SALES AND OPERATIONS PLANNING
Course Objectives

- Obtain an overview of the process
- Understand Concepts of Sales and Operations Planning (SOP)
- Define how the SOP is integrated with other SAP modules
- Understand the SOP processes
- Perform SOP transactions
- Understand the process of Flexible Planning
Table of content

- Production Planning Overview
- Sales and Operations Planning (SOP)
- SOP Process
- Flexible Planning
What is Production Planning?

- Production Planning is the process of aligning forecasts with manufacturing capability to create production and procurement schedules for finished products and component materials.

- It also tracks and records the detail of the manufacturing process, for example, the planned and actual costs and material flows.

- It is fully integrated with the other SAP modules: SD, MM, LE, CO
PP Processes and Roles

1. Sales & Ops Planning
2. Long Term Planning
3. Demand Management
4. MRP
5. Capacity Requirements Planning
6. Production Execution

Master Data Maintenance

Production Planning Master Data provides the infrastructure for Production Planning transactions
PP flow & Integration

- Long Term Capacity Planning
- Sales & Ops Planning
- Demand Management
- MRP
- Capacity Req. Planning
- Production Execution
- MM
- FI/CO
- MM - LE (Stock Control)
- CO (Cost Control)
- QM (Quality Control)
What is Sales & Operations Planning?

- Sales & Operations Planning (SOP) is the process of aligning forecasts of customer demand with manufacturing capability.
What is the SOP Process (1) ?

- SOP is used for the annual planning processes of budget preparation and the rolling monthly execution plans.

- There are three principal sources of data:
  - Annual plan of capacity including maintenance shutdown
  - Sales forecast by region, country and grade
  - Profitability Analysis

- The plans are prepared in calendar months. Capacity is checked using Rough-Cut Capacity Planning and adjusted where necessary.
What is the SOP Process (2)?

- The budget and the rolling plans both use a hierarchical representation of products and product groups:
  - Adjustments to demand and production are made at the lowest level (i.e. packed products)
  - Planned production quantities are aggregated up the hierarchy to allow the loading to be checked for Rough-Cut Capacity Planning at product group levels

- The rolling plan moves forward each month and the Planner will check and confirm the detail for the next 3 months.
Who is Responsible for SOP?

- **Plnt Planner (SOP)**
  - Responsible for creating and controlling Sales & Operation Planning, taking the sales forecast via profitability analyses, checking the loading using rough capacity planning and adjusting the S&OP as necessary
How does SOP data apply to the Process?

- SOP data creation
### SOP Planning Table

#### Sales Information System
- **Information Version** ______
- **From** ______
- **To** ______
- **Measure**
  - Sales quantity
  - Returns

#### CO / PA Module
- **CO/PA field name Version** ______
- **From** ______
- **To** ______
- **Measure**
  - Sales quantity

#### Forecast
- [Graph showing trend]

#### Distribution
- **Direct - manual**

#### Sales
<table>
<thead>
<tr>
<th>Value</th>
<th>OP</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>5</td>
<td>01/1999</td>
<td>12/1999</td>
</tr>
<tr>
<td>Production</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target stock lvl</td>
<td>10</td>
<td>=</td>
<td>01/1999 12/1999</td>
</tr>
<tr>
<td>Tgt days' supply</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Information System
- **Measure**
  - Sales quantity
  - Returns

#### CO / PA Module
- **CO/PA field name Version** ______
- **From** ______
- **To** ______
- **Measure**
  - Sales quantity

#### Forecast
- [Graph showing trend]

#### Distribution
- **Direct - manual**

#### Sales
<table>
<thead>
<tr>
<th>Un</th>
<th>Sales</th>
<th>PC</th>
<th>05/2003</th>
<th>06/2003</th>
<th>07/2003</th>
<th>…</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>1200</td>
<td>900</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
S&OP Version Management Guideline

- **Initial SOP**: Version 900
  - **Copy to Last Years Plan**: Source Version 800 -> Target Version 700 (Annually)
  - **Copy to Current Annual Plan**: Version 800 (Annually)
  - **Copy to Rolling Monthly Plans**: Version 801 (Monthly)
    - **Copy to Active Version after Review**: Version A00 (Monthly)
Aggregation and Disaggregation

Disaggregate Production Plan...

Product Group 1

...or Sales Plan

Product Group A

Product Group B

Material MAT1

Material MAT2

Material MAT3

Material MAT4

Material MAT5

60% 40%

50% 30% 20% 75% 25%

Production Plan...

Sales Plan
Transfer to Demand Management

Product Group 1

- 60% to Product Group A
- 40% to Product Group B

Product Group A
- 50% to Material MAT1
- 30% to Material MAT2
- 20% to Material MAT3

Product Group B
- 75% to Material MAT4
- 25% to Material MAT5

DEMAND MANAGEMENT
Frequently used transactions for SOP

Practice the following transactions

- MC82 Change SOP Plan
- MC76 Disaggregate SOP Plan
- MC8G Mass Process – Aggregate Plan
- MC78 Copy Planning Version
- MC8G Mass Transfer to Demand Management
What is Flexible Planning?

- Flexible Planning provides detailed way of planning based on our own characteristics.

- Examples of planning on our own characteristics:
  - Production line
  - Product Size
  - Market
Basis for Flexible Planning?

- Information structure
- Planning Hierarchy
- Planning Type
- Planning through Planning Table
What is information structure?

Information structure is the one which hold entire information of the required characteristics and key figure. E.g. S755

Example of characteristics & Key figure

- Production line -- characteristic
- Product Size -- characteristic
- Market -- characteristic
- Sales – key figure
Planning Hierarchy

What is Planning Hierarchy?

- Planning hierarchy is a combination of characteristic values based on the characteristics of one information structure.
- Planning hierarchies provide a framework for planning.

Example of Planning hierarchy

- For information structure S755, sales quantity is planned for below characteristics:
  - Production line -- characteristic
  - Product Size -- characteristic
  - Market -- characteristic
Planning Type

What is Planning Type?

- Planning type is a customized view on the planning table.
- Planning type defines the content and the layout of the lines in the planning table.
- Planning data is saved on the information structure and planning type acts as a mere template on the information structure.
Planning Table

What is Planning Table?

- Planning table is the place where the planning is done.
- Planning table hold the information with different version for each plan.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production line</td>
<td>Bar mill</td>
</tr>
<tr>
<td>Product Size</td>
<td>16mm</td>
</tr>
<tr>
<td>Market</td>
<td>Export</td>
</tr>
<tr>
<td>Material</td>
<td>22001972</td>
</tr>
<tr>
<td>Sales</td>
<td>Jan-1000, Feb-2000...etc..</td>
</tr>
</tbody>
</table>
Transactions

- Practice the following transactions

  - MC63 Display Planning Hierarchy
  - MC93 Create Plan
  - MC8V Copy Planning Version
  - MC8G Transfer to Demand Management