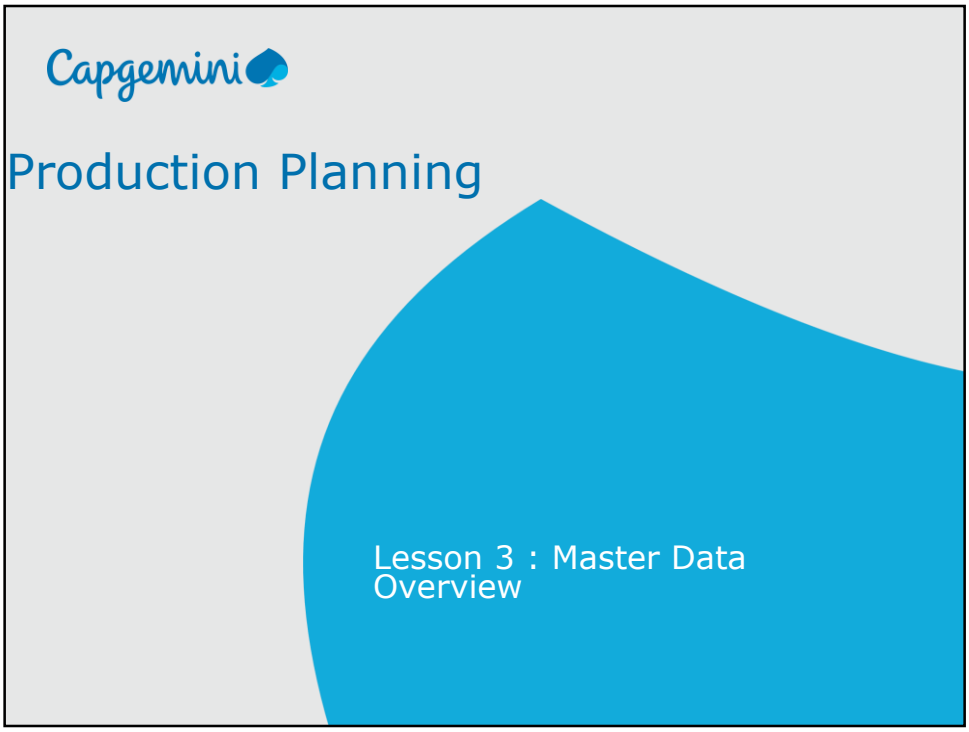


Note : Kindly Follow the Sequence of Master date : 1. Material master, 2. BOM ,3.Work Center , 4. Routing

Add instructor notes here.

Lesson Objectives

- After this training module you will be able to:
  - Understand master data and types of master data
  - Understand how to create / change / delete / view Material master data
  - Understand concept & challenges in data migration
  - Understand how to create / change / delete / view Bill of Material
  - Understand how to create / change / delete / view Work center , Routing & Production Version

Training Agenda

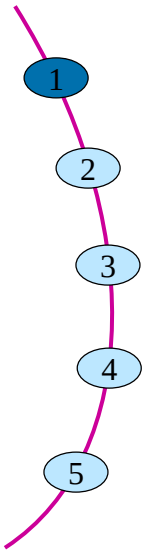
- Master data introduction
- Purpose
- Use
- Challenges
- PP Master Data Overview
- Essentials
- Material Master
- Data Structure of Material Master
- Bill of Material
- Work Center
- Routing

Training Agenda

Production Version
Production Resource Tool (PRT)
References – Table info
References – T codes

Add instructor notes here.

Master date Overview



Prepare Me

Tell Me

Show Me

Let Me

Help Me

Add instructor notes here.

Prepare Me

Master data is the group of data which will be reference for any Business records

- Ex: Production Order is prepared by referring Material Master, Bill of Material, Work Centers and Routings

Master Data contains the records that remain in the database over an extended period of time

Master Data is centrally stored (shared across application modules) and processed to eliminate data redundancy

Master data can be manually created in the SAP

LSMW/BDC are commonly used tools for uploading mass master data

Add the notes here.

Add instructor notes here.

Purpose

Master data is reference data for any Business process.
Master data is shared across application modules in R/3.

Add the notes here.

Add instructor notes here.

Use

Material Master – This is base for all business process in an Organization

Bill Of Material - Created in Design Dept. /Sales Dept. and referred in Planning and Shop floor for Good Reservation/issue/Receipt. Also used in product costing

Work Centers - Scheduling/Capacity evaluation and costing will be done by use of formula defined in resources. Also used in Plant maintenance

Routing – This is used for Scheduling the production Order

Production Resource Tool – Production is carried out with the help of this. It is not consumed in the process; for eg. Jigs and Fixtures

Add the notes here.

Add instructor notes here.

Use

Production Versions – Production versions are used in Sales and Operations Planning (SOP), material requirements planning (MRP), Production order creation, and product costing to select the most suitable task list/recipe and the corresponding Bill of Material/material list

Add the notes here.

Add instructor notes here.

Challenges

Master data is the backbone of any system, hence its accuracy is the main criterion for the success of the system

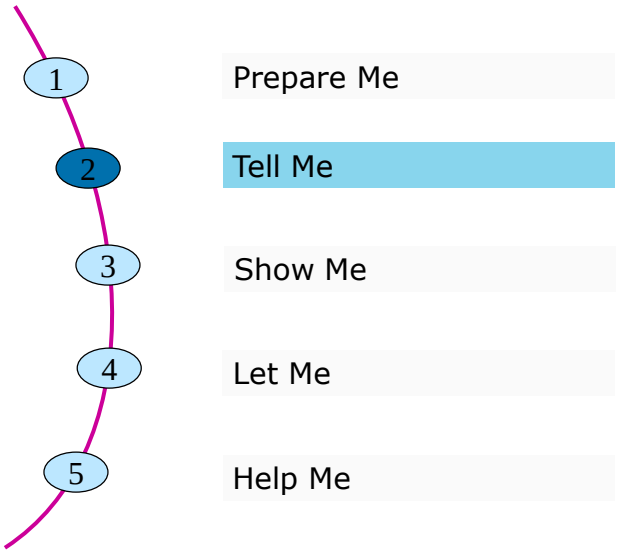
The number of assignment of master data should be logical and meaningful

Master data that is obsolete can be archived

Add the notes here.

Add instructor notes here.

Name of the Functionality



Add instructor notes here.

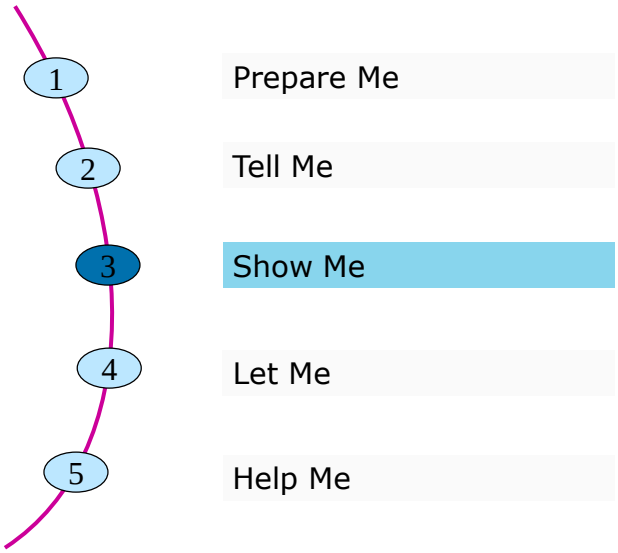
Master data Overview

The next slides shows Process Flow of PP Master data

Add the notes here.

Add instructor notes here.

Master data overview



Add instructor notes here.

Essentials

The followings are to be taken care before creating Master data:

- Number ranges to be defined for Internal numbers
- Code should represent the usage
- Ambiguity to be avoided
- SAP defined data, should not be deleted or modified directly. If required can be copied and renamed to suit the application

Add the notes here.

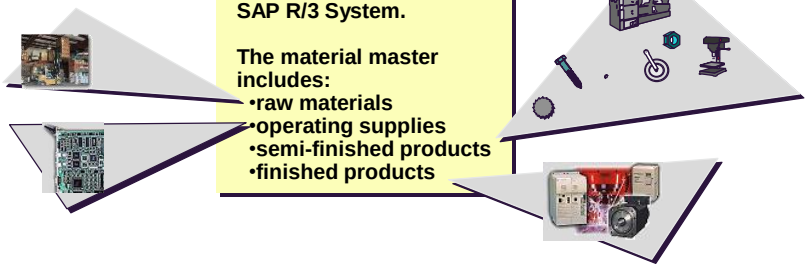
Add instructor notes here.

Master data : Material Master

Material Master :

The material master is a central data object in the SAP R/3 System.

The material master includes:
- **raw materials**
- **operating supplies**
- **semi-finished products**
- **finished products**



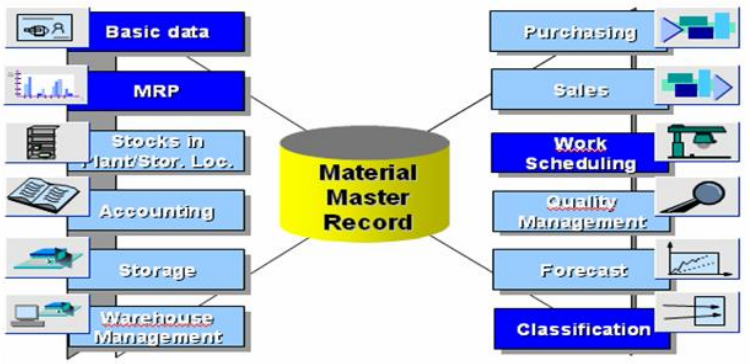
- The material master is a central data object in the SAP R/3 System
- All the information required to manage products and equipment is stored in the material master record
- Each user department has its own view of the material master which permits easy access to and maintenance of data

Add the notes here.

Add instructor notes here.

Material Master

The followings are the views in Material Master

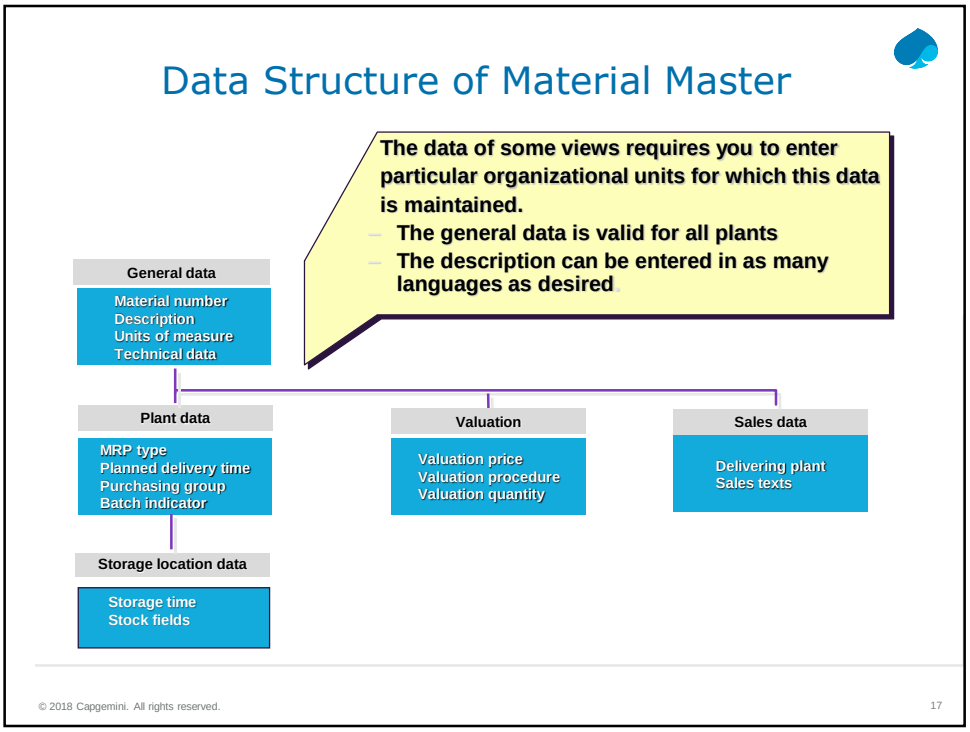


Used in Production Planning

16

Add the notes here.

Add instructor notes here.



Add the notes here.

Add instructor notes here.

Bill of Material

A bill of material is a complete, formally structured list of the components that make up a product or assembly

The list contains a description and object number for each component, together with the quantity and unit of measure

Depending on the industry sector, they can also be called recipes or lists of ingredients and so on.

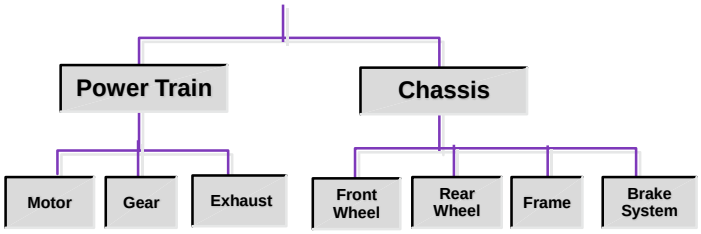
BOM can be created with or without Plant but mentioning the material and BOM usage is mandatory

(Note: Material + Plant + BOM usage = Unique BOM No. In case any of these 3 things changes, BOM No. will change)

Add instructor notes here.

Bill of Material

Example:



Add instructor notes here.

Bill of Material

How to create BOM

Step 1) From SAP Easy access screen open transaction CS01

Enter parent material for which BOM needs to be created

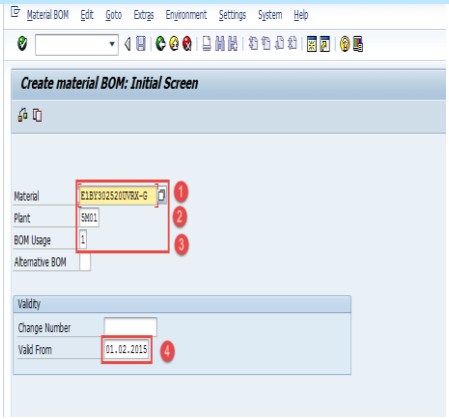
Enter Plant Code

Enter BOM usage = **"1"** which is used for Creating Production BOM

Enter the valid from the date which means that BOM would be valid from that date

After filling in all the fields, click or press Enter to go to the next screen

OR ON THE SAP EASY ACCESS SCREEN,
Choose Logistics → Production → Master Data → Bills of Material → Bill of Material → Material BOM →Create (CS01)



Add instructor notes here.

Bill of Material

How to create BOM

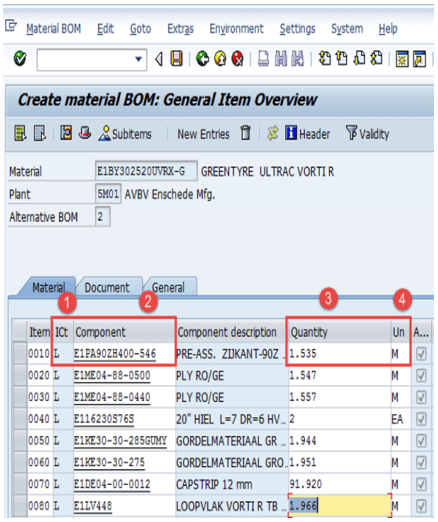
Step 2) In Next Screen

Enter Item Category as "L" which is used for stock item and could be default also

Enter Component material code in Component Field

Enter Component quantity as shown below

Some information such as description and a basic unit measure of the component will be brought out by the system automatically after clicking or pressing enter from the keyboard



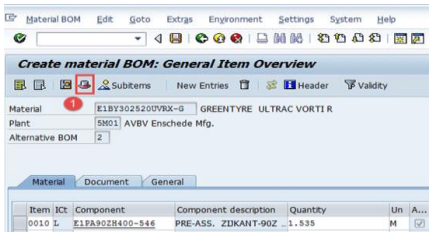
Add instructor notes here.

Bill of Material

How to create BOM

Step 3) In this screen,

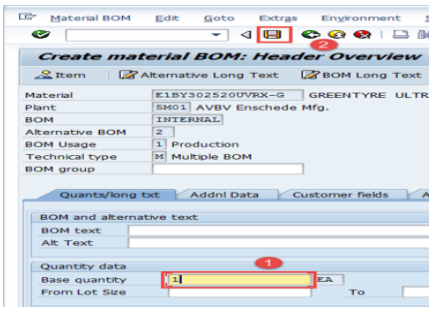
Click on this icon to see the BOM header, the system will then show the BOM header screen in the next step



Step 4) In the BOM header view,

Fill the base quantity of parent material. If this is 1 EA (each), then the component quantity will describe how much is needed to produce 1 item

Click to save the new BOM after check, the system will show Creating BOM for material message at the lower left corner



Add instructor notes here.

Bill of Material

How to change BOM

Step 1) From SAP Easy access screen open transaction CS02

OR

ON THE SAP EASY ACCESS SCREEN,

Choose Logistics → Production→ Master Data → Bills of Material → Bill of Material → Material BOM →Change (CS02)

How to display BOM

Step 1) From SAP Easy access screen open transaction CS03

OR

ON THE SAP EASY ACCESS SCREEN,

Choose Logistics → Production→ Master Data → Bills of Material → Bill of Material → Material BOM →Display (CS03)

Add instructor notes here.

Bill of Material

How to delete a BOM

You can delete a BOM in the following ways:

Using the deletion function

Using the deletion flags

Deleting the entire BOM

Deleting individual items

(Note: Deletion at header level removes the entire BOM, whereas deletion at item level removes only the specified item)

Add instructor notes here.

Work Center

- Work Center is where an operation or activity for a production is carried out within a Plant.
- Represent anything as general as a geographical location, or as specific as a particular machine within a department in a Plant.
- Operations are carried out at a work center
- Work center can be Machine and machine groups, Entire Production lines, Assembly / Repair work centers, Labor and groups of Labor

Add the notes here.

Add instructor notes here.

Work Center

Work center is used;

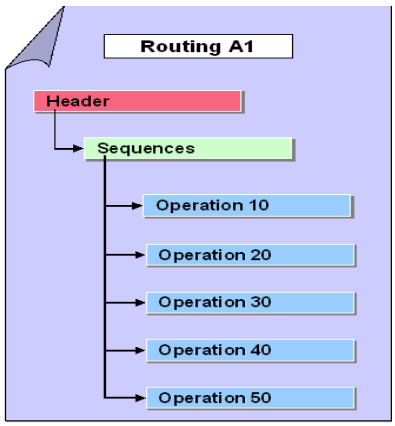
- To calculate the time duration of the operation.
- To calculate the cost of the operation.
- To calculate the capacity requirements

Add the notes here.

Add instructor notes here.

Routing

- Routing describe the sequence of operations required to produce a specific material



Add the notes here.

Add instructor notes here.

Routing

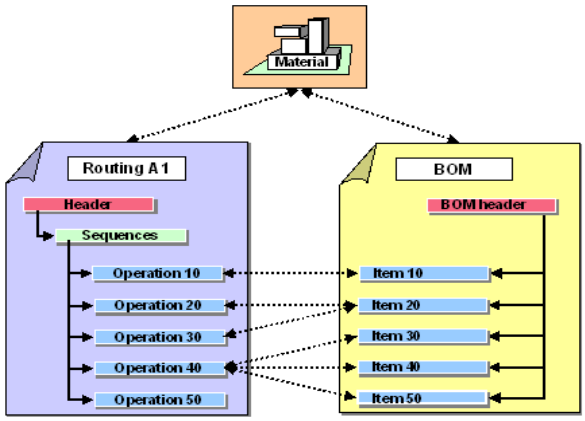
- Routings have the information about the operations and the order in which they are carried out, a routing also contains details about the work centers at which they are carried out.
- For each operation, the Work centres, component allocation and tools required to produce the material are maintained in the routing

Add the notes here.

Add instructor notes here.

Routing

- Component Allocation to the Operations in the Routing



Add the notes here.

Add instructor notes here.

Production Version

- A production version determines which alternative BOM is used together with which task list/master recipe to produce a material or create a master production schedule
- For one material, we can have several production versions for various validity periods and lot-size ranges
- Production versions are used both in discrete manufacturing and process manufacturing.

Add the notes here.

Add instructor notes here.

Production Resource Tool (PRT)

PRT can be classified as follows.

Material – Any consumable tools, inventory control is necessary.

Equipment – Any tools required Maintenance.

Document – Any Drawings.

Add the notes here.

Add instructor notes here.

PP Master Data Overview

Add instructor notes here.

PP Master data

- Some exclusive master data, used in Discrete Manufacturing Industries are explained in this session.

Note: For Material Master please refer PP1008 - Material Master - PP Master Data

Add the notes here.

Add instructor notes here.

Let Me-PP Master data

- Material Master
  - T code **MM01** to **create**
  - T code **MM02** to **change**
  - T code **MM03** to **display**

Add the notes here.

Add instructor notes here.

Let Me-PP Master data

Select the following views:

MRP-1

MRP-2

MRP-3

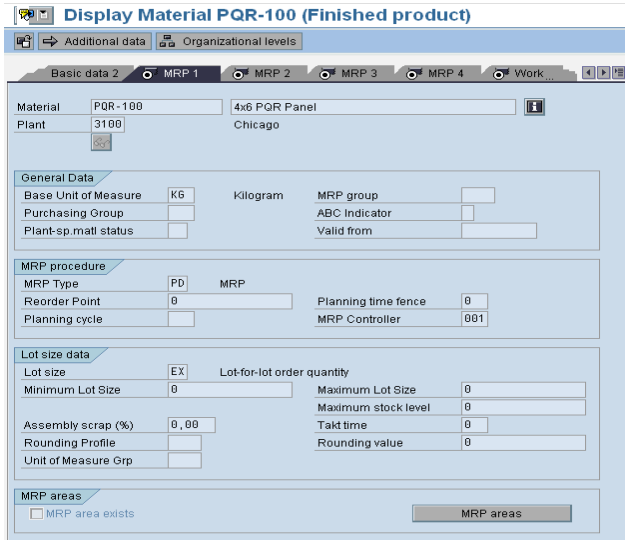
MRP-4

WORK SCHEDULING

Add the notes here.

Add instructor notes here.

Let Me-PP Master data

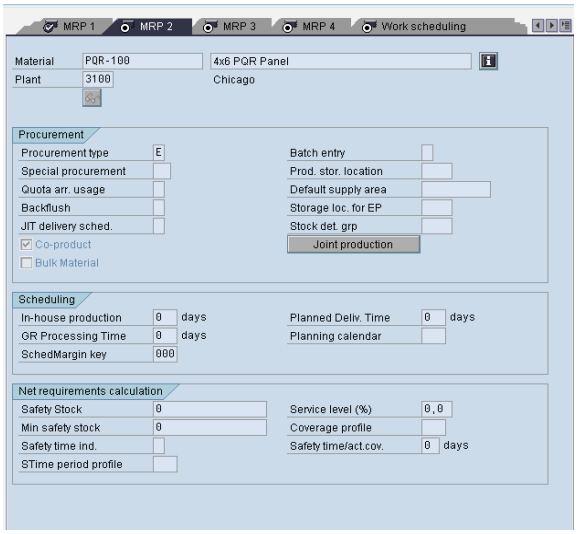


MRP 1
Here we define MRP procedure and Lot size calculation

Add the notes here.

Add instructor notes here.

Let Me-PP Master data



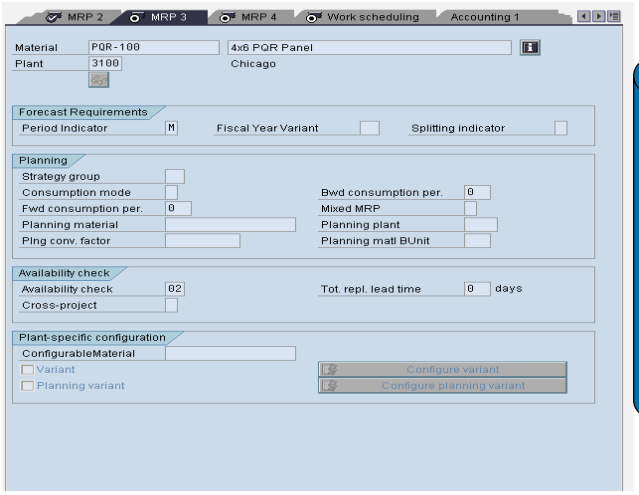
MRP 2

Here we define 1.Procurment– In-house or external procurement or Both for material 2.Scheduling- In-house production time, planned delivery timer processing time and Scheduling Margin Key

Add the notes here.

Add instructor notes here.

Let Me-PP Master data

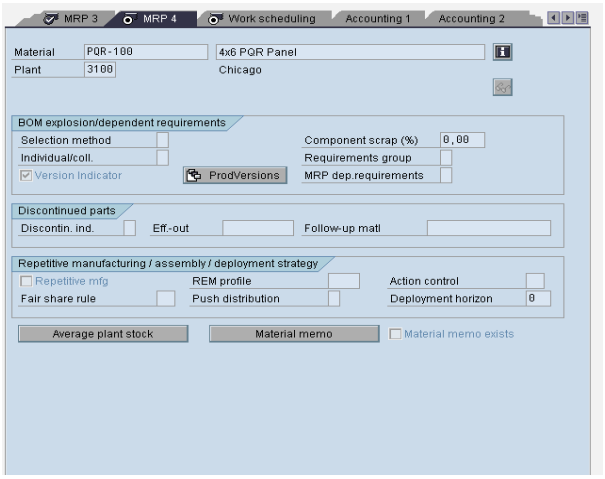


MRP 3
Here we define
1.Forecast requirements
2.Planning- Strategy group for make to stock or make to order strategy
3.Consumption mode
4.Availabilty check

Add the notes here.

Add instructor notes here.

Let Me-PP Master data

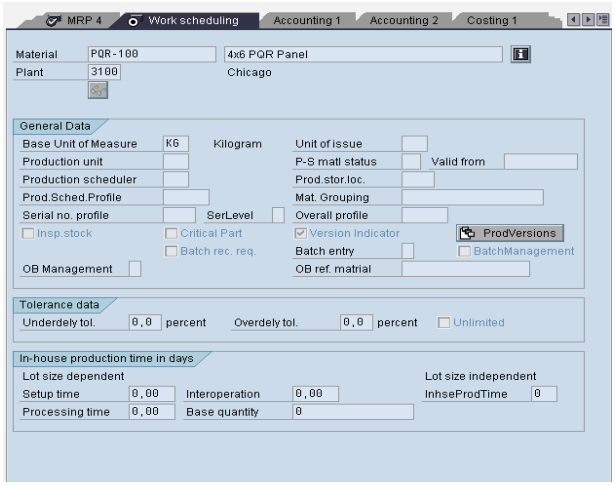


MRP 4
Here we define
1.BOM explosion
2.Dependent requirements
3.Discontinued Parts
4.Repetitive manufacturing if required.

Add the notes here.

Add instructor notes here.

Let Me-PP Master data



Work scheduling
Here we define
1.General data for production scheduler, production scheduling profile
2.Tolerance data
3.In-House production time in days

Add the notes here.

Add instructor notes here.

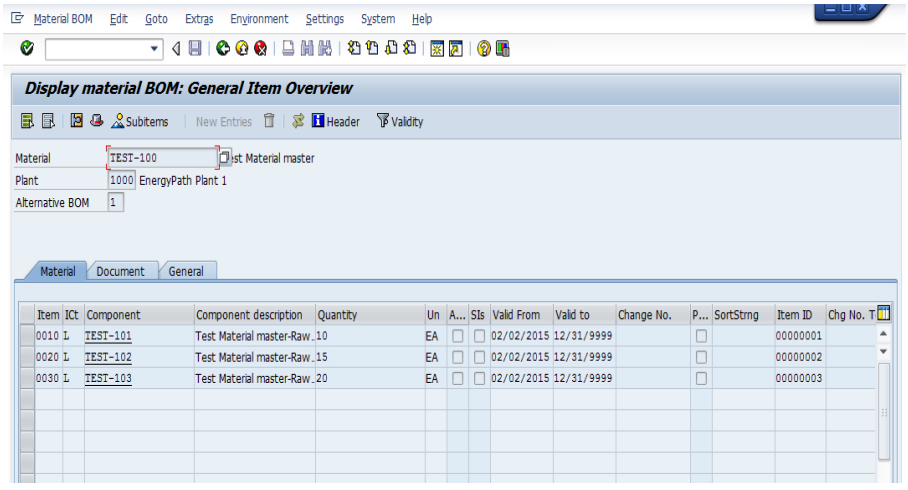
Let Me-PP Master data

- Bill of Materials
  - T code **CS01** to **create**
  - T code **CS02** to **change**
  - T code **CS03** to **display**

Add the notes here.

Add instructor notes here.

Let Me-PP Master data



Add the notes here.

Add instructor notes here.

Let Me-PP Master data

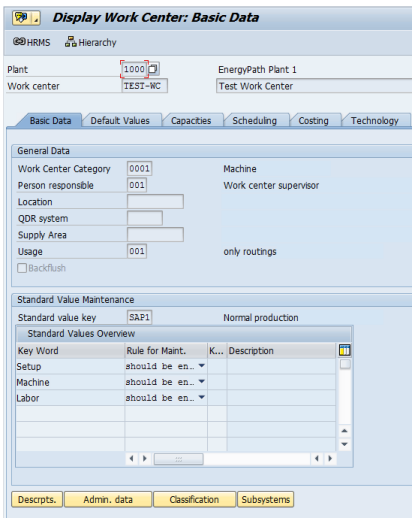
- Work Centers
  - T code **CR01** to **create**
  - T code **CR02** to **change**
  - T code **CR03** to **display**

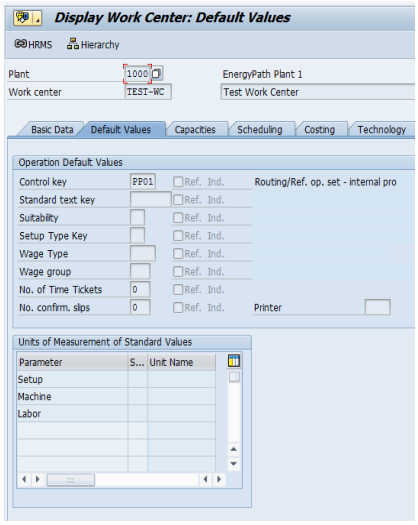
Views are shown in next following slides.

Add the notes here.

Add instructor notes here.

Let Me-PP Master data

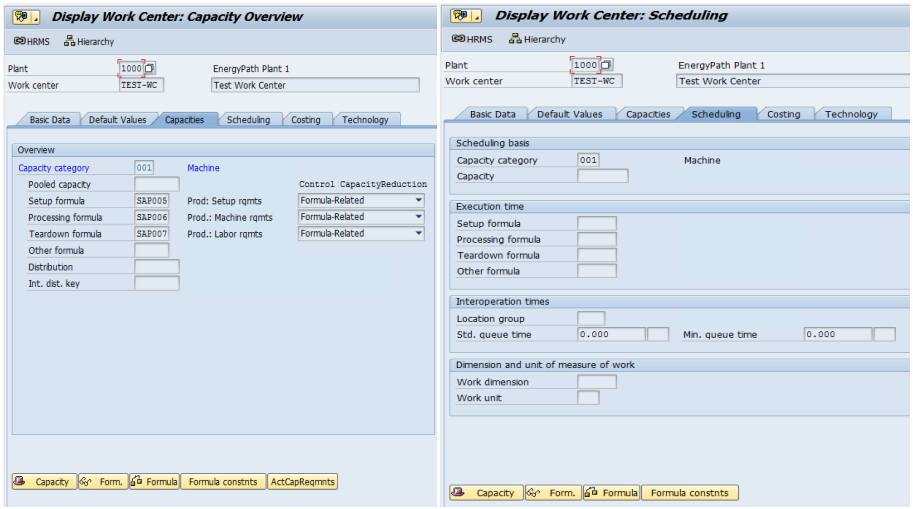




Add the notes here.

Add instructor notes here.

Let Me-PP Master data



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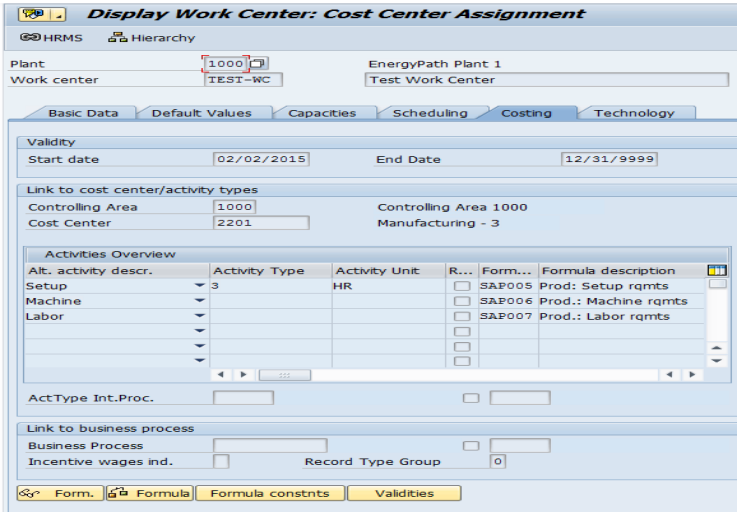
Add the notes here.

Add instructor notes here.

Let Me-PP Master data



Add the notes here.

Add instructor notes here.

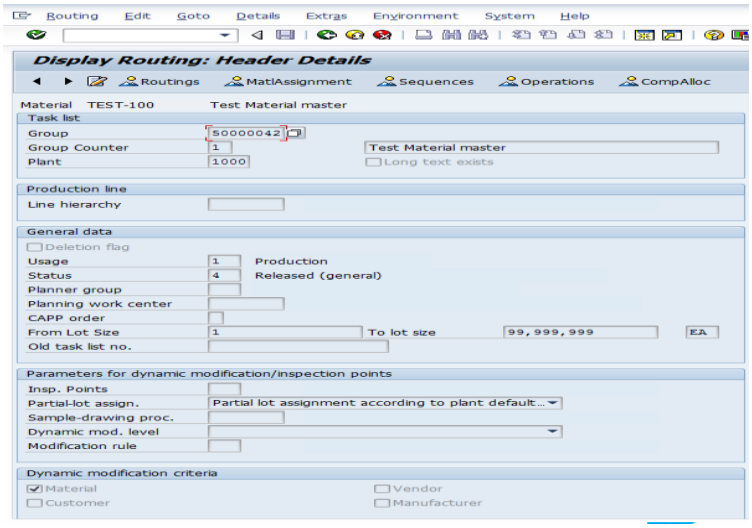
Let Me-PP Master data

- Routings
  - T code **CA01** to **create**
  - T code **CA02** to **change**
  - T code **CA03** to **display**

Views are shown in next following slides.

Add instructor notes here.

Let Me-PP Master data



Add the notes here.

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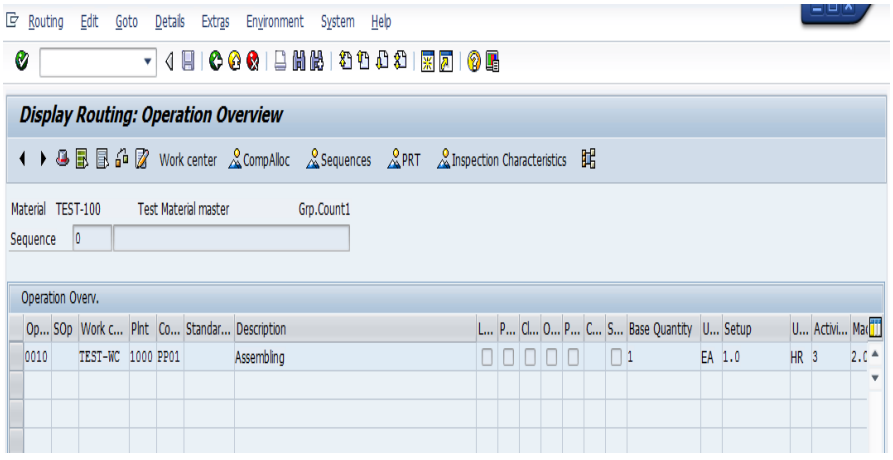
Let Me-PP Master data



Add the notes here.

Add instructor notes here.

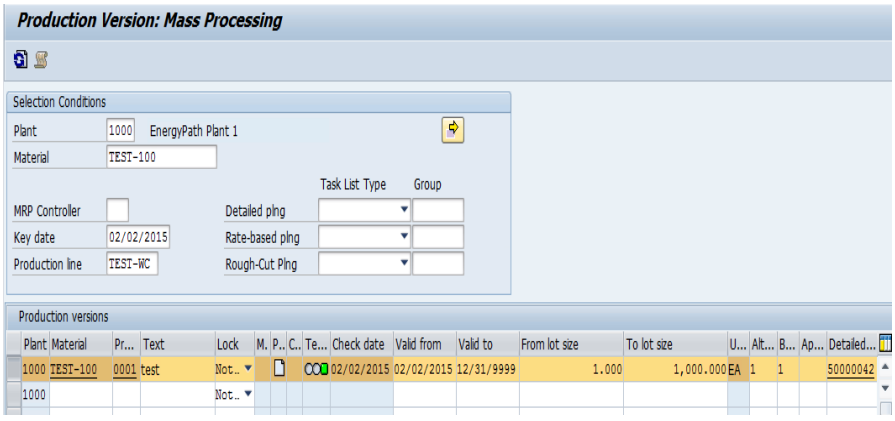
Let Me-PP Master data

- Production Version
  - T code **C223 - Production Versions**

Views are shown in next following slides.

Add instructor notes here.

Let Me-PP Master data

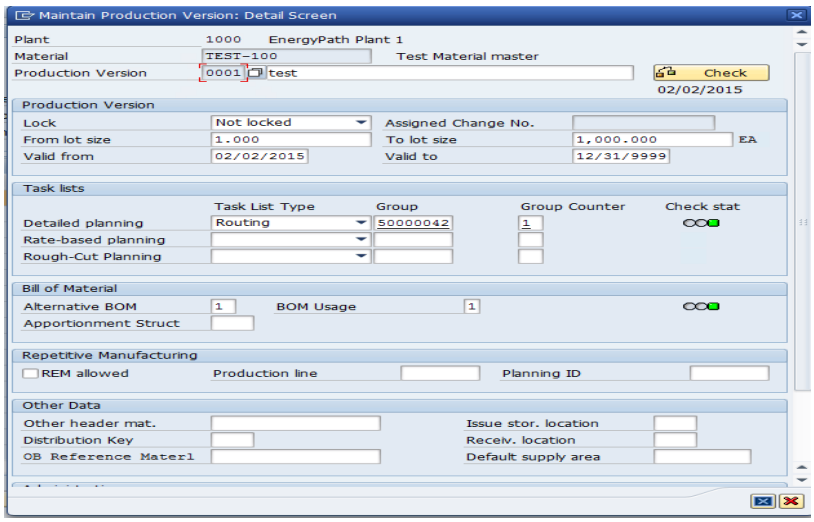


51

Add the notes here.

Add instructor notes here.

Let Me-PP Master data



Add the notes here.

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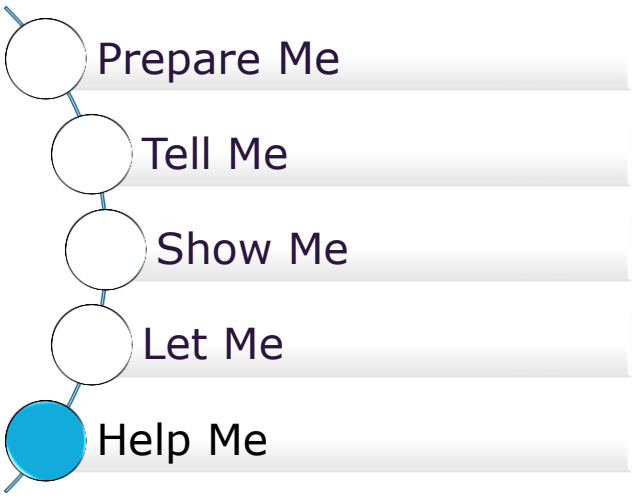
PP Master Data Overview



Add instructor notes here.

References

Next slides shows some important tables for Master data.

Add the notes here.

Add instructor notes here.

References – Table info

Material master is distributed in following tables

MARA – General material Data.
MARC – Purchasing data.
MARD – storage Location data.
MBEW – Valuation.
MAST – BOM Link.
MARM – Unit of Measurement.
MAKT – Basic Data.
MAPL – Routing Link.

Add the notes here.

Add instructor notes here.

References – Table info

Bill Of Material is distributed in following tables.

STKO – BOM Header data.
STPO – BOM Details (item)

Add the notes here.

Add instructor notes here.

References – Table info

Work Center is distributed in following tables

- CRCA – Capacity allocation.
- CRCO – Costing data.
- CRHD – Header data.
- CRHH – Hierarchy data.
- CRHS – Hierarchy structure.
- KAKO – Capacity header data.
- KAKT – Capacity description.
- KAPA – shift parameter of available capacity data.
- KAPE – capacity measuring data.
- KAZY – Interval of available Capacity data.

Add the notes here.

Add instructor notes here.

References – Table info

Routing is distributed in following tables

- PLKO – Group Header Data.
- PLFL - Sequence data.
- PLPO – Group operation.
- PLAS – Task list- Selection of Operation\activity.
- PLKZ – Task list header data.
- PLMZ – Allocation of BOM.
- PLFH – Task list - PRT

Add the notes here.

Add instructor notes here.

References – T Codes

MM01/MM02/MM03 – Create/Change/Display of Material Master.

CS01/CS02/CS03 - Create/Change/Display of Bill of Materials.

CR01/CR02/CR03 - Create/Change/Display of Resource.

CA01/CA02/CA03 - Create/Change/Display of Recipe.

C223 - Maintenance of Production Versions.

Add the notes here.

Add instructor notes here.

Review Question

Which of the following are ways of deleting a BOM?

- Delete the entire BOM
- Delete a BOM item
- Set the deletion indicator
- Delete with a change number
- Archive the BOM

A material BOM can have many different usages for specific departments within a company

- True
- False

Add the notes here.