



Name(s):

Course & Selection:

Identifier:

Client:

Chapter 08: **Materials Planning**  
Exercise 08-02: **Material Planning Process**  
**Single Company Code**  
**Version 1**  
**Rev: 01/04/2011**

## Introduction

### General Notes and Information

It is strongly recommended that you read through the entire exercise prior to starting. Not all instructions can be provided in a linear manner.

The following symbols are used to indicate important information, as described below.

- ➔ An arrow highlights an important instruction that must not be overlooked.
- A pencil prompts you to write down an important piece of information.

Each student or group will be assigned a unique **three-digit identifier**. This identifier is used in all exercises to uniquely identify your data. Whenever you see **###** in these exercises, replace it with your identifier.

- ➔ Always work with your data.

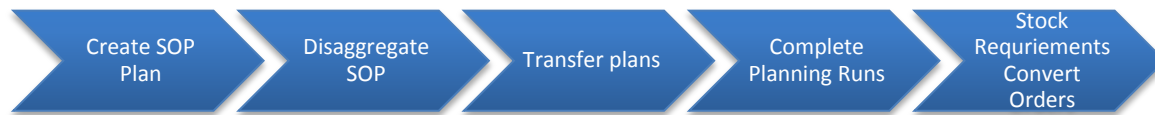
### Business Process Overview

GBI utilizes the material planning process to develop forecasts and to create sales plans and procurement plans. After successfully implementing materials planning, GBI can automate its planning through a MRP run, which will automatically create both Purchase Requisitions and Planned Orders for production. This exercise will take you through this process.

## Exercise Prerequisites

Exercise 8-1 GBI Materials Planning Master Data –SCC

## Exercise Workflow



## Exercise Deliverables

Deliverables are consolidated into one worksheet at the end of this exercise. For this exercise you will need the following deliverables:

### In the System:

- Creation SOP plan
- Disaggregate down to the material level
- Complete MRP runs
- Convert requirements into purchase requisitions and purchase orders

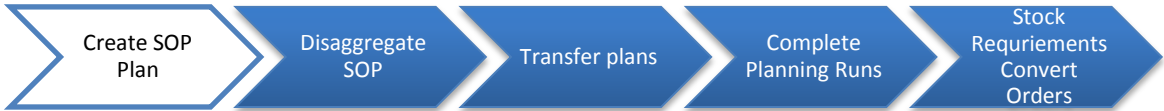
### On Paper:

- Completed exercise worksheet (attachment 1) to turn in
- Write down the transaction codes for each step and submit them to your instructor.
- Answers to the Questions

➡ You may be assigned additional deliverables. Make certain to check with your instructor.

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**Step 1: Create SOP Plan**



GBI’s Co-CEO, John Davis, has just returned from a trade show where he displayed the company’s products. He is very excited because he received a great deal of positive feedback. Based on his conversations with several potential customers, he anticipates that sales will increase over the next few months. In this step, you will create a sales plan based on John’s projections.

Step 1.1:      Navigate to the transaction to create a Sales & Operations plan.

**Navigation**  
 Logistics → Production → SOP → Planning → For Product Group → Change

**Q1:** What is the transaction code to change a SOP plan for a product group: -----

Step 1.2:      In the “**Change Plan (Initial Screen)**” screen, enter the following information:

Field Name	Data Entry
<b>Product group</b>	<i>Code for your Product Group Bicycle</i>
<b>Plant</b>	<i>Code for Plant Dallas</i>

Step 1.3:      In the “**Version Selection**” section click on the Active version button.

Step 1.4:      In the “**Change Rough-Cut Plan**” screen, enter John’s sales projections and desired stock levels for accessories.

Field Name	Month 1	Month 2	Month 3
<b>Sales</b>	1200	1200	850
<b>Target stock level</b>	800	800	600



(ENTER)

Step 1.5: The stock level line is filled with negative numbers because there is no plan for production. Use the following information to fill in the line for the target stock level:

Field Name	Month 1	Month 2	Month 3
<b>Production</b>	2000	1200	650



(ENTER)

➔ The stock level line is now the same as the target stock level line.



(SAVE)

**Exercise Deliverables**

In the System:

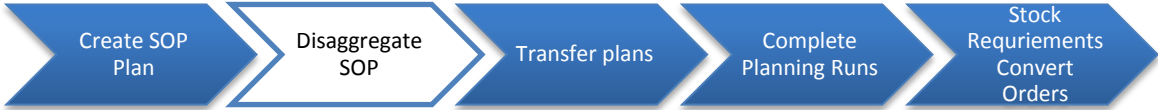
- SOP plans for the Bicycle Product Groups

On Paper:

- Answers to the Questions



## Step 2: Disaggregate SOP



In this step, we will disaggregate the production plan we created in SOP down to the material level. Using the proportion factors we set up in our original product group, the system will do all the work for us, deciding how many of each part we need to meet the production needs for each month.

Step 2.1:      Navigate to the transaction to disaggregate SOP plan.

**Navigation**  
 Logistics → Production → SOP → Disaggregation → Break Down PG Plan

**Q2:** What is the transaction code to break down PG plan: -----

Step 2.2:      In the **“Change Plan: Initial Screen”** screen, enter the following information:

Field Name	Data Entry
<b>Product group</b>	Code for <b>your</b> Product Group Bicycle
<b>Plant</b>	Code for Plant Dallas

Step 2.3:      In the **“Version Selection”** section, click on the Active version button.

- ➔ The **“Change Plan: Initial Screen”** should pop up. You should see two product groups; PG-ORBK### and PG-TRBK###, along with their correct proportion factor. Make sure the **“Disaggregate production plan”** and **“Stock balance”** radio buttons are selected.

(ENTER)

Step 2.4:      The **“Change Rough-Cut Plan”** window should display the SOP plan that you created for your bicycles product group. Now you will break down the plans to the material level. Begin by clicking the Macro button (Shift + F6).

Step 2.5: In the **“Macro Selection”** pop-up select the **“Disaggregate Production -> Production”** radio button.



(ENTER)

- ➔ The SOP plan for product group Bicycle has now been disaggregated down to PG-ORBK### and PG-TRBK###.



(SAVE)

- ➔ In order to disaggregate planning down to the material level, you will need to disaggregate for every product group.

Step 2.6: Repeat step 2.1 thru 2.4 for the following: **PG-ORBK###, PG-TRBK###, PG-DXTR###, and PG-PRTR###.**

- ➔ You will see the materials listed on the screen in *step 2.2* for PG-ORBK###, PG-DXTR###, and PG-PRTR###. This is how you will confirm you have disaggregated down to the material level.

### Exercise Deliverables

In the System:

- Disaggregated SOP plans down to the material level.

On Paper:

- Answers to the Questions
-

## Step 3: Transfer Plans



In this step, you will transfer your disaggregated plans to demand management. This will enable you to perform MRP runs on the materials.

Step 3.1: Navigate to the transaction to transfer the disaggregated plans.

### Navigation

Logistics → Production → SOP → Disaggregation → Transfer PG to Demand Management

**Q3:** What is the transaction code to Transfer PG to Demand Management: -----

Step 3.2: In the **“Transfer Planning Data to Demand Management”** screen, enter in the following:

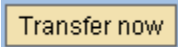
Field Name	Data Entry
<b>Product Group</b>	Code for your Product Group Bicycle
<b>Plant</b>	Code for Plant Dallas
<b>Version</b>	Active version

In the “Transfer strategy and period” section, enter the following:

Field Name	Data Entry
<b>Production plan for material or PG members</b>	Selected
<b>From</b>	First month planned in SOP
<b>To</b>	Last month planned in SOP
<b>Invisible transfer</b>	Selected

In the "Independent requirement specifications" section, enter the following:

Field Name	Data Entry
<b>Requirements type</b>	Make-to-stock production
<b>Active</b>	Selected

Step 3.3: Click on the  button. You should see the system working, but you will not receive any type of confirmation that you have successfully transferred your product group. If you already have enough material to meet the requirements, you will be brought to an "Error log" screen.

**Exercise Deliverables**

In the System:

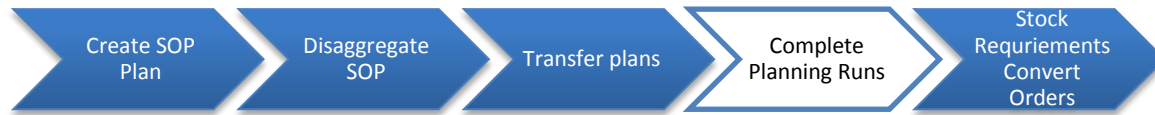
- Individual requirements for your different materials

On Paper:

- Answers to the Questions
-



## Step 4: Complete Material Planning Runs



In this step, you execute the planning runs. GBI wants to carry out planning for all materials that have undergone a change relevant to the SOP disaggregation. The planning runs will create either planned orders or purchase requisitions for the materials, depending on their planning type. The runs will also develop schedule lines for future periods.

**Step 4.1:**      Navigate to the transaction to complete planning for finished goods.

### Navigation

Logistics → Production-Process → Production Planning → MPS → MPS → Single-Item, Interactive

**Q4:** What is the transaction code for Single-Item planning, Interactive: -----


**Step 4.2:**      In the **"Single-Item Planning – Interactive"** screen, enter the following information:

Field Name	Data Entry
<b>Material</b>	Code for your Product Group Bicycle
<b>Plant</b>	Code for Plant Dallas
<b>Product Group</b>	Selected
<b>Processing key</b>	NETCH
<b>Create purchase req.</b>	3
<b>Delivery schedules</b>	3
<b>Create MRP list</b>	1
<b>Planning mode</b>	1
<b>Scheduling</b>	1




(ENTER)

- ➔ You may receive the warning "Please check input parameters"

After you review your entries, click  (ENTER)

Step 4.3: The window "**Product Group PG-BIKE### DL00**" will appear. Expand the folder "PG-TRBK###" then "PG-DXTR###." Then, double-click "DXTR1###."

The "Planning Result: Individual Lines" screen should display the independent requirements that you made from transferring your SOP plan to demand management.

Step 4.4: Click the  **Planning** button. Notice that the system has already created a planned order for you. In addition, it has developed planned orders for the next two months to meet the targets that John established.

**Q5:** What is the Planned Order number for your Black Deluxe Touring

Bike: -----



(SAVE)

Step 4.5: **You will be brought back out to the "Product Group Bike### DL00"** pop-up window. Go to the other materials in your planning group, and plan for "**PRTR1###**." Make certain to click Save after you have planned for the material.

- ➔ These materials are produced in house and cannot be bought from a vendor. These planned orders will later be converted into production orders and used to produce these bikes.
- ➔ You have successfully planned for your bicycles. However, you still need to plan for all of the other raw and semi-finished materials that are needed to produce the bikes.

Step 4.6: Navigate to the transaction to run planning for semi-finished goods and raw materials.

## Navigation

Logistics → Production-Process → Production Planning → MPS → MPS → Single-Item, Multi-Level

**Q6:** What is the transaction code for Single-Item, Multi-Level planning: ----

Step 4.7: In the **"Single-Item, Multi-Level"** screen, enter the following information:

Field Name	Data Entry
<b>Material</b>	<i>Code for your Black Deluxe Touring Bicycle</i>
<b>Plant</b>	<i>Code for Plant Dallas</i>
<b>Product Group</b>	<i>Not selected</i>
<b>Processing key</b>	<i>NETCH</i>
<b>Create purchase req.</b>	<i>1</i>
<b>Delivery schedules</b>	<i>3</i>
<b>Create MRP list</b>	<i>1</i>
<b>Planning mode</b>	<i>3</i>
<b>Scheduling</b>	<i>1</i>



(ENTER)

➔ You may receive the warning "Please check input parameters."



After you review your entries, click (ENTER).

You have planned successfully for all materials that are necessary to produce the DXTR1###. In the next step, you will examine the results of your planning.

### Exercise Deliverables

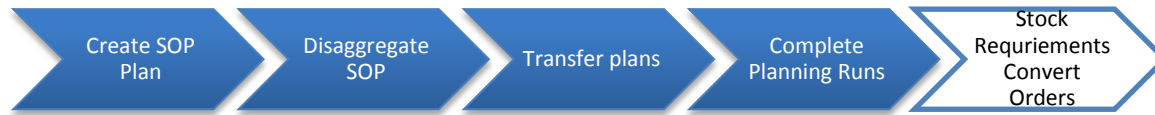
In the System:

- Planned orders for your different materials

On Paper:

- Answers to the Questions

## Step 5: Stock Requirements Convert Orders



In this step, you will go into the Stock/Requirements list to view your planned materials, create purchase requisitions and production orders for the planned orders, and convert those purchase requisitions into a single purchase order.

Step 5.1:      Navigate to the transaction to convert orders.

### Navigation

Logistics → Materials Management → Material Requirements Planning (MRP) → MRP → Evaluations → Stock/Requirements list

**Q7:** What is the transaction code for Stock/Requirements List: -----

Step 5.2:      In the **“Stock/Requirements List: Initial”** screen, click on the

**Collective access**

tab, and enter the following:

Field Name	Data Entry
<b>Plant</b>	Code for Plant Dallas
<b>Product group</b>	PG-BIKE###



(ENTER)


Step 5.3:      The **“Stock/Requirements List: Material List”** screen should display your eight bikes with red lights next to them. Double-click on “DXTR1###,” which will bring you to a similar screen to the one in the previous step.

Step 5.4:      Double-click the first “PldOrd” line which should pull up the **“Additional Data for MRP Element”** screen. Click the **-> Prod.ord** button, which will take you to the **“Production order Create: Header”** screen.




(SAVE)

**Q8:** What is your Production Order number: -----

**Step 5.5:** Although the conversion of the planned order to a production order has been saved, it will not be reflected in the stock/requirements list until you click the refresh  icon.

Now, you have to procure the materials necessary to produce the DXTR1###. For our purpose, it will be enough to procure just a few of the required materials. In a real company, you would perform the following steps for all of them.

**Step 5.6:** Go back to the **“Stock/Requirements List: Initial Screen”** screen. Click the  tab, and enter the following information:

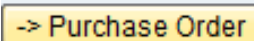
Field Name	Data Entry
<b>Material</b>	Code for your Black Touring Frame
<b>Plant</b>	Code for Plant Dallas




(ENTER)

- ➔ Notice how you can get to the same screen from viewing the stock requirements for either an entire product group or a single material.


**Step 5.7:** Double-click the first “PurRqs” line. The “Additional data for MRP element” box will appear. Choose the “->Purchase Order” button.





In the “Create Purchase Order” screen, select the open requisition on the left side of the screen, and then click on the  adopt button.

Enter the following information:

Field Name	Data Entry
<b>Vendor</b>	<i>Code for "Space Bike Composites" vendor (In field to the RIGHT of Vendor)</i>
<b>Purch Org (in Header folder)</b>	<i>US00</i>
<b>Net Price (in Item folder)</b>	<i>\$200</i>
<b>Currency (in Item folder)</b>	<i>USD</i>

 (ENTER), hit Enter again to get past the warning about the delivery date.


 (SAVE). If necessary, hit Save again in the pop-up screen.

➔ Hit refresh  on the "Stock/requirements list" screen. Notice that the "PurRqs" is now a POitem with your PO #.


**Q9:** What is your purchase order number: -----

Step 5.8: Return to the **"Stock/Requirements List: Material List"** screen. Click the **Individual access** tab, and enter in the following information:

Field Name	Data Entry
<b>Material</b>	<i>Code for your Touring Seat Kit</i>
<b>Plant</b>	<i>Code for Plant Dallas</i>

 (ENTER)

**Q10:** What is the "PurRqs" number for your touring seat kit: -----

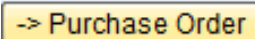
Step 5.9: Return to the "Stock/Requirements List: Initial Screen" screen. Click the  tab, and enter the following information:

Field Name	Data Entry
<b>Material</b>	Code for your Touring Handle Bar
<b>Plant</b>	Code for Plant Dallas



(ENTER)


Step 5.10: Double-click the first "PurRqs" line. The "**Additional data for MRP element**" box will appear. Click on the "**->Purchase Order**" button.



In the "Create Purchase Order" screen, select open requisition and click on  the Adopt button.

Enter the following information:

Field Name	Data Entry
<b>Vendor</b>	Code for "Fun n sun seats n bar" vendor
<b>Purch Org</b>	US00
<b>Net Price</b>	\$25
<b>Currency</b>	USD

Select "Purchase Requisition" within the "Selection Variant" drop down menu.  the "Purchase Requisitions" screen, delete all of the information except for the plant.



(EXECUTE)

Scroll down the list until you find the number of the purchase requisition that you recorded previously. Adopt this "PurRqs."

Field Name	Data Entry
<b>Net Price</b>	\$50
<b>Currency</b>	USD


Enter the following information:



(ENTER)



(SAVE)

➔ Click on refresh  on the "Stock/Requirements List" screen. Notice that the "PurRqs" is now a POitem with your PO #.

**Q11:** What is the purchase order number: .....

**Exercise Deliverables**

In the System:

- Purchase Order containing your trading good materials

On Paper:

- Answers to the Questions



### Attachment 1: Exercise Worksheet

Name(s): .....

Course & Selection: .....

Identifier: .....

Client: .....

- Q1:** What is the transaction code to change a SOP plan for a product group: -----
- Q2:** What is the transaction code to break down PG plan: -----
- Q3:** What is the transaction code to Transfer PG to Demand Management: -----
- Q4:** What is the transaction code for Single-Item planning, Interactive: -----
- Q5:** What is the Planned Order number for your Black Deluxe Touring Bike: -----
- Q6:** What is the transaction code for Single-Item, Multi-Level planning: -----
- Q7:** What is the transaction code for Stock/Requirements List: -----
- Q8:** What is your Production Order number: -----
- Q9:** What is your purchase order number: -----
- Q10:** What is the "PurRqs" number for your touring seat kit: -----
- Q11:** What is the purchase order number: -----