

# **Manufacturing Collaboration**

## **Student Guide**

14784GC10

Production 1.0

September 2000

M0-13006

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# Preface

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## Profile

### Before You Begin This Course

Before you begin this course, you should have the following qualifications:

- Thorough knowledge of production activities associated with a discrete and repetitive manufacturing environment.
- Working experience with navigating Oracle Applications

### Prerequisites

- Scheduling Discrete Jobs (eClass)
- Repetitive Schedules (eClass)

### How This Course Is Organized

Manufacturing Collaboration is an instructor-led course featuring lecture and hands-on exercises. Online demonstrations and written practice sessions reinforce the concepts and skills introduced.

## Related Publications

### Oracle Publications

| Title                               | Part Number |
|-------------------------------------|-------------|
| Oracle Work in Process User's Guide | A83598-01   |

### Additional Publications

- System release bulletins
- Installation and user's guides
- *read.me* files
- *Oracle Magazine*

# Typographic Conventions

## Typographic Conventions in Text

| Convention   | Element   | Example  |
|--|---|--|
| Bold italic  | Glossary term (if there is a glossary)  | The <b><i>algorithm</i></b> inserts the new key.   |
| Caps and lowercase                                 | Buttons, check boxes, triggers, windows   | Click the Executable button.<br>Select the Can't Delete Card check box.<br>Assign a When-Validate-Item trigger to the ORD block.<br>Open the Master Schedule window.   |
| Courier new, case sensitive (default is lowercase) | Code output, directory names, filenames, passwords, pathnames, URLs, user input, usernames                    | Code output: <code>debug.set ('I', 300);</code><br>Directory: <code>bin (DOS), \$FMHOME (UNIX)</code><br>Filename: Locate the <code>init.ora</code> file.<br>Password: User <code>tiger</code> as your password.<br>Pathname: Open <code>c:\my_docs\projects</code><br>URL: Go to <code>http://www.oracle.com</code><br>User input: Enter <code>300</code><br>Username: Log on as <code>scott</code> |
| Initial cap  | Graphics labels (unless the term is a proper noun)  | Customer address ( <i>but</i> Oracle Payables)   |
| Italic   | Emphasized words and phrases, titles of books and courses, variables  | Do <i>not</i> save changes to the database.<br>For further information, see <i>Oracle7 Server SQL Language Reference Manual</i> .<br>Enter <code>user_id@us.oracle.com</code> , where <i>user_id</i> is the name of the user.  |
| Quotation marks                                    | Interface elements with long names that have only initial caps; lesson and chapter titles in cross-references | Select "Include a reusable module component" and click Finish.<br><br>This subject is covered in Unit II, Lesson 3, "Working with Objects."  |
| Uppercase  | SQL column names, commands, functions, schemas, table names   | Use the <code>SELECT</code> command to view information stored in the <code>LAST_NAME</code> column of the <code>EMP</code> table.   |

| Convention | Element    | Example             |
|------------|------------|---------------------|
| Arrow      | Menu paths | Select File—> Save. |

|            |                  |   |
|------------|------------------|---|
| Brackets   | Key names        | Press [Enter].  |
| Commas     | Key sequences    | Press and release keys one at a time:<br>[Alternate], [F], [D]  |
| Plus signs | Key combinations | Press and hold these keys simultaneously:<br>[Ctrl]+[Alt]+[Del] |

## Typographic Conventions in Code

| Convention         | Element                    | Example  |
|--------------------|----------------------------|--|
| Caps and lowercase | Oracle Forms triggers      | When-Validate-Item   |
| Lowercase          | Column names, table names  | SELECT last_name<br>FROM s_emp;                              |
|                    | Passwords                  | DROP USER scott<br>IDENTIFIED BY tiger;                      |
|                    | PL/SQL objects             | OG_ACTIVATE_LAYER<br>(OG_GET_LAYER<br>( 'prod_pie_layer' ) ) |
| Lowercase italic   | Syntax variables           | CREATE ROLE <i>role</i>                                      |
| Uppercase          | SQL commands and functions | SELECT userid<br>FROM emp;                                   |

## Typographic Conventions in Navigation Paths

This course uses simplified navigation paths, such as the following example, to direct you through Oracle Applications.

(N) Invoice > Entry > Invoice Batches Summary (M) Query > Find (B) Approve

This simplified path translates to the following:

1. (N) From the Navigator window, select Invoice > Entry > Invoice Batches Summary.
2. (M) From the menu, select Query > Find.
3. (B) Click the Approve button.

### Notations :

(N) = Navigator

(M) = Menu

(T) = Tab



(I) = Icon

(H) = Hyperlink

(B) = Button

## Typographical Conventions in Help System Paths

This course uses a “navigation path” convention to represent actions you perform to find pertinent information in the Oracle Applications Help System.

The following help navigation path, for example—

(Help) General Ledger > Journals > Enter Journals

—represents the following sequence of actions:

1. In the navigation frame of the help system window, expand the General Ledger entry.
2. Under the General Ledger entry, expand Journals.
3. Under Journals, select Enter Journals.
4. Review the Enter Journals topic that appears in the document frame of the help system window.

## Getting Help

Oracle Applications provides you with a complete online help facility.

Whenever you need assistance, simply choose an item from the Help menu to pinpoint the type of information you want.

### To display help for a current window:

1. Choose Window Help from the Help menu, click the Help button on the toolbar, or hold down the Control key and type 'h'.

A web browser window appears, containing search and navigation frames on the left, and a frame that displays help documents on the right.

The document frame provides information on the window containing the cursor. The navigation frame displays the top-level topics for your responsibility, arranged in a tree control.

2. If the document frame contains a list of topics associated with the window, click on a topic of interest to display more detailed information.

3. You can navigate to other topics of interest in the help system, or choose Close from your web browser's File menu to close help.

## **Searching for Help**

You can perform a search to find the Oracle Applications help information you want. Simply enter your query in the text field located in the top-left frame of the browser window when viewing help, then click the adjacent Find button.

A list of titles, ranked by relevance and linked to the documents in question, is returned from your search in the right-hand document frame. Click on whichever title seems to best answer your needs to display the complete document in this frame. If the document doesn't fully answer your questions, use your browser's Back button to return to the list of titles and try another.

# **Manufacturing Collaboration**

## **Chapter 1**

# Manufacturing Collaboration

---

# R11i Manufacturing Collaboration

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### Objectives

**After completing this course you should be able to do the following:**

- **Describe the difference between Outside Processing and Manufacturing Collaboration**
- **Explain why Manufacturing Collaboration is a business solution**
- **Identify the key integration points**
- **Execute the setup steps for Manufacturing Collaboration**

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# Agenda

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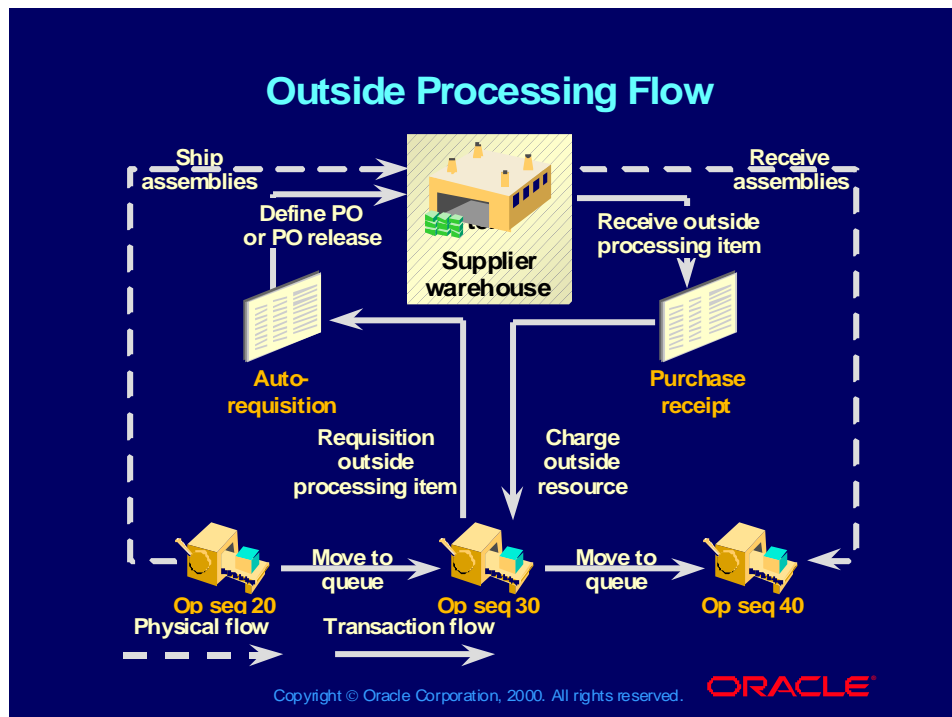
## Agenda

- Overview of Outside Processing and Manufacturing Collaboration
- Using Manufacturing Collaboration
- Identifying how Manufacturing Collaboration is accomplished
- Identifying key integration points
- Setting up Manufacturing Collaboration
- Automating Manufacturing Collaboration
- Demonstrating Manufacturing Collaboration

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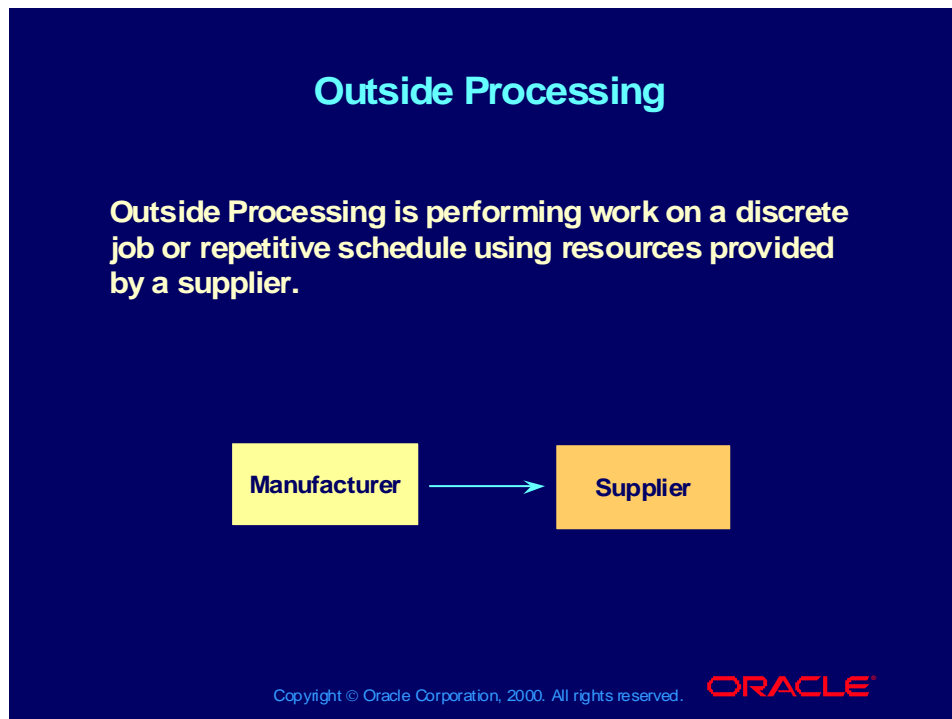
## Outside Processing Flow





## Outside Processing

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### Oracle Purchasing

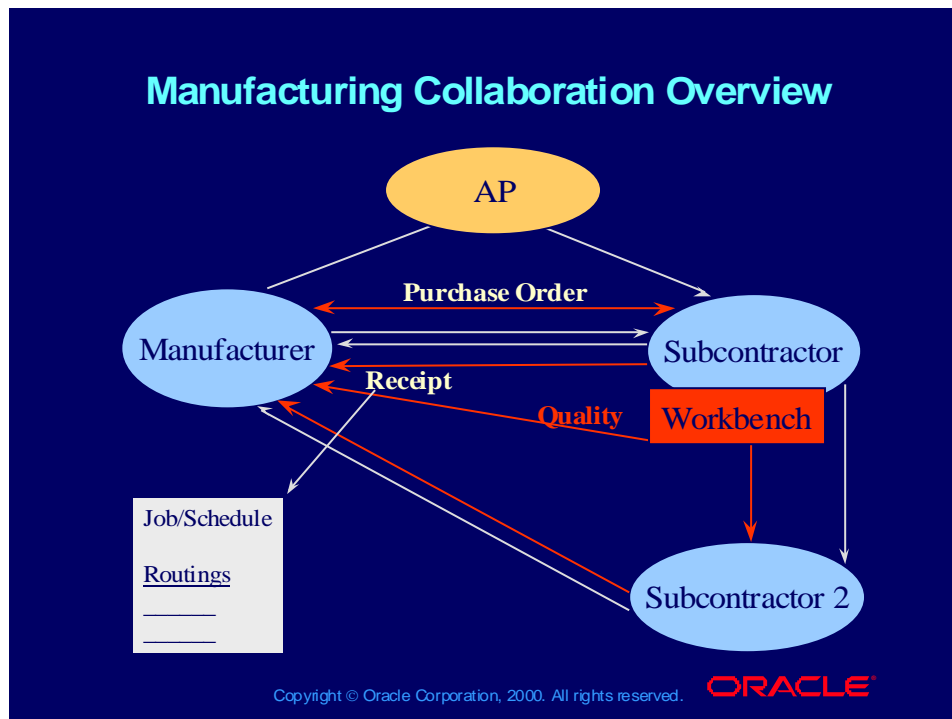
You can purchase and receive items through the use of requisitions and purchase orders.

### Oracle Work in Process

- You can manage the assembly flow.
- You can schedule, transact, and cost resources.
- You can control supplier-supplied components.
- In advance of your day-to-day outside processing execution, you should take the following steps:
  - Determine the need for outside service during production or process design
  - Identify and qualify specific suppliers
  - Create relationships and contracts with selected suppliers
  - Identify and create blanket purchase orders to handle contract volume by using Oracle Purchasing

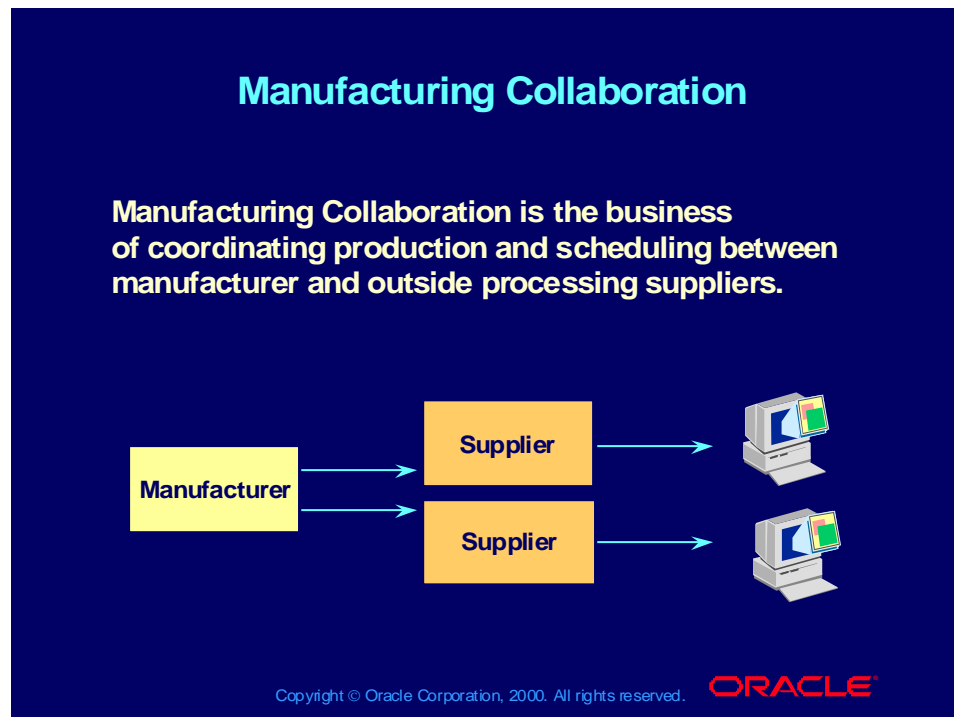
## Manufacturing Collaboration Overview

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# Manufacturing Collaboration

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## Overview

Manufacturing Collaboration is an approach to manufacturing that provides:

- improved and automated communication
- the linking activities between work orders and purchase orders

### Using Manufacturing Collaboration

**Reasons why a manufacturer may outsource part of their production:**

- the supplier can complete the process more efficiently
- the supplier can complete the process at a lower cost
- production is outsourced when additional capacity is needed (seasonal demand)

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### Accomplishing Manufacturing Collaboration

- Resource on routing represents supplier's resource
- Outside processing item on purchase order represents supplier contribution
- The outside processing item is linked to the resource on the routing so that a one-to-one relationship exists

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### Manufacturing Collaboration

**Manufacturing  
Collaboration  
is more than  
Outside Processing...**

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### Outside Processing Enhancements

The outside processing enhancements listed below are designed to improve usability and save time:

- Automatic completions
- Create requisition options
- Item revision
- Need-by-date
- Web supplier integration

### Describing the Differences

- **Integration with the internet supplier portal**
  - makes it easier to collaborate with your supplier
  - provides suppliers with greater access to information that affects them
- **Automated notifications using workflow reduces the need to make calls or use a fax**



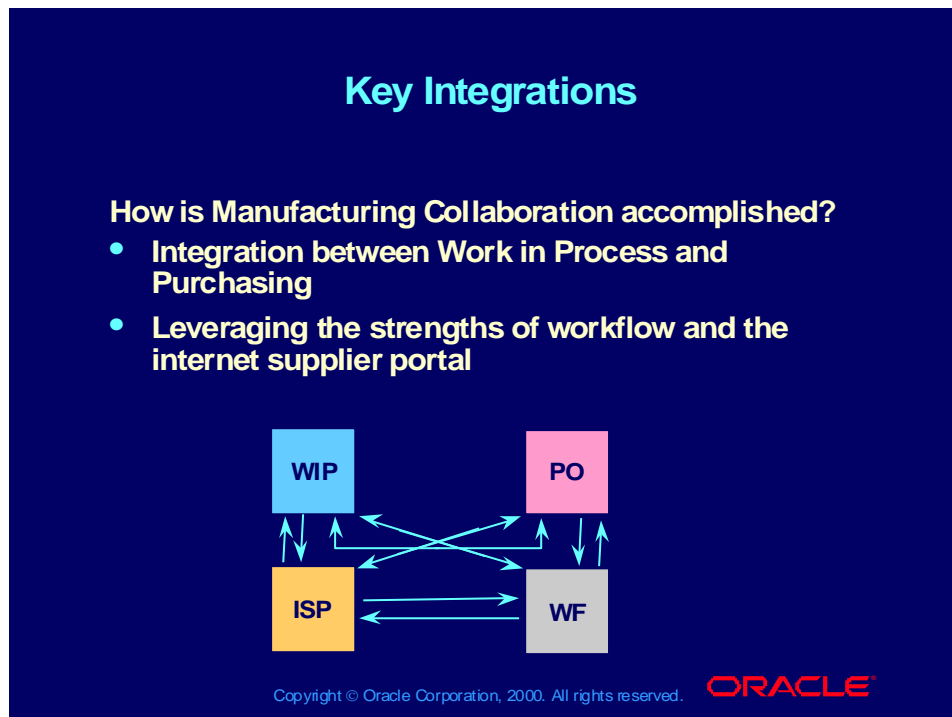
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## Key Integrations

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### Integration Flow

- Manufacturer creates a work order in WIP. This launches Requisition Import in Purchasing.
- A purchase order needs to be created and approved if there is not an approved blanket po. The movement of the assemblies into the queue step of the outside processing operation starts an ASN to the supplier. When the supplier is finished with the work, the Internet Supplier Portal is used by the Supplier to create and submit an ASN or ASBN
- The ASN creates the logical receipt of the assemblies and moves the assemblies to the next operation if there are two or more sequential outside processing operations in the routing
- The ASN also launches the WIP: Shipping and Receiving Intermediate workflow which allows the Buyer, Production Manager and the Second Supplier to communicate about the quantity of assemblies shipped and received as well as their condition upon receipt
- The process continues until the ASN is submitted at the final outside processing operation. The receipt of the assemblies will create both the delivery into wip and the subsequent movement of the assemblies into a sub-inventory if a sub-inventory is defined at the routing or job level.

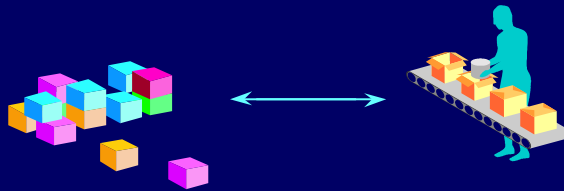
## Example

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### Example

**WIP routing is as follows:**

| Op | Dept | Resource    |
|----|------|-------------|
| 10 | out1 | supplier #1 |
| 20 | out2 | supplier #2 |



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## Example (continued)

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### Example (continued)

#### Time to execute - manufacturing site

- Create work order in a status of released
- Requisition import is executed and requisition is created; blanket release created in a status of approved
- Component parts issued to wip and physically shipped to supplier #1



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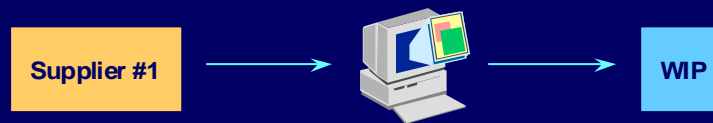
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## Example (continued)

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### Example (continued)

Supplier #1 completes operation 10



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## Example (continued)

---

### Example (continued)

#### Back to the manufacturer

- Buyer responds to the notification
- Notification is sent tot the second supplier
  - Second supplier responds as to how many were received
  - Response is sent to buyer with the quantity received



Buyer

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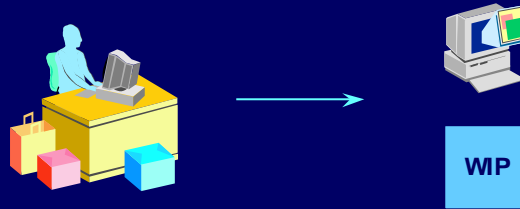
## Example (continued)

---

### Example (continued)

#### Supplier #2 finishes the process

- Supplier #2 creates an ASN or ASBN; ASN creation notification is sent to buyer
- Supplier #2 physically ships the assemblies back to the manufacturer
- Optionally, quality data can be entered



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## Example (continued)

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### Example (continued)

#### Back to the manufacturer

- Buyer receives ASN Creation Notification
  - Receiving Transaction Processor is run
  - Receiver receives the assemblies
  - Delivery on system is to wip job
- Work order continues



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## Example (continued)

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### Example (continued)

#### Back to the manufacturer (continued)

- Work order is completed, reviewed, and closed
- Invoice is created and processed in AP



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### Internet Supplier Portal

#### What information is available?

- Purchase order
- Receipt
- Invoice
- Quality data
- Component information on a job





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## Additional Capabilities of Workflow

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### Additional Capabilities of Workflow

- **Supplier can update capacity information**
  - workflow notification sent to buyer
  - used in the sourcing process
- **Supplier can update promise date on PO**
  - workflow notification sent to buyer
  - buyer must accept
- **Manufacturer can change the need by date on PO**
  - workflow notification sent to buyer and supplier
  - if supplier accepts change; PO is updated

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### Review Question

The Internet Supplier Portal gives the supplier instant access to information in the manufacturers system. Which of the following can not be viewed through the portal?

- A. Purchase order
- B. Quality data
- C. Quantity delivered
- D. Resources used in the job

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### Answer to Review Question

The Internet Supplier Portal gives the supplier instant access to information in the manufacturers system. Which of the following can not be viewed through the portal?

- A. Purchase order
- B. Quality data
- C. Quantity delivered
- D. Resources used in the job

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### Review Question

**How is the need-by-date for a purchase requisition at an OSP operation determined?**

- A. Start date of the current operation**
- B. Start date of the next operation**
- C. Start date of the job**
- D. Start time of previous operation plus OSP resource lead time**

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### Answer to Review Question

How is the need-by-date for a purchase requisition at an OSP operation determined?

- A. Start date of the current operation
- B. Start date of the next operation
- C. Start date of the job
- D. Start time of previous operation plus OSP resource lead time

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## Review Question

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### Review Question

**You can change the need-by-date on a purchase order and have a workflow triggered which sends notification to the supplier. Which navigation path would be used to update the need-by-date?**

- A. WIP > Discrete > Discrete Jobs (M) Tools**
- B. WIP > Job/Schedule Details > Material Requirements (M) Tools**
- C. WIP > Discrete > View Discrete Jobs (M) Tools**
- D. WIP > Job/Schedule Details > Operations (M) Tools**

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### Answer to Review Question

**You can change the need-by-date on a purchase order and have a workflow triggered which sends notification to the supplier. Which navigation path would be used to update the need-by-date?**

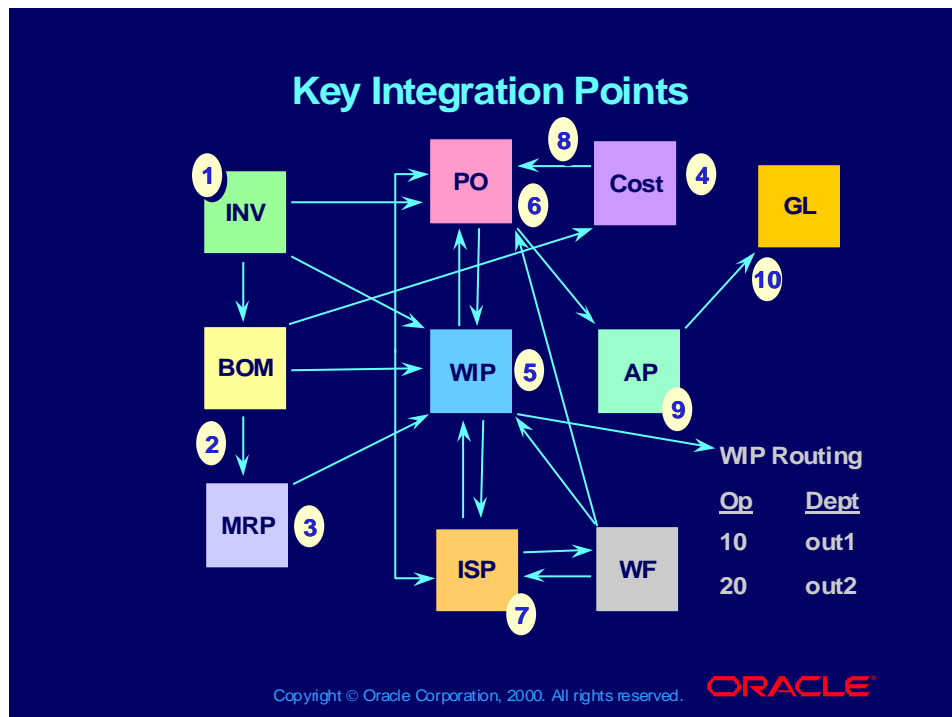
- A. WIP > Discrete > Discrete PBS (M) Tools**
- B. WIP > Job/Schedule Details > Material Requirements (M) Tools**
- C. WIP > Discrete > View Discrete Jobs (M) Tools**
- D. WIP > Job/Schedule Details > Operations (M) Tools**

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## Key Integration Points



## Key Setups - Inventory

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### Key Setups - Inventory

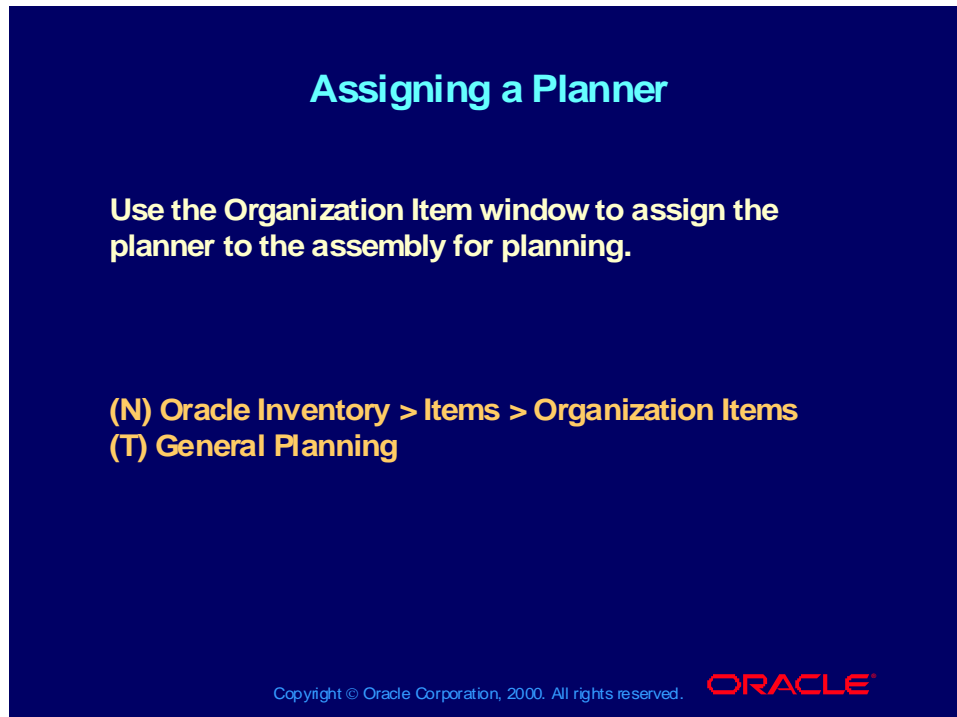
| Assembly                             | Outside Processing Item                     |
|--------------------------------------|---|
| Item/Part number<br>(inventory item) | Item/Part number<br>(supplier contribution) |
| Planning                             | Purchasing                                  |
| WIP                                  | Receiving                                   |

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## Assigning a Planner

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**Assigning a Planner**

Use the Organization Item window to assign the planner to the assembly for planning.

**(N) Oracle Inventory > Items > Organization Items**  
**(T) General Planning**

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### **Assign a Planner**

Create the item you are building in WIP and assign a planner to the assembly

**(Help) Oracle Manufacturing Applications > Oracle Inventory > Items  
> Updating Organization Level Items**

## Defining Planning Attributes

---

### Defining Planning Attributes

Use the Organization Item window to define MRP/MPS planning attributes for your assembly.

(N) Oracle Inventory > Items > Organization Items  
(T) MPS/MRP Planning

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### Define Planning Attributes

Determine the release time fence for your assembly

**(Help) Oracle Manufacturing Applications > Oracle Inventory > Items  
> Updating Organization Level Items**

## Verifying WIP Attributes

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### Verifying WIP Attributes

Use the Organization Item window to verify that WIP attributes have been set for the assembly being manufactured.

(N) Oracle Inventory > Items > Organization Items  
(T) Work in Process

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### Verify WIP Attributes

Verify the the attribute *Build in WIP* has been checked

**(Help) Oracle Manufacturing Applications > Oracle Inventory > Items  
> Updating Organization Level Items**

## Setting Purchasing Attributes

---

### Setting Purchasing Attributes

Use the Organization Item window to set the purchasing attributes for the outside processing items at each OSP operation.

(N) Oracle Inventory > Items > Organization Items  
(T) Purchasing

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### Set Purchasing Attributes

Create items representing the supplier contribution at each OSP operation

**(Help) Oracle Manufacturing Applications > Oracle Inventory > Items  
> Updating Organization Level Items**

## Setting Receiving Attributes

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### Setting Receiving Attributes

Use the Organization Item window to create an item and set the receiving attributes for each OSP item.

(N) Oracle Inventory > Items > Organization Items  
(T) Purchasing

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### Set Receiving Attributes

Determine the receipt routing for each OSP item

(Help) Oracle Manufacturing Applications > Oracle Inventory > Items  
> Updating Organization Level Items

### Key Setups - BOM

- **Outside Processing Resource**
  - charge type of po move or po receipt
  - outside processing enabled
  - establish the relationship with purchasing
  - determine if resource is to be costed
  - charge to wip at either standard or actual
  - define absorption and variance accounts (both default from the org level parameters)

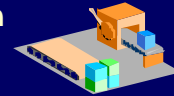
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### Key Setups - BOM (continued)

- **Departments**
  - location is the address for delivery to either the manufacturer or second supplier
  - determine if uncompleted assembly is coming back or going to another supplier
- **Routing** - completion sub-inventory for automatic completion
- **BOM** - supply type of operation pull for components needed at OSP operation



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## Creating a Resource

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**Creating a Resource**

Use the Resources window to create a supplier's resource for each operation.

**(N) Oracle Inventory > Bills of Materials > Routings > Resources**

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### Create a Resource

Create a resource representing the supplier's resource for each operation

- In this form:

- OSP item is linked to outside processing resource
- the resource will be charged to WIP at standard or actual rate

**(Help) Oracle Manufacturing Applications > Oracle Bills of Material > Routings > Setting Up > Defining a Resource**

## Entering a Location

---



### Enter a Location

Create a location representing the address of where the assemblies are to be delivered.

**(Help) Oracle Manufacturing Applications > Oracle Purchasing > Setting Up > Defining Locations**

## Defining a Department

---

### Defining a Department

Use the Departments window to define departments within your organization that represents each outside supplier.

**(N) Oracle Inventory > Bills of Materials > Routings  
> Departments**

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### Define a Department

Create a department for each of your outside suppliers

**Note:** For more information on defining and linking Locations and Departments, see the *Oracle Purchasing User's Guide Release 11i*.

**(Help) Oracle Manufacturing Applications > Oracle Bills of Materials  
> Setting Up > Defining a Department**

## Assigning Resources to Departments

---

**Assigning Resources to Departments**

Use the Resources window from the Departments window to establish the relationship between the resources and the departments.

**(N) Oracle Inventory > Bills of Materials > Routings  
> Departments (B) Resources**

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### **Assign Resources to Departments**

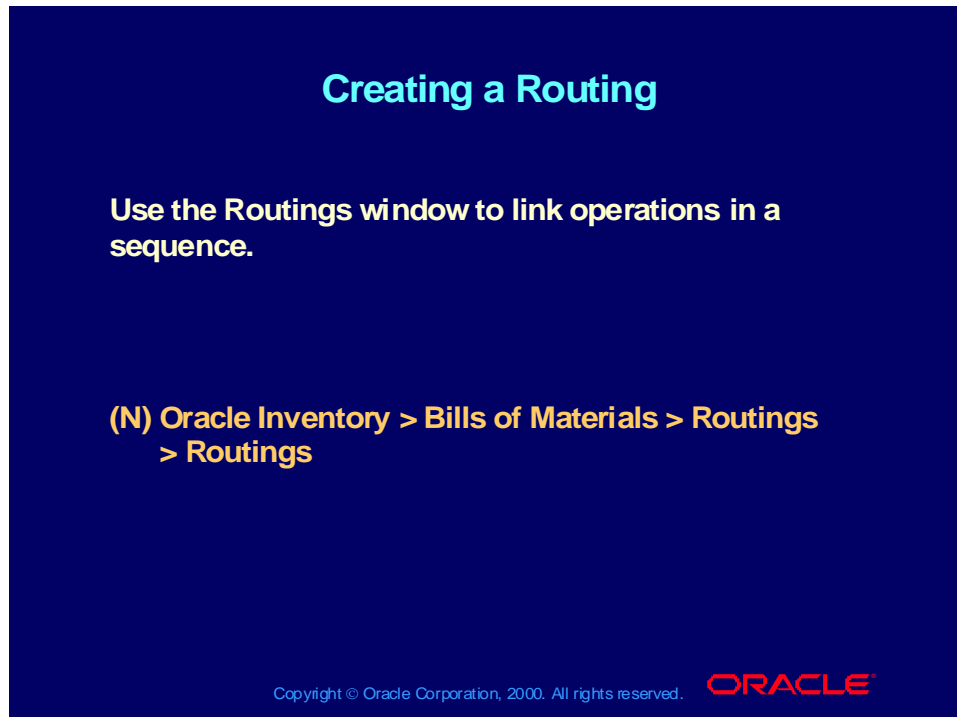
Assign all your resources to their respective departments

**Note:** A Queue Resource can be set up to represent time at the OSP supplier to calculate the lead time without impacting cost.

**(Help) Oracle Manufacturing Applications > Oracle Bills of Materials  
> Setting Up > Assigning Resources to a Department**

## Creating a Routing

---



### **Create a Routing**

Create a routing for the assembly

**(Help) Oracle Manufacturing Applications > Oracle Bills of Materials > Routings > Defining a Routing > Creating a Routing**

## Selecting Resources for an Operation in a Routing

---

### Selecting Resources for an Operation in a Routing

Use the Operation Resources window to link the required resources to the department in the routing.

**(N) Oracle Inventory > Bills of Materials > Routings  
> Routings (B) Operation Resources**

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### Select Resources for an Operation

Select the required resources for this operation routing

- The usage represents the cost per assembly for the OSP resource
- The time to be scheduled is calculated by setting up a queue resource that is defined as scheduled and uncoded.

**(Help) Oracle Manufacturing Applications > Oracle Bills of Materials  
> Routings > Defining a Routing > Assigning Operation Resources**

## Verifying Charge Type

---

### Verifying Charge Type

Use the Operation Resources window to verify what the charge type is set to for a resource.

**(N) Oracle Inventory > Bills of Materials > Routings  
> Routings (B) Operation Resources**

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### Verify Charge Type

Verify the OSP resource has a charge type set to PO Move or PO receipt. This tells the system whether or not to move the assemblies to the next operation upon receipt.

**(Help) Oracle Manufacturing Applications > Oracle Bills of Materials  
> Routings > Defining a Routing > Assigning Operation Resources**



## Assigning a Completion Sub-Inventory

---

### Assigning a Completion Sub-Inventory

Use the Routing Details window to assign a completion sub-inventory where finished assemblies are stored.

**(N) Oracle Inventory > Bills of Materials > Routings  
> Routings (B) Routing Details**

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### Assign a Completion Sub-Inventory

Assign a completion sub-inventory to the assembly. This will allow the assemblies to be completed directly into a sub-inventory if the last operation is an OSP operation and the charge type is PO Move.

**(Help) Oracle Manufacturing Applications > Oracle Bills of Materials  
> Routings > Defining a Routing > Assigning a Completion  
Subinventory and Locator**

## Creating a Bill of Material

---

### Creating a Bill of Material

Use the Bills of Material window to identify the components of the bill which are supplied by the manufacturer.

**(N) Oracle Inventory > Bills of Materials > Bills > Bills**

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### Create a Bill of Material

Create a bill of material if there are parts that are supplied by the manufacturer from the sub-inventory

**Note:** The supply type determines the timing of the issuance of the material.

**(Help) Oracle Manufacturing Applications > Oracle Bills of Materials > Bills of Material > Defining a Bill of Material > Creating a Bill of Material**

### Key Setups - Purchasing

- **Required**
  - Shipping network location at supplier site - address of next supplier where assemblies are shipped
  - Supplier contact for workflow and internet supplier portal
- **Optional (to create more automated flow)**
  - Supplier site as pay on receipt
  - Receipt routing
  - Blanket PO
  - Approved supplier list
  - Sourcing rules



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## Creating a Supplier Site

---



### Create a Supplier Site

Create a supplier site for each OSP operation. Verify that each site is a pay and purchasing site.

**Note:** The Shipping Network Location represents the address of the second supplier. This is required for the workflow notifications and logical receipt.

**(Help) Oracle Financial Applications > Oracle Payables > Suppliers > Suppliers and Supplier Sites Window Reference > Suppliers and Supplier Sites Window Reference**

## Entering a Contact

---



**Entering a Contact**

Use the **Supplier Sites** window to enter contact(s) for the outside suppliers.

**(N) Oracle Purchasing > Supply Base > Suppliers**  
**(B) Sites (T) Contacts**

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### **Enter a Contact**

Create a contact for each of the outside suppliers you created.

**Note:** This is needed for the two outside processing workflows

**(Help) Oracle Financial Applications > Oracle Payables > Suppliers > Suppliers and Supplier Sites Window Reference > Suppliers and Supplier Sites Window Reference**

## Verifying Payment on Receipt

---

### Verifying Payment on Receipt

Use the **Supplier Sites** window to verify that the supplier site allows for payment on receipt.

(N) Oracle Purchasing > Supply Base > Suppliers  
(B) Sites (T) Purchasing

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### Verify Payment on Receipt

Verify that each supplier site allows for pay on receipt to allow for a more automated flow.

**(Help) Oracle Financial Applications > Oracle Payables > Suppliers > Suppliers and Supplier Sites Window Reference > Suppliers and Supplier Sites Window Reference**

## Entering a Blanket Purchase Order

---

### Entering a Blanket Purchase Order

Use the Purchase Orders window to enter blanket agreements for each OSP item.

**(N) Oracle Purchasing > Purchase Orders  
> Purchase Orders**

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### Enter a Blanket Purchase Order

Enter an approved blanket purchase order for the supplier contribution at each operation to allow this process to be more automated.

**Note:** The type is Outside Processing. OSP item must have revision.

- Blanket agreements are not required
  - Standard PO can be auto-created using an approved requisition
- **(Help) Oracle Manufacturing Applications > Oracle Purchasing > Purchase Orders > Purchase Order Types**

## Adding to the Approved Supplier List

---

### Adding to the Approved Supplier List

Use the Approved Supplier List window to add the OSP Suppliers.

**(N) Oracle Purchasing > Supply Base > Approved Supplier List**

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### Add to the Approved Supplier List

Add the OSP suppliers to the approved supplier list for better automated processing.

**Note:** Supplier status should be approved.

**(Help) Oracle Manufacturing Applications > Oracle Purchasing > Supply Base Management > Approved Supplier List**



## Defining Attributes

---

### Defining Attributes

Use the Supplier Item Attributes window to enter item attributes from the Approved Supplier List.

**(N) Oracle Purchasing > Supply Base > Approved Supplier List (B) Attributes**

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### Define Attributes

Choose a Release Method from the list of values. Indicate the blanket po for sourcing.

**(Help) Oracle Manufacturing Applications > Oracle Purchasing > Supply Base Management > Defining the Supplier/Item Attributes**

## Defining Sourcing Rules

---

### Defining Sourcing Rules

Use the Sourcing Rules window to define where to source the supplier contribution portion of the assembly.

**(N) Oracle Purchasing > Supply Base > Sourcing Rules**

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### Define Sourcing Rules

Create a sourcing rule for each outside processing supplier.

**Note:** For more information on sourcing rules, see the *Oracle Purchasing User's Guide Release 11i*.

**(Help) Oracle Manufacturing Applications > Oracle Purchasing > Supply Base Management > Defining Sourcing Rules**

## Assigning Sourcing Rules

---

### Assigning Sourcing Rules

Use the Sourcing Rules : Bill of Distribution Assignments window to assign the sourcing rules to the MRP assignment set.

**(N) Oracle Purchasing > Supply Base > Assign Sourcing Rules**

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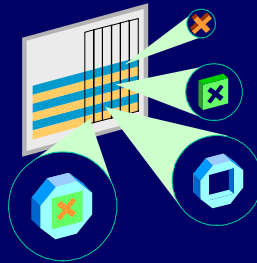
### Assign Sourcing Rules

Use the profile option MRP: Default Assignment Set to see what assignment set is being used by planning. This allows for better automation of the process.

**(Help) Oracle Manufacturing Applications > Oracle Purchasing > Supply Base Management > Assigning Sourcing Rules and Bills of Distribution**

### Key Setups - Planning

- Set up planner
- Preferences on Planner's Workbench
- MPS production attribute
- Release time fence



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## Creating a Planner

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### Creating a Planner

Use the Planners window to identify employees who are assigned to planning schedules.

**(N) Oracle Inventory > Setup > Planners**

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### Create a Planner

Create a planner for the assembly to be built in WIP.

**Note:** For automation, not required.

**(Help) Oracle Manufacturing Applications > Oracle Inventory > Setting Up > Inventory Structure > Defining Planners**

## Defining Planning Preferences

---

### Defining Planning Preferences

Use the Preferences window off of the MPS Planners Workbench to set planning preferences for outside processing assemblies.

(N) Oracle Material Planning > MPS > Workbench  
(M) Tools > Preferences

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### Define Planning Preferences

The preferences to determine how the job status will be created in WIP is selected by each planner. A status of Released automates the process even more.

**Note:** Item planner on assembly is required

**(Help) Oracle Manufacturing Applications > Oracle Master Scheduling/MRP > Setting Up > Defining Planning Parameters**

## Creating a Master Production Schedule

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### Creating a Master Production Schedule

Use the Mater Production Schedules window to enter a production schedule for the assembly.

**(N) Oracle Material Planning > MPS > Names**

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### Create a Master Production Schedule

Create an master production schedule for your assembly based on MDS.

**Note:** Production must be enabled in order for work orders to be created automatically.

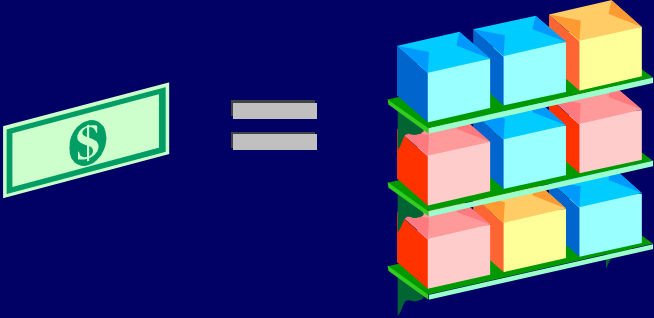
**(Help) Oracle Manufacturing Applications > Oracle Master Scheduling/MRP > Master Scheduling > Defining a Schedule Name**

## Key Setups - Costs

---

**Key Setups - Costs**

- Cost Rollup
- Cost Update



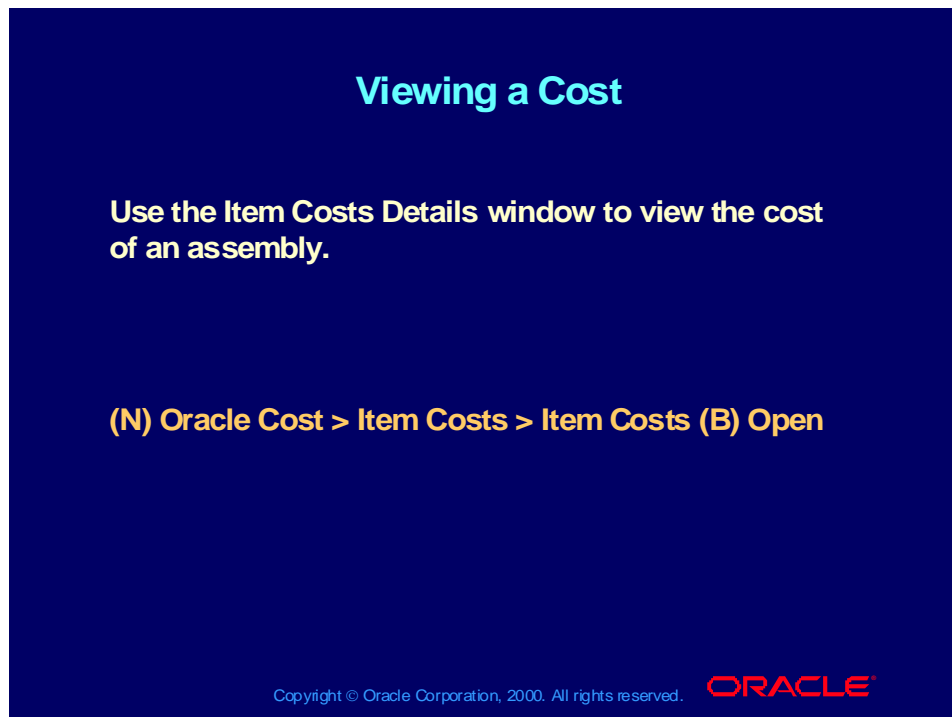
The diagram shows a single green dollar bill on the left, followed by an equals sign, and then a stack of nine colored blocks (three red, three blue, and three yellow) on the right. This visualizes the concept of a cost rollup or update, where a single unit's cost is aggregated into a larger stack of units.

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## Viewing a Cost

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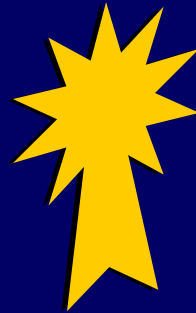
### View a Cost

The outside processing cost element is used to hold the cost of the OSP resource.

**(Help) Oracle Manufacturing Applications > Oracle Cost Management  
> Item Costing > Defining Item Costs Details**

### Key Setups - Quality

- Create a quality plan
- Select transaction type



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## Creating a Quality Plan

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### **Create a Quality Plan**

Create a quality plan for any of the outside processing suppliers.

**(Help) Oracle Manufacturing Applications > Oracle Quality > Collection Plans > Creating Collection Plans**

## Selecting Quality Collection Transactions

---

### Selecting Quality Collection Transactions

Use the Collection Transactions window to select the quality transaction types.

**(N) Oracle Quality > Setup > Collection Plans  
(B) Transactions**

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### Select Quality Collection Transactions

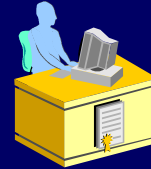
The transaction must be Self Service Outside Processing for the ISP to enter quality data through the portal.

**Note:** Plan must be enabled to be viewed in the Internet Supplied Portal.

**(Help) Oracle Manufacturing Applications > Oracle Quality >  
Collection Plans > Quality Data Collection During Transactions**

### Key Setups - WIP

- **Requisition creation time**
  - At job/schedule release
  - At operation
  - Manually
- **Job Roles for Shipping Notifications**
  - Production manager
  - Shipping manager
- **Overcompletion tolerance**
- **Completion sub-inventory at job/schedule**



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## Setting Requisition Creation Time

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### Setting Requisition Creation Time

Use the Work in Process Parameters window to set the timing for the creation of a requisition for the outside processing item.

**(N) Oracle WIP > Setup > Parameters (T) Outside Processing**

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### Create Requisition Options

You can automatically create requisitions for outside processing, when the job or schedule is released, or when you move assemblies into an outside processing operation. You also can require that purchase requisitions be created manually.

The default setup is to automatically create the requisition when you move into an outside processing operation. This can be changed at the organization level parameter.

**Note:** Requisition import will be run based on the option you choose.

**(Help) Oracle Manufacturing Applications > Oracle Work in Process > Setting Up > Defining WIP Parameters**

## Assigning Shipping Notifications

---

### Assigning Shipping Notifications

Use the Work in Process Parameters window to define the employees who will receive the shipping notification.

(N) Oracle WIP > Setup > Parameters (T) Outside Processing

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### Assign Shipping Notifications

Determine who should receive the shipping notifications when the assembly is sent from supplier to supplier.

**Note:** Must be valid employees in the HR tables.

**(Help) Oracle Manufacturing Applications > Oracle Work in Process > Setting Up > Defining WIP Parameters**

## Defining Overcompletion Tolerances

---

### Defining Overcompletion Tolerances

**Use the Work in Process Parameters: Other window to enter the default overcompletion tolerance percent.**

**(N) Oracle WIP > Setup > Parameters (T) Other**

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### Default Overcompletion Tolerance %

A hierarchy is used to establish tolerances based on settings at different levels:

- Organization level tolerances

Set in WIP parameters, are considered if no other tolerances are set at the item level or at the discrete job level.

- Item level tolerances

Set in the Inventory Item Attributes form by organization, are considered for overcompletions, indicating tolerance type and tolerance value. If no item level tolerances are established, organization level tolerances in WIP parameters are considered.

- Discrete job level

Set in the Discrete Job form in the More tabbed region.

**(Help) Oracle Manufacturing Applications > Oracle Work in Process  
> Setting Up > Defining WIP Parameters**



## Modifying Completion Sub-Inventory

---

### Modifying Completion Sub-Inventory

Use the Discrete Jobs window to modify the default completion sub-inventory defined on the routing.

**(N) Oracle WIP > Discrete > Discrete Jobs (T) Routing**

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### Modify Completion Sub-Inventory

The completion sub-inventory defaults from the routing but it can be changed at the job/schedule level.

**(Help) Oracle Manufacturing Applications > Oracle Work in Process > Outside Processing > Outside Processing Setup and Planning > Setting Up Work in Process**

### Key Setups - System Administration

- User id's for suppliers
- Securing attributes
- Responsibilities
- Supplier contact at supplier site level

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## Creating a User for Each Supplier

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### Creating a User for Each Supplier

Use the Users window to create a user name to identify each outside processing supplier and select the responsibilities.

**(N) Oracle System Administrator > Security > User > Define (T) Responsibilities**

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### Create a User

The supplier field on the Create User window will be the supplier contact name.

**Note:** The contact name is what the workflow will be looking for (this can be by supplier or supplier site).

**(Help) Oracle Manufacturing Applications > Oracle Applications System Administration > Overview of Oracle Applications Security > Users Window**

## Defining Securing Attributes

---

### Defining Securing Attributes

Use the Users window to define the functions within the Internet Supplier Portal that the suppliers will be able to use.

**(N) Oracle System Administrator > Security > User > Define (T) Securing Attributes**

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### Define Securing attributes

Securing attributes are what keep the suppliers within their own user information.

**(Help) Oracle Manufacturing Applications > Oracle Applications System Administration > Overview of Oracle Applications Security > Users Window**

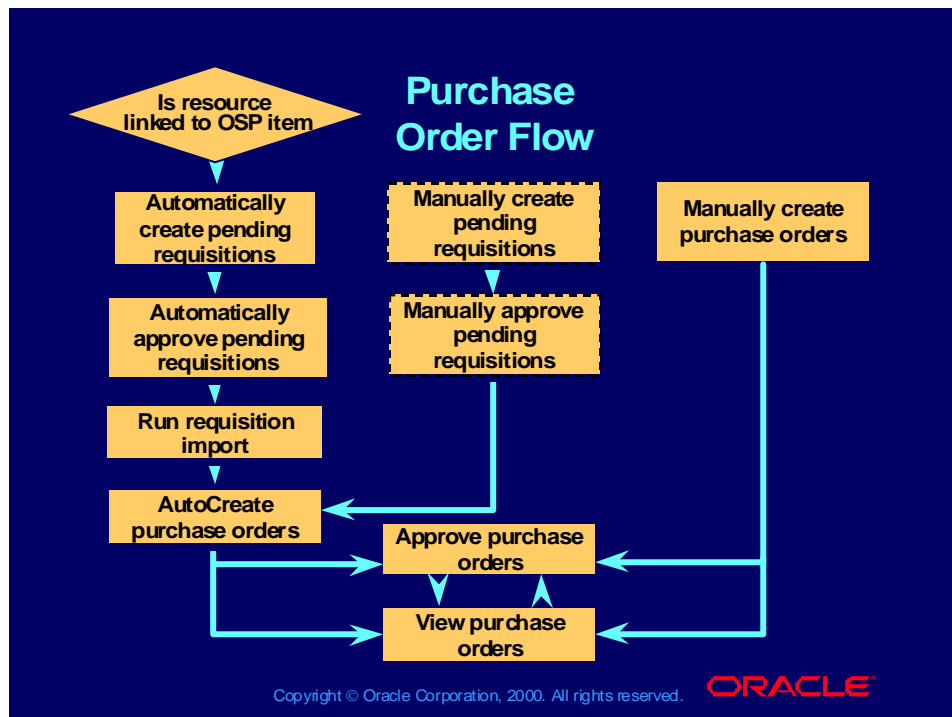
### Automating Manufacturing Collaboration

- Autorelease of planned orders with a status of released
- Blanket PO's with automatic release
- Requisition creation time of job/schedule release
- Charge type of PO Move on OSP resource
- Completion sub-inventory
- Pay on receipt - autoinvoice

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## Purchase Order Flow



### Purchase Order Flow

#### Defining a Purchase Requisition

If you want to requisition an outside processing item not usually consumed by a job or schedule, you can manually define a requisition in Oracle Purchasing and link it to one or more jobs or schedules.

#### Restrictions for Outside Processing

- You cannot change the status of a job or schedule to Unreleased if the job or schedule has an outside processing resource that is linked to a purchase requisition or a purchase order.
- You cannot delete outside processing operations or resources at those operations if a purchase requisition or a purchase order has been created.

## Discussing Unit Types

---

### Discussing Unit Types

| Outside Processing Unit Type | UOM | Receipt Quantity                       | Charge Amount                          |
|------------------------------|-----|--|--|
| Assembly                     | EA  | Move quantity                          | (Move quantity x Usage rate or amount) |
| Resource                     | HR  | (Move quantity x Usage rate or amount) | Receipt quantity                       |

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## Discussing Unit Types (continued)

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### Discussing Unit Types (continued)

| Outside Resource     |          | Transaction Quantities |                              |
|----------------------|----------|------------------------|------------------------------|
| Usage Rate or Amount | Std Rate | Receipt Qty            | Charge Amount                |
| 10                   | \$2      | 50 EA                  | (50 x 10) @ \$2<br>= \$1,000 |
| 10                   | \$2      | 500 HR                 | (500HR @ \$2)<br>= \$1,000   |

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#### Class Management Note

Can you backflush components under lot control at an outside operation with a PO Move resource?

**Answer:** Yes, as long as you set the Backflush Lot Entry parameter to one of the FIFO options in the Work in Process Parameters window.



## System Generated Transactions with PO Move Resources

---

### System Generated Transactions with PO Move Resources

| Move Quantities Example      |                      |                  |                |
|------------------------------|----------------------|------------------|----------------|
| Outside Processing Unit Type | Usage Rate or Amount | Receipt Quantity | Quantity Moved |
| Assembly                     | 20                   | 100 EA           | 100            |
| Resource                     | 10                   | 1,000 HR         | 100            |

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#### Additional Information

There can be only one PO Move resource per operation on a routing.

### Additional Information

| Calculating Requisition Quantities  |                  |  |
|-------------------------------------|------------------|--|
| Outside Processing Unit Type (Item) | Basis (Resource) | Req, PO, Receipt Quantities            |
| Assembly                            | Item             | Move quantity                          |
| Assembly                            | Lot              | 1                                      |
| Resource                            | Item             | (Usage rate or amount x Move Quantity) |
| Resource                            | Lot              | (Usage rate or amount x 1)             |

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### Calculating Requisition Quantities

- When Oracle Work in Process requisitions an outside processing item with an Outside Processing Unit Type of Resource, it uses the outside resource's usage rate or amount and basis, as well as the assembly move quantity if the basis is Item, to calculate the requisition quantity.
- When Oracle Work in Process requisitions an outside processing item with an Outside Processing Unit Type of Assembly, it does not extend the assembly move quantity by the usage rate or amount.

### Review Question

**Manufacturing Collaboration gives the ability of an assembly to automatically be completed into inventory as the supplier contribution is received. Which of the following will prohibit the automatic completion?**

- A. OSP operation is last operation on the routing**
- B. PO move resources tied to the last operation**
- C. Completion sub-inventory designation**
- D. PO receipt resources tied to the last operation**

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### Answer to Review Question

**Manufacturing Collaboration gives the ability of an assembly to automatically be completed into inventory as the supplier contribution is received. Which of the following will prohibit the automatic completion?**

- A. OSP operation is last operation on the routing**
- B. PO move resources tied to the last operation**
- C. Completion sub-inventory designation**
- D. PO receipt resources tied to the last operation**

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## Review Question

---

### Review Question

**A purchase requisition can now be automatically created for outside processing:**

- A. at job creation in a status of unreleased**
- B. when a job is changed to released**
- C. when a job is changed to on-hold**
- D. at job completion**

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### Answer to Review Question

**A purchase requisition can now be automatically created for outside processing:**

- A. at job creation in a status of unreleased**
- B. when a job is changed to released**
- C. when a job is changed to on-hold**
- D. at job completion**

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### Summary

**In this course, you should have learned how to:**


- **Describe the difference between Outside Processing and Manufacturing Collaboration**
- **Explain why Manufacturing Collaboration is a business solution**
- **Identify the key integration points**
- **Execute the setup steps for Manufacturing Collaboration**

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## Practice 1 Overview

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A blue rectangular slide with white text. The title 'Practice 1 Overview' is at the top. Below it, the text 'This practice covers the manufacturing collaboration process.' is displayed. At the bottom right is the Oracle logo, and at the bottom left is a small copyright notice.

**Practice 1 Overview**

**This practice covers the manufacturing collaboration process.**

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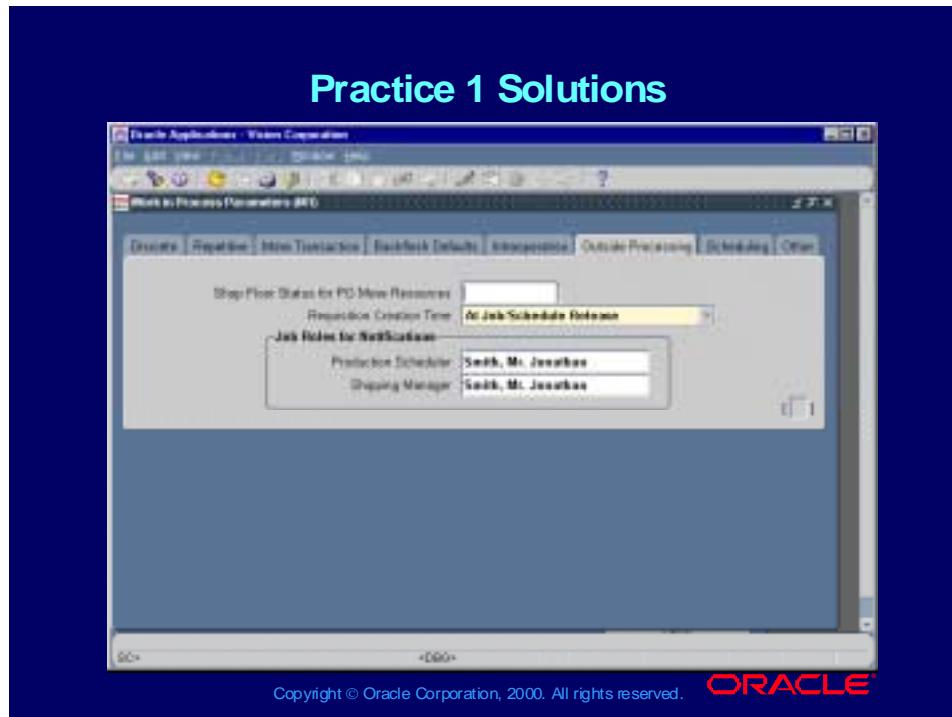
### Scenario

A manufacturer wants to send out an assembly to an outside processor. Perform the setup steps and transactions required to demonstrate the manufacturing collaboration process.



## Practice 1 Solutions

---



### Oracle Applications Logon

The following is specific information to access Vision for manufacturing:

1. Enter a url that is given to you by the instructor
2. Enter User Name: mfg
3. Enter Password: welcome
4. Click Connect
5. Select Responsibility: Manufacturing and Distribution Manager
6. Click OK
7. Select the M1 Seattle manufacturing organization in which to do all of the practices.  
(N) Other—>Change Organization (M) M1 Seattle Manufacturing (B) OK
8. Verify that the requisition will be created upon job release.  
(N) Work in Process > Setup > Parameters
9. Choose the Outside Processing tab
  - Requisition Creation Time: at job/schedule release
10. Save your work.
11. Create a location that will represent the address where the goods will be sent after they leave the first supplier.  
(N) Inventory > Setup > Organization > Locations
  - Name: you decide
  - Description: you decide
  - Address Details Tab:

Address: you decide

Choose OK

- Shipping Details tab:

Ship to location: the name of your location created above

Ship to: enabled

Receiving Site: enabled

Office site: enabled

Bill to site: enabled

Internal site: enabled

- Save your work.

12. Establish the relationship between the two suppliers. You will need to attach the location you created above with the second supplier that you will use in the exercise.

(N) Purchasing > Supply Base > Suppliers

- (M) View > Find

- Supplier Name: Industrial Dressler

- Choose Find

- Choose Sites

- Choose the General tab.

- Shipping Network Location: the location you created above (this is needed to link the two supplier together)

- Save your work.

13. The suppliers are set up in sys admin, however, you will need to add the workflow responsibility to each supplier.

- Change your responsibility to System Administrator

(N) Security > Responsibility > Define

- (M) View > Find

- Responsibility Name: @Workflow

- Effective date to: clear this field

- Save your work.

- Find a user

(N) Security > User > Define

- (M) View > Find

- User name: Advanced

- Responsibilities: @Workflow

- Save your work.

- Repeat the same process for the second supplier contact.

- User Name: Industrial

- Responsibilities: @Workflow

- Save your work.

- Switch your responsibility back to Manufacturing and Distribution Manager.

14. Create your items, bills and routings to be used in outside processing.

(N) Inventory > Items > Master Items

- Item: xx-osp assembly
- Description: you decide
- Choose (M) Tools > Copy from
- Template: finished good
- Save your work. Assign the assembly to the M1 organization.
- Choose (M) Tools > Organization assignment  
Org: M1 (enable)
- Save your work.

15. Create two parts that will represent supplier contribution at each operation. Use the outside processing template.

(N) Inventory > Items > Master Items

- Item: xx-osp item a
- Description: you decide
- Choose (M) Tools > Copy from
- Template: outside processing
- Choose the purchasing tab:  
Purchased: enabled  
Purchasable: enabled  
OSP item: enabled  
OSP type: assembly  
List price: you decide
- Choose the receiving tab:  
Receipt routing: direct
- Save your work. Assign the part to the M1 organization.
- Choose (M) Tools > Organization assignment  
Org: M1 (enable)
- Save your work.
- Choose (M) File > New record
- Create a second osp item using the outside processing template.
- Item: xx-osp item b
- Description: you decide
- Choose (M) Tools > Copy from
- Template: outside processing
- Choose the purchasing tab:  
Purchased: enabled  
Purchasable: enabled  
OSP item: enabled

- OSP type: assembly
  - List price: you decide
  - Choose the receiving tab:
    - Receipt routing: direct
  - Save your work. Assign the part to the m1 organization.
  - Choose (M) Tools > Organization assignment
    - Org: M1 (enable)
  - Save your work.
16. Create two resources that will be linked one on one to the outside processing item  
(N) Bill of Materials > Routings > Resources
- Resource: xx-ospresa
  - Description: you decide
  - Type: miscellaneous
  - UOM: Each (you will be prompted for a choice; do not choose process)
  - Charge type: PO Move
  - Basis: item
  - Outside Processing: enabled
  - Item: xx-osp item a
  - Costed: enabled
  - Standard rate: enabled
  - Absorption account: accept default
  - Variance account: accept default
  - Choose rates
    - Cost type: Pending
    - Rate: 1.00
  - Save your work. You will now create a second outside processing resource.
  - Choose (M) File > New record
  - Resource: xx-ospresb
  - Description: you decide
  - Type: miscellaneous
  - UOM: each
  - Charge type: PO Move
  - Basis: item
  - Outside Processing: enabled
  - Item: the second item you created above
  - Costed: enabled
  - Standard rate: enabled
  - Absorption account: accept default
  - Variance account: accept default

- Choose rates
    - Cost type: Pending
    - Rate: 1.00
  - Save your work.
  - Choose (M) File > New record
    - You will now create a queue resource that will be used for scheduling the time at the suppliers. This resource will not be costed just scheduled.
  - Resource: xx-queue
  - Description: you decide
  - Type: machine
  - UOM: hr
  - Charge type: wip move
  - Basis: item
  - Save your work.
17. Create two departments that represent the two outside suppliers.
- (N) Bill of Material > Routings > Departments
- Department: xx-osp1
  - Description: you decide
  - Choose Resources
    - Under the Main tab:
    - Resource: xx-ospresa
    - Available 24 hours: X
    - UOM: will default
    - Units: 1
    - Resource: xx-queue
    - Available 24 hours: X
    - UOM: will default
    - Units: 1
  - Save your work.
  - Choose (M) File > New record
  - Create the second department which represents the second supplier
  - Department: xx-osp2
  - Description: you decide
  - Location: the location created above (this is the second supplier's address and is where the assemblies will be sent once they leave the first supplier. They will not come directly back to the manufacturer.)
  - Choose resources
  - Under the Main tab:
    - Resource: xx-ospresb

Available 24 hours: X

UOM: will default

Units: 1

Resource: xx-queue

Available 24 hours: X

UOM: will default

Units: 1

- Save your work.

18. Create a routing for the assembly.

(N) Bill of Materials > Routings > Routings

- Item: xx-osp assembly
- Navigate to the operations region

Sequence: 10

Department: xx-osp1

- Choose operation resources

Sequence: 10

Resource: xx-ospresa

Usage: 3

- Choose costing

Standard rate: X

Charge Type: PO Move

- Return to the first page

Sequence: 20

Department: xx-osp2

- Choose operation resources

Sequence: 10

Resource: xx-queue

Usage: you decide

- Choose scheduling

Scheduled: yes

- Choose costing: wip move

Sequence: 20

Resource: xx-ospresb

Usage: 1

- Choose costing

Standard rate: X

Charge type: PO Move

- Return to the first page

- Choose routing details.

Completion Sub-inventory: fgi (must have for automatic completion)

- Save your work.

19. Create a Bill of Material for the final assembly (optional)

(N) Bill of Material > Bills > Bills

- Item: xx-osp assembly
- Navigate to the main tab  
Item seq: 10  
Operation seq: 10  
Component: choose a component from the seeded data  
Quantity: 1
- Choose the tab material control  
Supply type: operation pull  
Supply sub-inventory: stores
- Save your work

20. Create a work order for a quantity of 100.

(N) Work in Process > Discrete > Discrete Jobs

- Choose new
- Job: xx-osp1
- Type: standard
- Assembly: xx-osp assembly
- Class: discrete
- Status: released
- Start quantity: 100
- MRP Net: will default
- Start date: you decide
- Choose the routing tab  
Completion sub: verify that this field has a value
- Save your work.
- View the operations and make a note of the start date of the second operation.
- Choose operations.
- Choose dates.

21. The requisition import will run automatically after your job is created. Verify that the requisition import has completed normal.

(M) View > Requests

22. Autocreate the purchase orders from the requisitions. You will do this for both osp items.

(N) Purchasing > Autocreate

- Item: xx-osp item a
- Choose find
- Select your requisition.

- Choose automatic
- Supplier: Advanced Network Devices
- Site: Santa Clara
- Choose create
- Make a note of your po number \_\_\_\_\_.
- Contact (on the header): Joseph Williams
- Need by date: defaulted from the start date of the second operation
- Choose shipments
  - Ship to: should be the location you created. This says the goods are not coming back to my site but are going to an address for the second supplier.
- Save your work.
- Return to the header and approve the purchase order.
- Close the window and return to the find requisitions line window. Search for your second osp item.
- Item: xx-osp item b
- Choose find
- Select your requisition and choose automatic.
- Supplier: Industrial Dressler
- Site: US Headquarters
- Create the purchase order.
- Make a note of your po number \_\_\_\_\_.
- Contact: James Indus
- Choose shipments
  - Ship to: M1-Seattle (this will default to the location you created above)
- Save your work.
- Approve the purchase order.

23. Log on to the Internet Supplier Portal and create an ASN for the first purchase order.

**Note:** By creating an ASN for the shipment, you will only need to run the receiving transaction processor in order for the assemblies to be moved to the next operation. The wip move interface manager will move the assemblies. The system is creating a logical receipt for the shipment from the first supplier to the second supplier.

- User Name: Advanced
- Password: welcome
- Choose supplier services by supplier.
- Choose Advanced Shipment Notice
  - Supplier Site: choose the list and search for Santa Clara (this is case sensitive)
  - Ship to: choose the list and search (this is case sensitive)
- Choose search
- Select your purchase order number.



- Choose add to ASN. You should see a message that says:  
"total po shipments added: 1".
- Choose next.
- Enter the required information.
- Choose next.
- Choose finish. You should see a message that says:  
"an ASN has been successfully created."
- Choose Exit.

24. Return to the Core Manufacturing Applications and run the receiving transaction processor.

(N) Purchasing > Reports > Run

- Name: Receiving Transaction Processor
- Choose submit.

25. Verify that a workflow notification has been created for the shipment to the second supplier.

(N) Work in Process > Notification Summary

- Choose the flashlight to look for your notification.
- Status: all
- Type: WIP: Shipping and Receiving Intermediate
- Sent: today
- Choose find.
  - You should see that a notification has been sent to the production manager and the buyer on the second purchase order.
  - The buyer is required to respond to the purchase order.
  - The notification is then sent to the contact at the supplier contact. The supplier is required to respond saying how many assemblies were received and if any were damaged.
  - A notification is sent to the buyer once the second supplier has responded. This notification does not require a response.

26. Verify that the assemblies have moved to the second operation.

(N) Work in Process > Discrete > Discrete Jobs

- Job: xx-osp1
- Choose find.
- Choose operations.
- Choose the quantities tab. You should the quantity in the queue step of the second operation.

27. Once the workflow notifications have been processed, navigate back to the Internet Supplier Portal, login as the second supplier and create the ASN for the second supplier.

- User Name: Industrial
- Password: welcome
- Choose supplier services by supplier.

- Choose Advanced Shipment Notice
  - Search for the Supplier Site and Ship to Location (this is case sensitive)  
     Supplier Site: US Headquarters  
     Ship to location: M1-Seattle (your assemblies are coming back to the manufacturer after this operation)
  - Choose search
  - Select your purchase order and choose add to ASN.
  - You will see a message that says "Total PO shipments added: 1"
  - Choose next
  - Fill in the required information as you did for the first supplier and choose finished.
  - You should see a message that says ASN successfully created. Choose exit.
28. Navigate back to Core Manufacturing and run the receiving transaction processor.
- (N) Purchasing > Reports > Run
- Name: Receiving Transaction Processor
  - Choose submit. Once this process completes, you will need to receive the assemblies.
- (N) Purchasing > Receiving >Receipts
- Item: xx-osp item b
  - Choose find
  - Select the box next to the item and save your work.
29. Verify that the assemblies have moved to the to move step of the next operation and that the assemblies have been completed into finished goods.
- (N) Work in Process > Discrete >Discrete Jobs
- Job: xx-osp1
  - Choose find. The status of the job should be complete.
  - Choose operations
  - Choose quantities. There should not be any assemblies left in the job.
30. Verify that the completion transaction did occur.
- (N) Inventory > Transactions > Material Transactions
- Item: xx-osp assembly
  - Choose find
  - Choose Transaction Type
- Source: xx-osp1
- Transaction Type: WIP Assembly Completion