

# **SAP Master Data**

## Materials Management

SAP MM Master Data

# Outline

## Master Data in SAP

Material Master Data

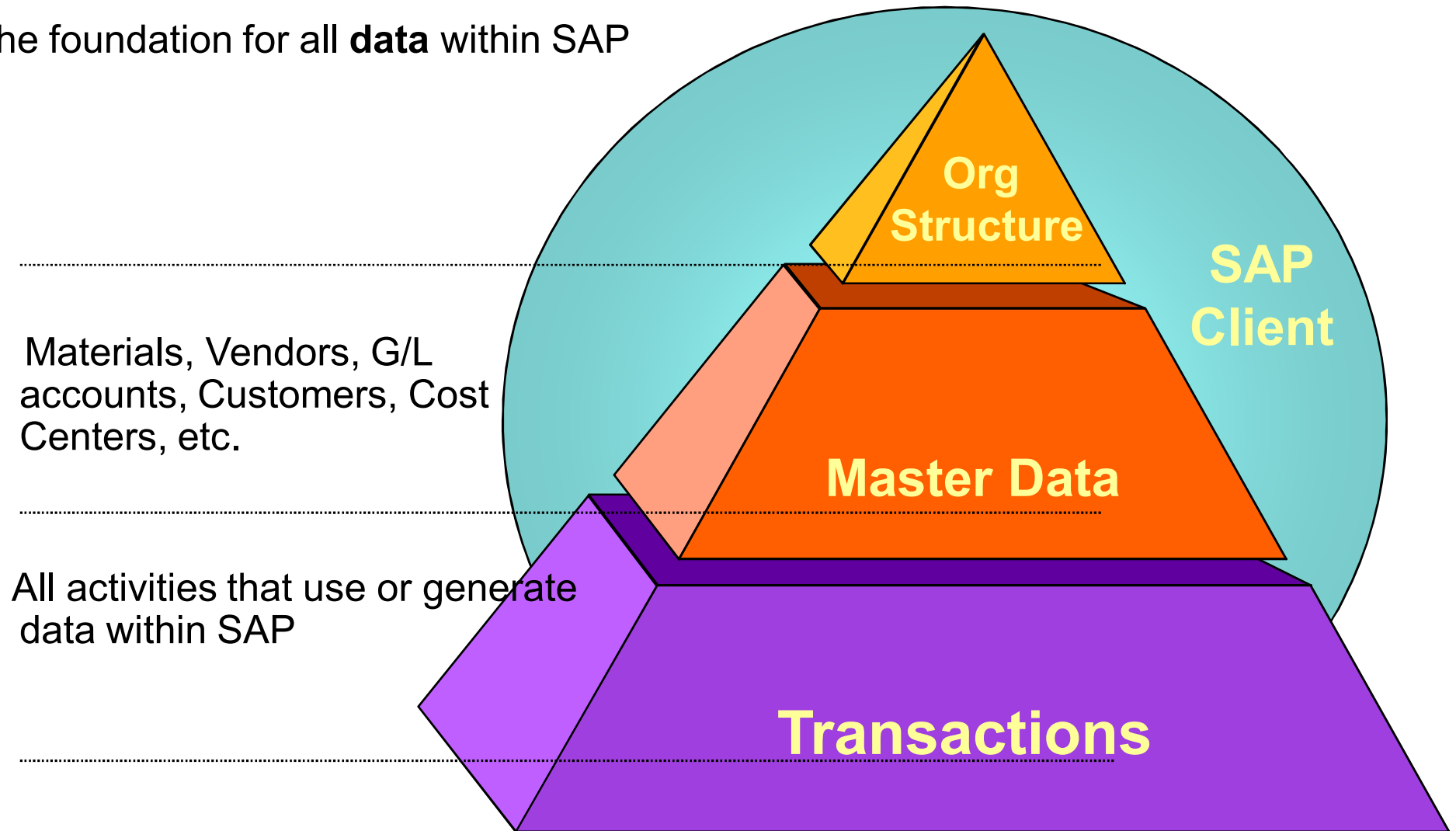
Service Master

Vendor Master

Purchasing Info Record

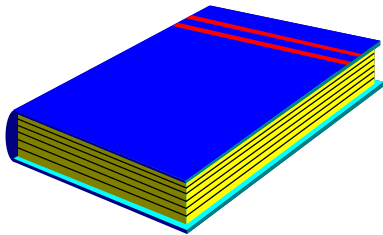
# SAP Master Data and the Organizational Hierarchy

The foundation for all **data** within SAP

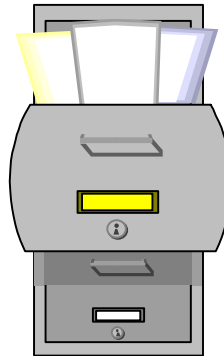


# Master Data in SAP

Data in SAP can be categorized one of 3 ways:

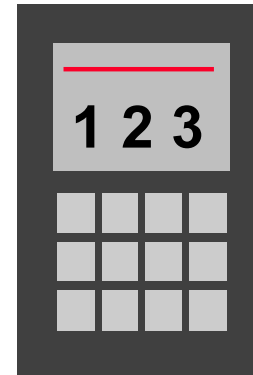


**Transaction Data**



**Master Data**

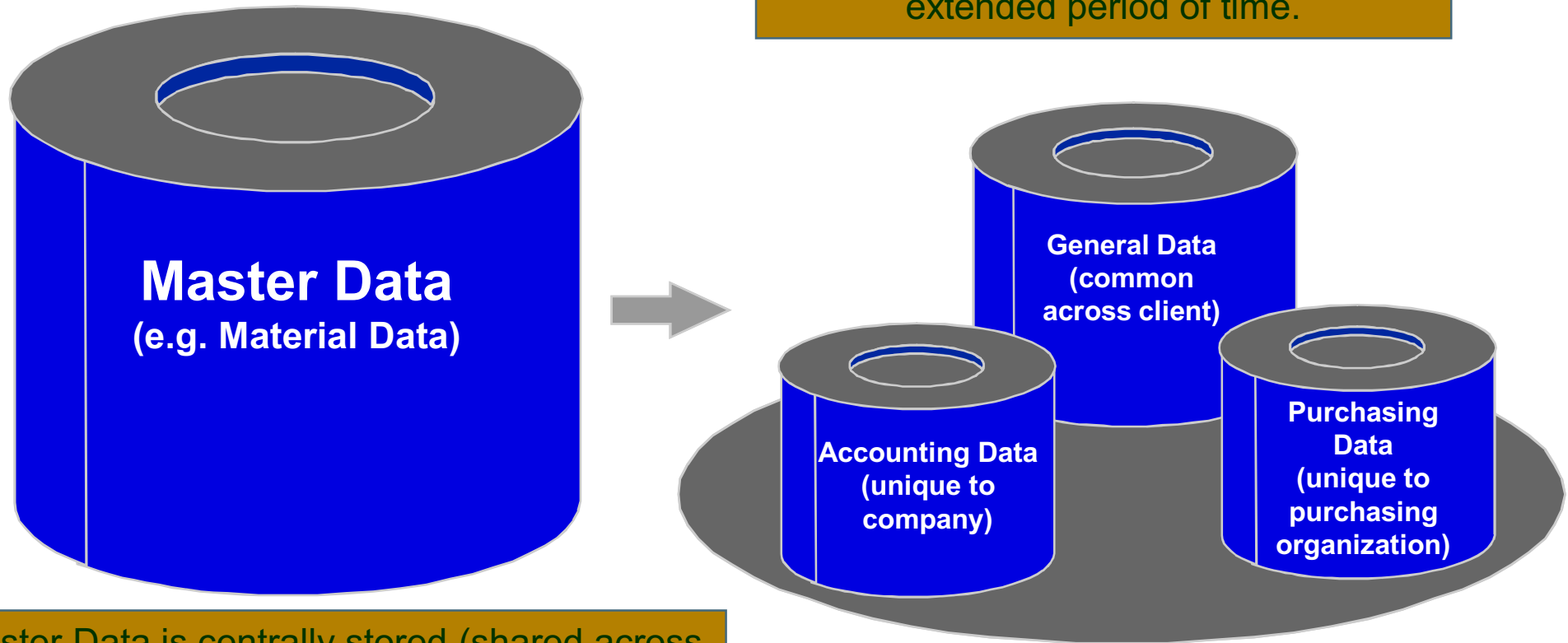
*(our focus in this section)*



**Configuration Data**

# Master Data in SAP

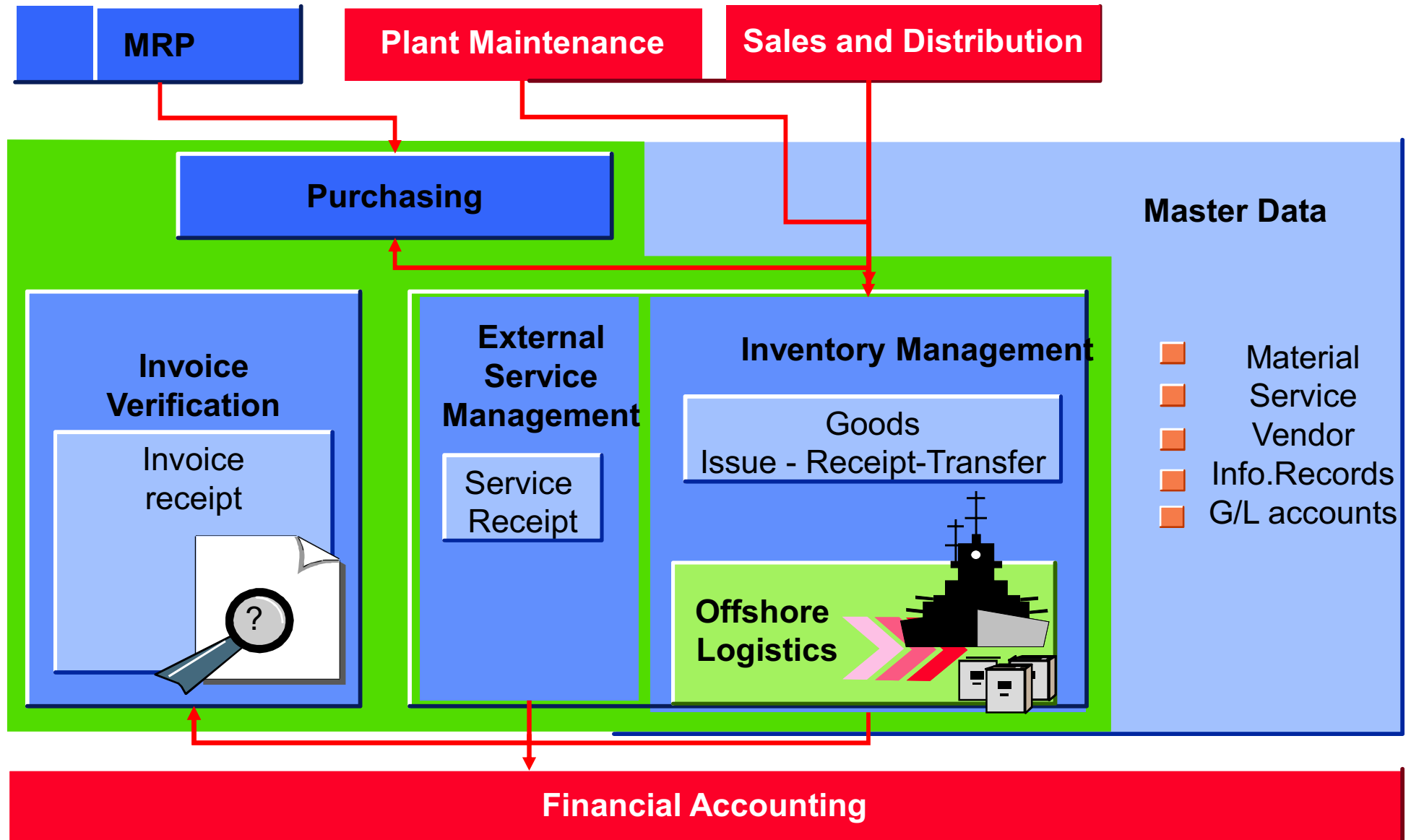
Master Data contains the records that remain in the database over an extended period of time.



Master Data is centrally stored (shared across application modules) and processed to eliminate data redundancy. In this way, the multiple storage (redundancy) of data is avoided.

# Master Data in SAP

## Process Overview



# Outline

Master data in SAP

Material Master Data

Service Master Data

Vendor Master

Purchasing Info Record

# Material Master

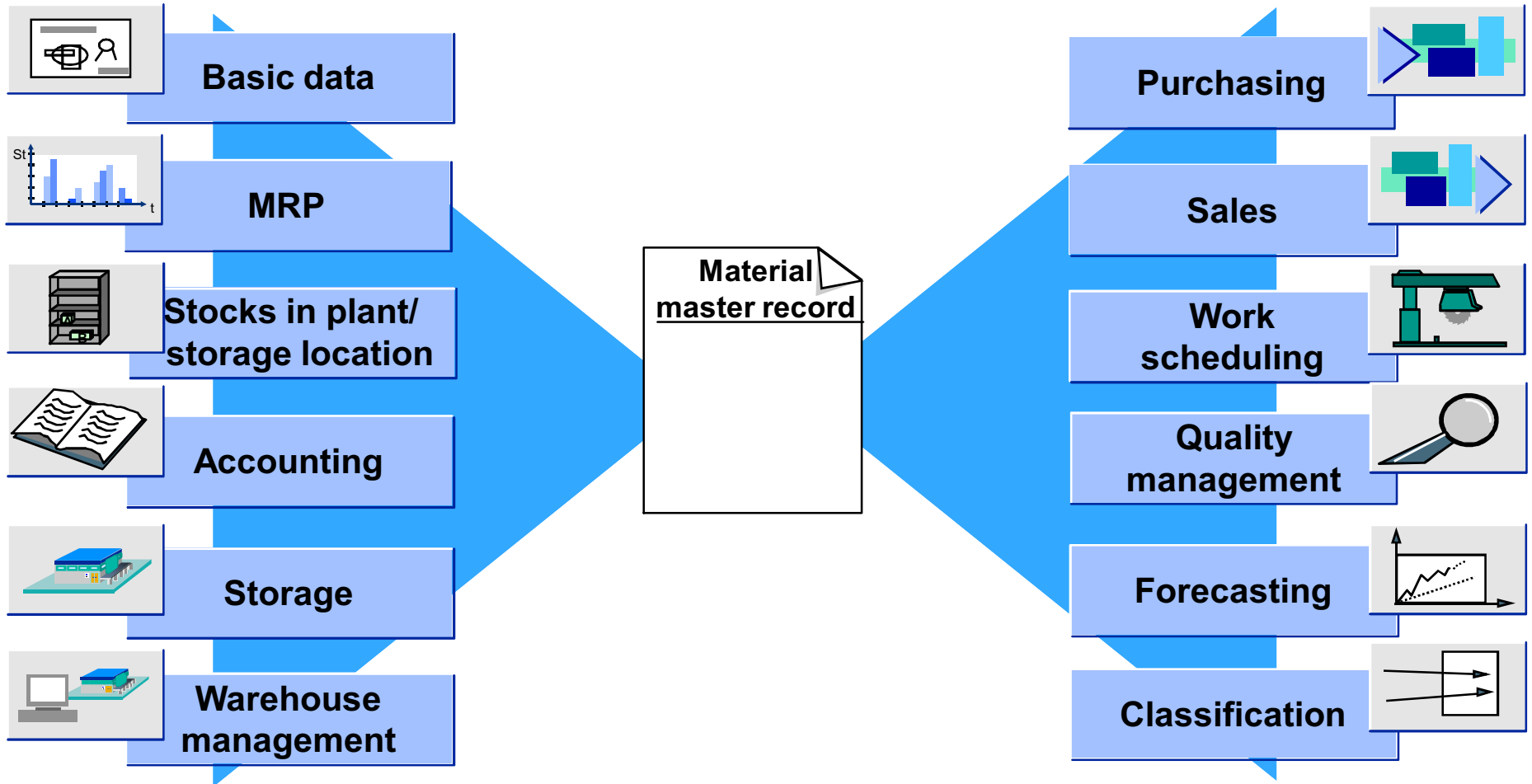
- The material master contains all data required to define and manage material.
- It integrates data from sales and distribution, purchasing, accounting, Production and other departments.
- The material master is used as a source of data for purchase order processing throughout the procurement cycle.



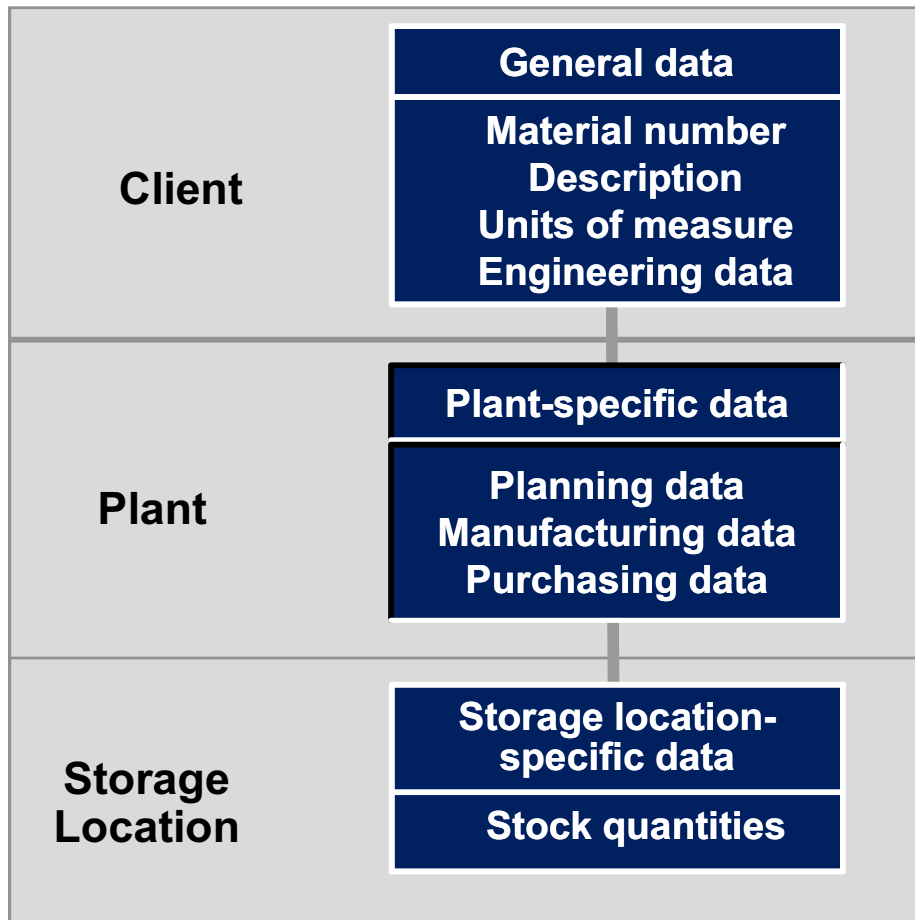


# Material Master Data

## Business Interactions



# Organizational Level

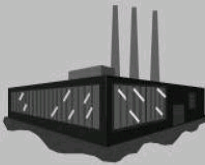


- Material master information is organized according to org levels.
- Relevant levels include:
  - Client
  - Plant
  - Storage Location
- The hierarchically structure:
  - Allows easy management of information
  - Prevents redundant storage of data

# Organization Levels



**Data that is valid for the whole enterprise:**  
for example, material no., material short text, material group, base and alternative units of measure, ...



**Data that is valid within one plant:**  
for example, purchasing data, MRP data, forecasting data, work scheduling data ...

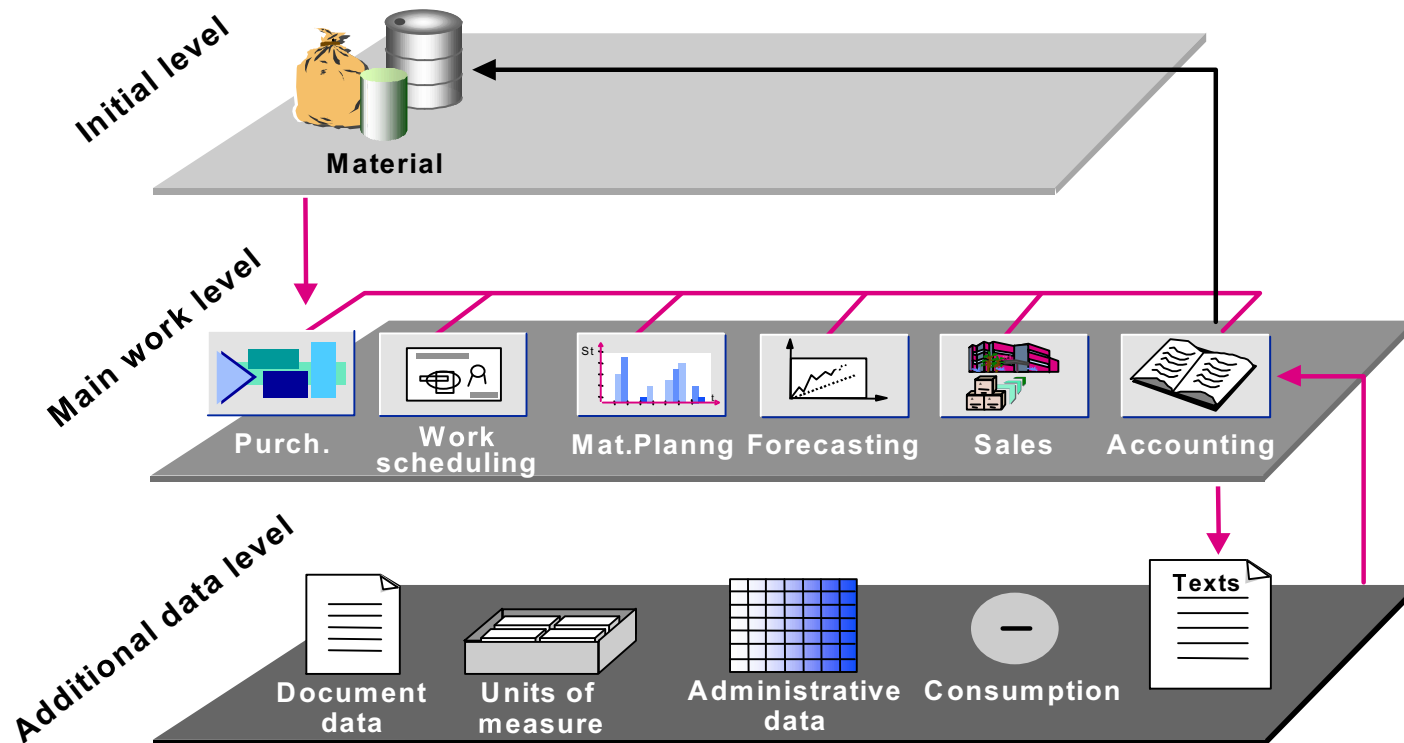


**Data that is valid for one storage location:**  
for example, storage bin description, picking area, ...

## Material Master: Organization Levels

# Material Master Data

## Data Screens in Material Master Maintenance



# Material Master Data

The data screens used in processing material master records can be subdivided into the following types of screens:

- **Main work level:**  
These are the screens for each user-department, such as **basic data**, materials planning, and so on.
- **Additional data level:**  
These are screens you use to maintain **additional information**, such as units of measure, material descriptions, consumption values, forecasting data, and administrative data.
- Most data in the **material master record can be maintained directly by the user**. But some information is **automatically** updated by the system. When you enter goods movements, for example, the system updates stock and consumption data.

# Material Master Data

- **Plant (mandatory)**

An organizational unit serving to subdivide an enterprise according to production, procurement, maintenance, and materials planning aspects. It is a place where either materials are produced or goods and services provided.

- **Sales Organisation (mandatory)**

An organizational unit subdividing an enterprise according to the requirements of Sales. It is responsible for selling materials and services. A sales organization can be subdivided into several distribution chains which determine the responsibility for a **distribution channel**. **Several divisions** can be assigned to a sales organization which is responsible for the materials or services provided. A **sales area** determines the distribution channel used by a sales organization to sell a division's products.

# Material Master Data

## Storage location-specific data

- **Storage Location**

An organizational unit allowing the differentiation of material stocks within a plant. All data referring to a particular storage location is stored at storage location level. This applies mainly to storage location stocks.

- **Warehouse Number**

An alphanumeric key defining a complex warehousing system consisting of different organizational and technical units (storage areas). All material data specific to warehouse management and relating to a particular warehouse number is stored at warehouse number level. This includes, for example, data on palletizing, stock placement, and stock removal.

# Material Master Data

- **Storage Type**

A physical or logical storage area that can be defined for a warehouse in the Warehouse Management (WM) system. It consists of one or more storage bins. Storage types differ according to organizational and technical criteria.

The following are typical examples of storage types that can be defined using the WM system: Goods receipt area, Goods issue area, Picking area, High rack storage area



# Material Master Data

- **Material numbers (mandatory)**

Number uniquely identifying a material master record, and thus a material. For every material that your company uses, you must create a material master record in the material master. This record is uniquely identified by a material number.

Following types of number assignment in the R/3 System:

## **External number assignment**

If your company uses mnemonic keys (normally alphanumeric), you enter the character string you want to use as the material number when you create the material master record.

## **Internal number assignment**

If your company uses nonmnemonic keys, you do not enter a material number when creating a material master record. Instead, the system assigns a consecutive number to the material. This number is visible when you maintain the material master record.

# Material Master Data

- **Industry sector (mandatory)**

When you create a material master record, you are required to classify the material according to industry sector and material type. (e.g. chemical industry, engineering)

- **Material type (mandatory)**

Materials with the same basic attributes are grouped together and assigned to a material type. This allows you to manage different materials in a uniform manner in accordance with your company's requirements. (e.g. raw materials, semi-finished goods, finished goods).

When creating a material master record, you must assign the material to a material type. The material type determines certain attributes of the material and has important control functions

# Material Type

- Material types group materials with the same basic attributes.

Material type information determines:

- Which departmental views are maintained.
- Whether changes in material quantities are updated.
- Whether changes in value are also updated in the stock accounts in financial accounting
- Whether internal or external procurement is allowed.
- Which general ledger accounts are updated (e.g., inventory account).
- Whether the material number can be assigned internally or externally
- The number range from which the material number is taken
- Which screens appear and in what sequence
- Which departmental data you may enter
- What procurement type the material has; that is, whether it is manufactured in-house or procured externally, or both type.

The screenshot shows the SAP 'Create Material (Initial Screen)' interface. The title bar includes 'Material Edit Goto Defaults System Help'. Below the title bar are three buttons: 'Select view(s)', 'Organizational levels', and 'Data'. The main form contains several input fields: 'Material', 'Industry sector', 'Material type', and 'Change Num'. The 'Material type' field is highlighted with a red circle, and a red arrow points to the dropdown menu that is open. The dropdown menu lists the following material types: Packaging, Perishables, Pipeline materials, Process materials, Product catalogs, Product groups, Production Resource/Tool, Raw materials, Returnable packaging, and Semifinished Product. There are also 'Copy from...' and 'Material' buttons on the left side of the form.

# Material Search

Materials can be found using a search screen that requires any of the following inputs\*:

The screenshot shows the SAP 'Create Purchase Order: Overview of Requisition Items' interface. The search criteria are defined by four tabs: 'Material Number/Material Description', 'Material by old material number', 'Material by material group', and 'Material by material type'. The 'Material Number/Material Description' tab is active, showing input fields for 'Material description', 'Language key' (set to 'EN'), 'Material', and 'Maximum no. of hits' (set to '500'). Callout boxes with arrows point to each of the four tabs, labeling them as 'Material Number/Description', 'Old Material Number', 'Material Group', and 'Material Type'. A note at the bottom right states '\* Other search parameters available'.

# Outline

Master data in SAP

Material Master Data

Service Master Data

Vendor Master

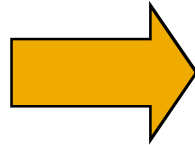
Purchasing Info Record

# Service Master Data

- **Service master:** are records in which descriptions of all services that may need to be procured can be stored.
- **Use:**
  - Master records are suitable for certain combinations of services that are likely to be referenced again and again in various business transactions

# Service Master Data

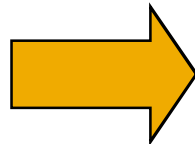
**SERV**



## Actual Service Master

- Services specified down to the lowest level e.g. unit day rate for inspector.
- Applies to contract agreement items.
- Data cannot be overwritten.

**GENC**



## Generic Service Master

- Used for services generic in nature where specification to the lowest level is impractical.
- Short texts can be overwritten and long texts can be utilised for detailed specifications.

# Service master Structure

A service master record contains the following principal information for the unique description of a service:

- ▣ **Service number**

- ▣ **Service category**

- ▣ **Descriptive texts** : consists of short text and long text. The short text allows the input of 40 characters which will be sufficient for the majority of service masters. There is , however facility for long text which allows an unlimited number of lines

- ▣ **Base unit of measure**

- ▣ **Service group**: is an alpha-numeric description for a group of similar services e.g. CE3610 - Offshore Crane Service. All service masters require a service group.

- ▣ **Valuation class**: Each service master will be allocated a valuation class in SAP which links directly to a corresponding General Ledger account



# Service Master Data

**Change Service 30000100**

Other service

**Description**

- \*Milestone 2:Pilling, foundation
- \*Milestone 3:production,substation cons
- \*Milestone 4: pre-commisioningon cons
- \*Milestone 5: retention over one year
- \*Milestone 6: Site management fixed fee
- 2" S/S SCH 40 PIPING SYSTEM
- 4" S/S SCH 40 PIPING SYSTEM
- Administrative Service Master**
- CHARGE FOR 3 TON TRUCK
- COMPANY EQUIPMENT
- DORMANT RATE
- ENHANCED - PRODUCTION 400-800 M3
- FISH / MILL EQUIPMENT
- Fabrication of pupjoints
- Generic Service Master
- Generic Service Master
- Generic Well Engineering Service
- Refurbush X-mess Tree
- SKILLED LABOUR
- SUPERVISOR
- Supply of 6GR welder
- Supply of E & I inspector
- Supply of Mechanical Inspector
- Var. Piling/Foundation
- Var. Site/Road/Fencing

Service number: 30000100 Administrative Service Master

Service category: SERV Administrative Service  Short tx. change allowed

Base unit of measure: HR Hour  Deletion flag

Basic data

Material group: BC1130 LAND RIG SV

Valuation class: S005 Land Rigs

Purch. data

Internal work

Long txt

Lang. to be maint.: EN English

INS Li 1, Co 1 Lh 1 - Lh 1 of 1 lines

A03 (1) (474) mussp415 INS

# Outline

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Material Master Data

Service Master Data

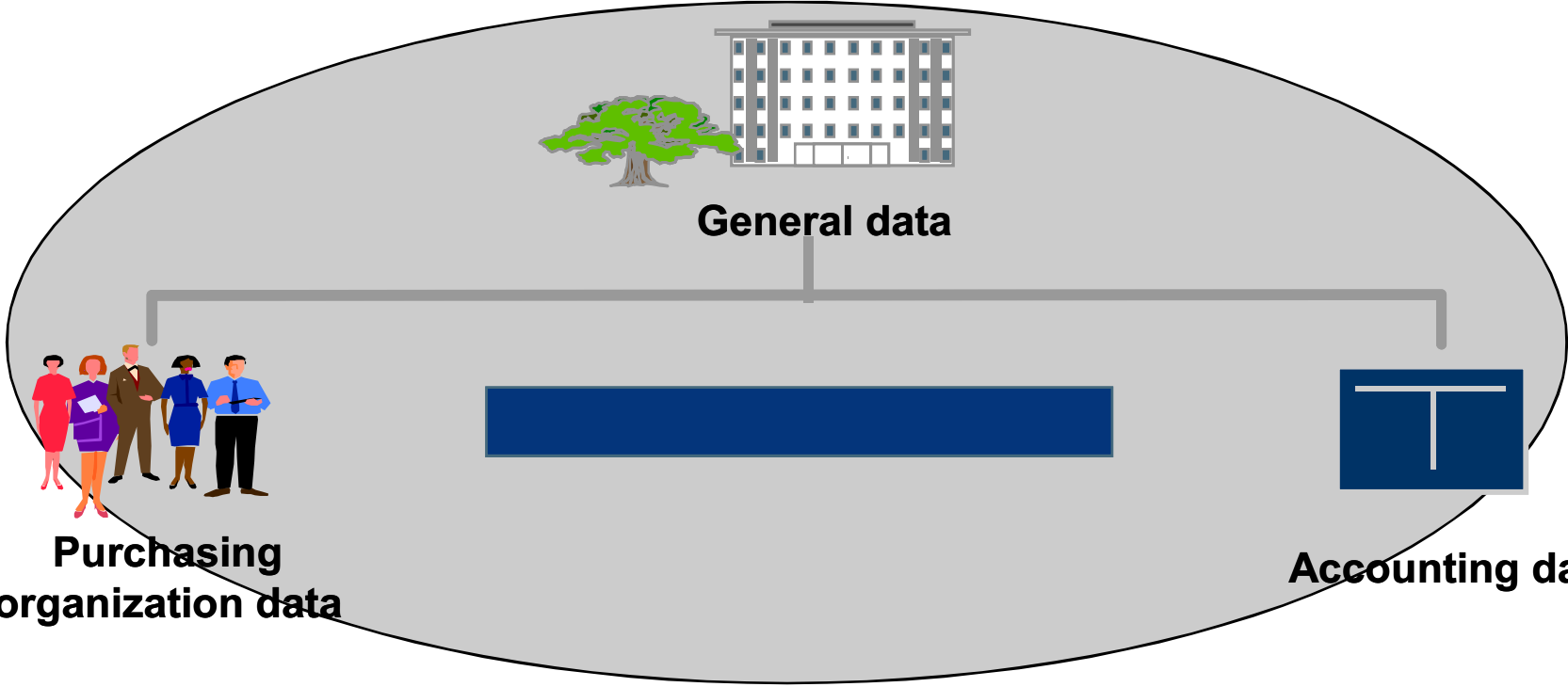
Vendor Master

Purchasing Info Record

## Vendor Master Data

- The vendor master record contains all required information on a vendor. It is maintained by Financial Accounting and the Purchasing department.
- In Accounting, the vendor is regarded as the company's crediting business partner. The vendor master record is therefore maintained by Accounting and Purchasing.
- Each user department can maintain general data centrally or decentrally, as well as Purchasing and Accounting-specific data. Often, Purchasing also maintains data at corporate group level.

# Basic Organizational Levels



# Vendor Master Data

Data in the vendor master record is divided into three categories:

- **General data:** This data is valid for the whole client. This includes the vendor's address, bank details, & communications data, for example. This data is valid for the entire Corporate group (client).
- **Purchasing data:** This data is maintained separately for each purchasing organization. It includes the purchase order currency, incoterms, and the vendor's tax data. There is additional data available (optionally) also at the purchasing level including such things as Plant and Vendor sub-range.
- **Accounting data:** This data is maintained at company code level, for example, PO currency, incoterms, vendor tax data, the number of the control account & payment methods for automatic payment transactions.
- You can use the SAP System authorization concept to define how data maintenance should be organized in the vendor master record.

# Vendor Master Data

## Vendor Master Data

### Area of validity

Valid for all  
Organizational levels

Valid for one  
purchasing organization

Valid for one  
company code



### Data groups

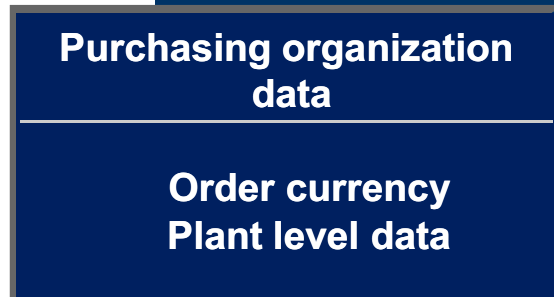
General data  
Address  
Communication

Purchasing organization  
data  
Order currency  
Partner roles  
Control e.g. Invoice  
Verification type

Company code data  
Bank data  
Payment transactions  
Account management

# Vendor Master Data

## Data groupings



## Validity

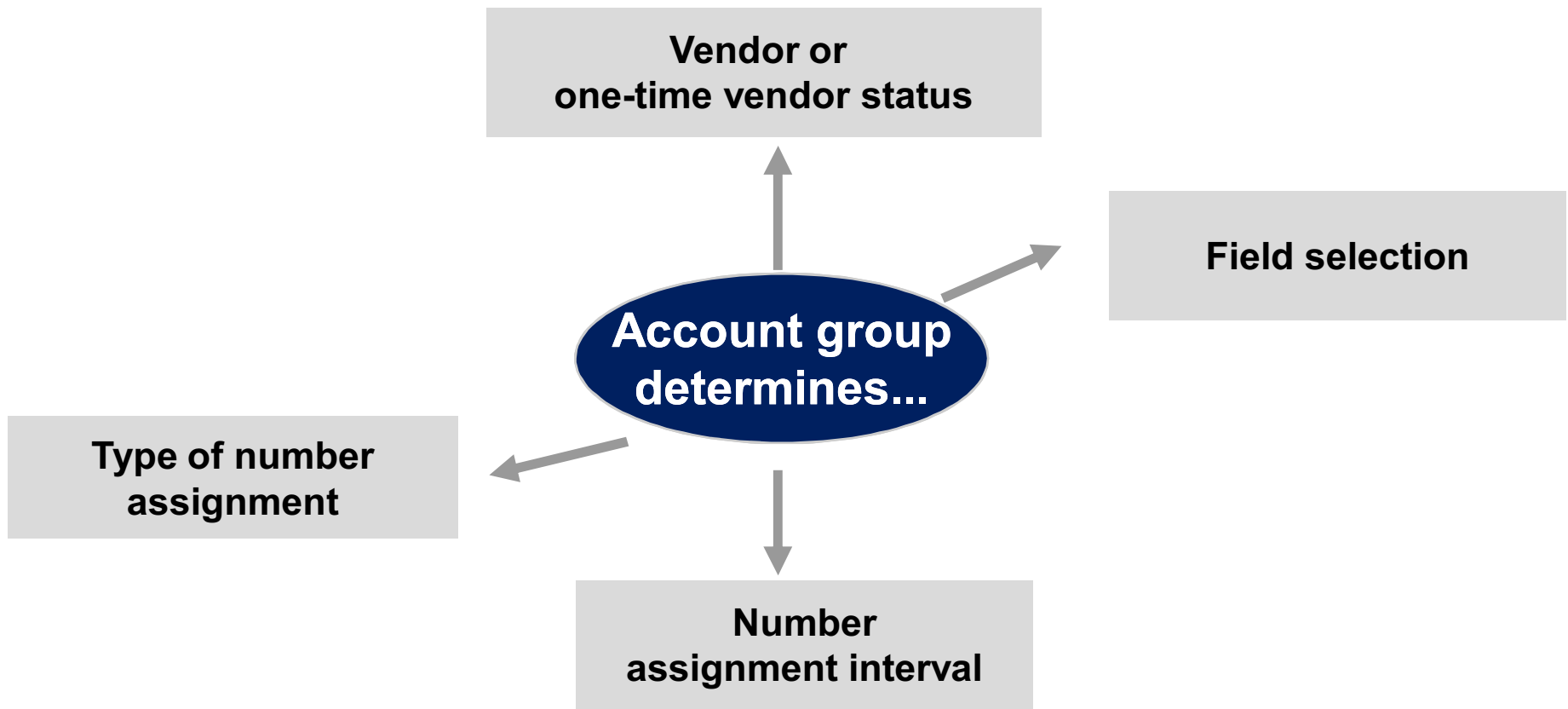
Valid  
for all organizations

Valid  
for one purchasing  
organization

Valid  
for one company code



# Vendor Master Account Group



- **An account group defines the control functions for vendor master record maintenance.**
  - **Every vendor master is managed under an account group.**



# Outline

Master data in SAP

Material Master Data

Service Master Data

Vendor Master

Purchasing Info Record

# Purchasing Info Record

- Purchasing info record is maintained as a source of information for Purchasing. It contains some of the information from material master and some of the information related to its supplier/vendor.
- You can have more than one purchasing information record for a single material if it is being supplied by more suppliers, one for each supplier. Information maintained in purchasing information records is used as default data in documents such as purchase orders.
- Following are some of the information maintained in Info record:
  - Units of measure in which materials are ordered from the vendor
  - The applicable reminder levels
  - Prices and Conditions with validity period (Present and Future)
  - Planned Delivery Time
  - Standard & Maximum Quantity
  - Tolerance limits for over-deliveries and under-deliveries
  - Number of Last Purchase Order or Quotation

# Purchasing Info Record

## Types of Information Record

- Info record with material master record
- Info record without material master record

## Organizational Levels

- A purchasing information record can be maintained at following organizational levels:
- Purchasing Organization Specific (All plants within a purchasing Organization)
- Plant Specific (single plant within a purchase organization)

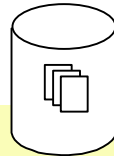
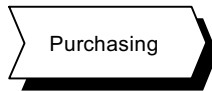
## Purchasing Information Category

A purchasing information record can be maintained for the following procurement types:

- Standard
- Subcontracting
- Pipeline
- Consignment

# Purchasing Info Record

## Purchasing Information Record



Order Material 3:  
Vendor x

| Info Record |                              |  |                               |  |
|-------------|------------------------------|--|-------------------------------|--|
| Material 1  | <input type="checkbox"/> 3.- | <input type="checkbox"/> 4.-             | <input type="checkbox"/> 3.95 | <input type="checkbox"/>                 |
| Material 2  | <input type="checkbox"/>     | <input type="checkbox"/>                 |                               |  |
| Material 3  |                              | <input checked="" type="checkbox"/> 2.50 |                               | <input checked="" type="checkbox"/> 2.90 |
| Material 4  |                              |  | <input type="checkbox"/>      |  |
|             | Vendor A                     | Vendor B                                 | Vendor C                      | Vendor D                                 |

Vendor B; DM 2.50

# Purchasing Info Record

Info record Edit Goto Extras Environment System Help

### Create Info Record: Purch. Organization Data 1

General data Conditions Texts

Info record:    
 Vendor: 1000000006 ACCENT MICRO PRODUCTS  
 Material: 177 Material A  
 Material group: SP Spare Parts  
 Purchasing org.: SPCS Consignment

Control

Underdel. tol.  %  No mat.txt  
 Overdeliv. tol.  %  Ackn. reqd  
 Purch. group   
 Standard qty. 500 EA  Unlimited ConfContrK   
 Minimum qty  EA  GR-based IV Tax code   
 Rem. shelf life  D  No ERS  
 Shipping instr.   
 Exp/imp proced.   
 Maximum qty  EA RoundingProfile  Unit group

Conditions

Net price 2.00 PHP / 1 EA Valid to   
 Effective price 0.00 PHP / 1 EA  No cash disc.  
 Qty. conversion 1 EA <-> 1 EA Condition group   
 Pr. date cat.  No control  
 Incoterms

# Questions

