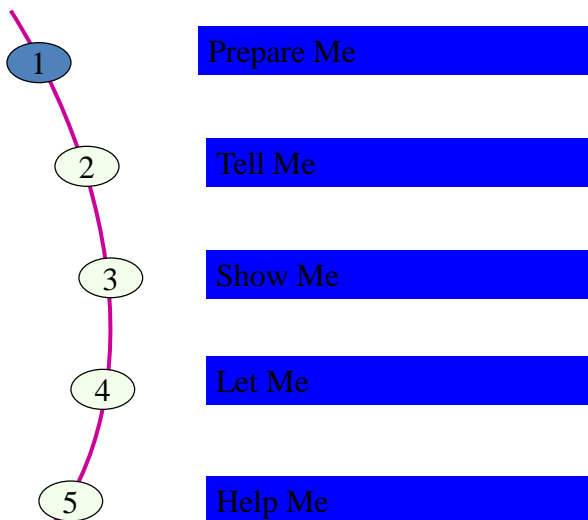




## MM0003: MM Master Data



## Master Data



1

Prepare Me

2

Tell Me

3

Show Me

4

Let Me

5

Help Me

## Prepare Me

In this section , we will cover 3 topics which are,

1. Purpose
2. Use
3. Challenges



"How important is Master Data in an organization for Daily transactions?"

### **Data Entry**

Repeated, laborious & time consuming task of entering data during every Transaction Processing

### **Consistency**

Lack of Consistency and accuracy due to manual Data entry

# Imagine 🤖



## **A World without Master Data**

### **Inadequate Control**

Need to authorize every user to enter / change / modify even the sensitive information

### **Training Impact**

Specialized trainings required to teach what to enter and where to enter

## Master Data...?



The facts describing your core business entities: Example. Customers, Suppliers, other business partners, products, chart of accounts, & employees

The high value Information that an organization uses repeatedly across many business processes

Master Data is critical because it provides the business context by providing concrete data models for business processes

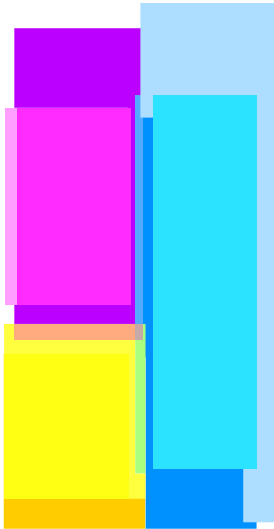
Ensures consistent master information across for transactional and analytical systems purposes

## Use



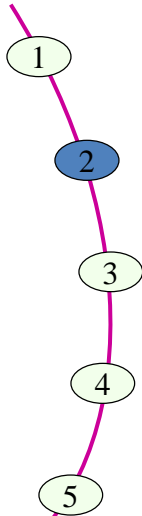
- Master Data are centrally stored and shared across departments
  - to eliminate data redundancy
- Master Data helps in keeping validation & fast user entry for transactions
- One time creation of data which is rarely changed. Only the incremental data required to be maintained

## Challenges



- Managing all the Master Data, important for the organization, centrally.
- Validating & ensuring correctness of data entered in the Master record.
- Avoiding duplication of data
- Formalizing a search strategy to search Master Data.
- Creating procedures & guidelines for periodic maintenance of the Master data records.

## Master Data



Prepare Me

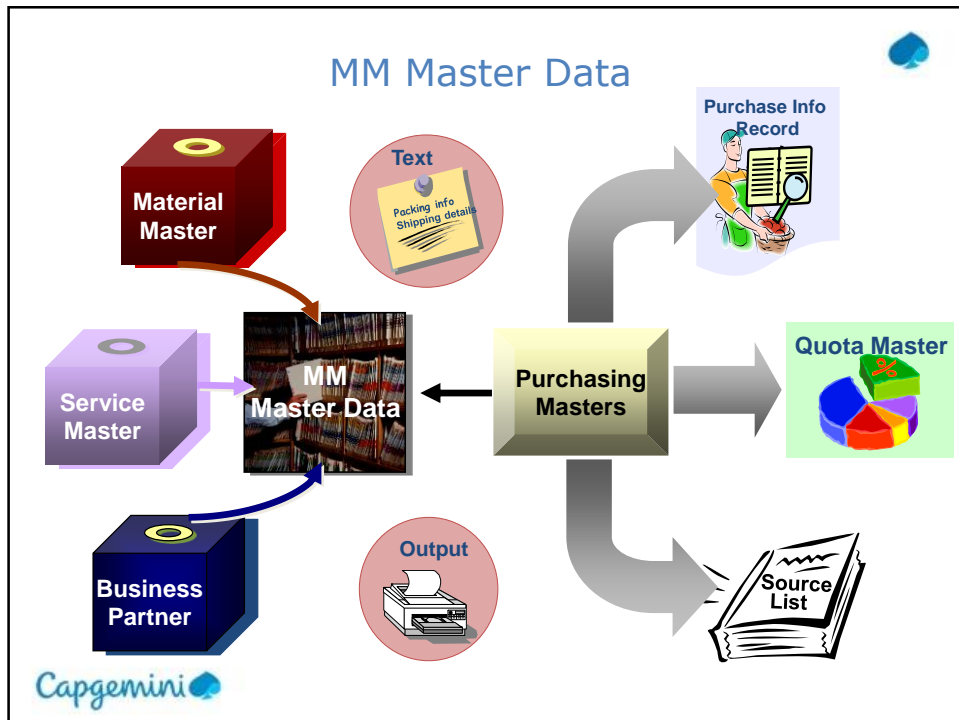
**Tell Me**

Show Me

Let Me

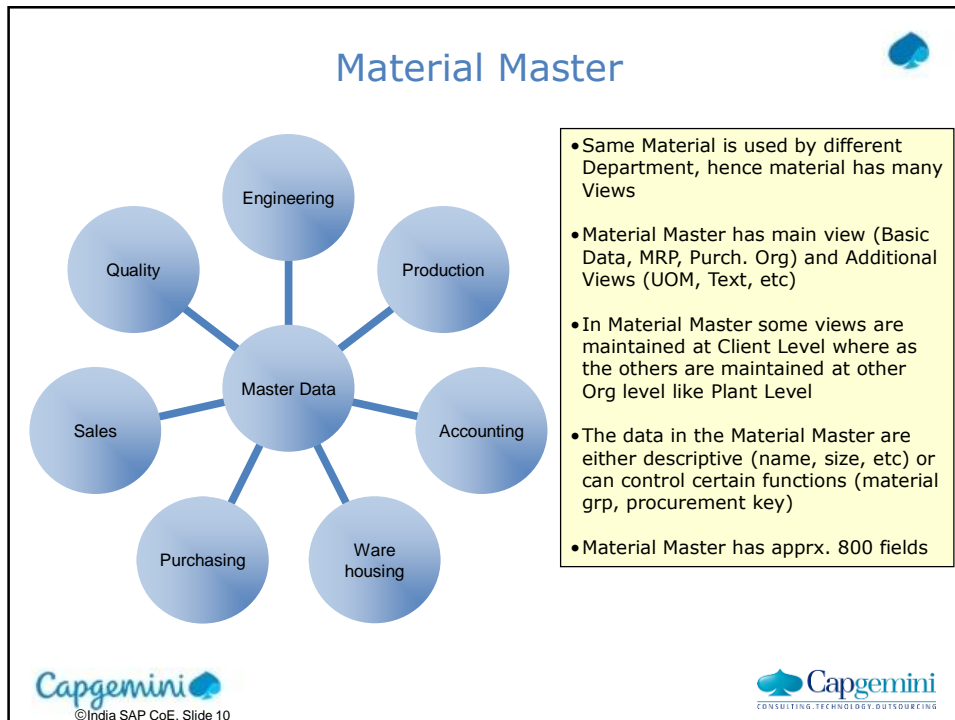
Help Me





Master data contains data records that are centrally stored in the database for a long period of time and are used & processed on a cross application basis. This prevents the multiple storage (redundancy) of data.

While creating a Purchasing documents, the relevant data's are copied from the existing master data thereby reducing the data entry work.



Material Master contains information on all the materials that a company procures or produces, stores and sells.

The data contained in the material master is required for the following functions:

In Purchasing for ordering

In Inventory Management for goods movement postings and physical inventory

In Invoice Verification for posting invoices

In Sales and Distribution for sales order processing

In Production Planning and Control for material requirements planning, scheduling, and work scheduling

Material Type in Material master controls the number range, the views and the screen layout.

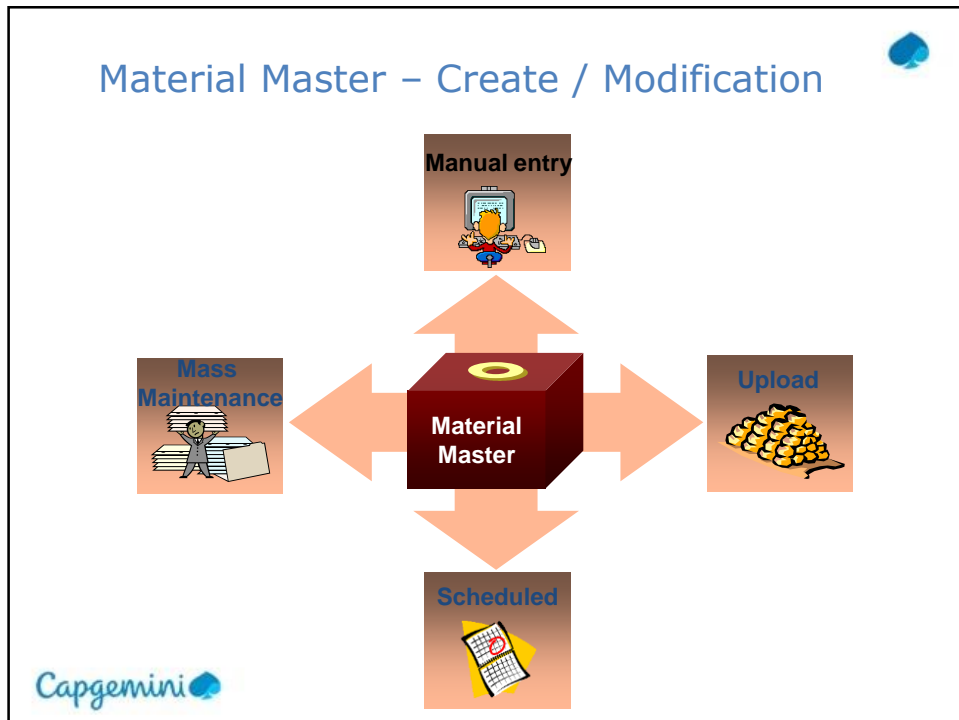
All the view in material master are maintained at certain org level.

Example: Basic data is maintained at client level. This means all the company codes under a client will have same value under basic data for a material.

Purchasing view are maintained at plant level. You can maintain different value in the purchasing view of a material for different plants.

MRP view are maintained at Plant, Storage location level.

Material master also has addition data where material text, conversion of various unit of measures.



Material Master can be created or modified through

- Manual Entry, where Material are created one by one
- Mass Upload via LSMW, BDC, CAT. The process of Mass upload is normally done during the Implementation phase when huge lot of Material Master needs to be uploaded from Legacy to SAP system.
- Material Master can also be scheduled for creation. While creating material master specify the time when the Material needs to be created. In such scenario the Material gets created, but is only available for display and for use only after the Scheduled time.
- A Material can be extended or modified through Mass Maintenance. Mass maintenance is generally used when values in same fields need to be changed for a large volume of material.

## S/4HANA future-oriented Business Partner



- ❑ In S/4 HANA we provide with the business partner as leading object additional embedded future-oriented features to provide new processes and improving the existing ones
- ❑ The BP transaction is the single point of entry to create, edit, and display master data for business partners, customers, and vendors

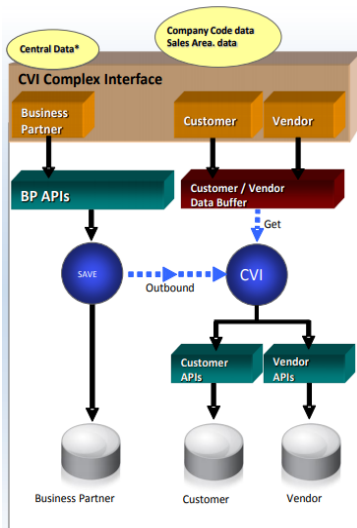
# Business Partner Approach: Specific Information



## S/4HANA future-oriented Business Partner

- ❑ A legal entity is represented with one Business Partner – One unique Business Partner for different roles e.g. Customer, Supplier, Contact, (Employee not part of CVI).
- ❑ Different Business Partner Categories – Organization, Person, Group
- ❑ Maximal data sharing and reuse of data which leads to an easier data consolidation
- ❑ General Data available for all different business partner roles, specific data is stored for each role
- ❑ Several Addresses possible with a default Address
- ❑ Flexible Business Partner Relationships possible like contact, married etc
- ❑ Time dependency on different sub entities e.g. roles, address, relationship, bank data etc.
- ❑ Future – Field Extensibility and Process Extensibility out of the box – Fiori User Interface with a specific Customer, Supplier and Business Partner App

# Integrated Object Model: Customer / Vendor Integration



- ❑ A Business Partner is always created when a customer or supplier is created.
- ❑ The complex interface of the CVI (Customer-Vendor-Integration) contains Business Partner specific data as well as Customer and Vendor specific data.
- ❑ Partially, the data of the Business Partner and Customer/Vendor are redundant For instance 'Name and Address specific attributes' are available in both persistencies.
- ❑ Customer or Vendor specific data is routed through the Customer/Vendor specific interface and mixed up with the Business Partner central data. On commit, the Business Partner and corresponding Customer and/or Vendor is maintained / created.

## Obsolete Transactions related to Vendor & Customer master :



- The old specific transactions like XD01, XD02, XD03 or VD01, VD02, VD03 / XK01, XK02, XK03 or MK01, MK02, MK03 etc. are not available in SAP S/4HANA Enterprise management Version i.e. since 1511 and 1610 onwards.
- Currently mass maintenance for customers and vendors via transaction MASS is not available.

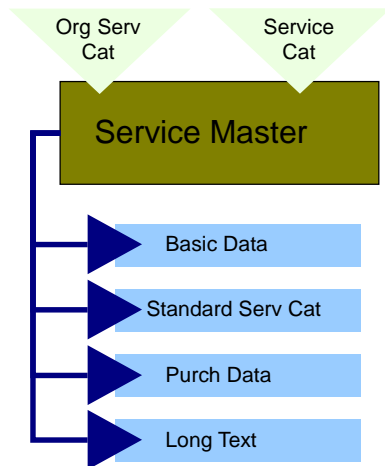
# Service Master



- ❑ Service Master serves as a Master Data within External Service Management and the data stored in the Service Master can be called while creating service specifications
- ❑ Service Master contains the short and long description of services that need to be procured are stored
- ❑ Along with description, Service Master contains
  - Unique Service Number
  - Service Category
  - Base Unit of Measure
  - Material Group
- ❑ Price can be defined in the Service Master through Service conditions

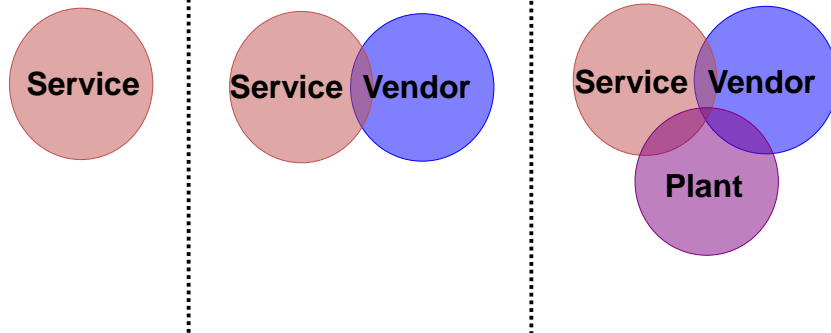


# Service Master



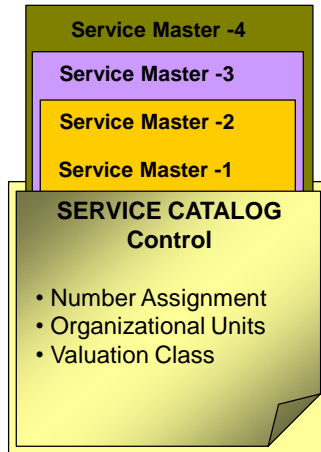
- ☐ Organization Service Category controls the Views in Service Master
- ☐ Service Category controls the Number range, default value for Valuation Class, etc.
- ☐ Basic Data contains data like Material Grp, Division, Valuation Class, and Authorization Group
- ☐ Purchasing status, Validity, EAN is maintained in Purchasing data
- ☐ Service Master can be created through Transaction Code: **AC03**

# Service Master



- ❑ Master Conditions can be maintained at:
  - Service Level → Transaction Code: ML45
  - Service – Vendor Level → Transaction Code: ML39
  - Service – Vendor – Plant Level → Transaction Code: ML33
- ❑ Prices stored in the Master conditions are proposed in service specifications

# Service Master - Service Category



- ❑ Service Category helps in grouping Service Master records based on their usage
- ❑ Service Category is the most important criterion for structuring Service Master
- ❑ It provides default value for the Valuation Class
- ❑ Service Category also controls the number range assignment for Service Master
- ❑ The standard Service Category available are:
  - Master Records describing internal service
  - Master records describing externally procured services
  - Master records describing third party performed services

# Purchase Info Record



- ❑ Purchase Info Record represent Vendor-Material relationship and it contains concise information about the Vendor and a Material
- ❑ Purchase Info Record can be created manually or automatically during maintenance of Quotations, Purchase Order or Outline Agreements
- ❑ Purchase Info Record can be created with or without material. In case of without material, it is created for a Material Group
- ❑ Purchase Info Record also shows the last purchasing document created for the Material Vendor combination

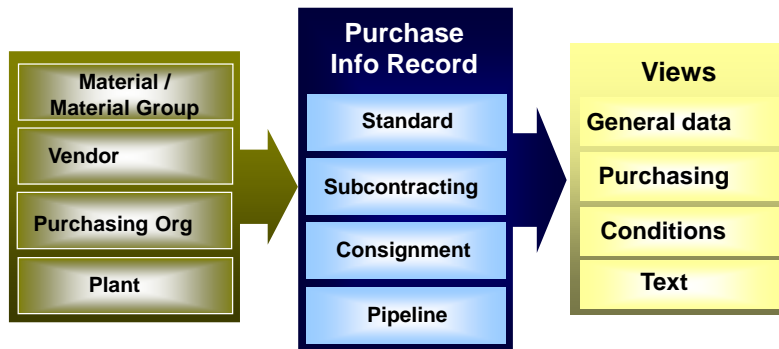
# Purchase Info Record



- SPRO → Materials Management → Purchasing → Purchase Info Record

- ☐ We can customize:
- ☐ Whether to have an internal or external number range. Standard SAP have separate number ranges for Stock material and Non-stock Material
- ☐ The field status (optional, mandatory, display or suppressed) through Field Selection group
- ☐ The header and item text for Info Record
- ☐ Whether the Purchase order price history is to be updated with the net price or the effective price
- ☐ Our own search help over and above provided by the standard SAP. Standard SAP provides
  - ☐ Search via Vendor
  - ☐ Search via Material
  - ☐ Search via Material Group
  - ☐ Search for External Processing

# Purchase Info Record



- ❑ PIR are created for Standard, Subcontracting, Pipeline & Consignment Purchase
- ❑ PIR contains information like Vendor price, Payment Terms, Standard Qty, Text
- ❑ PIR is valid for all Plant covered by the Purchasing Organization
- ❑ Purchasing Info Record also displays the Order price history for each purchase order created

# Purchase Info Record



## Purchase Info Record: 1

Material: 0001	Purch Org : 1000
Vendor : 1001	Plant : 1000

Valid From 01 – Jan – 07 Valid To 31 – Jan - 07					Valid From 01 – Jan – 08 Valid To 31 – Jan - 08				
Condition Type	Amt	Unit	Per	UOM	Condition Type	Amt	Unit	Per	UOM
Gross Price	100	USD	1	EA	Gross Price	200	USD	1	EA
Discount	10	USD	1	EA	Discount	15	USD	1	EA
Freight %	1	USD	1	EA	Freight %	1	USD	1	EA

- ☐ Price and conditions maintained in the PIR are picked in all the Purchasing documents created for the Material/Vendor combination
- ☐ Scales can also be maintained for certain Condition Types

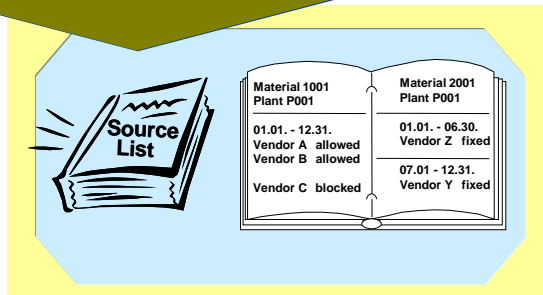
# Source List



- ❑ Source List is maintained for a Material, Plant combination and helps in Source Determination
- ❑ Source list display for a material all the allowed and disallowed Vendors within a Plant for a specified period
- ❑ Every Source in Source List is maintained for a specified period of time
- ❑ Plant can also be assigned as a source of supply in the Source List



# Source List



- ❑ Source List contain allowed, preferred or blocked source of supply of a Material in a Plant
- ❑ Within Contract maintenance function, Source List can be created for a material grp for Contract Items with the Item Category M (Material Unknown) or W (material group)

We can define a Vendor as fixed for a certain period of time. Fixed Vendors are Vendors only from whom the material would be procured.

We can also control whether a Purchase requisition or a schedule line needs to be created through MRP. We can also assign a Outline agreement as a source of supply in source list.

# Source List Creation - Collectively



Info Record

Material: 2001  
Vendor: A  
Plant: P001

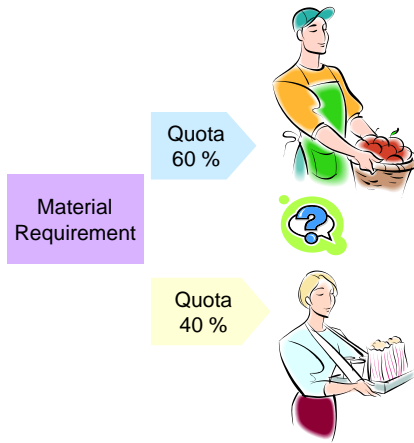
Outline Agreement

Material: 2001  
Vendor: B  
Plant: P001

Material 1001 Plant P001		Material 2001 Plant P001	
01.01. - 12.31.		01.01. - 06.30.	
Vendor A	allowed	Vendor Z	fixed
Vendor B	allowed	07.01. - 12.31.	
Vendor C	blocked	Vendor Y	fixed

- ❑ The Trans Code to create Source List collectively is ME05
- ❑ It allows to update all of the material source of supply
- ❑ It considers the Info Record and the Outline Agreement available for a Material Vendor combination
- ❑ There is a preview function for creating Source List. This allows to simulate the Source List before actual creation
- ❑ After update the Source List can be restored to their original status

# Quota Arrangement



- Quota Arrangement divides the total requirement of a material over a period among certain sources of supply by assigning a quota to each source

- Quota can be of 2 types

**Allocation Quota:** The Vendor who scores the lowest Quota rating gets the order. The Quota rating is calculated based on:

Quota allocated qty + base qty

Quota

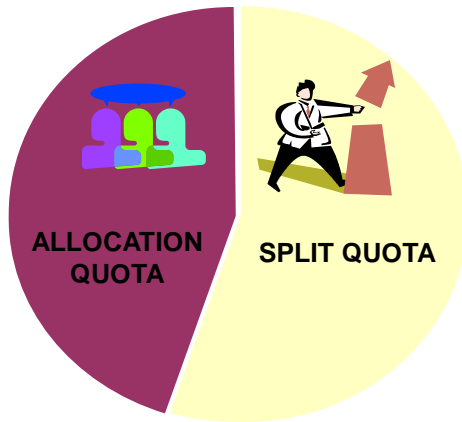
Base qty is a manual qty added to Vendors account

Split Quota: The requirement is simply distributed among Vendors based on the pre defined ratio

- Quota also has feature of controlling

- Min & Max Qty
- Lot Size
- Blocking of Vendor

# Quota Arrangement



- ❑ Quota can be Allocated and Split Quota. Split Quota is controlled by the Lot Size maintained in the Material Master
- ❑ System generates a Unique No to each Quota Arrangement
- ❑ Quota also controls
  - Min & Max Qty
  - Lot Size
  - Blocking of Vendor

## Quota Arrangement – Allocation Quota

$$\text{Quota rating} = \frac{\text{Allocated Qty} + \text{Quota base Qty}}{\text{Quota}}$$

Material: A Reqt: 1000	Source	Quota	Allocated Quantity	Base Quantity	Quota Rating
	Vendor – A	25	500	100	24
	Vendor – B	75	3000		40

- ❑ The source with the lowest Quota Rating represents the effective source
- ❑ If more than one Quota has the Quota rating as zero, then the source with highest Quota is the effective source
- ❑ The Quota base quantity can be used when a new source is included in an existing Quota arrangement. The Quota base quantity enables to prevent a situation in which the new source is assigned all requirement until its Quota allocated quantity exceeds the quota allocated quantity of one of the old sources

# Quota Arrangement – Split Quota

$$\text{Quota rating} = \frac{\text{Quota Source of Supply} \times \text{Required Quantity}}{\text{Total of all Quota}}$$

Material: A  
Reqt: 1000

Source	Quota	Quantity
Vendor – A	5	500
Vendor – B	3	300
Vendor – C	2	200

**Min Splitting Qty: 200**

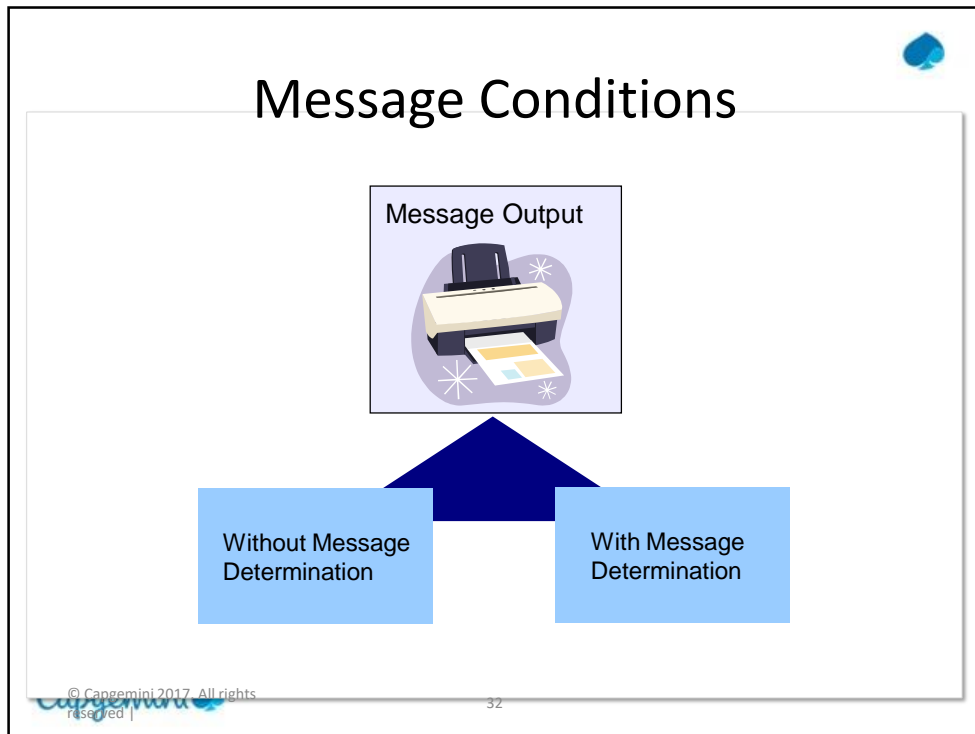
Material: A  
Reqt: 1000

Source	Quota	Quantity
Vendor – A	5	200
Vendor – B	3	
Vendor – C	2	

# Quota Arrangement – Other Control



- ❑ Maximum limit can be maintained for a Source for a specified period of time. If the max limit is reached or exceeded within the period, then the source is no longer suggested for the Quota arrangement
- ❑ Minimum & Maximum Lot Size can also be maintained for a Source
- ❑ Maximum Lot size refers to the greatest possible order proposal quantity. If a requirement exceed the maximum lot size quantity, several order proposals are suggested with quantities equal to maximum lot size, until the total quantity required is covered
- ❑ Minimum Lot size refers to the minimum quantity of order proposal. If a source is determined by Quota arrangement for which minimum lot size is maintained, and if the quantity required is less than the minimum lot size, then the order proposal is generated for a quantity equal to minimum lot size
- ❑ The minimum & maximum lot size maintained in the Quota overrides the lot size maintained for the material master, but only for the sources maintained in the quota



### **Message Output without Message Determination**

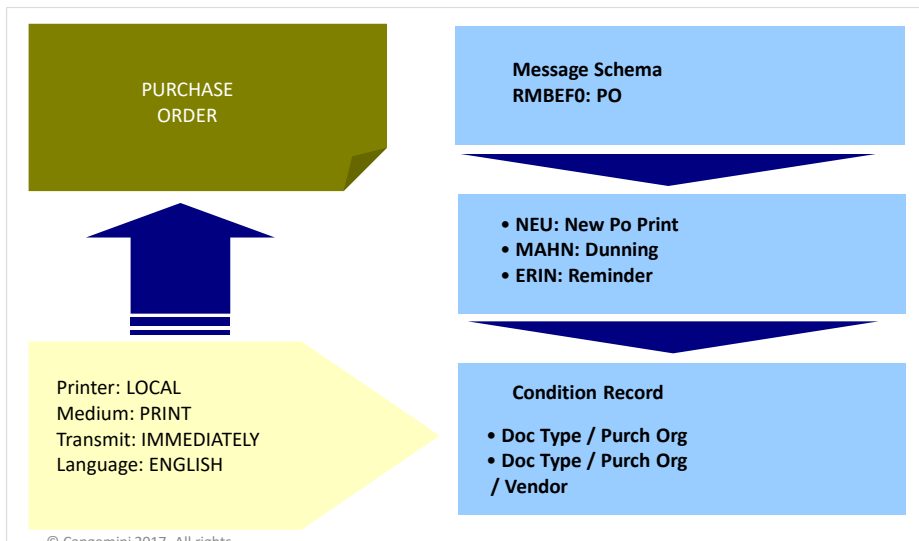
- In case of Message Output without Message Determination, system only considers the Standard Output Type. Example: NEU.
- The system only generates messages using the Standard Parameters. We can change the proposed value latter.
- System determines the printer in the following sequence:
  - Printer defined for the Purchasing group
  - Printer defined in the User parameter
  - Printer defined in User default.

### **Message Output with Message Determination**

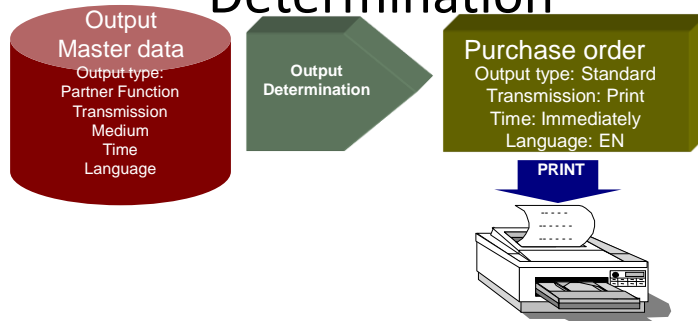
- The aim of Message Determination is to manage messages according to predefined criteria
- The system can suggest the output medium and time depending on the specific values of the influencing factors.



# Message Conditions – Message Determination

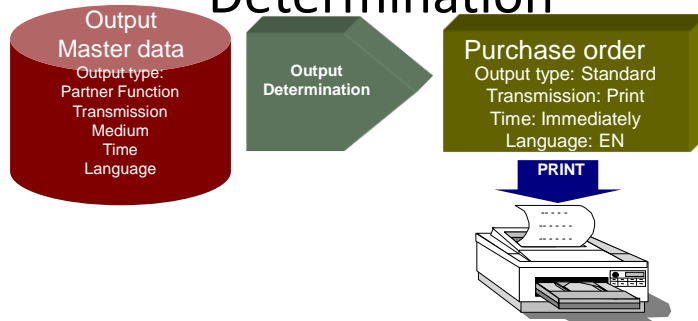


# Message Conditions-Output Determination



- ❑ Output is triggered when a new Purchasing Document is created or any of the Purchasing Document has been changed
- ❑ Output type can be maintained at various combinations like Purchase org / Vendor, Document type/purchase org/vendor, document type, etc.
- ❑ Output can be generated with or without Message Determination

# Message Conditions-Output Determination



- ❑ Output is triggered when a new Purchasing Document is created or any of the Purchasing Document has been changed
- ❑ Output type can be maintained at various combinations like Purchase org / Vendor, Document type/purchase org/vendor, document type, etc.
- ❑ Output can be generated with or without Message Determination

# Overview of BRF+

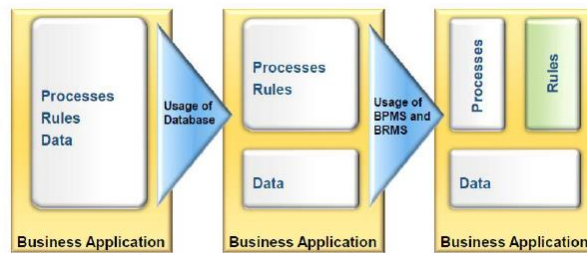


- ❑ BRF+ is an API and user interface for defining and processing business rule. It allows us to model rules in an intuitive way and to reuse the these rules in different application.
- ❑ BRF+ function provides an interface between business rule and an application using that rule.
- ❑ Rules are implemented as expression which are assigned to a function. The rule input is known as context and the rule output is called result.
- ❑ Context and result consists of data object which is called decision table, structure, decision tree.
- ❑ BRFplus supports features such as simulation, trace, transport, XML export and import.

# Advantage of BRF+




- ❑ Separation of program and business rules.
- ❑ Rules can be changed without programming
- ❑ Business users instead of programming can define and maintain rules
- ❑ Rules change can be carried out faster
- ❑ BRFplus is a part of SAP NetWeaver





NAST Output management	S4HANA output management
Leverages condition tables and communication structures	Leverages BRF+ rules
Ability to create a number of custom condition tables and access sequences	Supports building conditions using BRF+ using the fields supported by the application object
Flexibility to add ABAP code in output requirements for more fine-tuned control	The application object is supported by one CDS view
Ability to extend communication structures and literally populate any value in the communication structure using the user exits.	CDS view can be extended with CDS extensions but in a limited fashion
Requires Print programs and forms. Limited support to Legacy output forms	Not a whole lot of possibilities to add custom code to handle complex logic



NAST Output management	S4HANA output management
Requires Print programs and forms. Limited support to Legacy output forms	Not a whole lot of possibilities to add custom code to handle complex logic
One output type can only trigger one output per document	Requires Print programs and Adobe forms. Limited support to Legacy output forms
Supports multiple output mediums – Print, Fax, Telex, external send, EDI, Special functions, ALE etc.	One output type can trigger any number of outputs
Archive link is optional. But not very integrated with output management. You cannot view old outputs from archive link from output screen	Supports multiple channels Print, Email, XML, IDOC. Documentation and SAP notes say Fax is not supported but can be made to work
Works for all of Sales and purchasing documents	Does not support special functions explicitly but the same can be accomplished by adding code to any print program/channel



NAST Output management	S4HANA output management
Configuration and approach is different for finance, WM, Production	Supports multi tenancy and works with cloud solutions
	Archive link is standard
	Retains a copy of original output, very helpful to keep track of different versions sent to the customer
	SAP's direction seems to be converging all the outputs into BRF+ approach. Underlying technology for BRF+ lends itself to be used with any document
	Much cleaner email templates that can leverage a lot of context sensitive data that can be leveraged





## Master Data

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## MM Master Data



Configuration of Master data

Maintenance of Master data

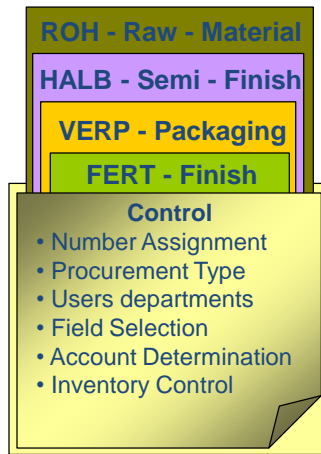
# MM Master Data



Configuration of Master data

Maintenance of Master data

## Material Master - Material Type



### Material Type controls:

- Number Assignment (Internal or External). It also controls the Number Range Interval

- Whether to have Internal (In house manufacturing) and/or External Procurement

- Which types of Views (Purchasing, MRP, Sales, Accounting, etc) need to be displayed

- Which Screen appears and in what sequence

- The Fields in Material (optional, required, display or suppressed)

### Along with Plant it controls:

- Whether changes in quantity are updated in Material Master

- Whether changes in value are updated in the stock accounts in Financial Accounting

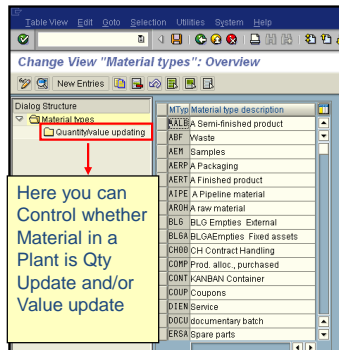
Material Type groups Materials with similar attributes. Example: All the Raw Materials will be created under Material Type : ROH – Raw Material.

This allows to manage materials with similar attributes in a uniform manner as per the company's requirement.

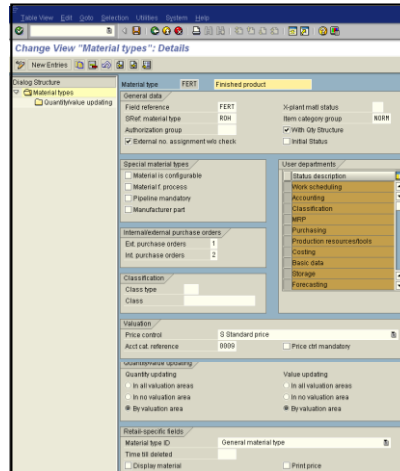
# Material Master - Material Type



**SPRO → Logistics General → Material Master → Basic Settings → Material Types → Define Attributes for Material Type**



Select to display the details of Material Type

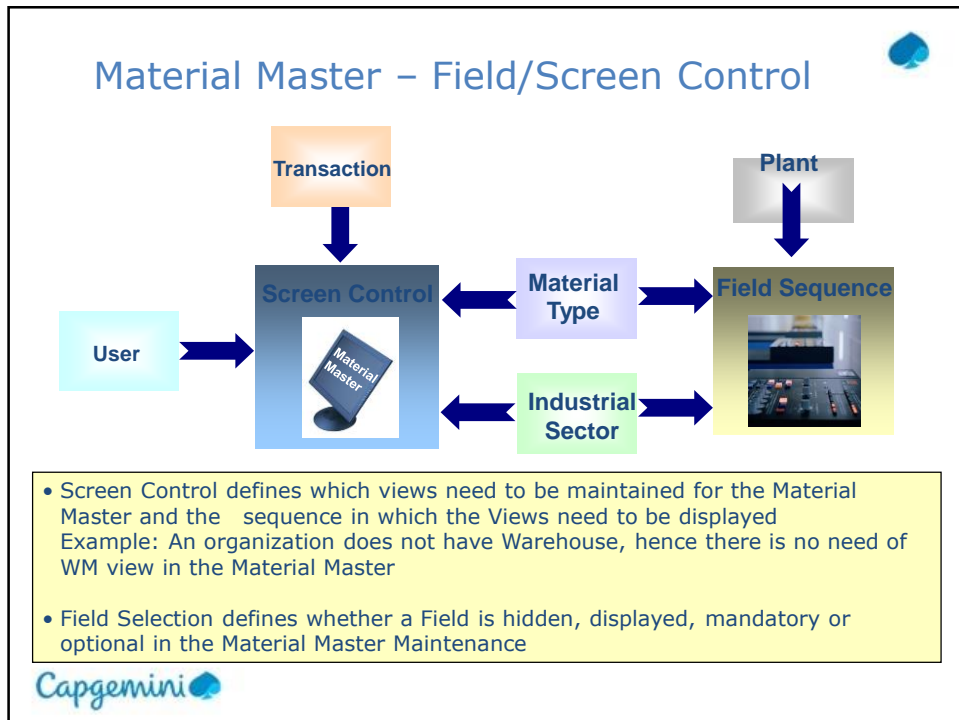


- A new Material Type should be always created by coping a standard Material Type.

In the details screen of Material type you can maintain:

- **Field Reference:** It controls the Fields Status (Display, Hidden, Mandatory or Optional) in the Material Master.
- **Plant Material Status:** It controls the status of Material in each Plant. Example: Material can be blocked for Procurement, Blocked for Costing, Obsolete Material.
- **Item Category Group:** The value entered gets default populated in the Material Master.
- **Control the Views required.**
- **Control whether material can be Internally procured and/or externally procured.** The values can populated in the Material Master. You can also control whether it is modifiable or not.

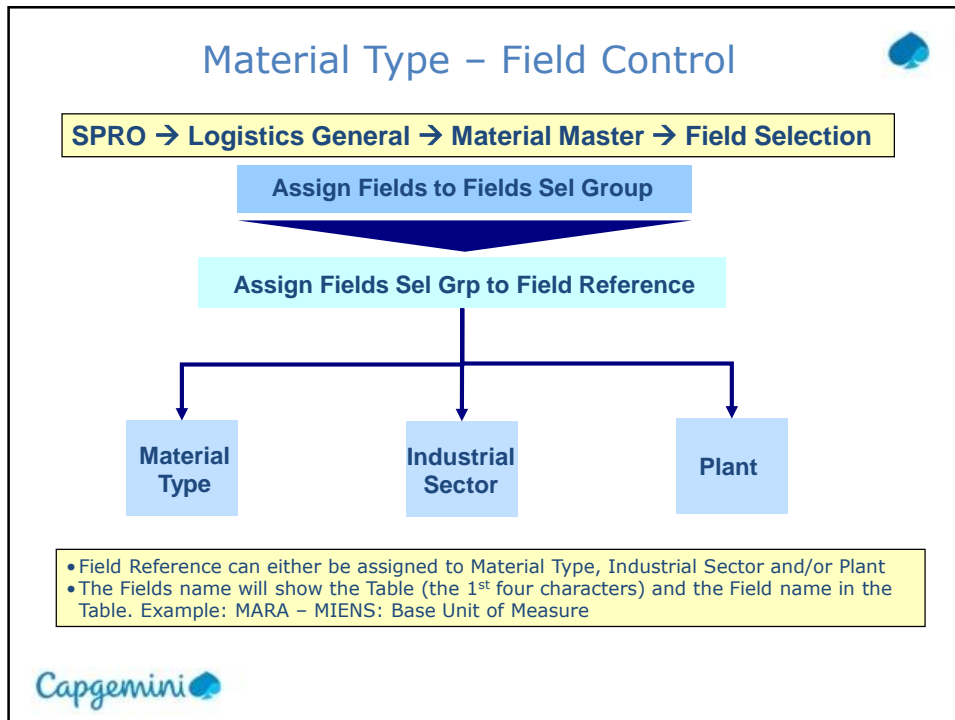




Field Selection can be controlled at Plant, Material Type and/or Industrial Sector.

Where ever there is a conflict in the Field control, the Field Attribute would be determined in the priority Sequence given below

1. Hide
2. Display
3. Required Field
4. Optional Field



### Assign Fields to Fields Sel Group:

- Here you control whether the Field can be Displayed, Hidden, Mandatory or Optional.
- A single Field can be assigned to more than one Fields Sel Group.
- In Standard SAP, Fields Sel Group from:
  - ☐ 001 – 110 is for Material Master for Industry
  - ☐ 121 – 150 is for Material Master for Industry
  - ☐ 151 – 210 is for Material Master for Retail

### Assign Fields Sel Group to Field Reference:

- “Field Reference” groups multiple “Field Selection Group”.
- “Field Selection Group” can be assigned to multiple “Field Reference”

If the Field status needs to be controlled at Plant level, then assign Field Reference to Plant Code

If the Field status needs to be controlled at Industrial Sector, then assign the Field Reference to Industrial Sector

# Material Type – Field Control



## Assign Field to Field Sel Group

Table View Edit Go Selection Utilities System Help

Change View "Field Groups": Overview

New Entries

Field name in full	Short Text	Sel. group
KALP-WPME	Sales price (net)	179
DOCUMENTE		
EAN_DELETE		
EINA-KNZPU	Number of points	190
EINA-IDNLF	Material Number used by Vendor	190
EINA-KOLIF	Prior vendor	190
EINA-LTFAB	Available (deliverable) from	190
EINA-LTFOT	Available (deliverable) until	190
EINA-LMEIN	Base Unit of Measure	190
EINA-LTSNR	Vendor Sub-Range	190
EINA-LTSSF	Sort sequence number	190
EINA-RAH01	Number of days for first remindingurging letter (expediter)	190
EINA-RAH02	Number of days for second remindingurging letter (expediter)	190
EINA-RAH03	Number of days for third remindingurging letter (expediter)	190
EINA-REINS	Order unit	175
EINA-PUNE1	Points unit	190

Sort and position

Field name Field name Entry 17 of 857

Field sel. group Field sel. group

Search the Field through Field name

Search the Field Grp through Field sel. group

## Assign Field Sel Group to Field Ref

Table View Edit Go Selection Utilities System Help

Change View "Field Selection for Data Screens": Overview

New Entries

Field sel. group 1

Fields (Field selection group 1)

Field name	Short Text
PARA-REINS	Base Unit of Measure
TOGRA-REINT	Unit of Measurement Test (Maximum 10 Charac

Field selection (Field selection group 1)

Field ref.	Hide	Display	Read entry	Opt. entry
0001	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0002	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CAD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D1EN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Sort Entries

by field references by field selection

Position Position Entry 1 of 43

Select to check the where use list of Field Reference



## Material Type – Field Control



### Assign Field Ref to Ind Sector

Table View Edit Goto Selection Utilities System Help

Change View "Industry Sectors": Overview

New Entries

Industry sector	Industry description	Field reference
1	Retail	A
2	Aerospace & Defense	A
3	Service Provider	A
A	Plant Engin./Construction	A
B	Beverage	A
C	Chemical Industry	C
F	Food and Related Products	P
J	Processing	A
M	Mechanical Engineering	M
P	Pharmaceuticals	P
T	Telecommunications	M
V	Retailing	A

### Assign Field Ref to Plant

Table View Edit Goto Selection Utilities System Help

Change View "Field Selection at Plant Level": Overview

New Entries

Plant	Name 1	Maintenance status	Field reference
0001	Werk 0001	X	DEVALBP0SZXCFC6 0001
0099	Werk für Customizing-Kurse SCM	X	DEVALBP0SZXCFC6 0001
1000	Werk Hamburg	X	DEVALBP0SZXCFC6 0001
1001	CENTRO MADRID	X	DEVALBP0SZXCFC6 0001
1100	Berlin	X	DEVALBP0SZXCFC6 0001
1111	Plant 1	X	DEVALBP0SZXCFC6 0001
1200	Dresden	X	DEVALBP0SZXCFC6 0001
1234	Santro Motors Plant1	X	DEVALBP0SZXCFC6 0001
1300	Frankfurt	X	DEVALBP0SZXCFC6 0001
1400	Stuttgart	X	DEVALBP0SZXCFC6 0001
1901	RAJASHRI CEMENT	X	DEVALBP0SZXCFC6 0001
1902	BIRLA SUPAR CEMENT	X	DEVALBP0SZXCFC6 0001
1903	BIRLA PLUS CEMENT	X	DEVALBP0SZXCFC6 0001
2000	Heathrow / Hayes	X	DEVALBP0SZXCFC6 0001
2006	Cap Gemini Plant	X	DEVALBP0SZXCFC6 0001

**Status description**

- A Work scheduling
- B Accounting
- C Classification
- D MRP
- E Purchasing
- F Production resources/tools
- G Costing
- K Basic data
- L Storage
- P Forecasting
- Q Quality management
- S Warehouse management
- V Sales
- X Plant stocks
- Z Storage location stocks

You can also control the Views along with Field Status At Plant level



Field Reference can be assigned to Material Type in the option “Define Attributes to Material Type”.

# Material Master – Screen Control



Here, you can define for a combination of user and screen sequence that certain views appear as pre-selected in the Select View(s) dialog box.

You can define that a particular industry sector is proposed whenever the user creates a material master record..

Name	IndSector	Hide ind. sector
ALBAT		
ASCHE	C	
BAESSLER		
BATIPPS		
BLUMDEHN	M	
BOLLINGER		
BURMANH		
C5022505		
CATT_USER		
CGARIBAL	P	
CIECKO	M	
CURA	3	
D001155	M	
D019589	M	
D022429		
D022513	M	

Name	S	Pint	RPIn	SLoc	RSL	Co	RefC	ValA	ValA	Val. type	Val. type	SOrg	R
ACARRANZA													
ADHOLAKI	Z1												
ALBAT	Z1	1000	1000			1000						1000	10
ALBAT	EH	1000	1000	0001	0001	1000						0001	00
ALBAT	PL	1000	1000	0001	0001	1000						0001	00
ANDERSON	Z1	3000	3000	0001	0001	3000						3020	30
ANDERSON	EH	3000	3000	0001	0001	3000						3020	30
ANDERSON	PL												
ANSELMANNA	Z1	SL31	SL31	0001	0001							SL31	SL
ASCHE	01	1100	1100										
ASCHE	Z1	1100	1100	0001	0001	1000	1000					1020	10
ASCHE	EH	1100	1100	0001	0001	1000	1000					1020	10
ASCHE	KU	1100	1100										
ASCHE	PL	1100	1100	0001	0001	1000	1000					1020	10
ASCHE	Z1	1100	1100										
BALLA	Z1	1000				1000							

Position... Entry 1 of 642

You can define for a combination of user and screen sequence, the organizational levels that are proposed whenever the user creates, changes, or displays a material master record



## SAP S/4HANA MATERIAL MASTER DATA CHANGES

In terms of structure, material master is still the same. Old transactions (mm01, mm02, mm03) still exist in the SAP S/4HANA world. A few fields have been removed, new material types have been added, and the length of material has been changed. Beyond that, there is not much change from a functional perspective.



### **Changes with Simple Logistics Material Ledger**

The material ledger is now mandatory for material valuation.

### **Changes with Foreign Trade Data**

Foreign trade data is no longer relevant in S/4HANA. It is now a part of GTS.

### **Introduction of a New Material Type**

A new material type, SERV, is available in SAP S/4HANA for services.

The views available are:

Basic data

Sales view

Purchasing view

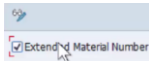
Accounting



## Changes in Material Master Field Length

In ECC, the material master field length was 18 characters. Now, it has changed to 40 characters in SAP S/4HANA. But, by default, it is switched off. This means that technically, the material length can take on 40 characters but doesn't operate that way by default. You have to check the extended material field. The menu path to check the flag for an extended material field is

SPRO -> IMG -> CROSS-APPLICATION FUNCTIONS -> GENERAL APPLICATION FUNCTIONS -> FIELD LENGTH EXTENSION -> ACTIVATE EXTENDED FIELDS  
GO TO NEW ENTRIES AND CHECK THE FLAG



Unless you check the flag, SAP will not use the entire 40 characters for external interface communications. When you use the interface to communicate, like sales order or purchase order using IDOC or any other mechanism, SAP still uses the old 18-character material length. BAPIs and systems which were built and are in-place have 18 characters.



For a functional consultant, the definition of material is 40 characters. The external systems do not know the definition of material. You have to check the Flag for the extended material number so that SAP starts to use the extended field for communication with external systems regarding the material master. You can also restrict the length of the material master. In addition, you can use the transaction OMSL to specify the format of material master.

**Change View "Material Number Format": Details**

Material Number Display Options

Material No. Length: 18

Material Number Template:

☐ Lexicographical ☒ Leading Zeros



### Changes in Material Master Field Length

In ECC, the material master field length was 18 characters. Now, it has changed to 40 characters in SAP S/4HANA. But, by default, it is switched off. This means that technically, the material length can take on 40 characters but doesn't operate that way by default. You have to "check" the flag in the extended material field.

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For the S/4 HANA system, now the definition of material is of 40 characters. The external systems may not know this extended definition of material. You have to check the Flag for the extended material number so that SAP starts to use the extended field for communication with external systems regarding the material master. You can also restrict the length of the material master. In addition, you can use the transaction OMSL to specify the format of material master.

**Change View "Material Number Format": Details**

Material Number Display Options

Material No. Length:

Material Number Template:

☐ Lexicographical ☒ Leading Zeros



**MRP fields in Material Master** :The SAP S/4HANA simplification is done on the following tabs in transaction **MM01/02/03**.

1. Lot Size data in MRP1 Tab:
  - o **Unit of Measure Group (MARC-MEGRU)**
2. Procurement in MRP2: MRP considers quota arrangements always, henceforth it is not required to switch it on in the material master.
  - o **Quota arr. usage. (MARC-USEQU)**
3. BOM explosion /dependent Requirement tab in MRP4
  - o **Selection Method (MARC-ALTSL)**
4. Repetitive manufacturing /assembly /deployment strategy tab of MRP4
  - o **Action control (MARC-MDACH)**
  - o **fair share rule (MARC-DPLFS)**
  - o **push distribution (MARC-DPLPU)**
  - o **Deployment horizon. (MARC-DPLHO)**
5. Storage Location in MRP4
  - o **SLoc MRP indicator (MARD-DISKZ)**
  - o **spec.proc.type SLoc (MARD-LSOBS)**
  - o **Reorder Point (MARD-LMINB)**
  - o **Replenishment qty. (MARD-LBSTF)**
6. Also the backend database fields for these "omitted functionality" remains existing in the system.



## MRP fields in Material Master

### **Scheduling Margin Key**

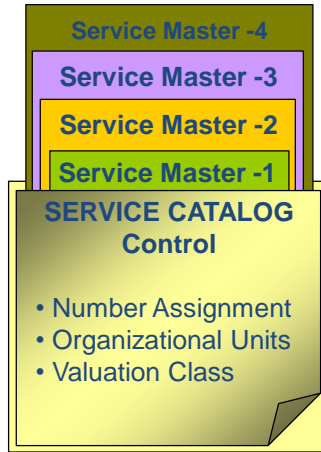
In S/4HANA, the scheduling margin key (field MARC-FHORI) is mandatory if defined in t-code OMSR. By default the scheduling margin key is not mandatory.

In ECC, the scheduling margin key (field MARC-FHORI) was mandatory if MRP Type was:

- Not reorder point planning
- Not time-phased planning

This was independent from the customizing in t-code OMSR.

## Service Master - Service Category



- Service Category helps in grouping Service Master records based on their usage
- Service Category is the most important criterion for structuring Service Master
- It provides default value for the Valuation Class
- Service Category also controls the number range assignment for Service Master
- The standard Service Category available are:
  - Master Records describing internal service
  - Master records describing externally procured services
  - Master records describing third party performed services

## Service Master - Service Category



SPRO → Materials Management → External Service Management → Service Master

Change View "Org. Status: Service Category": Overview

OrgSrvCat	S-BD	S-CO	S-MM	S-SD	Desc.Org.Status.SrvCat
AS01	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Status Basic Data
AS02	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Status Basic Data + CO
AS03	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Status Basic Data + MM

Position. Entry 1 of 3

Change View "Service Category": Overview

SrvCat	OrgSrvCat	Ex	ARef	Service Cat. Desc.
ALL	AS02	<input type="checkbox"/>	0006	Complete service
BULD	AS03	<input checked="" type="checkbox"/>	0006	Construction
GRND	AS01	<input type="checkbox"/>	0006	Basis service
INST	AS03	<input type="checkbox"/>	0006	Plant maintenance
MINI	AS03	<input type="checkbox"/>	0006	
SERV	AS03	<input checked="" type="checkbox"/>	0006	Service: purchasing
SRV1	AS01	<input type="checkbox"/>	0006	General Services
SRV2	AS01	<input type="checkbox"/>	0006	Hardware Services
SRV3	AS01	<input type="checkbox"/>	0006	Software Services
SRV4	AS01	<input type="checkbox"/>	0006	Train & Consult. Services
SRV5	AS01	<input type="checkbox"/>	0006	Technical Services
SRV6	AS01	<input type="checkbox"/>	0006	Contract Services

Capgemini

Service Category are assigned to organization status which indicates the area in which Service Master records are used.

Example: Units of your company may use services provided internally by other units of the company, or procure services externally (from other companies).

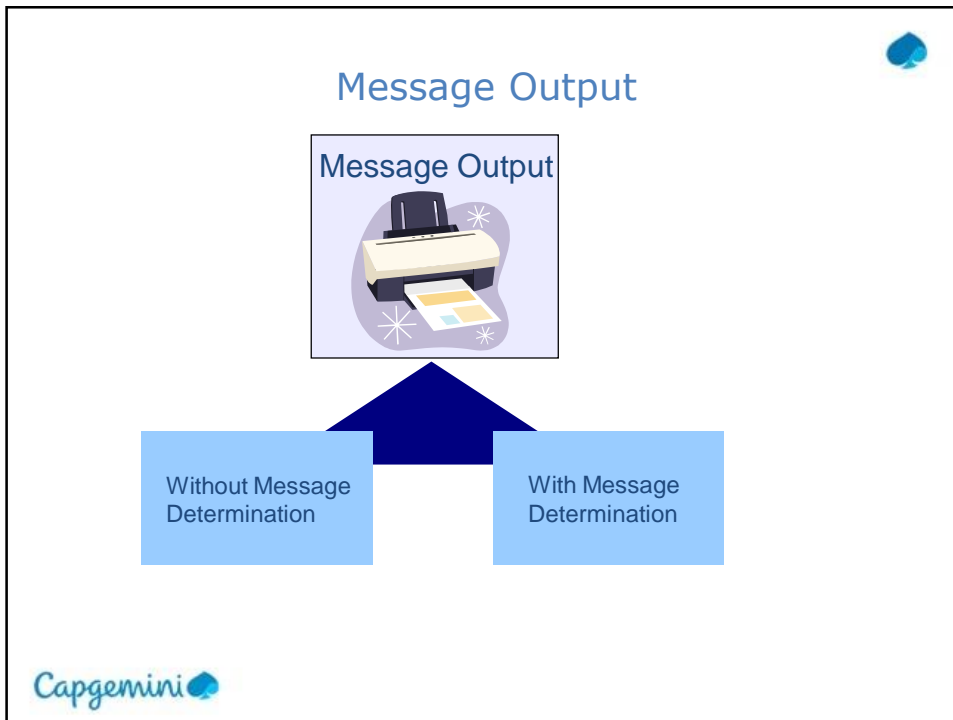
# Purchase Info Record



SPRO → Materials Management → Purchasing → Purchase Info Record

You can customize:

- Whether to have an internal or external number range. Standard SAP have separate number ranges for Stock material and Non-stock Material
- The field status (optional, mandatory, display or suppressed) through Field Selection group
- The header and item text for Info Record
- Whether the Purchase order price history is to be updated with the net price or the effective price
- Your own search help over and above provided by the standard SAP. Standard SAP provides
  - Search via Vendor
  - Search via Material
  - Search via Material Group
  - Search for External Processing

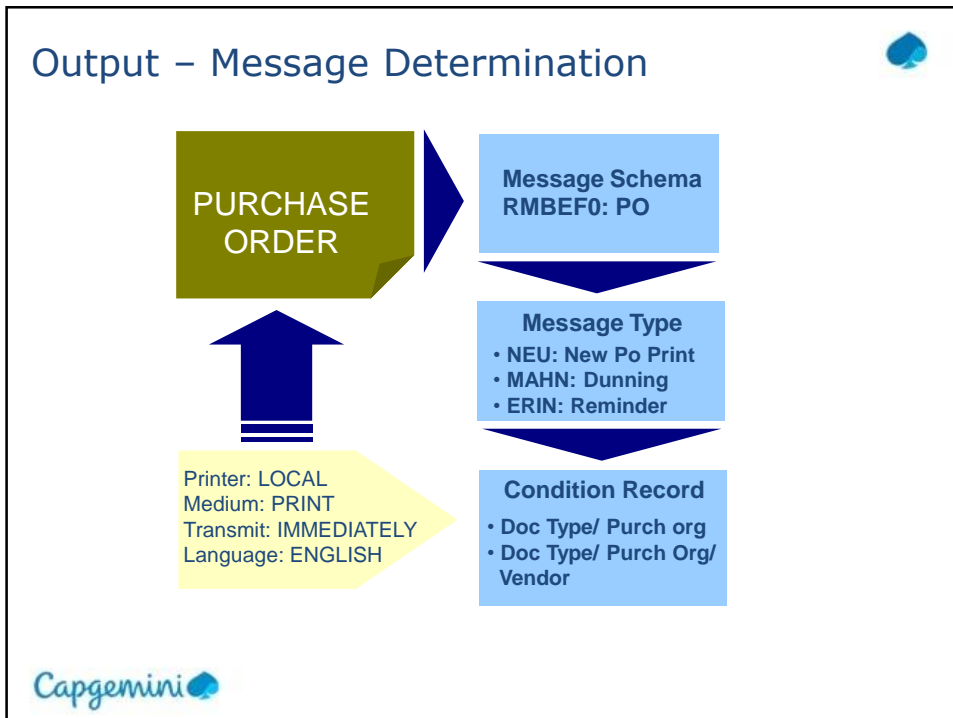


### **Message Output without Message Determination**

- In case of Message Output without Message Determination, system only considers the Standard Output Type. Example: NEU.
- The system only generates messages using the Standard Parameters. You can change the proposed value latter.
- System determines the printer in the following sequence:
  - Printer defined for the Purchasing group
  - Printer defined in the User parameter
  - Printer defined in User default.

### **Message Output with Message Determination**

- The aim of Message Determination is to manage messages according to predefined criteria
- The system can suggest the output medium and time depending on the specific values of the influencing factors.



- Message determination function enables to determine allowed message for a purchasing transaction and selects the suitable one.
- The every type of Purchasing Document determines a Message Schema. Example the Standard Message Schema for PO is RMBEF0
- Each Message Schema has multiple Output types assigned to it
- Output Type controls the Layout of the Output. The Program, Forms determining output is maintained in the Output Type
- Each Output Type has multiple Conditions Records Assigned to it. Condition records defines the output details such as time, no of copies, Mode (Print / Fax), printer name, etc.



## MN04 Create Message: PO

The screenshot shows the SAP MN04 'Create Output - Condition Records : Purchase Order' screen. The 'Key combination' section has an 'Output Type' field containing 'NEU'. A yellow callout bubble labeled '1. Select Output Type' points to the 'NEU' value. Another yellow callout bubble labeled '2. Select Key Combination' points to the 'NEU' field. A third yellow callout bubble labeled '3. Select the radio button' points to the selected radio button in the 'Key Combination' dialog box. The dialog box is titled 'Key Combination' and contains three radio button options: 'Purchasing Output Determination: Purch. Org./Vendor for EDI', 'Purchasing Output Determination: Doc.Type/Purch.Org/Vendor', and 'Purchasing Output Determination: Document Type'. The third option is selected. The dialog box has a green checkmark button and a red X button at the bottom right.

**Create Output - Condition Records : Purchase Order**

Key combination

Output Type

**Create Output - Condition Records : Purchase Order**

Key combination

Output Type



**Key Combination**

- ☐ Purchasing Output Determination: Purch. Org./Vendor for EDI
- ☐ Purchasing Output Determination: Doc.Type/Purch.Org/Vendor
- ☒ Purchasing Output Determination: Document Type

## MN04 Create Message: PO




**Create Condition Records (Purchase order): Fast Entry**



Communication  

Condition Recs.

Do...	Name	Funct	Partner	Medium	Date/Time	Lan...
NB	Purchase...	VN		1	4	EN




**Create Condition Records (Purchase order) : Communication**

Variable Key

Purchasing Doc. Type	Description
NB	Purchase Requisition



Print Output

Output Device	LP01	Print immediately	<input checked="" type="checkbox"/>
Number of messages		Release after output	<input type="checkbox"/>
Spool request name			
Suffix 1			
Suffix 2			
SAP cover page	X Print		
Recipient			

# MM Master Data



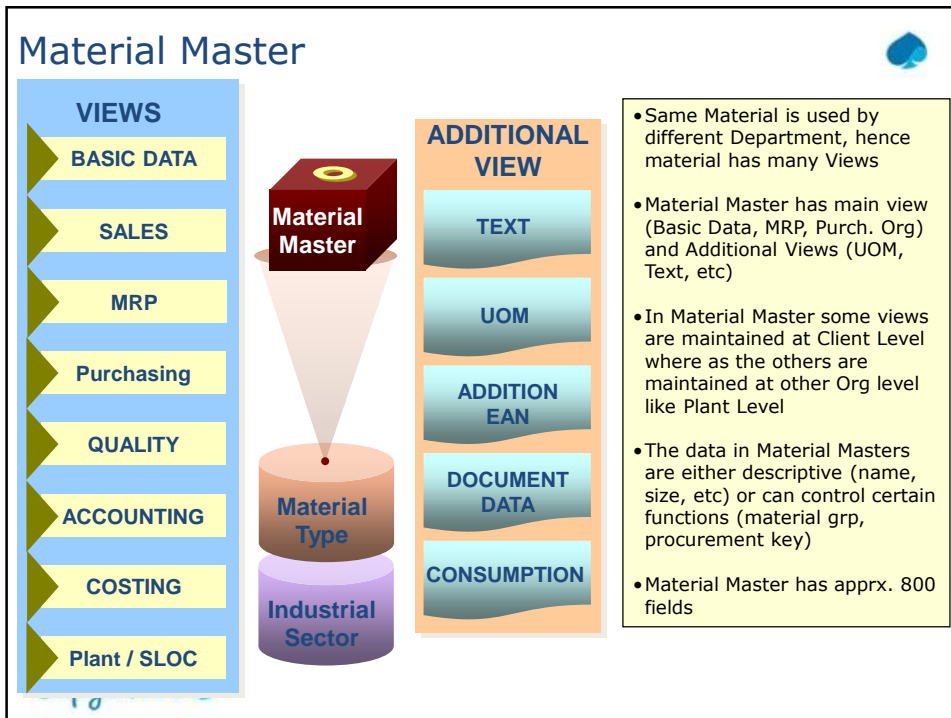
Configuration of Master data

Maintenance of Master data

# Agenda







Material Master is created for a combination of Material Type and Industrial Sector. Industrial Sector controls the screen sequence and fields selections in the Material Master. The industry sector groups together companies according to their activities (for example, Plant engineering and construction, mechanical engineering, the chemical industry, and the pharmaceutical industry).

Every Material Master has a unique Material Number which differentiates one material from another.

Material Master is one of the most important master data as it is used by all the components in the R/3 Logistics System.

Example:

- Purchasing Data in Material Master is used to create Purchase Documents
- MRP data controls the Planning activities.
- Inventory Management data controls the posting of goods movement and Physical Inventory.

## Material Master - Create



### Create Material (Initial Screen)

Select view(s)
Organizational levels

Material
Industry sector
Material type
Change Number
Copy from...
Material

- Chemical Industry
- Food and Related Products
- Mechanical Engineering
- Pharmaceuticals
- Plant Engin./Construction
- Retail
- Retailing
- Service Provider
- Telecommunications

- A Pipeline material
- A Finished product
- A Packaging
- A Semi-finished product
- A raw material
- Additional
- Apparel (seasonal)

#### Important Transaction

- MM01: Create Material
- MM02: Change Material
- MM03: Display Material
- MM04: Display Material Change Doc.
- MM06: Flag Material For Deletion
- MM17: Mass Maintenance
- MM50: List Extendable Materials
- MM60: Material List
- MM70: Select Mat. Flagged for Del
- MMSC: Enter S Loc collectively
- MMAM: Change Material Type
- MR21: Change Material Price

- The Material Master to be able to be used needs the following pre-requisites:
  - Define Industry Sector & Material Types
  - Define internal and external number ranges
  - Define Screen Sequence
- Material Master can also be copied from the existing created Material



**The Material Master to be able to be used needs the following pre-requisites:**

- Define Industry Sector & Material Types
- Define internal and external number ranges
- Define Screen Sequence

**Industry Sector :** Key that specifies the branch of industry to which the material is assigned.

**Material Type :** Key that assigns the material to a group of materials

## Material Master – Create



**Create Material (Initial Screen)**

Select view(s) | Organizational levels | Data

Material:   
Industry sector: Chemical Industry  
Material type: A Finished product  
Change Number:   
Copy from... Material:

Select View(s)

- View
- Basic Data 1
- Basic Data 2
- Classification
- Sales: Sales Org. Data 1
- Sales: Sales Org. Data 2
- Sales: General Plant Data
- Foreign Trade: Export Data
- Sales Text
- Purchasing
- Foreign Trade: Import Data
- Purchase Order Text
- MRP 1
- MRP 2
- MRP 3
- MRP 4
- Forecasting
- Work Scheduling

☐ View selection only on request  
☐ Create views selected

Organizational levels | Data

Organizational levels

Plant: 1000  
Stor. location: 001  
Valuation type: 001  
Sales Org.: 1000  
Distr. Channel: 10  
Warehouse No.: 001  
Storage Type: 001

Profiles  
MRP profile: MRPV

☐ Org. levels/profiles only on request

Select view(s) | Default values

In Material Master some views are maintained at Client Level where as the other are maintained at other Org level like Plant Level. Purchasing View are maintained at Plant Level



In MRP Profile you can specify the following information:

- Fields you want the profile to contain
- Values you want these fields to contain
- Whether the values copied from the profile to the respective *MRP* or *Forecasting* screen in the material master can be overwritten (default values) or not (fixed values)



# Material Master - Create



**Display Material 100-100 (Semi-finished product)**

Additional data Organizational levels

Sales text Purchasing Foreign trade import Purchase order text MRP 1

Material: 100-100 Casing Plant: 1000 Werk Hamburg

General data

Base Unit of Measure: PC Piece Order unit: 003 Var. OUn: %

Purchasing group: 000 Material group: 003

Plant-sp.matl status: Valid from

Tax ind. f. material: Qual f. FreeGoodsDis.

Material freight grp: OB management OB ref. material

Batch management

Purchasing values

Purchasing value key: 1 Shipping instructs:

Reminder 1: 10 days Underdel. tolerance: 0,0 percent

Reminder 2: 20 days Overdeliv. tolerance: 0,0 percent

Reminder 3: 30 days Min. del. qty in %: 0,0 percent

Std del. time var.: 0 days Units overdelivery Acknowledgment reqd

Other data / manufacturer data



GR processing time: 0 days Post to Insp. stock Critical part

Quota am. usage: 4 Source list JIT sched. indicator

MR part profile

MR part profile

- Basic data 1
- Basic data 2
- Classification
- Sales: sales org. 1
- Sales: sales org. 2
- Sales: general/plant
- Foreign trade export
- Sales text
- ✓ Purchasing
- Foreign trade import
- Purchase order text
- MRP 1
- MRP 2
- MRP 3
- MRP 4
- Forecasting
- Work scheduling
- Prod.resources/tools
- Plant data / stor. 1
- Plant data / stor. 2
- Warehouse mgmt 1
- Warehouse mgmt 2
- Quality management
- Accounting 1
- Accounting 2
- Costing 1

- Select  to display all the views of Material Master
- Select  to get the general information on Material  
Example: Creation date, User Id of the person who has created

## Material Master – Additional Data



**Create Material 622123 (A Finished product)**

Additional data | Organizational levels | Check screen data

Sales: sales org. 1 | Sales: sales org. 2 | Sales: general plant | Forei...

Material: 622123  
Sales Org: 1000  
Distr. Chl: 10

Main data

Descriptions | Units of measure | Additional EANs | Document data | Basic data...

Material: 622123 Container (top open)

Units of measure grp

Units of measure/EANs/dimensions

X	AUn	Measu...	<=>	Y	BUn	Measu...	EAN/UPC	Ct	Au	A	Length
1	EA	Each	<=	1	EA	Each					
			<=		EA	Each					

Descriptions in different languages, Units of measure, Basic Data Text etc can be maintained in Additional data

## Material Master



Views	Org Level	Attributes
Basic Data - 1	Client	Base Unit Measure, Material Grp, Division, Gross Weight, Net Weight
Basic Data - 2	Client	Details of Design Drawing, Variant Configuration
Sales Org - 1	Plant - Sales Ord - Dist	Delivering Plant, Dist Channel, Division, Tax data, Sales Unit
Sales Org - 2	Plant - Sales Ord - Dist	Item Cat Grp, Acct assignment Grp, Mat Statistics Grp, Product Hierarchy
Sales General	Plant - Sales Ord	Loading Grp, Trans Grp, Profit Center
Purchasing	Plant	Purchasing Grp, Order Unit, Purchasing Value key, Plant sp material status
MRP - 1	Plant - Storage Loc	MRP Grp, MRP Type, Reorder Point, MRP Controller, Lot size, MRP Area
MRP - 2	Plant - Storage Loc	Procurement Type, Prod S Loc, Default supply area, Quota Arrangement, Safety Stock, Schedule
MRP - 3	Plant - Storage Loc	Period Indicator, Availability check,
MRP - 4	Plant - Storage Loc	BOM explosion details, Repetitive manufacturing



Material Master once created needs to be only extended to other Plant, Sale Org or Storage Location as and when required.

Material Master can be also created with reference to an existing Material.

## Material Master



Views	Org Level	Attributes
Plant/S Loc -1	Plant - Storage Loc	Shelf life data
Plant/S Loc -2	Plant - Storage Loc	Serial No data
Accounting - 1	Plant - Valuation type	Valuation Class, Price Control, Moving Price, Standard Price, Total Value, Valuation Category
Accounting - 2	Plant - Valuation Type	Tax Price
Costing - 1	Plant	With Qty Structure, Variance key, Production Version
Costing - 2	Plant	Cost Estimate,
Plant Stock	Plant	Current Period, Previous Period, Plant Stock Current Period, Plant Stock Previous Period.
S Loc Stock	Plant - Storage Loc	Current Period, Previous Period, S Loc Stock Current Period, S Loc Stock Previous Period

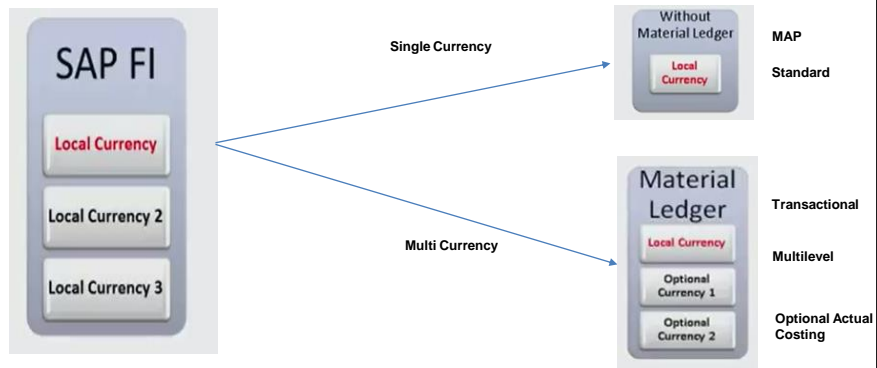


## Material Ledger

With SAP S/4HANA, it is obligatory to use the Material Ledger. Latest trends in material management aim for improved and more flexible valuation methods in multiple currencies and parallel accounting standards while simultaneously reducing required system resources and improving scalability of the business processes. Since the data model of the Material Ledger (ML) module supports these business requirements, it was chosen as the basis for material inventory valuation in the new solution SAP S/4HANA.



## Inventory Valuation





## Material Ledger

### ECC Setup

In SAP ERP System, you can have one company code currency (Local Currency 1) and up to two parallel currencies (Local Currency 2 and Local Currency 3) in the FI module. We have the option of adopting the currencies used in the FI module, the CO module, or both, or of assigning currency types individually. The currencies are translated based on the historical rates in the Material Master.

### S/4 Hana Setup

In SAP S/4HANA, a key improvement that SAP has made with parallel currencies is to allow up to eight freely definable currencies in the Universal Journal table, in addition to fixed (local and global) currencies as follows:

Local : The company code currency

Global: The Controlling area currency

Freely defined: Up to eight currency types

## Material Master Changes due to material Ledger activation

ECC Material Master Accounting tab

Material: 51941991  
Material: WICK

Plant: R235 PCA Automobiles Argentina SA

General Data  
Base Unit of Measure: ST items  
Valuation Category:   
Currency: ARS  
Division: 99  
Current period: 03 2019  
Price determ.:   
Price control: V  
Valuation Class: 7920  
VC: Sales order stk:   
Moving price: 0,00  
Total Stock: 0  
Proj. stk val. class:   
Price unit: 1  
Standard price: 0,00  
Total Value: 0,00

S/4 Hana Material Master Accounting tab

Material: JABBEEL  
Descr.: Barrel for Pils  
Plant: 1010 Plant 1 DE

Period 002.2019 Period 001.2019 Period 012.2018 Future costing run Current costin...  
General Valuation Data  
Total Stock: 1.950 Base Unit: SA each  
Division:   
Valuation Cat:   
Valuation Class: 7900  
VC: Sales Order Stk:   
Project Stock-VC:   
Price Determ.:   
Transaction-Based:   
Prices and values  
Currency: EUR  
Standard Price: 1,00  
Price Unit: 1  
Prc. Chf: 0  
Inventory Value: 1.950,00  
Company code currency: EUR  
Group currency: EUR  
9.750,00

The Inventory Value shown in the Material Master is based on the different valuation views multiplied by the current level of inventory. In SAP S/4HANA, currency and valuation views must be assigned to a ledger because, with the integration of the FI and CO modules in the Universal Journal, the Ledger field, which was formerly only used in FI, is now a key field for reporting CO dimensions as well.



# Material Ledger



## ECC - Challenges with Material Ledger (ML)

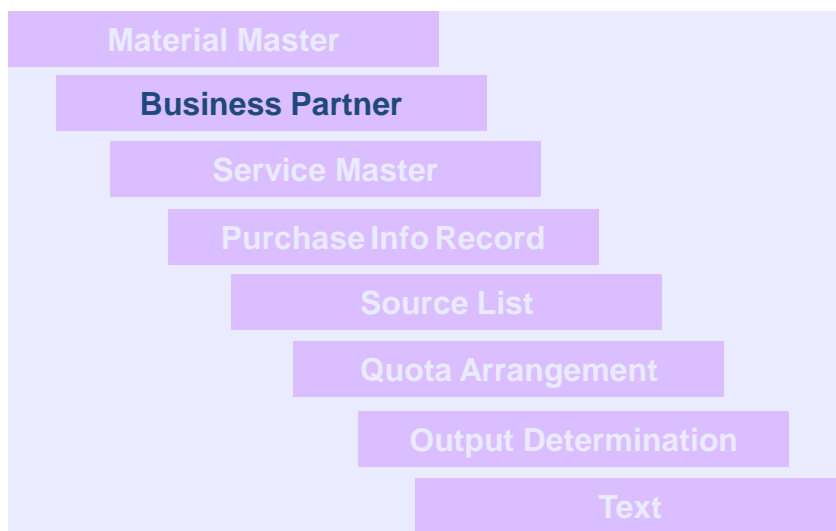
Material ledger functionality is present in SAP ERP , but not many companies have implemented it mainly due to

1. Several configurations (perceived to be complex)
2. Production startup activity (Perceived to be complex with considerable business down time)
3. Additional period end activities (Specially when actual costing is active)
4. Performance (Transaction run time gets impacted due to update in several ML tables during goods movement , invoices and additional period end activities)
5. Analytics (Analysis of price to be drilled down to individual document takes time)

## S/4 – Simplified Data Model in S/4 Hana

Data will now be stored mainly in universal journal table ACDOCA , several ML tables have been replaced with HANA views with same name.

1. Performance and analytics will be eliminated through simplified data model, higher throughput, 'on the fly' aggregates, real time reporting.
2. Some of the period end activities (for reconciliation etc) may not be needed with single table ACDOCA



# Maintain Business Partner-General View (Create)



Display Organization : 10000

Locator On/Off Person Organization Group Open BP Switch Between Display and Change Relationships Settings Services for Object More

Business Partner: 10000 US Vendor 1000 / N

Display in BP role: Business Partner (Gen.)

1. Select BP Role

2. Select Title

3. Input Name

4. Input Search Term 1

Name

Title: Company

Name: US Vendor 1000

Salutation:

Search Terms

Search term 1: US VENDOR 1000

# Maintain Business Partner-CoCd View (Create)



SAP Display Organization: 10000

On/Off Person Organization Group Open BP Switch Between Display and Change Company Code Relationships

Business Partner: 10000 US Vendor 1000 / N

Display in BP role: Vendor

1. Select BP Role

2. Select Company Code

3. Input CoCd

Company Code: 1000 ABC Holding Company

Customer: 10000

Vendor: 10000

Company Codes

Switch Company Code

Vendor: Account Management Vendor: Transactions Vendor: Correspondence Vendor: Status

4. Input Recon Account

Account Management

Reconciliation acct: 2000001 Vendor Recon Account

Head office:

Sort key:

Authorization Group:

# Maintain Business Partner-Purchasing View (Create)



SAP Display Organization: 1000

On/Off Person Organization Group Open BP Switch Between Display and Change Purchasing Relationships Settings S

Business Partner: 10000 US Vendor 1000 / New York NY 10019

Display in BP role: Vendor

Purchasing Organization

Purch. organization: 1000 Purchasing Org 1000

Purchasing Organizations

Switch Organization

Purchasing Data Partner Functions 4. Input Order Currency ing Data Interchangeability Vendor: Texts

Conditions

Order currency: USD

Payment terms:

Incoterms Version:

Incoterms:

Incoterms Location 1:

Incoterms Location 2:

Minimum order value: 0,00

# Maintain Business Partner (Change)



1. Click on Switch Between Display and Change

Change Organization: 10000

Locator On/Off Person Organization Group Open BP Switch Between Display and Change Check Relationships Settings Services for Object More

Business Partner: 10000 US Customer 1000 / New York NY 10019

Change in BP role: Business Partner (Gen.)

Worklist Find

Find: Business Partner By: Number Business Partner: 10006 MaxHit: 100 Start

Partner Description

Address Address Overview Identification Control Payment Transactions Status Additional Texts Technical ID

Name

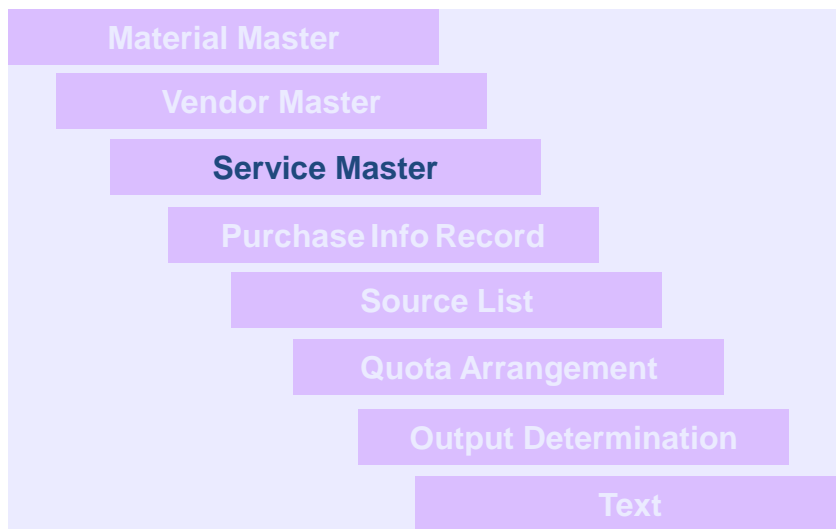
Title: Company

Name: US Customer 1000

Salutation:

Search Terms

Search term 1: US CUSTOMER 1000



## Create Service Master Record



1. Click on Create

**Display Service 3**

Other Service | Expand All | Collapse All

Activity number: 0000111 created for service entry sheet

Service Category: SERV Service: purchasing ☐ Short Txt Change Allowed

Base Unit of Measure: AU ☐ Deletion Indicator

**Basic Data**

Mat/Srv.Grp	01	Material group 1	Authorization Group	
Division			Tax Indicator	
Valuation Class				
Formula				
Graphic				

**Standard Serv. Cat.**

- Time Mgmt.
- Purch. Data
- Internal Work
- Sales and Distributio...
- Long Txt

**Long text**

Lang. to be maint.: EN English

Ln 1, Co 1 | Ln 1 - Ln 1 of 1 lines

**User Fields**



## Create Service Master Record

**Create Service Master Record**

Other Service | Expand All | Colla...

Activity number: 1 | Maintenance Service

Service Category: SERV Service: purchasing | Short Txt Change Allowed | Deletion Indicator

Base Unit of Measure: AU | AU

**Basic Data**

Mat/Srv.Grp: 01 | Material group 1 | Authorization Group | Tax Indicator

Division | Valuation Class | Formula | Graphic

Standard Serv. Cat. | Time Mgmt | Purch. Data | Internal Work | Sales and Distributio... | Long Txt

**Long text**

Lang. to be maint.: EN English

Li 1, Co 1 | Ln 1 - Ln 1 of 1 lines

**User Fields**

## Create Service Master Record



5. Click on Save

**Create Service Master Record**

Other Service | Expand All | Collapse All

Activity number: S\_1 | Maintenance Service

Service Category: SERV Service: purchasing | Short Txt Change Allowed

Base Unit of Measure: AU | AU | Deletion Indicator

**Basic Data**

Basic Data

Mat/Srv.Grp	01	Material group 1	Authorization Group	
Division			Tax Indicator	
Valuation Class				
Formula				
Graphic				

Standard Serv. Cat.

Time Mgmt

Purch. Data

Internal Work

Sales and Distributio...

Long Txt

Long text

Data records saved

# Change Service Master Record



Service Master Edit Goto System Help

Display Service

1. Click on Edit

Other Service Expand All Collapse All

Activity number 0000121 AC Maintenance Service

Service Category SERV Service: purchasing ☐ Short Txt Change Allowed

Base Unit of Measure AU ☐ Deletion Indicator

Basic Data

Basic Data

Mat/Srv.Grp	01	Material group 1	Authorization Group
Division			Tax Indicator
Valuation Class			
Formula			
Graphic			

Standard Serv. Cat.

Time Mgmt

Purch. Data

Internal Work

Sales and Distributio...

Long Txt

Long text

Lang. to be maint. EN English

## Change Service Master Record

Service Master Edit Goto System

3. Click on Save

### Change Service 3000121

Other Service Expand All Collapse All

Activity number: 3000121 AC Maintenance Service

Service Category: SERV Service: purchasing ☐ Short Txt Change Allowed

Base Unit of Measure: AU ☐ Deletion Indicator

2. Change Mat/Ser. Grp from 01 to 02

Basic Data

Mat/Srv.Grp: 02 Material group 1 Authorization Group

Division

Valuation Class

Formula

Graphic

Standard Serv. Cat.

Time Mgmt

Purch. Data

Internal Work

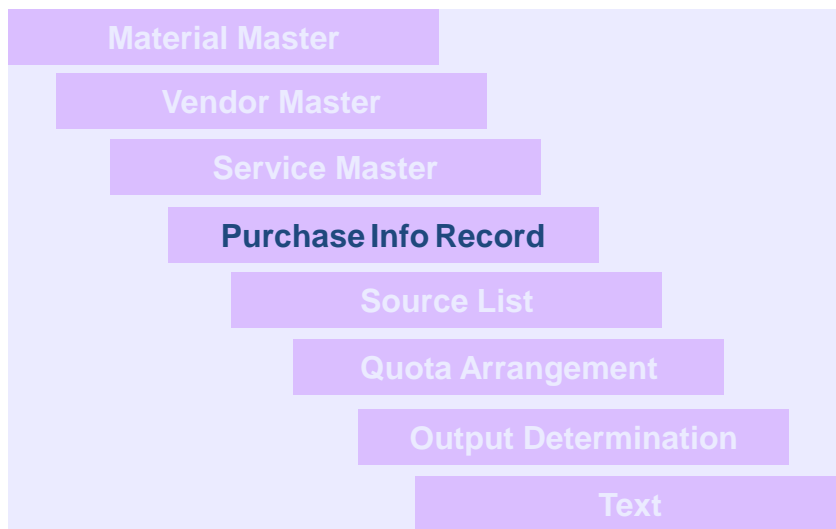
Sales and Distributio...

Long Txt

Lang. to be maint.: EN English

Data records saved

92



# Manage Purchasing Info Records (Create)



Manage Purchasing Info Records ▾

Standard ▾  
Filtered By (1): Editing Status ▾

Info Records (0) | Standard ▾ Delete +

1. Click on  
Create (+)

Purchasing Info Record ▾

PIR\_SP

Header **2. Enter Description** Purchasing Data Delivery and Quantity Conditions Reference

*Info Record Description: PIR_SP	*Purchasing Organization: 1000	*Supplier: 10000	Material: SP01
Info Record: PIR_SP	Plant: 1000	Material Group: 01	
	*Purchasing Group: 100		

3. Enter following details

## Manage Purchasing Info Records (Create)



PIR\_SP

Header General Information Purchasing Data **Delivery and Quantity** Conditions Reference

4. Enter Following Details

Delivery Information

Unit of Measure

Quantity

\*Delivery Time in Days:

10

\*Order Unit:

PC

\*Standard Order Quantity:

100,000

Under Delivery Tolerance in %:

0,0

Conversion from Order Unit:

1

PC

Minimum Order Quantity:

0,000

Over Delivery Tolerance in %:

0,0

Conversion to Base Unit:

1

PC

Maximum Order Quantity:

0,000

PC

PIR\_SP

5. Click on Condition

Header General Information Purchasing Data Delivery and Quantity **Conditions** Reference

6. Click on "+"

Delete +

## Manage Purchasing Info Records (Create)



PIR\_SP /

Condition ▾

**General Information**

\*Valid From: 17.12.2018 Amount: 0,00 Pricing Unit: 1  
\*Valid To: 31.12.9999 Unit of Measure: PC  
Condition Type:  
Gross Price (PB00)

7. Enter Following Details

8. Click on "Apply"

Apply

Draft saved Save Cancel

Purchasing Info Record ▾

PIR\_SP 5300000000

Purchasing Organization: Purchasing Org 1000 (1000)	Supplier: 10000	Material: Filter (SP01)	Material Group: Material group 1 (01)
Plant: Plant US (1000)			
Purchasing Group: Raw Material (100)			



## Manage Purchasing Info Records (Change)

Standard ▾

Editing Status: Material: Material Group: Supplier:

Search  All ▾    Adapt Filters (1) Go

Info Record	Material	Material Group	Supplier	Plant	Purchasing Organization	Delivery Time in Days	Price Valid From	Price Valid To	Net Price
<input type="radio"/> <Unnamed Object> 5300000000	RM0000000000000001	Material group 1 (01)	10000		Purchasing Org 1000 (1000)	10			

1. Select the Radio Button

2. Click on >

# Manage Purchasing Info Records (Change)



Purchasing Info Record

5300000000

Purchasing Organization: Purchasing Org 1000 (1000) Supplier: Plant: 10000 Material: RM0000000000000001 Material Group: Material group 1 (01)

10000 RM0000000000000001 Material group 1 (01)

3. Click on Edit

General Information Purchasing Data Delivery and Quantity Conditions Reference

Header General Information Purchasing Data Delivery and Quantity Conditions Reference

Basic Data Supplier Material Number: Supplier Material Group: Supplier Subrange: Sort Sequence Number: Manufacturer:

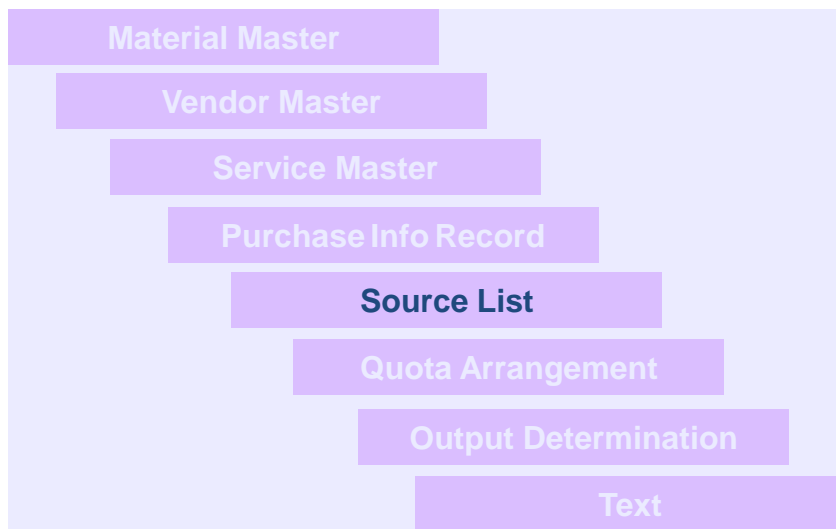
Supply Details Salesperson: Supplier Telephone Number: 4304180 Regular Supplier: Prior Supplier: Available From: Available To:

Reminder 1st Reminder/Expediter in Days: 0 2nd Reminder/Expediter in Days: 0 3rd Reminder/Expediter in Days: 0 Points Unit: 0,000 Unit of Measure: PC

Purchasing Data Incoterms Condition Control

4. Make necessary changes & Click on Save

Save Cancel





3. Click on "+"

# Manage Source Lists (Create Source List)



Source List /

### General Information

**4. Enter Valid From & Valid to Dates**

\*Valid from: 17.12.2018

\*Valid to: 17.01.2019

**5. Input Vendor**

Vendor: 10000

**5. Input Purchase Organization**

\*Purch. organization: 1000

Procurement Plant:

Materials Planning:

Status:

**6. Click on "Apply"**

Draft saved [Apply](#)

Manage Source Lists (Change Source List)

Standard

Source Lists (2) Standard

Material	Plant	Valid from	Valid to	Vendor	Agreement/Item	Purch. organization	Procurement Plant	Status
PBT ULTRADUR B4520 RM0000000000000001 Draft	Plant US 1000	15.01.2019	31.01.2019	10000		Purchasing Org 1000 (1000)		Fixed Status (Fixed)

Source List

RM0000000000000001

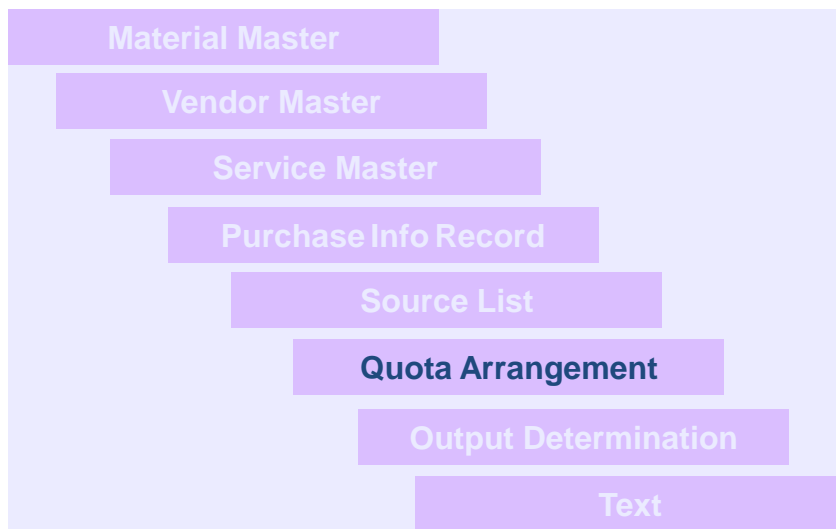
General Information Sources

Material: RM0000000000000001 Plant: Plant US (1000)

Sources

Valid from	Valid to	Vendor	Agreement	Agreement Item	Purch. organization	Procurement Plant	Materials Planning	Status
15.01.2019	31.01.2019	10000		0	Purchasing Org 1000 (1000)		Source list record not relevant to MRP	Fixed Status (Fixed)

3.Make necessary changes & Click on Save



# Manage Quota Arrangements (Create)



Manage Quota Arrangements

Standard

Editing Status: All

Material: Plant:

Filters (1) Go

Quota Arrangements (0) Standard

Delete +

Plant US

General Information: Quota Arrangement Items

\*Material: SPO1

\*Valid From: 17.12.2018

Minimum Splitting Quantity: 60,000

\*Plant: 1000

\*Valid To: 31.12.2018

Base Unit of Measure: PC

Quota Arrangement Items

Search Copy from Another Quota Arrangement Delete +



# Manage Quota Arrangements (Create)



Quota Arrangement / 10000 2

General Information Other Details

5. Enter following Input Fields

\*Type: External procurement  
\*Special Procurement: 0  
Vendor: 10000

Procurement Plant:  
Production Version:

Allocated Quantity: 0,000  
Base Quantity: 0,000  
Maximum Quantity: 0,000

6. Click on "Apply"

10 2 Draft saved Apply

Quota Arrangement Items

7. Enter Qouta

8. Click on "Save"

Quota Arrangement Item	Type	Special Procurement	Vendor	Procurement Plant	Quota	Percent age	Allocated Quantity	Base Quantity	Priority
2	External procure	0	10000		60	100,0	0,000	0,000	0

Draft saved Save Cancel

Plant US

Created on: 17.12.2018 Quota Arrangement ID: 3 Created By: TRAINE05\_STR

# Manage Quota Arrangements (Create)



SAP Manage Quota Arrangements


Standard \* ▾

Editing Status: All ▾ Validity: dd.MM.yyyy - dd.MM.yyyy Material: Filter (SP01) Plant: 1000 Adapt Filters (3) Go

Quota Arrangements (2) Standard ▾

Material	Plant	Quota Arrangement ID	Valid From	Valid To	Minimum Splitting Quantity
Filter (SP01)	Plant US (1000)	3	17.12.2018	31.12.2018	60,000 >
Filter (SP01)	Plant US (1000)	4	17.01.2019	31.01.2019	40,000 >

# Manage Quota Arrangements (Change)

 Manage Quota Arrangements ▾ All ▾ Manage Quota Arrangements 🔍

Standard \* ▾

Editing Status: ▾ All ▾ Validity: dd.MM/yyyy - dd.MM/yyyy Material: Plant: Adapt Filters (1) Go

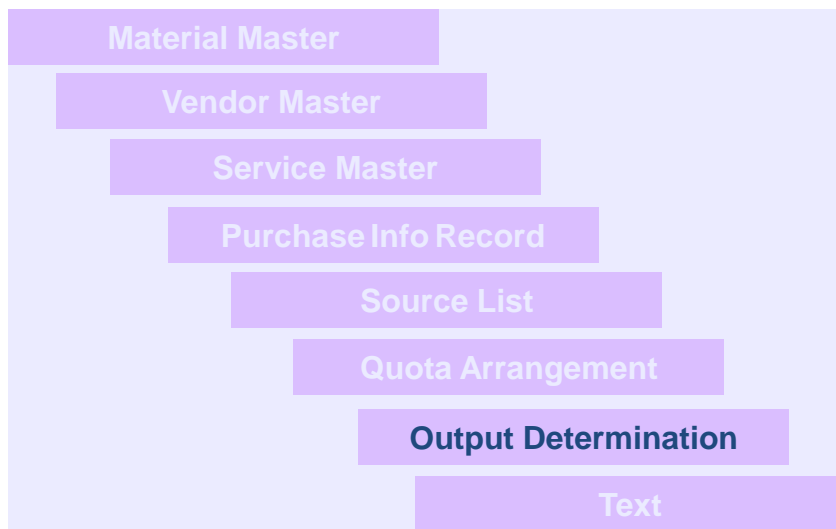
Quota Arrangements (2) Standard ▾ Delete +

Material	Plant	Quota Arrangement ID	Valid From	Valid To	Minimum Splitting Quantity
<input type="radio"/> PBT ULTRADUR B4520 (RM0000000000000001)	Plant US (1000)	1	24.01.2019	01.03.2019	10,000 >
<input checked="" type="radio"/> PBT ULTRADUR B4520 (RM0000000000000001)	Plant US (1000)	2	02.03.2019	14.03.2019	90,000 >

1. Select the Radio Button

1. Click on >





## MN04 Create Message: PO

The screenshot shows the SAP MN04 'Create Output - Condition Records : Purchase Order' screen. The 'Key combination' section has an 'Output Type' field containing 'NEU'. A yellow callout bubble labeled '1. Select Output Type' points to the 'NEU' value. Another yellow callout bubble labeled '2. Select Key Combination' points to the 'NEU' field. A third yellow callout bubble labeled '3. Select the radio button' points to the selected radio button in the 'Key Combination' dialog box. The dialog box is titled 'Key Combination' and contains three radio button options: 'Purchasing Output Determination: Purch. Org./Vendor for EDI', 'Purchasing Output Determination: Doc.Type/Purch.Org/Vendor', and 'Purchasing Output Determination: Document Type'. The third option is selected. The dialog box has a green checkmark button and a red X button at the bottom right.

Key combination

Output Type

1. Select Output Type

2. Select Key Combination

3. Select the radio button

Key Combination

- ☐ Purchasing Output Determination: Purch. Org./Vendor for EDI
- ☐ Purchasing Output Determination: Doc.Type/Purch.Org/Vendor
- ☒ Purchasing Output Determination: Document Type



## MAN04 Create Message: DO

### Create Condition Records (Purchase order): Fast Entry

Communication

5. Click on  
Communication

Condition Recs.

Do...	Name	Funct	Partner	Medium	Date/Time	Lan...
NB	Purchase...	VN		1	4	EN

4. Enter  
Following  
Details

### Create Condition Records (Purchase order) : Communication



Variable Key

Purchasing Doc. Type	Description
NB	Purchase Requisition

6. Enter  
Following  
Details

Print Output

Output Device LP01

Print immediately



Number of messages

Release after output



Spool request name

Suffix 1

Suffix 2

SAP cover page

X Print

Recipient



# MN01 Create Message PO

Print Preview of LP01 Page 00001 of 00001



Company  
US Customer 1000  
PO Box 10019  
New York NY 10019

## Purchase order

PO number/date  
4500000032 / 01/08/2019  
Contact person/Telephone  
Raw Material

Your vendor number with us  
10000

Please deliver to:  
Company  
Plant US  
Stevens Dr.  
PA 19113

Delivery date: Day 01/18/2019

Terms of delivery: CIF New York

Terms of payment: Payable immediately Due net

Currency USD

Item	Material Order qty.	Unit	Description	Price per unit	Net value
00010	RM0000000000000003		Raw material		
	10 1			100.00	1,000.00-
	Returns item				

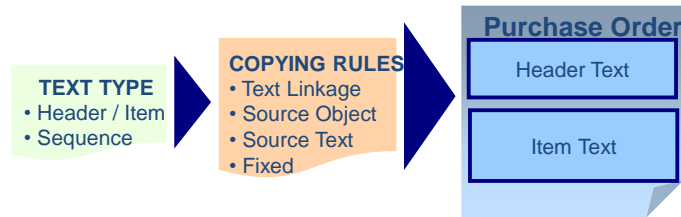
Copyright © SAP AG. All rights reserved.







# Text Determination



- Text Type determines the Header Text and Item Text. It also determine the sequence in which the Text needs to be displayed in the Purchasing document
- Text Type are assigned to the Source Object and Source Text to copy the values into relevant Text Type
- Fixed Indicator controls:
  - Whether the Text gets copied to the target object and fixed immediately
  - Whether the Text gets copied only if required
  - Whether the Text cannot be copied to the Target object.



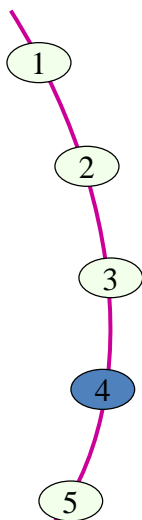
SPRO → Materials Management → Purchasing → Purchase Order → Text for Purchase Order

The screenshot displays the SAP Text Type Configuration interface. The main window title is "Display Text Types: Header Texts Purchase order". The left pane shows the "Dialog Structure" with "Text types" selected. The right pane shows a list of text types with their corresponding source objects and source texts.

Seq. No.	Description	Source object	Source text	Fix
01	Header text	RFQ/quotation	Header text	
02	Header note	Purchase order	Header text	
03	Pricing types	Contract	Release order text	
04	Deliveries			
05	Terms of delivery			
06	Shipping instructions			
07	Terms of payment			
08	Warranties			
09	Penalty for breach of contract			
10	Guarantees			
11	Contract riders (clauses)			



## Master Data



PrepareMe

TellMe

ShowMe

LetMe

HelpMev

## Let me



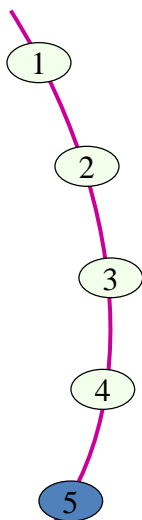
ABC Corporation has 2 Plants in Germany. Each Plants have 2 Storage Locations.

Create following Masters for ABC Corporation

- Create 3 Material Master with Material Type : ROH Raw Material, FERT Finished Goods & HALP Semi Finished Goods respectively
- Create a Vendor Master for ABC Corporation
- Create a Purchase Info Record for Material (with Material Type: ROH Raw Material) Vendor combination. Maintain 2 prices, one for Validity period 01-Jan - 14 to 31 - Apr - 14 and 01-May-14 to 31-Dec-17
- Create Source List for 2 Material (with Material Type: ROH Raw Material & FERT Finished Goods) in both the Plants. Assign Vendor Code to it
- Maintain Output Type: NEU, for PO for a combination of Purchasing Org and Vendor



## Master Data



PrepareMe

TellMe

ShowMe

LetMe

HelpMe

## Additional Info



- To find number of material per plant. T Code: S\_ALR\_87101053
- You can see where used list of a material through T Code: S\_ALR\_87012963
- You can control the input and output length of Material Number. The maximum length of Material number is 18 characters. T Code: OMSL
- You can see the list of Sales Document of a material:  
Material Master (Sales View) → Environment → Sales Functions
- You can use Change Management to track the changes done in a Material Master
- You can check all the reference material created with reference to a Material:  
Material Master → Environment → List referring Materials
- To find all the Vendor Address per Account Grp: T Code: S\_ALR\_87010052
- To Find all the Vendor Details per Account Grp: T Code: S\_ALR\_87010036
- To Find all the Vendor Changes: T Code: S\_ALR\_87010039
- You can list the entire order price history of a Purchase Info Record:  
Purchase Info Record → Environment → Order price history
- You can check the last document created for a Purchase Info Record:  
Purchase Info Record → Environment → Last document



## Case Study- Service Master Record

### Business Example

The fluorescent tubes in your offices have to be replaced due to wear and tear. An external service provider will be carrying out this work. Test the procurement process for external services. Service master records exist in the system for regular maintenance work involving the replacement of worn-out fluorescent tubes on your company's premises. Check this master data and the conditions for these services.

#### 1. Display a service master record

Display the service master records **T-LM1## (removal of fluorescent tubes)** and **T-LM2## (installation of fluorescent tubes)**.

**Hint: Choose *Other service and then enter the service number.***

You can close the service overview using *Hide Overview*.

#### 2. Is there a long text describing the service in more detail in each case?

#### 3. What is the unit of measure for managing the services?

---



## Test Your Knowledge



**1. Which of the following master data is relevant to the procurement of external services?**

*Choose the correct answer(s).*

- ☐ A Vendor master record
- ☐ B Material master record
- ☐ C Service master record
- ☐ D Purchasing info record
- ☐ E Bill of materials
- ☐ F Service conditions

**2. When you enter vendor-specific conditions, you create a separate service info record for each service and vendor (comparable to the purchasing info record for material).**

*Determine whether this statement is true or false.*

- ☐ True
- ☐ False

## Test Your Knowledge



### 3. Which of the following statements are correct?

*Choose the correct answer(s).*

- ☐ A For service procurement, you can work with or without a service master record.
- ☐ B The account assignment category unknown (U) is allowed only in purchase orders with item category D (service).
- ☐ C You must specify a limit in a service item.
- ☐ D The service specification of a service item can be structured in a maximum of four hierarchy levels.
- ☐ E You cannot specify a single limit in a service item. One service specification must have at least one service.

### 4. List different procedures for maintaining a source list.

---

---

## Answers



1. Which of the following master data is relevant to the procurement of external services?

**Answer: A, C, F**

For the procurement of external services, you need a vendor master record for the service provider. You can also use master records for services and service conditions. Bills of material, purchasing info records, and material master records are used for the procurement of materials.

2. When you enter vendor-specific conditions, you create a separate service info record for each service and vendor (comparable to the purchasing info record for material).

**Answer: False**

Service conditions are entered for each vendor. You can enter conditions for several services for one vendor at the same time.

3. Which of the following statements are correct?

**Answer: A, D**

For B: Account assignment category U is also allowed for item category B (limit). For C and E: It is possible, but not necessary, to enter a limit for unplanned services. You are also allowed to specify a single limit, but no services.

## Answers



4. List different procedures for maintaining a source list.

**Answer:**

1. Manually, per material and plant
2. Automatically by the system, per material and plant or for several materials and plants
3. When creating or changing an outline agreement or a purchasing info record, per material and plant