stock points. If the stock point is identified, the outbound order line cost peg distribution is advised based on the available quantity at the stock point and the available quantity in the project pegged inventory. The peg distribution is based on the earliest required date.

When determining the quantity that must be advised for each separate peg line, this calculation is performed before searching for the project pegged inventory:

```
Quantity to be advised = Required Quantity - Advised Quantity - Rejected
Quantity
 - Shipped Quantity - Not Shipped Quantity - Expected Not Shipped Quantity

Quantity to be advised = Minimum (To be distributed (Stock point Quantity),
 To be Advised )
```

This table explains the quantity that must be advised:

Required Quantity	Advised Quantity	Shipped Quantity	Not Shipped Quantity	To be Advised Quantity
10	10	10	0	0 (10 – (10 – 0))
20	10	10	0	10 (20 – (10 – 0))
20	20	10	10	10 (20 – (20 – 10))
20	20	10	0	0 (20 – (20 – 0))
20	20	15	5	5 (20 – (20 – 5))
20	20	0	20	20 (20 – (20 – 20))

After the to be advised quantity is retrieved, the project pegged inventory search engine is activated.

These scenarios exist:

- No shortages, full advise
- Shortage on project pegged inventory
- Shortage on stock point inventory
  - Part that can be advised has no shortage in project pegged inventory
  - Part that can be advised has a shortage in project pegged inventory

No shortages, full advise
Initial position of the inventory:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available Quantity
WH01	item001	100	0	100

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			40	0	40
WH01	item001	proj2	elem2	acti2			40	0	40
WH01	item001	proj2	elem3	acti2			20	0	20

Outbound Order Line (whinh220)

Order Ori-gin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Open

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	0	10/30/2011

| Sales | SLS000001 | 10 | 1 | 20 | proj2 | elem2 | acti2 | 20 | 0 | 11/1/ 2011 |
| Sales | SLS000001 | 10 | 1 | 30 | proj2 | elem3 | acti2 | 10 | 0 | 10/29/ 2011 |

In the example, you can see that the outbound order line can be advised because the inventory levels are sufficient.

This example displays results after an outbound advice is created:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available Quantity
WH01	item001	100	40	60

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			40	10	30
WH01	item001	proj2	elem2	acti2			40	20	20
WH01	item001	proj2	elem3	acti2			20	10	10

Outbound Order Line (whinh220)

Order Ori-gin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Advised

Outbound Advice (whinh225)

Order Origin	Order	Line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	40

Outbound Order Line Cost Peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	10	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	20	20	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	10	10	10/29/2011

Note

Only one outbound advice is created. The outbound order line cost peg distribution is updated with the advised quantity for each peg.

Shortage on project pegged inventory

The cost peg transfer functionality enables you to track the shortages in project pegged inventory. For more information, refer to *Cost peg transfers in Warehousing (p. 84)*.

Initial position of the inventory:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available Quantity
WH01	item001	100	60	40

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			20	0	20
WH01	item001	proj2	elem2	acti2			10	0	10
WH01	item001	proj2	elem3	acti2			70	60	10

Outbound Order Line (whinh220)

Order Origin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Open

Outbound Order Line Cost Peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	0	10/30/2011

| Sales | SLS000001 | 10 | 1 | 20 | proj2 | elem2 | acti2 | 20 | 0 | 11/1/2011 |
| Sales | SLS000001 | 10 | 1 | 30 | proj2 | elem3 | acti2 | 10 | 0 | 10/29/2011 |

In the example, peg line 20 has a higher priority, because the required date is earlier.

The resulting inventory after the outbound advice is created (without the use of transfer logic) is listed in these tables:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	100	90	10

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			20	10	10
WH01	item001	proj2	elem2	acti2			10	10	0
WH01	item001	proj2	elem3	acti2			70	70	0

Outbound Order Line (whinh220)

Order Ori-gin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Partially Ad-vised

Outbound Order Line Cost Peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	10	10/30/2011

| Sales | SLS000001 | 10 | 1 | 20 | proj2 | elem2 | acti2 | 20 | 10 | 11/1/2011 |
| Sales | SLS000001 | 10 | 1 | 30 | proj2 | elem3 | acti2 | 10 | 10 | 10/29/2011 |

Outbound Advice (whinh225)

Order Origin	Order	Line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	30

Shortage on stock point inventory

The possible scenarios for stock point inventory shortage:

The part that can be advised has no shortage in the project pegged inventory

In this example, there is not enough inventory available. However, the part of the inventory that can be advised must also be handled.

Initial position of the inventory:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	20	30

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available quantity
WH01	item001	proj1	elem1	acti1			10	0	10
WH01	item001	proj2	elem2	acti2			30	20	10
WH01	item001	proj2	elem3	acti2			10	0	10

Outbound Order Line (whinh220)

Order Origin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Open

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	0	10/30/2011

| Sales | SLS000001 | 10 | 1 | 20 | proj2 | elem2 | acti2 | 20 | 0 | 11/1/2011 |
| Sales | SLS000001 | 10 | 1 | 30 | proj2 | elem3 | acti2 | 10 | 0 | 10/29/2011 |

A shortage of 10 pieces is present on the inventory level. The advice can be created only for the available pegged inventory. LN generates a message for shortage and an outbound advice of the available inventory is created. Following is the resulting inventory after the outbound advice is generated:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	50	0

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available quantity
WH01	item001	proj1	elem1	acti1			10	10	0
WH01	item001	proj2	elem2	acti2			30	30	0
WH01	item001	proj2	elem3	acti2			10	10	0

Outbound Order Line (whinh220)

Order Ori-gin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Partially Ad-vised

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	10	10/30/2011

| Sales | SLS000001 | 10 | 1 | 20 | proj2 | elem2 | acti2 | 20 | 10 | 11/1/2011 |
| Sales | SLS000001 | 10 | 1 | 30 | proj2 | elem3 | acti2 | 10 | 10 | 10/29/2011 |

Outbound Advice (whinh225)

Order Origin	Order	Line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	30

The part that can be advised has a shortage in the project pegged inventory

There is a shortage in the project pegged inventory.

Initial position of the inventory:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	20	30

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available quantity
WH01	item001	proj1	elem1	acti1			10	0	10
WH01	item001	proj2	elem2	acti2			5	0	0
WH01	item001	proj2	elem3	acti2			35	20	15

Outbound Order Line (whinh220)

Order Ori-gin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Open

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	0	10/30/2011

| Sales | SLS000001 | 10 | 1 | 20 | proj2 | elem2 | acti2 | 20 | 0 | 11/1/2011 |
| Sales | SLS000001 | 10 | 1 | 30 | proj2 | elem3 | acti2 | 10 | 0 | 10/29/2011 |

There is a shortage of 10 pieces on the inventory level. In the part that can be advised, a shortage of 5 pieces is also identified on the project pegged inventory. In this situation, LN determines that 30 pieces can be advised. However, an additional shortage of 5 pieces is identified. Hence, only 25 pieces are available to be advised. The resulting inventory is explained in these examples:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	45	5

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			10	10	0
WH01	item001	proj2	elem2	acti2			5	5	0
WH01	item001	proj2	elem3	acti2			35	30	5

Outbound Order Line (whinh220)

Order Ori-gin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	40	Partially Ad-vised

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	10	10	10/30/2011

| Sales | SLS000001 | 10 | 1 | 20 | proj2 | elem2 | acti2 | 20 | 5 | 11/1/2011 |
| Sales | SLS000001 | 10 | 1 | 30 | proj2 | elem3 | acti2 | 10 | 10 | 10/29/2011 |

Outbound Advice (whinh225)

Order Origin	Order	Line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	25

Create outbound advice despite inventory shortage

LN does not allow you to generate an outbound advice with an advised quantity higher than the total advised quantities of the related outbound order line cost peg distribution.

Outbound advice ownership

LN automatically generates the outbound advice ownership when the outbound advice is created if the outbound line is project pegged. LN does not allow you to change the ownership distribution for the project pegged order lines. The ownership distribution is based on the issue ownership set on the outbound order line.

LN does not allow you to generate ownership distribution or insert, modify, delete records for pegged outbound order lines in the Outbound Advice Ownership (whinh4128m000) session.

Inventory search engine

Inventory selection during the process of generating an outbound advice must be changed to support the project pegged inventory. When demand for a pegged item is advised, the process takes care of these peg distribution lines. So, the inventory search engine logic is extended to support the project pegged inventory.

The initial point of these steps is that the inventory on item warehouse level is found. The search sequence for inventory:

- Search for available inventory with the required peg.
- Search for available cost peg transfer orders (cost peg transfer orders created by Enterprise Planning or manually entered).
- Search for available excess.
- Search for available to transfer (non-excess inventory).
- Unpegged inventory.

■   Alternative Items.

Manual outbound advice

For a manually created outbound advice, when there is insufficient inventory to allocate for the manually entered advised quantity, LN displays an error message. The cost peg transfer logic is also executed.

Manual changes on outbound advice

When you modify the outbound advice quantity, LN updates the advised quantity on the underlying peg distribution.

In case of a decrease in the quantity, a peg redistribution is initiated. The decrease in advised quantity must be based on the latest required date. For example:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	50	0

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1	100	100	20	20	0
WH01	item001	proj2	elem2	acti2	100	100	30	30	0

Outbound Order Line (whinh220)

Order Ori-gin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	50	Advised

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	20	20	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	30	30	11/1/2011

Outbound Advice (whinh225)

Order Origin	Order	Line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	50

When you change the advised quantity to 45, the following is the result:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	45	5

Outbound Advice (whinh225)

Order Origin	Order	Line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	60

Undo outbound advice

When an advice is removed, the advised quantity on the deleted outbound advice line must be removed from the outbound order line cost peg distribution.

Process pick

When the user processes the picking list, LN also processes the pending cost peg transfers for the outbound advice that is picked.

Outbound advice for returns

Advising is done based on the latest required date; the pegs with the latest required date are advised first.

Creation of shipment line cost peg distribution

When the shipment lines are confirmed, the shipment line cost peg distribution is created for shipment lines related to an outbound order line that is pegged. The shipped quantities are distributed over the pegs for the shipment lines. The distribution is explained in these examples:

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on hand	Location Allocated Quantity	Available quantity
WH01	item001	50	50	0

Project Pegged Inventory (whwmd260)

Ware-house	Item	Project	Element	Activity	Exten-sion	Cost Compo-nent	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	proj1	elem1	acti1			20	20	0
WH01	item001	proj2	elem2	acti2			10	10	0
WH01	item001	proj2	elem3	acti2			20	20	0

Outbound Order Line (whinh220)

Order Ori-gin	Order	Line	Sequence	Item	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	WH01	50	Open

Outbound Advice (whinh225)

Order Origin	Order	Line	Sequence	Item	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	WH01	50

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Re-quired Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	20	20	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	10	10	11/1/2011
Sales	SLS000001	10	1	30	proj2	elem3	acti2	20	20	10/29/2011

For this situation the following shipment lines are created:

Shipment Lines (whinh431)

Shipment	Shipment Line	Order Ori-gin	Order	Line	Sequence	Item	Shipped Quantity
SHIP00001	10	Sales	SLS000001	10	1	item001	30
SHIP00002	10	Sales	SLS000001	10	1	item001	20

Shipment Lines (whinh428)

Shipment	Shipment Line	Peg Line	Project	Element	Activity	Required Date	Shipped Quantity
SHIP00001	10	10	proj1	elem1	acti1	10/30/2011	10
SHIP00001	10	30	proj2	elem2	acti1	10/29/2011	20

When the shipment is confirmed, the shipped quantity is updated on the outbound order line cost peg distribution

Outbound Order Line cost peg Distribution (whinh290)

Order Origin	Order	Line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Required Date	Shipped Quantity
Sales	SLS000001	10	1	10	proj1	elem1	acti1	20	20	10/30/2011	10
Sales	SLS000001	10	1	20	proj2	elem2	acti2	10	10	11/1/2011	0
Sales	SLS000001	10	1	30	proj2	elem3	acti2	20	20	10/29/2011	20

Underdeliveries and overdeliveries

For underdeliveries, the quantity not delivered must be distributed on the peg distribution, beginning with the peg line with the latest required date. For overdeliveries, the quantity overdelivered must be distributed equally over the available peg lines for the outbound order line.

Not shipped quantities

The peg line distribution data is transferred to the transfer order / adjustment order only if a not-shipped quantity exists on peg distribution. During the confirmation process the not-shipped quantity is updated on the outbound order line cost peg distribution and the shipment line cost peg distribution.

Shipments for returns

When the items are not shipped to the destination, but are shipped back to the origin, a reverse required date priority is applied when generating the shipment line cost peg distribution during the confirmation of the return shipment line. As item inventory is decreased, LN changes the pegged inventory with the latest required dates.

Cost peg transfers

Cost peg transfers enable transfer of costs between two different pegs (pegged to unpegged and vice versa). The cost peg transfers do not physically move the inventory but only transfer the costs of the inventory. Cost peg transfers are performed within the same warehouse. It is not possible to transfer the goods across warehouses. For more information, refer to *Cost peg transfers in Warehousing (p. 84)*

Transfer (manual) orders / Transfer orders

LN allows you to use an inbound and outbound cost peg distribution to specify transfer manual orders to transfer actual goods between warehouses. LN generates the outbound order line cost peg distribution based on the project pegged inventory. The cost peg distribution can also be created manually and transferred to the inbound line cost peg distribution.

Change warehouse order at a later stage

LN allows you to modify the outbound warehousing order data related to the sales order/schedule. The data can be modified for warehousing orders of all origins. You can also define up to which outbound procedure step the data can be modified. For more information, refer to To modify the outbound warehousing order data.

Additional costs on shipment header/line

When the cost item that is mandatory pegged is added as additional cost to the shipment, the cost item is not displayed because LN cannot decipher which pegs must be added to the additional cost line.

When the cost item that is mandatory pegged is added as additional costs on the shipment line, or when the parent shipment line has a peg distribution, LN copies the peg distribution data to the additional cost line. The cost peg distribution of this additional cost line is transferred to the sales cost order. For more information, refer to Additional costs - shipment based

Interchangeable effectivity units for the outbound process

The effectivity units can be interchanged when there is no inventory available for the ordered effectivity unit.

For project pegged outbound order lines, when there is no inventory available for the ordered effectivity unit, LN allows you to interchange effectivity units.

Example

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	50	0	50

Warehouse - Item - Effectivity Unit Inventory (whwmd216)

Warehouse	Item	Effectivity Unit	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	1	50	0	50

Project Pegged Inventory (whwmd260)

Warehouse	Item	Effectivity Unit	Project	Element	Activity	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	1	proj1	elem1	acti1	30	0	30
WH01	item001	1	proj2	elem2	acti2	20	0	20

Outbound Order Line (whinh220)

Order Origin	Order	Line	Sequence	Item	Effectivity Unit	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	3	WH01	40	Open

Outbound Order Line Peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Need Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	30	0	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	10	0	11/1/2011

Planned Inventory Transactions (whinp100)

Order Origin	Order	Line	Sequence	Peg Line	Effectivity Unit	Ordered Quantity
Sales	SLS000001	10	1	10	3	30
Sales	SLS000001	10	1	20	3	10

Generate Outbound Advice

The ordered effectivity unit (3) is not in the inventory, so another effectivity unit is advised and the Planned Inventory Transaction (PIT) is updated. The result of generate outbound advice:

Example

Outbound Advice (whinh225)

Order Origin	Order	Line	Sequence	Item	Effectivity Unit	Warehouse	Advised Quantity
Sales	SLS000001	10	1	item001	1	WH01	40

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	50	40	10

Warehouse - Item - Effectivity Unit Inventory (whwmd216)

Warehouse	Item	Effectivity Unit	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	1	50	40	10

Project Pegged Inventory (whwmd260)

Warehouse	Item	Effectivity Unit	Project	Element	Activity	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	1	proj1	elem1	acti1	30	30	0
WH01	item001	1	proj2	elem2	acti2	20	10	10

Outbound Order Line (whinh220)

Order Origin	Order	Line	Sequence	Item	Effectivity	Warehouse	Ordered	Status

gin				Unit	house	Quantity	
Sales	SLS000001	10	1	item001	3	WH01	40	Advised

Outbound Order Line Peg Distribution (whinh290)

Order Origin	Order	Line	Se-quence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Need Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	30	30	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	10	10	11/1/2011

Outbound Order Line Peg Distribution - Advised Effectivity Units (whinh291)

Order Origin	Order	Line	Se-quence	Peg Line	Effectiv-ity Unit	Project	Ele-ment	Activity	Or-dered Quanti-ty	Ad-vised Quanti-ty	Need Date
Sales	SLS000001	10	1	10	1	proj1	elem1	acti1	30	30	10/30/2011
Sales	SLS000001	10	1	20	1	proj2	elem2	acti2	10	10	11/1/2011

Planned Inventory Transactions (whinp100)

Order Origin	Order	Line	Sequence	Peg Line	Effectivity Unit	Ordered Quantity
Sales	SLS000001	10	1	10	1	30
Sales	SLS000001	10	1	20	1	10

When the outbound advice is released, a shipment is created:

Shipment Lines (whinh431)

Shipment	Line	Item	Effectivity Unit	Shipped Quantity	Status
SHP000001	10	item001	1	40	Open

Confirm Shipment

When the shipment is confirmed:

Example

Shipment Lines (whinh431)

Shipment	Line	Item	Effectivity Unit	Shipped Quantity	Status
SHP000001	10	item001	1	40	Confirmed

Shipment Line Peg Distribution (whinh428)

Shipment	Line	Peg Line	Project	Element	Activity	Staged Quantity	Shipped Quantity	Need Date
SHP000001	10	10	proj1	elem1	acti1	30	30	10/30/2011
SHP000001	10	20	proj2	elem2	acti2	10	10	11/1/2011

Warehouse - Item Inventory (whwmd215)

Warehouse	Item	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	10	0	10

Warehouse - Item - Effectivity Unit Inventory (whwmd216)

Warehouse	Item	Effectivity Unit	Inventory on Hand	Location Allocated Quantity	Available Quantity
WH01	item001	1	10	0	10

Project Pegged Inventory (whwmd260)

Ware-	Item	Effectivity	Project	Element	Activity	Inventory	Location	Available

house		Unit				on Hand	Allocated Quantity	Quantity
WH01	item001	1	proj1	elem1	acti1	0	0	0
WH01	item001	1	proj2	elem2	acti2	10	0	10

Outbound Order Line (whinh220)

Order Origin	Order	Line	Sequence	Item	Effectivity Unit	Warehouse	Ordered Quantity	Status
Sales	SLS000001	10	1	item001	3	WH01	40	Shipped

Outbound Order Line Peg Distribution (whinh290)

Order Origin	Order	Line	Sequence	Peg Line	Project	Element	Activity	Ordered Quantity	Advised Quantity	Need Date
Sales	SLS000001	10	1	10	proj1	elem1	acti1	30	30	10/30/2011
Sales	SLS000001	10	1	20	proj2	elem2	acti2	10	10	11/1/2011

Planned Inventory Transactions (whinp100)

Order Origin	Order	Line	Sequence	Peg Line	Effectivity Unit	Ordered Quantity

The planned inventory transaction (PIT) is removed because the line is shipped.

Peg distribution for cycle counting and adjustment orders

The implementation of the project pegging functionality impacts the cycle counting and adjustment processes due to inventory variances.

Note

The **Based on** field shows how project pegs are generated:

- For a cycle counting order line in the Cycle Counting Order Line Peg Distribution (whinh5107m000) session.
- For an adjustment order line in the Adjustment Order Line Peg Distribution (whinh5127m000) session.

If project pegging is implemented, LN creates a peg distribution line before the cycle counting order or adjustment order is processed. The peg distribution line can also include a blank peg. The remaining quantity or the total quantity is then processed as unpegged.

Note

Blank pegs are not allowed if the **Mandatory Project Peg** check box in the Items (tcibd0501m000) session is selected.

After the cycle counting orders or adjustment orders are generated, the proposed peg distribution can be generated only if the warehouse is not a project warehouse. To generate a peg distribution for:

- A cycle counting order, use the Cycle Counting Order Line Peg Distribution (whinh5107m000) session.
- An adjustment order, use the Adjustment Order Line Peg Distribution (whinh5127m000) session.

If the peg distribution is not correct, the processing of the cycle counting order or adjustment order is discontinued and a message is displayed. If the peg distribution is incomplete, LN creates the peg distribution with the remaining data, which is saved in the:

- Cycle Counting Order Line Peg Distribution (whinh5107m000) session for cycle counting orders
- Adjustment Order Line Peg Distribution (whinh5127m000) session for adjustment orders

Note

When adjustment orders are generated as part of another process in LN, for example, rejection of goods during inspection, the peg distribution is created by this process and is processed by LN.

Peg distribution - gains and losses

When a pegged balance is impacted as a result of cycle counting or an inventory adjustment, the inventory at the peg level must also be adjusted. An increase of the inventory quantity at peg level is referred to as a gain and a decrease of the inventory quantity is referred to as a loss. The gain and loss balances can be viewed in the Project Pegged Inventory (whwmd2560m000) session. The pegged inventory that is affected by the gain or loss in the inventory is also recorded. LN applies a priority sequence when assigning gains and losses to the project cost pegs.

Priority sequence for gains

1. For pegs that were previously subject to a loss:

   a. Pegs without <u>excess inventory</u> and without <u>available to transfer (ATT)</u> inventory, with an economic shortage and in sequence of earliest requirement date. LN considers economic shortage quantity.

   b. Pegs without excess and without available to transfer inventory and without an economic shortage, in alphabetical order. LN considers full quantity for the peg.

   c. Pegs without excess and with available to transfer inventory, in alphabetical order. LN considers full quantity for the peg.

   d. Pegs with excess (in alphabetical order). LN considers full quantity for the peg.

   e. Inventory associated with a blank peg.

2. For pegs that were not previously subject to a loss:

   a. Pegs without excess and without available to transfer inventory and with an economic shortage and in sequence of earliest requirement date. LN considers economic shortage quantity.

   b. Pegs without excess and without available to transfer inventory and without an economic shortage, in alphabetical order. LN considers full quantity for the peg.

   c. Pegs without excess and with available to transfer inventory, in alphabetical order. LN considers full quantity for the peg.

   d. Pegs with excess (in alphabetical order). LN considers the full quantity for the Peg.

   e. Inventory associated with a blank peg.

Priority sequence for losses

1. For pegs that were previously subject to a gain. In case of multiple pegs, the pegs are selected in alphabetical order. LN checks for pegs:

   a. With excess, LN considers the excess quantity.

   b. With available to transfer inventory, LN considers the available to transfer inventory quantity.

   c. Without excess and without available to transfer inventory in sequence of latest requirement date first and considers full quantity for the peg

   d. Inventory associated with a blank peg.

2. Pegs that were not previously subject to a gain, LN checks for pegs:

   a. With an excess inventory balance greater than zero and LN considers the excess quantity.

   b. With an available to transfer inventory balance and LN considers the available to transfer inventory quantity.

   c. Without excess and available to transfer inventory in sequence of latest requirement date first and LN considers the full quantity for the Peg.

   d. Inventory associated with a blank peg.

Peg distribution - example of gains and losses

Assumptions:

- The pegs are in the same warehouse.
- The pegs are for the same item.
- The peg is a combination of project, element, and activity.
- The project pegged inventory table is up to date. If not, an update is executed with a loss of one for every step.

The information in the following tables is available in the Project Pegged Inventory (whwmd2560m000) session.

Starting point:

Peg Line	Project	Element	Activity	On Hand	Inventory Gains	Inventory Losses	Excess	ATT
1	PRO1	ELO1	ACT01	1	1	0	0	0
2				1	0	0	0	0
3	PRO2	ELO2	ACT02	1	0	0	1	0
4	PRO3	ELO3	ACT03	1	0	0	0	1
5	PRO4	ELO4	ACT04	1	0	0	0	1
6	PRO5	ELO5	ACT05	1	0	0	0	0

A loss of one results in the removal of peg line 1 as the first gains are decreased.

Peg Line	Project	Element	Activity	On Hand	Inventory Gains	Inventory Losses	Excess	ATT
2				1	0	0	0	0
3	PRO2	ELO2	ACT02	1	0	0	1	0
4	PRO3	ELO3	ACT03	1	0	0	0	1
5	PRO4	ELO4	ACT04	1	0	0	0	1
6	PRO5	ELO5	ACT05	1	0	0	0	0

A loss of one results in the removal of peg line 2 as the blank peg is removed.

Peg Line	Project	Element	Activity	On Hand	Inventory Gains	Inventory Losses	Excess	ATT
3	PRO2	ELO2	ACT02	1	0	0	1	0
4	PRO3	ELO3	ACT03	1	0	0	0	1
5	PRO4	ELO4	ACT04	1	0	0	0	1
6	PRO5	ELO5	ACT05	1	0	0	0	0

Then a loss of one removes the peg line 3 as an excess quantity exists.

Peg Line	Project	Element	Activity	On Hand	Inventory Gains	Inventory Losses	Excess	ATT
4	PRO3	ELO3	ACT03	1	0	0	0	1
5	PRO4	ELO4	ACT04	1	0	0	0	1
6	PRO5	ELO5	ACT05	1	0	0	0	0

Then a loss of one removes the peg line 4 as it has ATT and it is alphabetically before line 5.

Peg Line	Project	Element	Activity	On Hand	Inventory Gains	Inventory Losses	Excess	ATT
5	PRO4	ELO4	ACT04	1	0	0	0	1
6	PRO5	ELO5	ACT05	1	0	0	0	0

The next loss removes peg line 5 as it has ATT.

Peg Line	Project	Element	Activity	On Hand	Inventory Gains	Inventory Losses	Excess	ATT
6	PRO5	ELO5	ACT05	1	0	0	0	0

The last loss removes peg line 6 which is the last scenario of a decreasing peg inventory.

Cost peg transfers

Cost peg transfers in Warehousing

The cost peg transfer functionality enables the transfer of costs between two different pegs, from pegged to unpegged and vice versa. The cost peg transfers do not physically move the inventory but only transfer the costs of the inventory. Cost peg transfers are performed within the same warehouse. It is not possible to transfer the goods across warehouses.

When a cost peg transfer is processed, the changes are permanent when excess inventory is moved. However, the inventory can be transferred back. Excess inventory is checked at the planning cluster level and not at the warehouse level.

The source peg and the target peg can be either unpegged inventory (no project, element and activity filled) or pegged inventory (belonging to a project, element and/ or activity). For a cost peg transfer line, either the source peg or the target peg must be specified. The cost peg transfer also changes the allocations within the inventory - Transfer Allocated (from peg) and Transfer on Order (to peg).

Cost peg transfers can be generated from these sources within LN:
- **Enterprise Planning**
- **Outbound Advice**
- **Manual**
- **Mass Project Cost Peg Transfer**

Enterprise Planning

The cost peg transfers are created in Enterprise Planning during the planning runs and can be transferred to Warehousing by the user or by LN. The cost peg transfers are generated to handle shortages, using the Project Pegged Inventory (whwmd2560m000) session, identified during the planning run. When you process the cost peg transfer, the cost is transferred from the source peg to the target peg. Financial transactions are created during the processing of the cost peg transfer.

Outbound Advice

Cost peg transfers can be created to handle shortages when outbound advice is generated. If shortages occur, LN searches for an open cost peg transfer and links it to the outbound advice. The cost peg transfer is processed when the outbound advice is picked, or can be processed manually.

If the shortage is not met, a cost peg transfer is created if excess inventory or <u>available to transfer (ATT)</u> inventory is present for a different peg. The excess inventory and ATT inventory is transferred to the pegs with the inventory shortage.

Manual

LN allows you to manually create cost peg transfers. These are not created by a specific process. You can determine which pegged inventory must be transferred.

Mass Project Cost Peg Transfer

Mass cost peg transfers are created by executing a separate process that allows the user to transfer all excess inventories from a source peg to a target peg.

Processing cost peg transfers

While processing the cost peg transfer, LN:

1. Checks the inventory level of the source peg. In case of insufficient inventory, the cost peg transfer is not processed.
2. Moves the quantity of the cost peg transfer from the source peg to the target peg.
3. Creates financial transactions for the cost peg transfer.

The cost peg transfer can be processed manually or automatically during the picking process. Manual processing can be performed using an option or by a batch session available in all the cost peg transfer sessions.

Changes on the cost peg transfer

LN allows you to modify the cost peg transfer of all origins. In case of insufficient inventory, the cost peg transfers are not processed. The cost peg transfer that is linked to an outbound advice cannot be modified.

In case the cost peg transfer quantity increases, and the excess and ATT inventory of the source peg no longer meets the requirement, LN checks for the inventory available on the source peg. If inventory

is available, LN displays a warning message that the transfer includes the goods that are not moved from excess and ATT inventory. In case the inventory is not sufficient, LN displays an error message.

Changes on the outbound advice

If the advised quantity is increased on the outbound advice, the cost peg transfers linked to the outbound advice are also updated (if there is enough inventory), or a new cost peg transfer is created to match the advised quantity.

Example

Increase the advised quantity:

When you change the advised quantity on the outbound advice from 20 to 25:

Cost Peg Transfer Lines (whinh145)

Cost Peg Transfer	From Peg	To Peg	Quantity	Required Date	Processed
TRF000001	AAA-01	BBB-02	8 (5+3)	11/30/2011	No

The project pegged inventory:

Project Pegged Inventory (whwmd260)

Peg	on order	on Hand	Allocated	Location Allocated	Available Excess	Available to Transfer	Transfer Allocated	Transfer on order
AAA-01	0	20	10	12 (10+2)	2 (5-3)	0	8 (5+3)	0
BBB-02	0	5	10	13 (10+3)	0	0	0	8 (5+3)

Outbound Advice is updated:

Outbound Advice (whinh225)

Outbound Advice	Advised Quantity
1	25 (20+5)

The Outbound Order Line Cost Peg Distribution:

Outbound Order Line Cost Peg Distribution (whinh290)

Peg	Ordered Quantity	Required Quantity	Need Date	Advised Quantity
BBB-02	10	10	11/30/2011	13 (10+3)
AAA-01	10	10	12/01/2011	12 (10+2)

Decrease the advised quantity:

When you change the advised quantity from 20 to 14:

The cost peg transfer:

Cost Peg Transfer Lines (whinh145)

Cost Peg Transfer	From Peg	To Peg	Quantity	Required Date	Processed
TRF000001	AAA-01	BBB-02	5	11/30/2011	No

The cost peg transfer remains unchanged, because the decrease in advised quantity is removed from the location allocated based on the latest required date.

The project pegged inventory:

Project Pegged Inventory (whwmd260)

Peg	On order	On Hand	Allocated	Location Allocated	Available Excess	Available to Transfer	Transfer Allocated	Transfer on order
AAA-01	0	20	10	4	5	0	5	0
BBB-02	0	5	10	10	0	0	0	5

Outbound advice is updated:

Outbound Advice (whinh225)

Outbound Advice	Advised Quantity
1	14 (20-6)

The outbound order line cost peg distribution:

Outbound Order Line Cost Peg Distribution (whinh290)

Peg	Ordered Quantity	Required Quantity	Need Date	Advised Quantity
BBB-02	10	10	11/30/2011	10
AAA-01	10	10	12/01/2011	4 (10-6)

Splitting the cost peg transfer

During the generate outbound advice run, shortages if identified, are met using the existing cost peg transfers. The two scenarios are:

- Quantity on the cost peg transfer is more than the shortage quantity
- Quantity on the cost peg transfer is less than the shortage quantity

If the cost peg transfer quantity is more than the shortage quantity, the total cost peg transfer quantity is not utilized. A new cost peg transfer is created (with the same origin) with a quantity equal to the shortage quantity. Therefore, the quantity of the original cost peg transfer is reduced.

If the cost peg transfer quantity is less than the shortage quantity, the cost peg transfer must be updated with the outbound advice. LN checks for other cost peg transfers that can be used to handle the shortage.

Example

Starting point:

Project Pegged Inventory (whwmd260)

Peg	On order	On Hand	Allocated	Location Allocated	Available Excess	Available to Transfer	Transfer Allocated	Transfer on order

AAA-01	0	20	10	0	0	0	10	0
BBB-02	0	5	10	0	0	0	0	10

An order is created with this outbound order line cost peg distribution data:

Outbound Order Line Cost Peg Distribution (whinh290)

Peg	Ordered Quantity	Required Quantity	Need Date	Advised Quantity
AAA-01	10	10	11/30/2011	0
BBB-02	10	10	12/01/2011	4 (10-6)

This cost peg transfer is present, origin can be Enterprise Planning, Manual, Mass Cost Peg Transfer:

Cost Peg Transfer Lines (whinh145)

Cost Peg Transfer	Order Line	From Peg	To Peg	Quantity	Required Date	Processed
TRF00001	10	AAA-01	BBB-02	10	12/10/2011	No

As per the data, there is a shortage of five pieces for the Peg BBB-02 which can be handled with the cost peg transfer TRF000001.

The outbound advice is created with this data:

Cost Peg Transfer Lines (whinh145)

Cost Peg Transfer	Order Line	From Peg	To Peg	Quantity	Required Date	Processed
TRF00001	10	AAA-01	BBB-02	5 (10-5)	12/10/2011	No
TRF00001	20	AAA-01	BBB-02	5	12/01/2011	No

For cost peg transfer line 20 the required date was changed to match the outbound order line cost peg distribution record.

For the cost peg transfer TRF000001, line 20 of the outbound advice is also populated.

Within the inventory table, this data is updated:

Project Pegged Inventory (whwmd260)

Peg	On order	On Hand	Allocated	Location Allocated	Available Excess	Available to Transfer	Transfer Allocated	Transfer on order
AAA-01	0	20	10	10	0	0	10	0
BBB-02	0	5	10	10	0	0	0	10

Only the location allocated is changed, because the cost peg transfer is already present before the outbound advice was created. Splitting the cost peg transfer does not impact the **Project Cost Peg Transfer On Order** and **Project Cost Peg Transfer Allocated** quantities in the Project Pegged Inventory (whwmd2560m000) session.

Chapter 9
Service

9

Project pegging in depot repair

Overview

In Service, you can implement project pegging in the Depot Repair module. You can peg the service cost to a project, element, and/or an activity.

To peg a project, specify the project, element, and/or activity information for the call, the contract, the maintenance sales quotation, maintenance sales orders or work orders. You must select the **Mandatory Project Peg** check box in the Items (tcibd0501m000) session if defining the PCA ID is mandatory to peg the cost of the item to the project.

Initiation of the pegged transaction

The peg is initiated only when a business process is started for transactions that register actual costs. For Example Calls and Maintenance Sales orders.

Project Cost Account is an account where the cost is pegged. Costs are pegged through Project Cost Account ID. You can populate the PCA ID:

- By entering the PCA ID when you create a new call, contract, maintenance sales quotation, maintenance sales order, or an external work order.

- By specifying the PCA ID on the service contract. You can also enter the PCA ID manually.

Propagation of the peg in the depot repair process

The PCA ID is propagated to the resulting transaction (Example, from call to MSO to Work order). You can change the PCA ID until the status of the call / contract / maintenance sales quotation / maintenance sales order / work order changes.

Propagation of the peg to service contract and configuration lines

In Service, the service contract can determine whether the call / contract / maintenance sales quotation / maintenance sales order / work order, linked to the service contract, retrieves the PCA ID from the contract. By default, the configuration lines retrieve the PCA ID from the service contract header. These PCA IDs on the configuration line are propagated to the maintenance sales quotation lines, maintenance sales order part lines, and work orders.

Note

You can define the PCA ID for service contracts that have the status 'Free' or 'Active'.

Propagation of the peg to a call

The PCA ID of the call is retrieved from the service contract header by default, if the call is related to a service contract. You can specify or modify the PCA ID if the call status is 'Free'. You must specify the reason for the modification.

If the call is solved without being transferred (Example to a maintenance sales order or service order), the call can be invoiced. The costs are booked to the corresponding PCAs. The cost component is used to identify the appropriate project cost type using cost mapping in the Cost Mappings (tcmcs0149m000) session.

Propagation of the peg to the maintenance sales quotations

LN defaults the PCA ID of the quotation header line either from a service call, or a maintenance sales order part line, or a work order. If the PCA ID is not defaulted from these origins, LN defaults the ID from the service contract configuration line if the serialized item is linked to a service contract. You can specify or change the PCA ID, if the maintenance sales quotation status is 'Free'.

Propagation of the peg to the maintenance sales order

LN defaults the PCA ID of the maintenance sales order from the originating call or maintenance sales quotation. The PCA ID of the order part line is defaulted from a service call or maintenance sales order part line. If the PCA ID is not defaulted from these origins, LN defaults the ID from the service contract configuration line in case the serialized item is linked to a service contract. You can enter or change the PCA ID, if the maintenance sales quotation status is 'Free'.

Propagation of the peg to the work order for MSO part line

By default, the PCA ID is retrieved from the maintenance sales order. If the installation group or the item is linked to a service contract, the PCA ID is retrieved from the service contract configuration line. If the PCA ID is not defaulted from these origins, LN defaults the ID from the service contract configuration line in case the serialized item is linked to a service contract. You can specify or change the PCA ID, if the maintenance sales quotation status is 'Free'.

Propagation of the peg to the work order linked /originating from a maintenance sales order

LN defaults the PCA ID of the work order (linked/originating from maintenance sales order) from the service contract configuration line, if the serialized item is linked to a service contract. If the PCA ID is not defaulted from these origins, LN defaults the ID from the service contract configuration line in case the serialized item is linked to a service contracts. You can specify or change the PCA ID, if the maintenance sales quotation status is 'Free'.

Propagation of the peg to the follow-up work order

By default, the PCA ID is retrieved from the initiating work order. If the installation group or the item is linked to a service contract the PCA ID is retrieved from the service contract configuration line. If the PCA ID is not defaulted from these origins, LN defaults the ID from the service contract configuration line in case the serialized item is linked to a service contract. The user can specify or change the PCA ID, if the work order status is 'Free'.

Propagation of a material request to LN Warehousing from depot repair

When warehouse orders are generated from Service, in order to request material from a warehouse, the PCA ID is propagated to Warehousing only if the **Inherit Project Peg** check box in the Items (tcibd0501m000) session is selected. Warehousing uses the PCA ID for financial bookings to LN Project. Warehousing handles the potential peg transfers:

Example

Service needs materials B and material C to be used in the repair of item A. For item B, LN Service requests inventory with a peg. For item C, Service requests material with a peg, because the cost for B and C have to be reported to the project.

Warehousing checks if there is inventory of item B with the corresponding PCA. In the case of an inventory shortage, Warehousing checks whether transfer rules apply to meet the LN Service request. Warehousing handles the potential peg transfers in the background.

For item C, the process is the same. Service requests the material with a PCA, though there is inventory for item C without a peg.

For Example, a demand transaction for item A has a peg123 that requires material B and C. When the **Inherit Project Peg** check box in the Items (tcibd0501m000) session for Material B is set to Yes and for Material C is set to No:

	Inherit Peg	Cost Pegged To	Request to Warehouse
Material B	Yes	P1E10A10	Financially peg costs to: P1E10A10 Inventory from: P1E10A10
Material C	No	P1E10A10	Financially peg costs to: P1E10A10 Inventory from: <empty peg >

Since material C is without a peg in inventory, the costs are not yet pegged to the project. However, since material B is already cost pegged to the project, the cost do not have to be booked again to the project when the actual outbound process is executed.

Propagation of the Peg to generate purchase order

For project pegged items when purchase orders are generated, the PCA ID from Service (Example Subcontracting), is propagated to LN Order Management to generate the purchase order with the corresponding peg. For material request of type Via Purchase, the PCA ID is propagated only if the **Inherit Project Peg** check box in the Items (tcibd0501m000) session is selected.

Propagation of the peg to book hours

When hours are booked in Service, the PCA is processed to LN People to book hours on the work order.

Book other costs or bench stock material costs

When actual other costs or Bench stock material costs are defined in Service, the costs are logged in the PCL. If the item is defined for the maintenance sales coverage line, the item is used to identify the appropriate project cost type. In case the item is not defined, the cost component is used to identify the appropriate project cost type using cost mapping in the Cost Mappings (tcmcs0149m000) session.

Propagation of the peg to a maintenance sales order coverage line

When the maintenance sales order coverage lines are costed, the invoice is created in LN Invoicing. The revenues and costs are booked to the corresponding PCAs. If the item is defined for the maintenance sales coverage line, the item is used to identify the appropriate project cost type. In case the item is not defined, the cost component is used to identify the appropriate project cost type using cost mapping in the Cost Mappings (tcmcs0149m000) session. LN Invoicing receives the related PCA IDs for the actual costs.

Project pegging in Field Service

In Service, you can implement project pegging in the Field Service module. You can peg the service cost to a project, element, and/or an activity.

To peg a project in Service, specify the project, element, and/or activity information for the service order quote, quote line(s), service order (activity), related material, labor and other cost lines. You must select the **Mandatory Project Peg** check box in the Items (tcibd0501m000) session, if defining the project peg data is mandatory to peg the cost of the service item to the project.

To implement project pegging in Field Service, you must select the **Use Project Pegging in Field Service** check box in the Service Order Parameters (tssoc0100m000) session. If this check box is cleared, the existing project-service integration functionality is implemented.

The **Project Peg Origin** is displayed for service order (activities) and the material, labor and other cost lines.

Costs distribution of production order hours – examples

Project peg distribution is used to split production order hours across relevant project pegs, taking into account the quantity of each peg.

Example 1

Peg distribution on the production order:

Peg	Quantity
A	2
B	3
C	5

Operation rates:

Type of Operation	Cost Rate ($)	Cost Component
Labor	40	LB1
Overhead on Labor	4	LB2
Machine	50	MC1
Overhead on Machine	10	MC2

If, for this production order, 20 man hours and 10 machine hours are entered when these hours are processed, costs and hours are retrieved per peg and cost component:

Cost Component	LB1	LB2	MC1	MC2
Peg				
A	$160 (4h)	$16 (4h)	$100 (2h)	$20 (2h)
B	$240 (6h)	$24 (6h)	$150 (3h)	$30 (3h)
C	$400 (10h)	$40 (10h)	$250 (5h)	$50 (5h)

Example 2

If different types of operation have the same cost component, costs and hours are aggregated.

Operation rates:

Type of Operation	Cost Rate ($)	Cost Component
Labor	40	LAB
Overhead on Labor	4	OVH
Machine	50	MACH
Overhead on Machine	10	OVH

If, for this production order, 20 man hours and 10 machine hours are entered when these hours are processed, costs and hours are retrieved per peg and cost component:

Cost Component	LAB	MACH	OVH
Peg			
A	$160 (4h)	$100 (2h)	$36 (4+2=6h)
B	$240 (6h)	$150 (3h)	$54 (6+3=9h)
C	$400 (10h)	$250 (5h)	$90 (10+5=15h)

Chapter 11
Borrow/Loan and Payback

<div style="text-align: right">11</div>

Cost peg transfers - borrow/loan and payback

To handle shortages of project pegged inventory identified during the outbound process, you can use the borrow/loan and payback procedure to temporarily transfer <u>available to transfer (ATT)</u> or <u>excess inventory</u> from other projects with minimum cost impact on either project.

The borrow/loan and payback process

The borrow/loan and payback process constitutes the temporary transfer of inventory between two projects. LN can temporarily transfer cost pegged items from one project, the lending project, to another, the borrowing project, to fulfill an urgent demand. After the inventory is replenished, the borrowing project transfers the borrowed item quantities back to the lending project.

Manual finalization and aging

You can set an aging period or manually intervene to finalize the procedure before the automatic payback is due. Manual finalization is used for individual borrow/loan transfers and aging is used for collective finalization. Manual finalization and aging result in the permanent transfer of the inventory to the borrowing project and a financial compensation to the lending project.

Cost aspects

Item values can fluctuate between the moments of borrowing and paying back. To prevent cost increases from affecting the lending project, inventory is paid back at the inventory value at which it was borrowed.

Tracking borrow/loan and payback information

Various sessions provide insight into the progress of borrow/loan and payback transfers, both logistically and financially. These sessions help you decide whether borrow/loan transfers must be manually finalized, before the payback is due.

To set up borrow/loan and payback transfers

You must set up the required transfer rules and parameters to:

- Use borrow/loan and payback transfers and/or permanent cost peg transfers.
- Allow <u>available to transfer (ATT)</u> and/or <u>excess inventory</u> for borrow/loan and payback transfers.
- Allow manual or automatic creation of borrow/loan and payback transfers.

To set up borrow/loan and payback transfers

The setup of borrow/loan and payback transfers includes both company wide and planning-group level settings.

Note

Before setting up borrow/loan and payback transfers, you must set up project pegging.

1. **Company level**
   In the Planning Parameters (cprpd0100m000) session, select the **Use Available to Transfer** check box.
2. **Company level**
   In the Project Pegging Parameters (tcpeg0100m000) session:
   - Select the **Borrow/Loan and Payback** check box to activate borrow/loan and payback transfers. Specific settings for individual planning groups, projects, elements or activities are specified in the Cost Peg Transfer Rules (tcpeg1100m000) session.

   - Select the **Aging** check box to enable finalization of borrow/loan transfers after a fixed period.
   - Set the **Period**.
   - Select the **Log Borrow/Loan Transactions in Project** check box if borrow/loan and payback transactions must be displayed in the Financial Transactions (tpppc2100m100) session.

   - Select the **Allow Manual Borrow/Loan Cost Peg Transfers** check box if manually created borrow/loan cost peg transfers must be allowed.

   - Select the **Payback for Excess Inventory** check box if <u>excess inventory</u> must be allowed for borrow/loan cost peg transfers.

   - Select the **Ignore Cost Peg Transfer Rules for Paybacks** check box if transfer rules must not be applied to payback transfers. For more information, refer to the next step.
3. **Planning group level**
   In the Cost Peg Transfer Rules (tcpeg1100m000) session:
   - Specify the planning groups, projects, elements or activities to which or from which borrow/loan or permanent cost peg transfers must be allowed.

- Select the **Use Available to Transfer** check box to allow <u>available to transfer (ATT)</u> inventory to be transferred.
- Specify **Permanent** or **Borrow / Loan** in the **Cost Peg Transfer Type** field.

The borrow/loan and payback process

The borrow/loan and payback process constitutes the temporary transfer of inventory between two projects. LN can temporarily transfer cost pegged items from one project, the lending project, to another, the borrowing project, to fulfill an urgent demand. After the inventory is replenished, the borrowing project transfers the borrowed item quantities back to the lending project.

Borrow/loan

Sometimes incidents, such as damages inflicted during the movement to the docking area, cause inventory shortages just before shipping. Therefore, when an item for a project peg is issued from inventory to fulfill an order, and a shortage is detected, a borrow/loan transfer can be created to transfer inventory from another project to compensate for the shortage. The project that borrowed the inventory can then issue the items to fulfill the order.

Borrow/loan transfers are created together with payback records. When the borrow/loan transfer record is processed, the inventory is transferred from the lending project to the borrowing project.

After the borrowing project is replenished with new items, LN performs a payback transfer based on the payback records.

Payback

The lending project is replenished with a payback that transfers the borrowed inventory quantity back to the lending project. LN creates and carries out a payback transfer after the borrowing project is replenished, for example, after receiving a replenishment order created by the planning engine from Enterprise Planning.

The Enterprise Planning replenishment order is based on the borrowing project's replenishment lead times and inventory present after the issue, minus the borrowed inventory. The planning engine does not consider the borrowed inventory. The planning engine does not create replenishment orders for lending projects, because the lending projects are replenished by the payback transfers from the borrowing projects.

Note

Positive adjustments or cycle counting orders do not trigger payback transfers.

For a borrowing project, multiple outstanding paybacks to various lending projects can be present. After a receipt of project pegged items is confirmed, LN checks if there are any outstanding paybacks.

If found, LN first creates a payback transfer for the lending project with the earliest demand date. This is because the most urgent demand must be fulfilled first.

Partial paybacks

If the received quantity is smaller than the borrowed quantity, LN processes a partial payback for the lending project. The payback quantity still outstanding is fulfilled after the borrowing project has received one or more consecutive replenishment orders. These follow-up paybacks are identified by higher sequence numbers.

Conditions for creating borrow/loan and payback transfers

Parameter settings in the Project Pegging Parameters (tcpeg0100m000) session are used to determine how borrow/loan and payback transfers are created:

- Automatically if the **Borrow/Loan and Payback** check box is selected.
- Automatically and manually if the **Borrow/Loan and Payback** and the **Allow Manual Borrow/Loan Cost Peg Transfers** check boxes are selected.

Borrow/loan transfers are generated if:

- The parameters and transfer rules are defined.
- Available to transfer (ATT) or excess inventory is available for one or more projects.
- The potential lending project can be paid back before the original demand is due.

Note

You can ignore the lending project's replenishment lead times by selecting the **Ignore ATT Time Fence during Outbound** check box in the Project Pegging Parameters (tcpeg0100m000) session.

Automatic creation of borrow/loan transfers

LN creates the borrow/loan transfer together with payback records when outbound advice is created. The borrow/loan transfer is processed immediately. After the borrowing project is replenished with new items, LN performs a payback transfer based on the payback records.

Manual creation of borrow/loan transfers

If manual creation of borrow/loan transfers is allowed, you can specify borrow/loan transfers in the Generate Project Cost Peg Transfer (whinh1240m000) and Project Cost Peg Transfer Lines (whinh1145m000) sessions.

Manual borrow/loan transfers are allowed if the **Allow Manual Borrow/Loan Cost Peg Transfers** check box is selected in the Project Pegging Parameters (tcpeg0100m000) session.

To launch the transfer process, you must process the borrow/loan transfer in the Process Project Cost Peg Transfers (whinh1240m100) session.

You can specify and process manual borrow/loan transfers anytime, regardless of the presence of outbound advice. For example, you can specify a borrow/loan transfer to transfer inventory to a project with a shortage before outbound advice is present.

Inventory allowed for transfers

For all borrow/loan transfers, ATT inventory can be transferred.

Excess inventory is only allowed for manually created borrow/loan transfers if the **Allow Manual Borrow/Loan Cost Peg Transfers** and the **Payback for Excess Inventory** check boxes are selected in the Project Pegging Parameters (tcpeg0100m000) session.

Excess inventory not allowed for borrow/loan transfers

If more than one project is available from which to borrow inventory, LN selects the project with the latest demand date. This helps prevent shortages for the lending project.

However, if excess inventory is available in other projects, LN creates permanent transfers first. If none of the projects for which the setup allows cost peg transfers has sufficient ATT or excess inventory, LN creates an inventory shortage report.

Excess inventory allowed for borrow/loan transfers

If manual borrow/loan transfers are allowed and excess inventory is allowed for manual borrow/loan transfers, LN first selects available to transfer (ATT) from the lending project. If not available, LN selects excess inventory. If insufficient ATT inventory is available, LN selects the available ATT inventory and adds excess inventory to attain the required quantity.

Manual finalization and aging

You can set an aging period or manually intervene to finalize the procedure before the automatic payback is due. Manual finalization is used for individual borrow/loan transfers and aging is used for collective finalization. Manual finalization and aging result in the permanent transfer of the inventory to the borrowing project and a financial compensation to the lending project.

The borrowed items are not returned to the lending project. The borrowed items and their value are added to the borrowing project's inventory as described in Borrow - example of cost aspects, but permanently. The payback is a purely financial compensation for the lending project.

Reasons to finalize borrow/loans manually or by aging:

- The difference of the inventory value between the moment of borrowing and (forecasted) payback is negligible.
- Outstanding loans are finalized after a fixed period according to policy.

Impact

The consequence of aging or manual finalization is that the lending project is not replenished by the borrowing project and consequently there is an inventory shortage. The lending project must now (urgently) reorder the missing inventory, often at higher costs than it would have incurred by the automatic payback. In addition, this new shortage may also trigger new project cost peg transfers.

Finalizing the borrow/loan procedure while a supply order is present for the borrowing project may result in excess inventory for the borrowing project cost peg. However, Enterprise Planning can identify this forecasted excess and allocate the expected receipt to another demand. If no supply order is present when you finalize a borrow/loan transfer, Enterprise Planning identifies the shortage of the lending project and creates new supply orders – at a rather late stage.

Manual finalization

To finalize an individual borrow/loan transfer, in the Borrow/Loan (whinh1146m000) or Borrow/Loan (whinh1646m000) session, select the relevant transfer and using the appropriate menu, select **Finalize**. You are then prompted to specify a reason.

Aging

You can use the Aging of Borrow/Loan Cost Peg Transfers (whinh1246m000) session to finalize a range of borrow/loan transfers.

Cost aspects of borrow/loan and payback transfers

When a borrow/loan transfer is carried out, the inventory value is transferred from the lending project to the borrowing project. The payback transfer returns the inventory value to the lending project. The transferred items are valuated against the inventory value of the lending project and the borrowing project. The inventory value of both projects is determined by the inventory valuation method used.

Item values can fluctuate between the moments of borrowing and paying back. To prevent cost increases from affecting the lending project, inventory is paid back at the inventory value at which it was borrowed.

The borrowed and loaned inventory has no impact on the project costs. For the lending project, the loaned inventory is returned at the original value. For the borrowing project, the difference between the payback value and the replenishment value is posted to the Project Costs & Commitments/WIP Costs and not to the project costs. Borrow/loan and payback transfers are non-billable transactions.

Cost aspects of borrow transfers

A borrow transfer does not affect the inventory value per item of the lending project, but the aggregated loaned inventory is subtracted from the total inventory value. The total inventory of the borrowing project is increased with the aggregated borrowed inventory value. The value per item is affected only if the item value of the borrowed inventory is different from the item value of the borrowing project.

Example

The inventory valuation method is MAUC by project.

Project A has four items in inventory, each with a value of 20. Therefore, the total value is 80. Project A borrows 4 items with a total value of 40 to fulfill a job shop requirement of 8 items. The total inventory value of project A is now 120, and the value per item is 15. The moment the borrow transfer is carried out, the 8 items are issued to the shop floor and no items are left in inventory.

Cost aspects of paybacks

The borrowed inventory is paid back at the value at which it was borrowed.

The borrowed and loaned inventory has no impact on the project costs. For the lending project, the loaned inventory is returned at the original value. For the borrowing project, the difference between the payback value and the replenishment value is posted to the Project Costs & Commitments/WIP Costs and not to the project costs. Borrow/loan and payback transfers are non-billable transactions.

Example

The inventory valuation method is MAUC by project.

Project A had borrowed four items from project B at a value of 10 each. The borrowed items have meanwhile been issued to fulfill a job shop requirement, so there is no inventory left. Then, project A is replenished with four items. The items have become more expensive: the value per item is now 30. After replenishment, the inventory value of project A is 4 * 30 = 120. The payback transfer is then carried out. The borrowed items are returned to project B at the value 40, which equals the value at which the items were borrowed. The inventory of project A becomes 0. The difference between the replenishment value and the payback value (120-40=80) are booked at the Project Costs & Commitments/WIP Costs of project A.

For the lending project, the result of the payback is that the total inventory value and the value per item are the same again as before the inventory was loaned.

Note

In case of partial paybacks, the values of the installments may differ.

Cost aspects of aging or manual finalization

The borrowed items are not returned to the lending project. The borrowed items and their value are added to the borrowing project's inventory as described in Borrow - example of cost aspects, but permanently. The payback is a purely financial compensation for the lending project.

The financial compensations are required because, for example, payments are made to the lending project's supplier before the borrow transfer is finalized.

Tracking borrow/loan and payback transfers

Various sessions provide insight into the progress of borrow/loan and payback transfers, both logistically and financially. These sessions help you decide whether borrow/loan transfers must be manually finalized, before the payback is due.

- The Project Cost Peg Transfer Lines (whinh1145m000) details session displays general information about the borrow/loan and payback transfers.
- The Borrow/Loan (whinh1146m000) and Borrow/Loan (whinh1646m000) sessions display more specific borrow/loan and payback details.
- The Paybacks (whinh1148m000) session displays payback details. This session is accessed from the Borrow/Loan (whinh1646m000) session.
- Historic information is provided in the Project Cost Peg Transfer - Borrow/Loan History (whinh1596m000) and Project Cost Peg Transfer - Payback Lines History (whinh1598m000) sessions.
- The Integration Transactions (tfgld4582m000) session displays the financial integration transactions generated from borrow/loan and payback transfers.
- The Financial Transactions (tpppc2100m100) session displays the project cost transactions generated from borrow/loan and payback transfers. The following posting types relate to borrow/loan and payback transfers:

Posting type	Description
Loan	The value of the loaned inventory, an entry for the lending project.
Borrow	The value of the borrowed inventory, an entry for the borrowing project.
Payback Result	The difference between the value of the borrowed inventory and the inventory that the borrowing

	project received on a replenishment order, which will be used to pay back the lending project.
Loan Reversal	The value of the inventory that the borrowing project pays back to the lending project, from the lending project's perspective.
Borrow Reversal	The value of the inventory that the borrowing project pays back to the lending project, from the borrowing project's perspective.

Note

To display borrow/loan transactions in the Financial Transactions (tpppc2100m100) session, you must select the **Log Borrow/Loan Transactions in Project** check box in the Project Pegging Parameters (tcpeg0100m000) session.

Examples of integration transactions for borrow/loan and payback transfers

The Integration Transactions (tfgld4582m000) session displays the financial integration transactions generated from borrow/loan and payback transfers.

In the following examples, project A is the borrowing project, and project B is the lending project.

The inventory valuation method is MAUC by project.

Borrow/loan transfer

Project A borrows four items with a total value of 40.

In each of the following examples, the **Business Object** is Inventory Transaction.

Integration Document Type	D/C	Reconciliation group		Project	Amount	Description
Cost Peg Transfer/ Loan	D	Borrow/ Loan Accrual /1	Loan Accrual	B	40	The borrow/loan transfer, from the lending project's perspective.
	C	Inventory/1	Inventory	B	40	
Cost Peg Transfer/ Borrow	D	Inventory/1	Inventory	A	40	The borrow/loan transfer, from the borrowing project's perspective.
	C	Borrow/ Loan Accrual/2	Borrow Accrual	A	40	

Payback transfer

Project A had borrowed four items from project B at a value of 10 each. The borrowed items have meanwhile been issued to fulfill a job shop requirement, so there is no inventory left. Then, project A is replenished with four items. The items have become more expensive: the value per item is now 30. After replenishment, the inventory value of project A is 4 * 30 = 120. The payback transfer is then carried out. The borrowed items are returned to project B at the value 40, which equals the value at which the items were borrowed. The inventory of project A becomes 0. The difference between the replenishment value and the payback value (120-40=80) are booked at the Project Costs & Commitments/WIP Costs of project A.

Integration Document Type	D/C	Reconciliation group		Project	Amount	Description
Cost Peg Transfer/Borrow Reversal	D	Borrow/ Loan Accrual/2	Borrow Accrual	A	40	The payback transfer, from the borrowing project's perspective.
	C	Inventory/1	Inventory	A	40	

Cost Peg Transfer/ Payback Re- sult	D	Invento- ry/1	Inven- tory	A	-80	The difference between the value of the borrowed invento- ry and the value of the invento- ry that the borrowing project received on a replenishment order, which will be used to pay back the lending project.
	C	Interim Transit/1	Inter- im Tran- sit	A	-80	
Project Costs & Commit- ments/Pay- back Result	D	Project WIP/1	Project WIP	A	80	The payback result, booked to the project WIP.
	C	Interim Transit/1	Inter- im Tran- sit	A	80	
Cost Peg Transfer/ Loan Rever- sal	D	Invento- ry/1	Inven- tory	B	40	The payback transfer, from the lending project's perspective.
	C	Borrow/ Loan Ac- crual/1	Loan Accru- al	B	40	

Finalization by aging or manual intervention

The borrowed items are not returned to the lending project. The borrowed items and their value are added to the borrowing project's inventory as described in Borrow - example of cost aspects, but permanently. The payback is a purely financial compensation for the lending project.

Integration Document Type	D/C	Reconciliation group		Project	Amount	Description
Cost Peg Transfer/ Borrow Reversal	D	Borrow/ Loan Accrual/2	Borrow Accrual	A	40	The payback transfer, from the borrowing project's perspective.
	C	Inventory/1	Inventory	A	40	
Cost Peg Transfer/ Loan Reversal	D	Inventory/1	Inventory	B	40	The payback transfer, from the lending project's perspective.
	C	Borrow/ Loan Accrual/1	Loan Accrual	B	40	
Cost Peg Transfer/Issue	D	Interim Transit/1	Interim Transit	B	40	The issue of the loaned inventory made permanent.
	C	Inventory/1	Inventory	B	40	
Cost Peg Transfer/Receipt	D	Inventory/1	Inventory	B		The receipt of the borrowed inventory made permanent.
	C	Interim Transit/1	Interim Transit	A		

Costing Breaks

For projects involving production or service of an item (such as depot repair service), the user is required to monitor unit costs at various levels.

Costing breaks provide a flexible method to view the breakup of unit costs at various levels in a project WBS. You can use costing breaks to move the unit costs from the top demand project pegs to other project WBS levels. You can also identify other specific cost types such as labor, material, subcontracting, and so on to redirect the unit costs to the other WBS levels.

You can register the costing breaks for:

- Manufacturing: for the Bill of Material (BOM) components of the item
- Service: for the As-built structure of the service item

Infor LN allows you to create multiple costing breaks for a project. When you create a costing break at a particular level in a project WBS, all the lower levels of the BOM inherit the costing break WBS links unless another costing break exists at the lower level in the BOM structure.

Example

A project PRJ001, with the element E and activity A, involves production of the End Item with the following components in the bill of material (BOM):

- Assembly
- Sub-Assembly 1 & Sub-Assembly 2
- MFG Comp 1, MFG Comp 2, MFG Comp 3 and MFG Comp 4
- Pur Comp 1 and Pur Comp 2
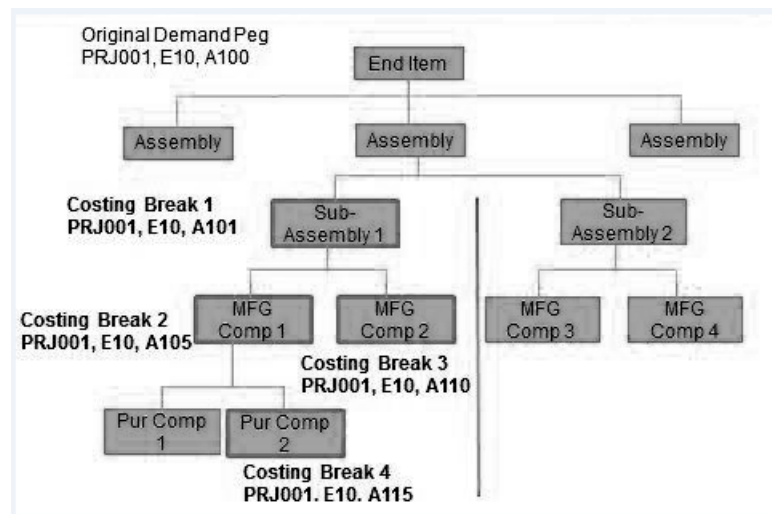
The peg distribution for the project is initially at the top demand item level (in this example at the End Item).

Costing breaks are created at the following levels:

- Costing Break 1 - at Sub-Assembly 1
- Costing Break 2 - at MFG Comp 1
- Costing Break 3 - at MFG Comp 2
- Costing Break 4 - at Pur Comp 2

You can collect and view the unit costs for:

- MFG Comp 1 at the Costing Break 2 (linked to peg PRJ001, E10, A105) instead of the Costing Break 1 (linked to peg PRJ001, E10, A101) as the Costing Break 1 is replaced by the lower level Costing Break 2.

- MFG Comp 2 at Costing Break 3 (linked to peg PRJ001, E10, A110) instead of Costing Break 1 (linked to peg PRJ001, E10, A101).

- Pur Comp 1 at Costing Break 2 (linked to peg PRJ001, E10, A105) as there is no costing break created at Pur Comp 1.

- Pur Comp 2 at Costing Break 4 (linked to peg PRJ001, E10, A115).

For the Sub-Assembly 2, MFG Comp 3, and MFG Comp 4, you can view the break up of unit costs at the top demand item level (the End Item linked to the peg (PRJ001, E10, A100)).

Costing breaks in Enterprise Planning and Manufacturing

In Manufacturing, the cost on a project is absorbed by a project account. With costing breaks, you can model dedicated project accounts for specific items and operations. You can define costing breaks at the lowest level such as item code or routing and operation, or at a generic level such as item group, assembly, operation type, or work center.

You can specify costing breaks for production resources and materials in the Costing Breaks (tppdm3600m000) session. When a production order is created, Enterprise Planning searches for costing breaks that can be applied to the new production order.

Costing breaks in the bill of material

Costing breaks override a project peg distribution of actual supply orders and move the related costs to different WBS levels on the same project.

Costing breaks are used to assign and track costs in Project. On a multilevel bill of material, costing breaks can be added on different levels. These costing breaks are indicated by lower level project peg codes for components, which differ from their parent item's project peg. Costs are moved from the main project peg to pegs that collect specific types of costs such as labour, material, subcontracting, or machine costs. In the BOM, you can apply costing breaks to routings, operations, work centers, or cost types. Multiple costing breaks can be applied to a BOM at the same time.

Costing breaks for nonpegged items

If the **Costing Breaks** check box is selected in the Implemented Software Components (tccom0100s000) session, before you can apply costing breaks to items, items must have a project peg distribution linked.

You can apply Costing breaks to nonpegged items. If the item is nonpegged, the **Inherit Project Peg** check box in the Items (tcibd0501m000) session determines how a project peg distribution is linked to these items. If this check box is selected, the item is treated as pegged and will have a peg distribution generated. If this check box is cleared, and no costing break is found for the nonpegged item during creation in, for example, the estimated materials, the order header project pegs are copied to the project peg distribution of the nonpegged item.

JSC Status	Cost Type	Action
Planned	Operations	Adding a new operation or copying an existing one.
		Changing the work center on an operation (nonsubcontracting) in case of machine breakdown or lack of resources.
		Changing a work center of the type **Subcontracting** in case of machine breakdown or lack of resources.
		Changing the work center from the type **Subcontracting** to **Company Owned**.
	Material	Adding a material.
		Changing the material from one item to another.
Released	Operations	Adding an operation or copying an existing one.
		Changing the work center from the type **Subcontracting** to **Company Owned**.
	Material	Adding a material.
		Changing a material.

This table shows the actions after which a costing break lookup takes place or the order header project peg is copied:

Note

If an operation with the status **Planned** is deleted all project pegs are removed.

Project Pegging Costing Breaks in Depot Repair

The costing break functionality allows you to collect costs at different Physical Breakdown levels for Depot Repair to redirect costs from project peg for service contract to another project peg.

Setup Costing Breaks for Depot Repair

Costing breaks must be defined in the Costing Breaks (tppdm3600m000) session for material, labor and other resources lines for depot repair.

Create Work Order from MSO Part Maintenance Line

When MWO is created from a MSO and costing breaks are defined in the Costing Breaks (tppdm3600m000) session, LN identifies the existing costing breaks and implement them to the project peg for the material lines, labor lines and other lines. The project pegs are defaulted in the following sequence:

1. If the project is defined on the MWO header and the **Costing Breaks** check box is selected in the Implemented Software Components (tccom0100s000) session, the Element and Activity are defaulted from the Costing Breaks (tppdm3600m000) session based on the material (Costing Breaks - Service Material (tppdm3103m000)), labor (Costing Breaks - Service Labor (tppdm3104m000)) and other resource line data (Costing Breaks - Service Other Cost (tppdm3105m000) sessions. LN identifies existing costing breaks and follows a hierarchy to implement them to the project pegs for the material lines, labor lines and other lines. When a costing break applies to the material, labor or other cost line the **Project Peg Origin** is set to **Costing Break**. For more information refer to *Service Costing Break Hierarchy and Search Path (p. 120)*.

2. If the **Costing Breaks** check box is not selected in the Implemented Software Components (tccom0100s000) session, the Element and Activity are defaulted from the Work Orders (tswcs2100m000) session. The **Project Peg Origin** field is set to **Top Demand**.

Note

- When a Maintenance Work Order (MWO) is created from a Maintenance Sales Order (MSO) - part maintenance line, the pegging (project, element, activity) data on the work order header is defaulted from the part maintenance line.

- When MWO is created from a MSO part maintenance line and a reference activity or master routing is defined on the part maintenance line or resource lines are defined manually, all material, labor, tooling and other requirement lines linked to the reference activity are copied to work order activity resource lines.

- When creating an internal work order, you can add the project pegging data and can modify this data only if the work order status is set to Free. You must specify a change reason when creating, changing or copying an internal work order.

- When a maintenance sales order or a work order is generated from a service order material cost line, the project pegging data is defaulted from the service order material cost line to the maintenance sales order part line or the work order.
- When a new maintenance sales order activity line is created or generated, the project pegging data is defaulted from the related maintenance part line or the related work order activity. You cannot modify this data.
- When work order activities are created, updated or deleted, the related maintenance sales activity lines are also created, updated or deleted. The project pegging data is considered during this synchronization.

Update Peg Data on MSO Part Maintenance Line

If the project pegging data changes on the MSO Part Maintenance Line and a Maintenance Work Order is already created before receiving the main part for repair on the MSO Part Maintenance Line, changes on the MSO Part Maintenance Line automatically update the project peg on the related MWO header and on MWO resource lines.

Note

After the MSO Receipt Line is generated, the peg data cannot be modified.

Plan Work Order

If the **Project Pegged Inventory** check box is selected in the Work Orders (tswcs2100m000) session, to issue the main item from warehouse, the project peg data is transferred to Warehousing for processing and a warehouse order is created with an outbound line.

If the **Project Pegged Inventory** check box is selected in the Work Orders (tswcs2100m000) session, to create the planned inventory transactions for the receipt of the main item or for each material line (with **Delivery Type** set to **From Warehouse** or **From Kit** or **To Warehouse** or **Via Purchase** in the Work Order Material Resources (tswcs4110m000) session), the project pegs of the MWO header are transferred to Warehousing.

Project Pegged Inventory check box is not selected in the Work Orders (tswcs2100m000) session for the items (to be issued from the warehousing) which are not project peg. The project peg is also not applicable for processing planned inventory transaction for such items.

If the **Project Pegged Inventory** check box is selected in the Work Orders (tswcs2100m000) session, for checking the availability of dedicated project inventory when performing the ATP check, the project pegs of the work order material resource line are used.

Note

When planning the MWO, LN checks the validity of the project pegs. In case a peg is not valid, an error message is displayed.

Release Work Order

If the **Project Pegged Inventory** check box is selected in the Work Orders (tswcs2100m000) session, at the time of releasing a work order, the work order planned inventory transaction are updated and warehouse outbound lines are created for the required material. The project pegs of the material lines are transferred to warehousing.

Register Actual Work Order Costs

Financial transactions are created when actual materials, labors or other cost are registered on the work order resource lines. The project peg data is also defaulted from the work order resource line. When actual costs are registered and the cost line is pegged, the costs are posted to the Project. For a new labor line that is created, MWO is project pegged, and **Costing Breaks** check box is selected in the Implemented Software Components (tccom0100s000) session, the pegging data are defaulted from the Costing Breaks (tppdm3600m000) session. When costing breaks are not defined, the pegging data is defaulted from the Work Orders (tswcs2100m000) session. For a new actual resource lines, the standard project peg defaults mechanism, described above is applicable.

Subcontract Work Order Activity

When you subcontract a work order activity, a work order other resource line with **Cost Type** set to **Subcontracting** is created in the Work Order Other Resources (tswcs4130m000) session. The project peg is defaulted from the applicable costing break or MWO header to the purchase order created for subcontracting.

Create Related Work Order

When a MWO is created for department transfer, the project peg data of the existing MWO must be transferred to the new related MWO. When you create a related MWO which is transferred within the same department (disassemble-assemble scenario), the project peg and the project peg origin of the material resource line in the Work Order Material Resources (tswcs4110m000) session, are defaulted on the new related MWO.

Close Work Order

When closing a work order, a warehouse order is created to receive the repaired item back in the warehouse. Return delivery lines are created for warehouse deliveries that are not fully consumed. The standard project peg defaults mechanism, described above is applicable.

Post Work Order to History

Canceled and closed work orders are posted to history. The project peg data is also copied.

Add MSO Coverage Line Additional Costs

When you manually add a coverage line for the additional costs, the project pegs are defaulted from the MSO header or the Lines which the coverage line is linked.

Note

If the coverage line is linked to a Part Maintenance Line and the **Costing Breaks** check box is selected in the Implemented Software Components (tccom0100s000) session , the Element and Activity are defaulted from Costing Breaks - Service Other Cost (tppdm3105m000) session, overwriting the project peg data defaulted from MSO header/line.

Cost MSO Coverage Line

When the **Status** of MSO or individual coverage lines is set to **Costed** in the Maintenance Sales Orders (tsmsc1100m000) session, invoice lines are created and the project peg of the coverage lines are transferred to Invoicing.

Service Costing Break Hierarchy and Search Path

The project, element and activity are retrieved from the Costing Breaks (tppdm3600m000) session. LN follows hierarchy for the various cost types, based on the following attributes.

Material Resource Lines Costing Breaks - Service Material (tppdm3103m000).

1. Installation Group of the MWO Header
2. Item of the MWO header (main item)
3. Item of the material line
4. Serial Number of the material line item
5. Project of the material line item

The following search order is applied:

1. Material line item and serial number
2. Main item and material line item
3. Material line item
4. Installation group and main item
5. Main item
6. Installation group
7. Service item group

Labor Resource Lines Costing Breaks - Service Labor (tppdm3104m000).

1. Master Routing of the MWO Activity the labor line is linked to
2. Routing Options of the MWO Activity the labor line is linked to
3. Reference Activity of the labor line

4. Task of the labor line

5. Project of the labor line

The following search order is applied:

1. Reference activity and task

2. Task

3. Reference activity

4. Master routing, routing option and reference activity

5. Master routing and routing option

6. Master routing

Other Resource Lines Costing Breaks - Service Other Cost (tppdm3105m000).

1. Cost Type (Tooling / Subcontracting / Other)

2. Item Group of the cost line item

3. Item

4. Serial Number

5. Project of the cost line

The following search order is applied:

If cost type is tooling

1. (Tool) Item and (Tool) serial number

2. (Tool) item

If cost type is subcontracting

1. Item

2. Item group

If cost type is other

1. Item

2. Item group

Appendix A
Glossary

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

activity

The smallest part of the activity structure used for a time-scaled budget. An entity that is used to represent a part of a project in an activity structure.

LN distinguishes these activity types:
- **WBS Element**
- **Control Account**
- **Work Package**
- **Planning Package**
- **Milestone**

See: activity structure

activity structure

A hierarchical structure that organizes and defines the total scope of the project. Each level represents an increasingly detailed definition of a work project. In contrast to the element structure, the activity structure is activity time oriented.

additional information fields

User-defined fields of various field formats that can be added to various sessions, in which users can edit these fields. No functional logic is linked to the contents of these fields.

Additional information fields can be linked to database tables. When linked to a table, the fields are displayed in the sessions corresponding to the database tables. For example, a field defined for the whinh200 table is displayed as an extra field in the Warehousing Orders (whinh2100m000) session.

The contents of additional fields can be transferred between database tables. For example, the information specified by a user in additional information field A of the Warehousing Orders (whinh2100m000) session is transferred to additional information field A in the Shipments (whinh4130m000) session. For this purpose, additional information fields with identical field formats and field name A must be present for the whinh200 and the whinh430 tables (whinh430 corresponds to the Shipments (whinh4130m000) session).

See: Additional information fields

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.

as-built structure

The actually built structure of a product including the serial numbers.

ATT

See: *available to transfer (ATT) (p. 124)*

available to transfer (ATT)

Inventory on-hand allocated to a particular project cost-peg demand, but not needed just yet. Therefore the inventory is available for other project cost pegs, provided that the inventory is replenished in time to fulfill the original demand.

Abbreviation: ATT

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.

backorder

An unfilled customer order, or partial delivery at a later date. A demand for an item whose inventory is insufficient to satisfy demand.

bill of material (BOM)

A list of all parts, raw materials, and subassemblies that go into a manufactured item and show the quantity of each of the parts required to make the item. The BOM shows the single-level product structure of a manufactured item.

blanket warehousing order

A warehousing order that is generated during the creation of a push schedule or a production schedule and that contains:

- A position number and sequence number of zero.
- An item as defined on the purchase schedule or production schedule.
- An order quantity equal to the quantity as defined on the purchase contract line. If based on a production schedule, the order quantity of the blanket order is based on the quantity specified in the **Transfer Quantity** field of the Work List (tirpt4602m000) session.
- An empty planned delivery date and planned receipt date.
- A lot selection defined as Any.

budget

1) A commercial cost estimate in the preproduction stage of projects. 2) A plan that includes an estimate of future costs and revenues related to expected activities.

change reason

The reason that can be assigned to a changed purchase document (line) or sales document (line).

change request

A change document that includes a proposal for the adjustment of an actual document. The change request is copied from and linked to the actual document. Changes are applied to the actual document after the change request is approved and processed.

control account

The only type of activity that can be linked to an organization breakdown structure. At this level functional responsibility for work and costs can be assigned. You can detail short-span jobs in control accounts and use it for the execution of a project.

cost control

The method that LN uses to control project costs.

Cost control involves:

- Recording actual costs against the expected costs entered in the budget.
- Reporting on any differences between budget, forecast, recorded costs and progress. If an element or activity uses cost control, the expected costs of the individual element as entered in the project budget are carried over to the control budget. If an element or activity does not use cost control, its budgeted costs are aggregated to the next, higher-level element in the budget structure for which cost control is applied.

costing breaks

Are used to break up and redirect costs related to a project, to project pegs that are linked to specific attributes, such as items, item groups, or work centers. The project costs are no longer linked only to the top demand project peg, but are spread over lower level pegs for the specified attributes (breaks), which improves project management.

customer furnished material

An item supplied by the customer being used as material in the production of an end-item for that same customer.

effectivity unit

A reference number, for example a sales order line or a project deliverable line, that is used to model deviations for a unit effective item.

element

The smallest part of an element structure. An element is used to define the (structure of the) work of the project, so that you can carry it out.

element structure

The multilevel, multiparent, hierarchical tree-like structure of elements that can be the basis of a budget.

element type

A way to distinguish project elements. A project with a **Progress Invoice** invoicing method can contain two types of elements: direct and indirect. If the progress is more than 100%, direct elements can have more than 100% progress. Indirect elements can never have more than 100% progress.

excess inventory

Inventory for which no demand is present. For example, excess inventory can result from fixed order quantities, when the received quantity exceeds the present demand.

Excess inventory can be:

- **On hand**
  Physically present in the warehouse
- **On order**
  Present on planned or scheduled receipts

export license

A license required by the authorities before selling and/or shipping of items (high-tech, classified or potentially dangerous) which are regulated by law. Items requiring this license have restrictions applied to them in Enterprise Planning. Supply for export license required items or items containing an export licensed item can only be commingled with supply for the same project. Similar restrictions exist for cost transfer rules.

inventory valuation method

A method to calculate the inventory value.

The inventory is valued at either its standard cost or its actual receipt price. Because inventory value can change with time, the age of inventory needs to be noted. In LN, the following inventory valuation methods are available:

Valuation Method

item subcontracting

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

moving-average unit cost (MAUC)

An inventory valuation method for accounting purposes.

The MAUC is the average value for each unit of the current inventory. For each new receipt the MAUC is updated.

multilevel bill of material

A BOM that lists the subcomponents of the components, and any eventual subcomponents.

In the multilevel BOM, the final product is at level zero.

operation subcontracting

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

opportunity

Used by a sales person to record and monitor sales information related to a business partner with the purpose of selling a product or service to this business partner.

parent/child relation

Generic term to indicate parent and child elements in any multilevel structure. For example, this relationship is used for companies, financial accounts, dimensions, product families, customers, suppliers.

peg

A combination of project/budget, element and/or activity, which is used to identify costs, demand, and supply for a project.

planned distribution order

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

planned inventory transactions

The expected changes in the inventory levels due to planned orders for items.

planning cluster

An object used to group warehouses for which the inbound and outbound flow of goods and materials is planned collectively. For this purpose, the demand and supply of the warehouses of the planning cluster is aggregated. Within a planning cluster one supply source is used, such as production, purchasing or distribution.

If multisite is implemented, a planning cluster must include one or more sites. The site or sites include the warehouses for which the planning processes are performed. A site is linked to one planning cluster.

planning group

A planning group is used for segregation in planning for project specific demand and supply. Commingling rules and cost transfer rules can be defined at planning group level to control supply planning behavior of project pegged items within the planning group as well as with other planning groups.

> **Note**
>
> A project can only be assigned to one planning group.

project

An endeavor with a specific objective to be met within the prescribed time and financial limitation, and that has been assigned for definition or execution.

purchase catalog

Identifies purchasable items. A purchase catalog is defined as a main category and as a purchase category.

push schedule

A list of time-phased requirements, generated by a central planning system, such as Enterprise Planning or Project, that are sent to the supplier. Push schedules contain both a forecast for the longer term and actual orders for the short term.

A push schedule can use one of the following release types:

- **Material Release**: only material releases are sent. Shipping is performed based on the **Firm** and **Immediate** requirements in the material release.
- **Shipping Schedule**: both material releases and shipping schedules are sent. Shipping is carried out based on the **Firm** and **Immediate** requirements in the shipping schedule. The material release only sends forecasting data.
- **Shipping Schedule Only**: only shipping schedules are sent. Shipping is carried out based on the **Firm** and **Immediate** requirements in the shipping schedule. No forecasting data is sent to the supplier.

reason

A user-defined standardized description of the reason for a particular decision or choice. A reason's type determines for which purpose you can use that reason.

To include additional information about an action, you can select and enter a reason from a list. LN can also print the reason in the relevant report.

response line

A response to a request for quotation line, which includes a bidder's bid for the RFQ line. A bid offers goods or services for a certain price and terms of sale and can be considered as an offer to sell.

revenue recognition

For a given contract, revenue recognition is the process that leads to the calculation (and subsequent posting to the General Ledger) of the total revenue that is estimated to have been earned, on the basis of the progress of the contract.

safety stock

The buffer inventory necessary to meet fluctuations in demand and delivery lead time. In general, safety stock is a quantity of inventory planned to be in inventory to protect against fluctuations in demand or supply. In the context of master production scheduling, safety stock is the additional inventory and capacity planned as protection against forecast errors and short-term changes in the backlog.

SSP

See: *supplier stage payments (p. 129)*

subassembly

An intermediary product in a production process that is not stored or sold as an end product, but that is passed on to the next operation.

For subcontracting purposes, a manufacturer can send a subassembly to a subcontractor to carry out work on the subassembly. This subassembly has its own item code defined in the Item Base Data.

After work is finished, the subcontractor sends the subassembly back to the manufacturer. Also this reworked subassembly has its own item code defined in the Item Base Data.

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.

supplementary unit

An extra unit in which the quantity of goods must be reported for the EU Intrastat declaration. The main reporting unit is kilogram in all cases. For some goods, a reporting unit must be used such as pairs (of shoes and so on), liters, head or pieces (for cattle), or square meters. Quantities of goods to which kilograms do not apply are only reported in the supplementary unit.

supplier stage payments

Spread payments that are made by customers to suppliers over a period of time. With stage payments, customers can make payments for an item before or after the item is actually received. An item's invoice flow is separated from its goods flow.

Abbreviation: SSP

supplying relationship

A distribution link between a supplying <u>planning cluster</u> and a receiving <u>planning cluster</u>. The planning clusters involved can be in the same company, or in different companies.

Enterprise Planning uses supplying relationships for distribution planning: the supplying relationships represent valid supply paths for particular items or groups of items. You can specify supplying relationships at the level of individual items, but also at more general levels.

The supplying relationships also determine the costs of supply, lot size rules, and other parameters.

warehouse transfer

A warehousing order to move an item between warehouses.

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

WBS

See: *work breakdown structure (p. 130)*

work breakdown structure

The top layer of the activity structure. The WBS can consist of a hierarchy of activities of the WBS element type.

Abbreviation: WBS

work package

A type of activity. You can detail short-span jobs in work packages and use it for the execution of a project.

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