

Materials Management (MM)

Curriculum: Introduction to S/4HANA using Global Bike



Teaching material - Information

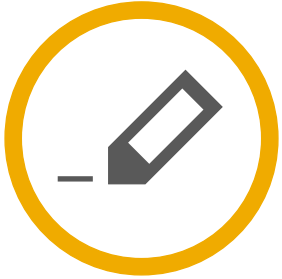


Teaching material - Version

- 4.2 (August 2023)
- Software used
 - S/4HANA 2022
 - Fiori 3.0
- Model
 - Global Bike
- Prerequisites
 - No Prerequisites needed



Module Information



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Target Audience

- Beginner

Module Information



Learning Objectives

You are able to:

- Describe the purchase-to-pay business process
- Identify the organizational levels that support the purchase-to-pay business process
- Create a material master record
- Create a vendor master record
- Create a purchase requisition for stock and consumable materials
- Create a purchase order by referencing a purchase requisition
- Post a goods receipt for a purchase order
- Explain the warehouse structure in Warehouse Management (WM)
- Enter a vendor's invoice
- Process the automatic payment run
- Explain the integration points of the purchase-to-pay business process

Functionality

- Inventory Management
- Purchasing
- MRP
- Physical Inventory
- Valuation
- Service Master
- Invoice Verification
- Product Catalogs

Unit Overview

- MM Organizational Structure
- MM Master Data
- MM Processes
 - Procure-to-Pay Process

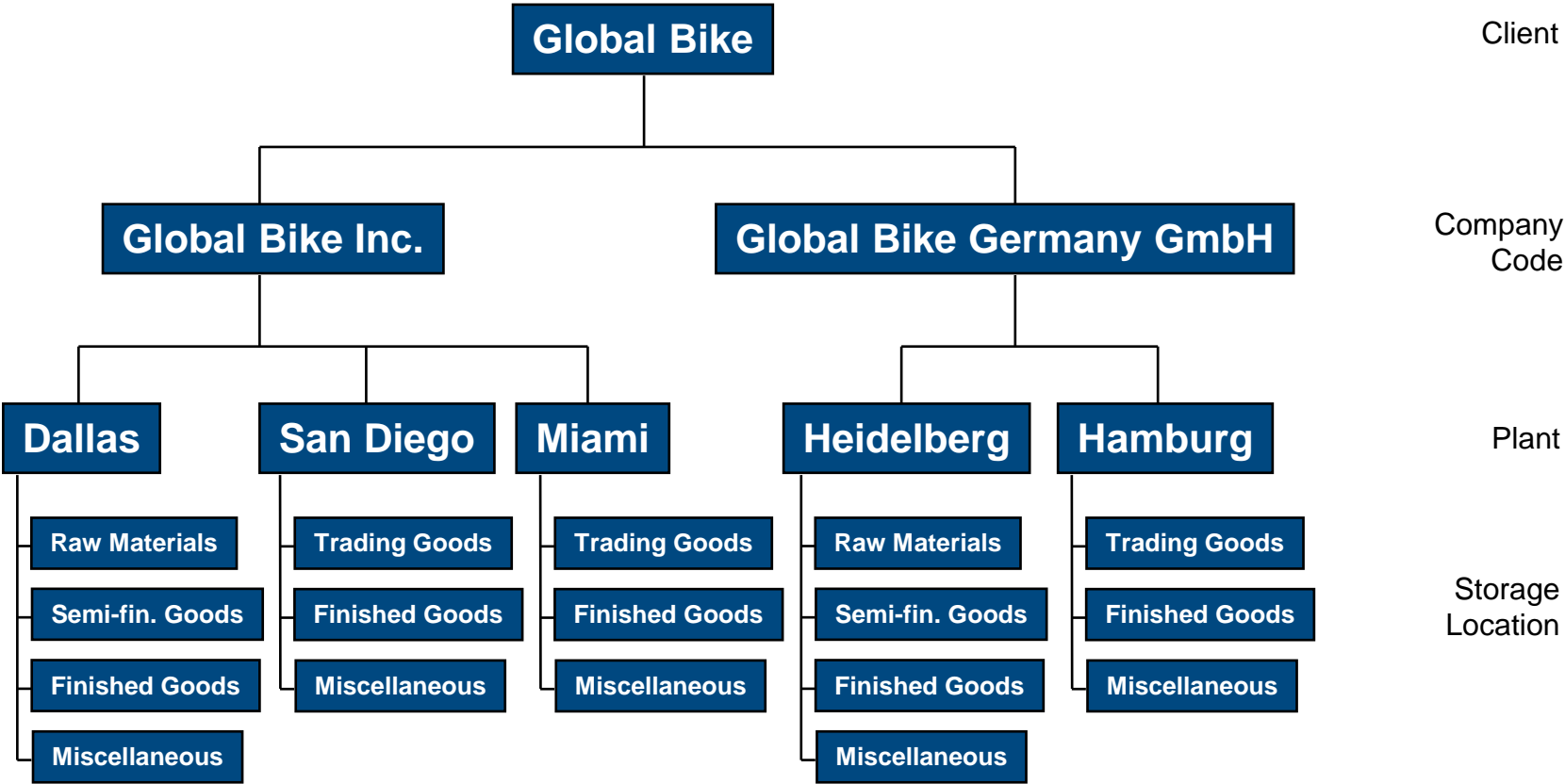
MM Organizational Structure (Materials Mgmt.)

- Client
 - An independent environment in the system
- Company Code
 - Smallest org unit for which you can maintain a legal set of books
- Plant
 - Operating area or branch within a company
 - Manufacturing, distribution, purchasing or maintenance facility
- Storage Location
 - An organizational unit allowing differentiation between the various stocks of a material in a plant

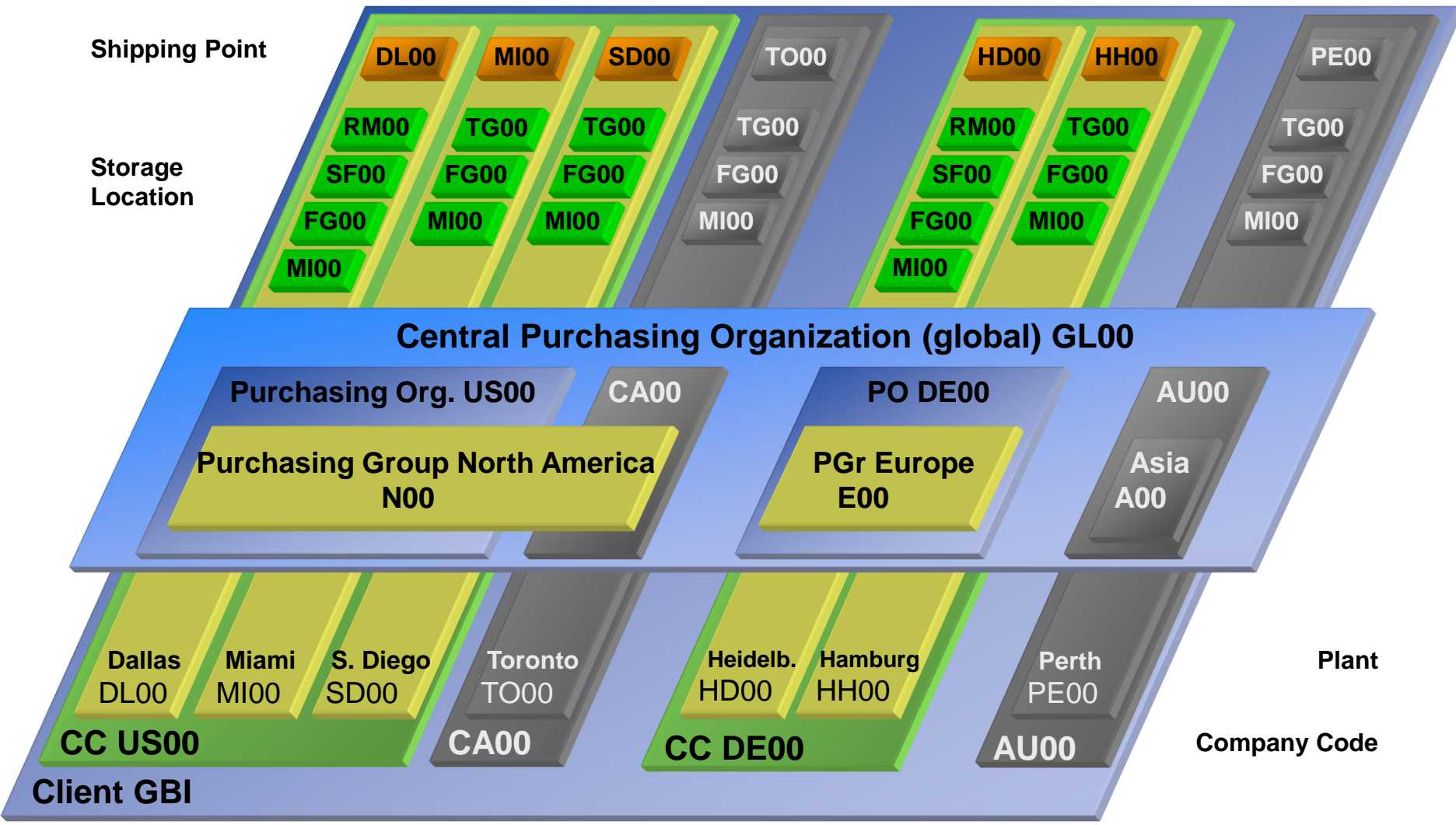
MM Organizational Structure (Purchasing)

- Purchasing Organization
 - The buying activity for a plant takes place at the purchasing organization
 - Organization unit responsible for procuring services and materials
 - Negotiates conditions of the purchase with the vendors
- Purchasing Group
 - Key that represents the buyer or group of buyers who are responsible for certain purchasing activities
 - Channel of communication for vendors

Global Bike Structure for Materials Management



Global Bike Enterprise Structure in SAP ERP (Logistics)



MM Master Data

SAP

Purchase Order ▾

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4500000000

EditCopyDisplay Commitments🔗

Standard PO

Status

Purchase Order Date

Net Value

Follow-On Documents

02.08.2021

5.250,00 USD

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General Information

Items

Limit Items

Delivery and Invoice

Supplier Contact Data

Notes

Output Management

Attachment: > ▾

Basic Data

Purchase Order Type:
Standard PO (NB)

Supplier:
Olympic Protective Gear (101999)

Currency:
United States Dollar (USD)

Language Key:
English (EN)

Further Information

Created by:
—

Purchase Order Date:
02.08.2021

Approval Status:
—

Approver:
—

Organization

Purchasing Group:
North America (N00)

Purchasing Organization:
Global Bike US (US00)

Company Code:
Global Bike Inc. (US00)

Vendor Master Data

Material Master Data

Purchasing Info Record

Condition Master Data

Output Master Data

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Vendor Master Data

■ Vendor Master

- Contains all the necessary information needed to business with an external supplier
- Used and maintained primarily by the Purchasing and Accounting Departments
- Every vendor MUST have a master record
- The supplier master record is created in SAP S/4HANA as a central business partner master record with different roles.
- For suppliers, these are often the business partner roles:
 - FLVN00 (FI Vendor)
 - FLVN01 (Vendor)

The screenshot displays the SAP S/4HANA Business Partner master data interface. The header shows the SAP logo, the text 'Business Partner', and a search icon. Below the header, the business partner name 'Olympic Protective Gear' and its ID '101000' are shown. A navigation bar includes tabs for 'Basic Data', 'Roles', 'Address', 'Bank Accounts', 'Payment Cards', 'Identification', 'Contacts', and 'Attachments'. The 'Roles' tab is active, showing a table of business partner roles. Below the table, the 'Address' tab is active, displaying the 'Standard Address' details.

Business Partner Role	Valid From	Valid To
FI Vendor FLVN00	08/18/2021	12/31/9999
Vendor FLVN01	08/18/2021	12/31/9999

Address

Standard Address

Street: 2100 Summit Boulevard	Country: USA (US)	Post Office Postal Code: –
House Number: –	Region: Georgia (GA)	Post Box: –
Postal Code: 30319		
City: Atlanta		

Vendor Master Views

- Client Level
 - Address
 - Vendor Number
 - Preferred Communication
- Company Code Data
 - Reconciliation Account
 - Terms of Payment
 - Bank Account
- Purchase Org Data
 - Purchasing Currency
 - Salesman's Name
 - Vendor Partners

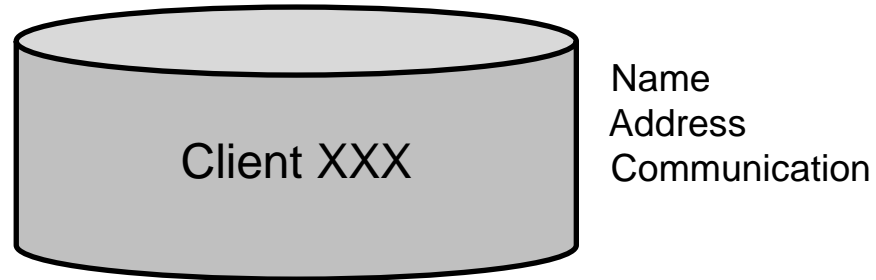
General Data

Company Code Data
Financial Accounting (FI)

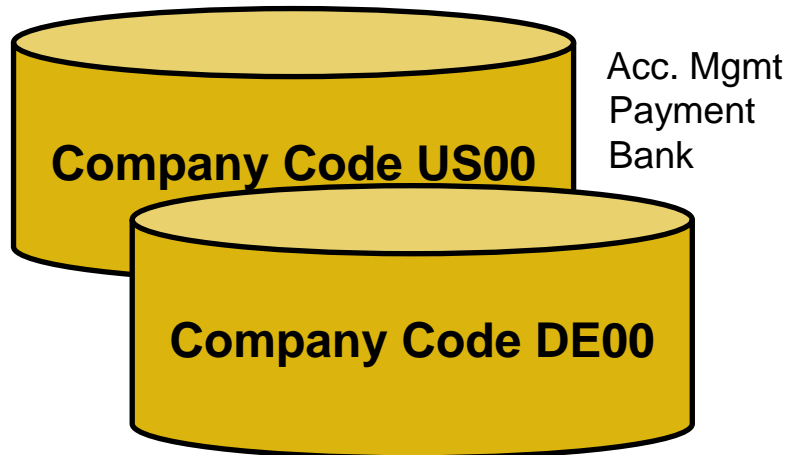
Purchasing Data
Materials Mgmt (MM)

Vendor Master

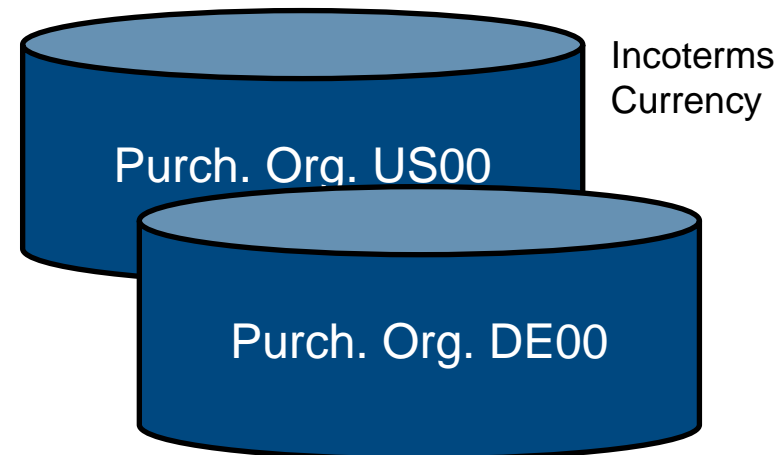
General Information relevant for the entire organization:



Company Code specific information:



Purch. Organization specific information:



Material Master Data

■ Material Master

- Contains all the information a company needs to manage about a material
- It is used by most components within the SAP system
 - Sales and Distribution
 - Materials Management
 - Production
 - Plant Maintenance
 - Accounting/Controlling
 - Quality Management
- Material master data is stored in functional segments called Views

Deluxe Touring Bike (black)
DXTR1000

Product Type: Finished Product (FERT) Base Unit of Measure: Each (EA) Revision Level:
Product Category: Product GTIN:
Product Group: Finished Bikes (BIKES) GTIN Category:

General Information Product Compliance Components Texts Sales Storage Warehouse Management

Basic Data

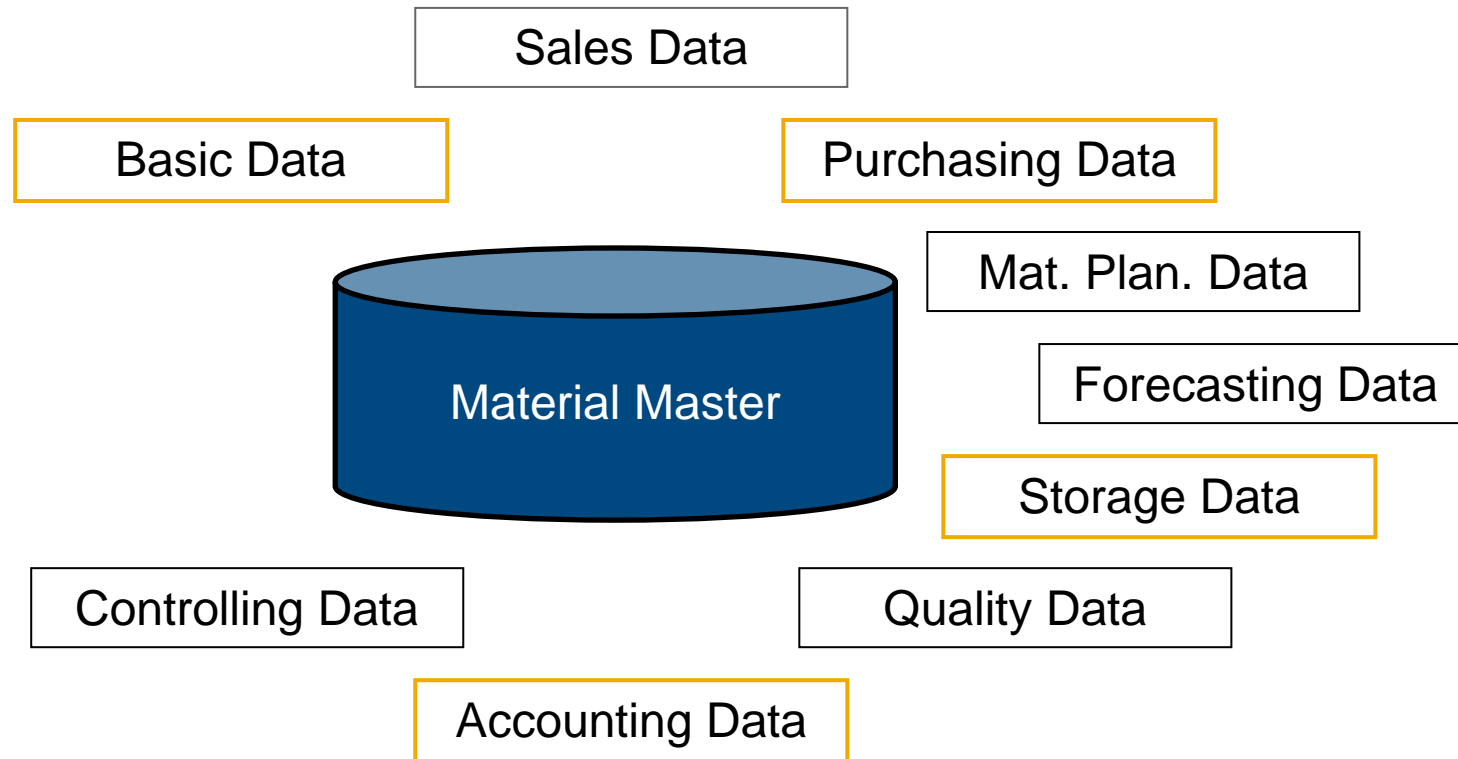
Division: Bicycles (BI) Created By: Chris Reich
Old Product Number: - Created On: 08/19/2021, 11:55:19
Batch Management Required: No Last Changed By: Chris Reich
Marked for Deletion: No Last Changed On: 08/23/2021, 12:36:09

Show More

Descriptions

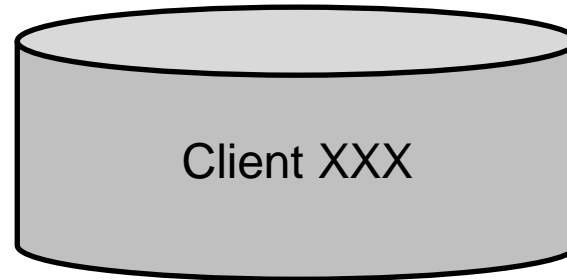
Language	Product
German DE	Deluxe Touring Bike (schwarz)
English EN	Deluxe Touring Bike (black)

Material Master Views



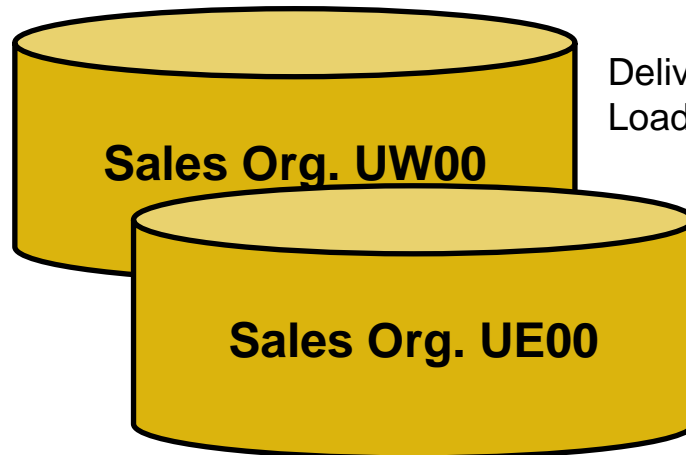
Material Master

General Information relevant for the entire organization:



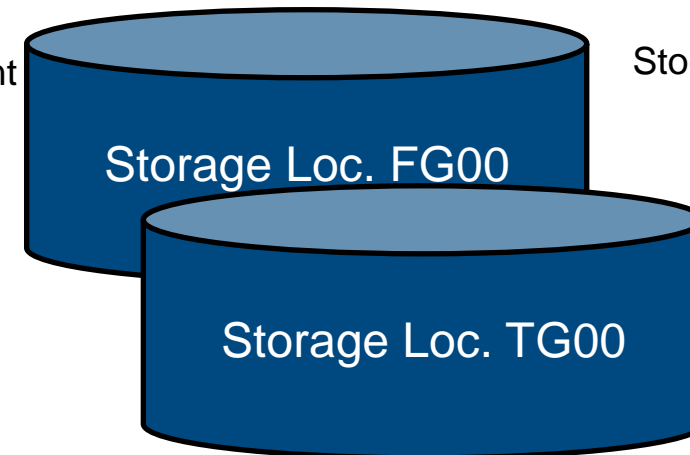
Name
Weight
Unit of Measure

Sales specific information:



Delivering Plant
Loading Grp

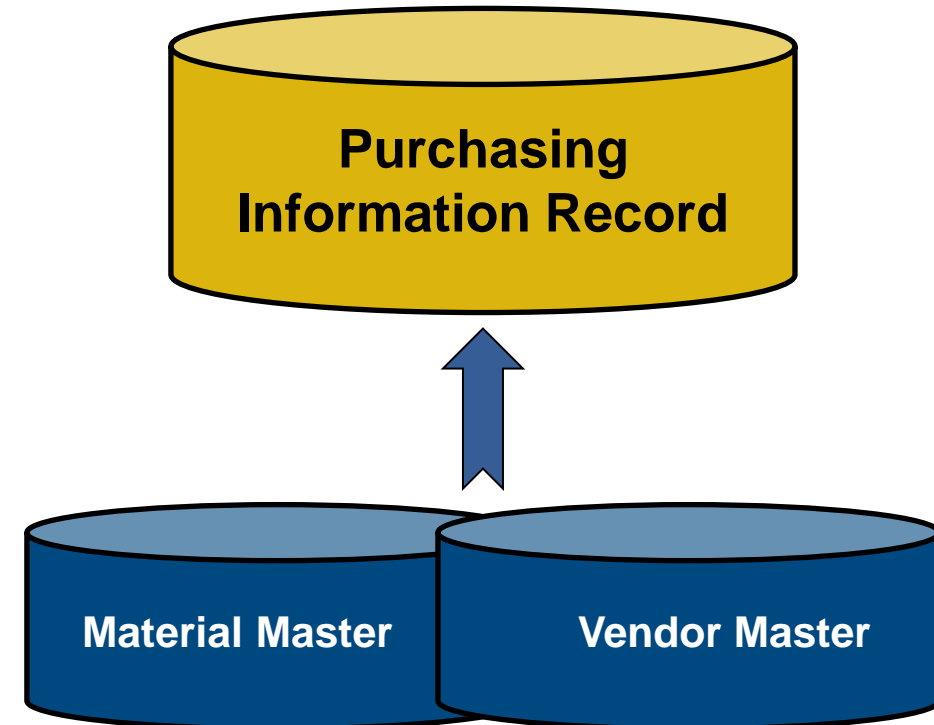
Storage Location specific information:



Stock Qty

Purchasing Information Record

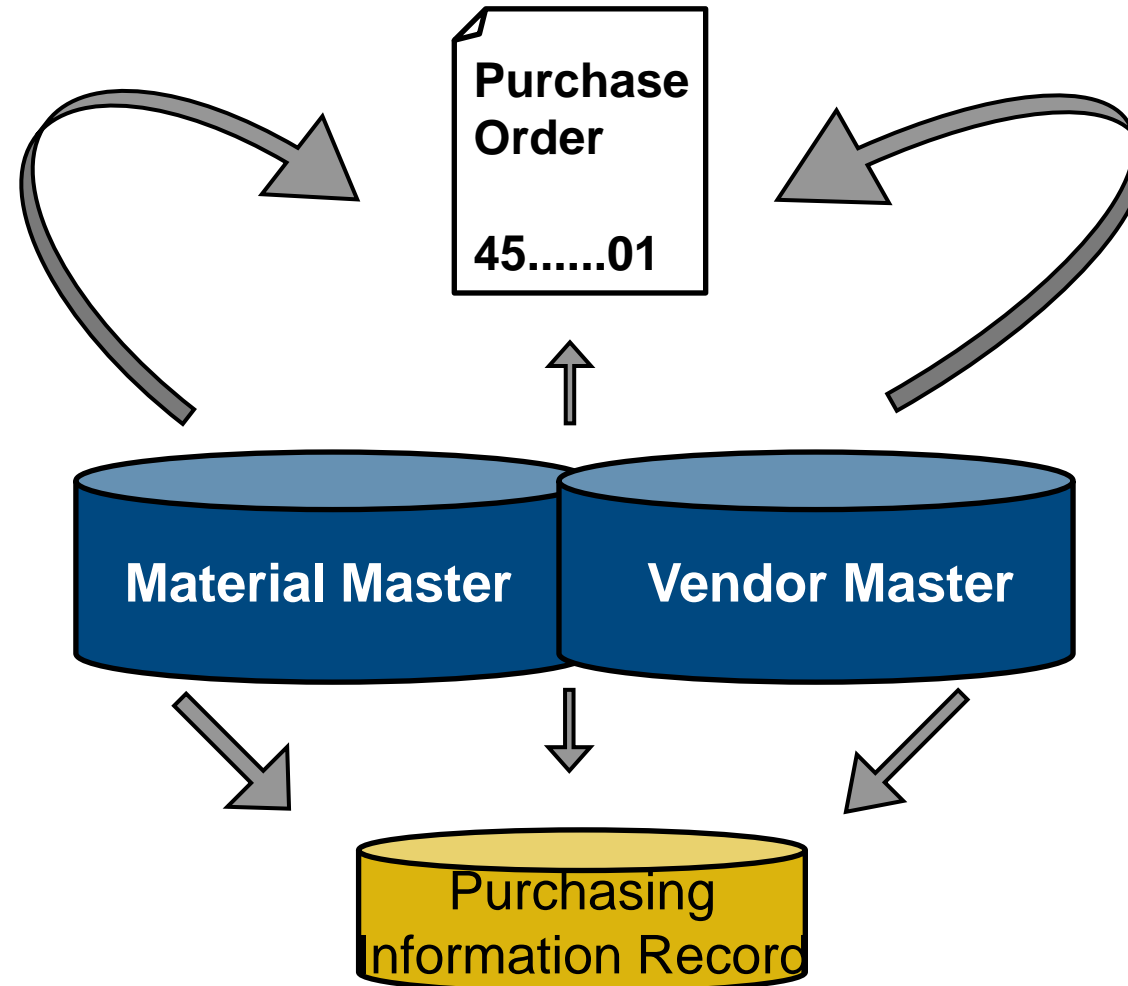
- Framework for Purchase Order
 - Contains the relationship between a vendor and a material
- Can be created:
 - Manually
 - Automatically – Quotations
 - Automatically – Purch. Orders
- Reporting
 - Vendor Evaluation



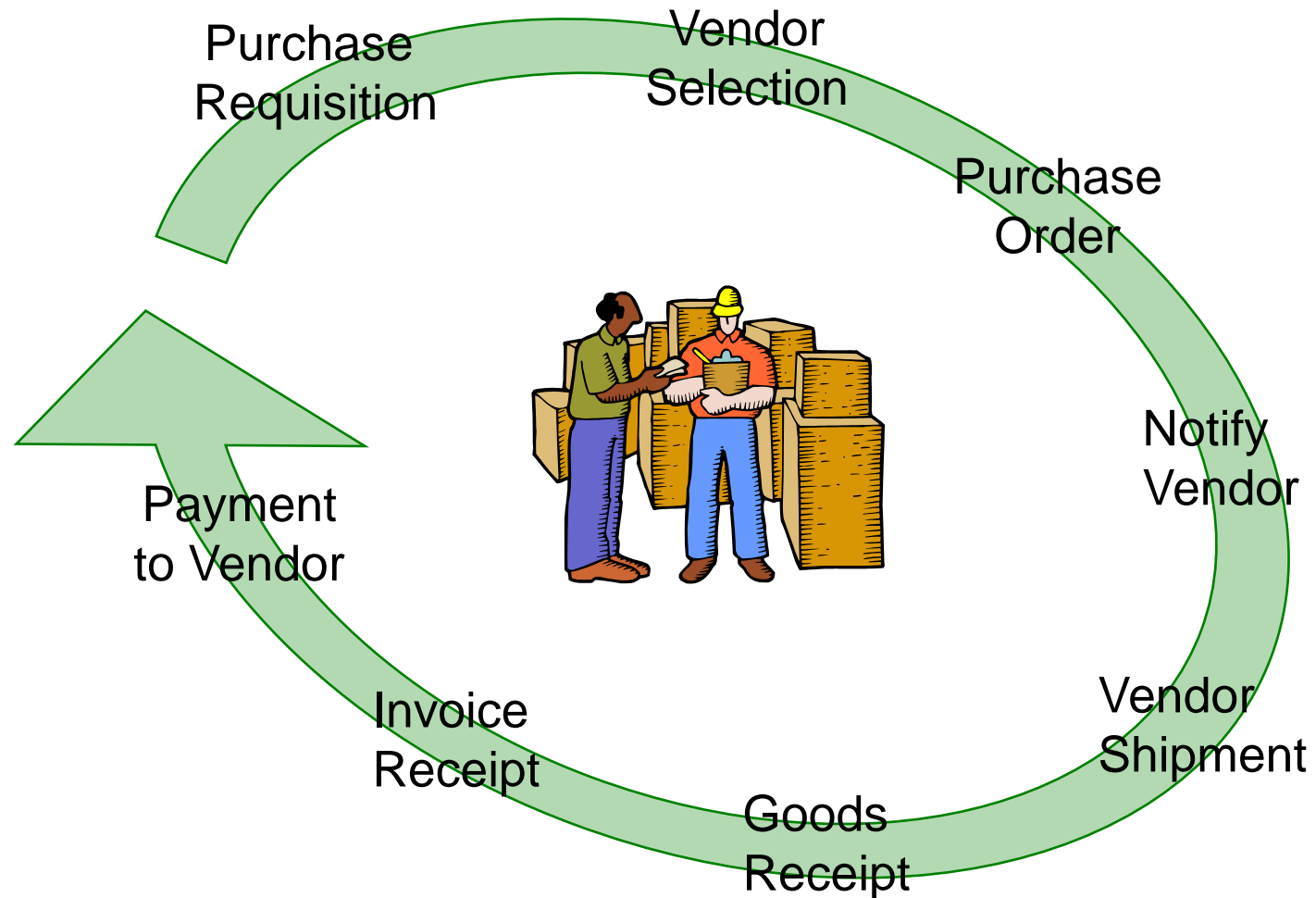
Purchasing Information Record

- Allows buyers to quickly determine:
 - Which vendors have offered or supplied specific materials
- Info Records contain:
 - Data on pricing and conditions
 - Last purchase order
 - Tolerance limits for deliveries
 - Specific lead times
 - Availability periods
 - Vendor Evaluation data
- Serves as default information for Purchase Orders

Master Data in Use



Procure-To-Pay Process



Purchase Requisition

- Internal Document instructing the purchasing department to request a specific good or service for a specified time
- Requisitions can be created two ways:
 - Directly - Manually
 - person creating determines: what, how much, and when
 - Indirectly - Automatically
 - MRP
 - Production Orders
 - Maintenance Orders
 - Sales Orders

Requisition Sourcing

- Once the requisition has been assigned a source of supply it can be released for processing
- There are a variety of ways that a purchasing department can process a requisition to determine the appropriate Source of Supply:
 - Internal Sourcing Requirements
 - Source List
 - Outlined Agreement
 - RFQ

Internal Sourcing

- The requisition for materials could be satisfied by sources within our company.
 - It is possible that a plant within your firm could represent a potential source of supply for the material needed (centralized warehouse)
 - If an internal source is identified the requirement is covered by an internal procurement transaction (stock transport order)

Source List

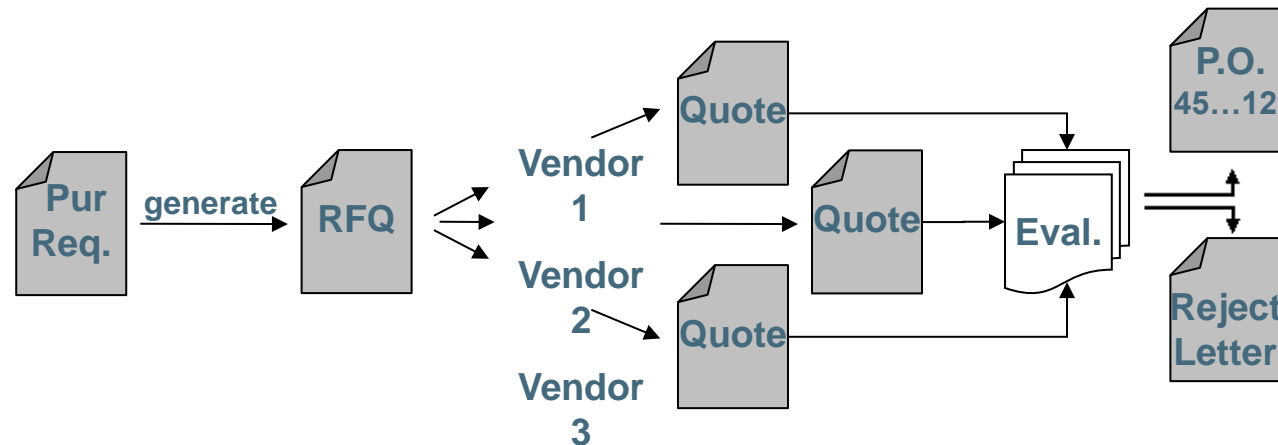
- A source list is a record that specifies the allowed means for procuring a material for a certain plant within a given time period.
 - If the list contains a sole source the system will assign the vendor to the requisition.
 - If several options exist the system will display a list of vendors for you to choose from.
 - If no source has been established the system will revert to search information records and outline agreements.

Outline Agreement

- Requisitions can be satisfied through existing longer-term purchasing agreement
- These agreements are subdivided into:
 - Contracts
 - Consists of items defining the individual materials, material groups, or services with prices and in many cases quantities
 - Quantity
 - Value
 - Scheduling Agreements
 - Total quantity of material is spread over a certain period in a delivery schedule, consisting of line items indicating quantities and their planned delivery date

Request for Quotation

- If nothing exist in the system we may need to submit a request for quotation to our vendors. An RFQ is an invitation to a vendor by a Purchasing Organization to submit a bid for the supply of materials or services
 - The accepted quotations will generate Purchasing Information Records
 - Perform Quotation Price Comparisons
 - Finally Select a Quotation



Quotation from Vendor

- The quotation received by your company is a legally binding offer, should decide to do business with the vendor, containing price's and conditions for the materials specified in the RFQ for a predefined period of time.
 - In SAP the RFQ and the Quotation will be become a single document, you will enter the vendor's response in the RFQ you created.

Vendor Evaluation once Identified

- Vendor evaluation helps purchasing evaluate vendors for sourcing while also enabling the company to monitor vendor relationships through performance scores and criteria you put in place.
 - Supports a maximum of 99 main criteria and 20 sub criteria for each main:
 - Price
 - Price Level
 - Price History
 - Quality
 - Goods Receipt
 - Quality Audit
 - Complaints/Rejection level
 - Delivery
 - On-time delivery performance
 - Quantity reliability
 - Compliance with shipping instructions
 - Confirmation Date
 - You then must establish a scoring range (1 -100) and determine the weight factors of scores for each.

Purchase Order

- A purchase order is a formal request to a vendor for a specific material or service under the stated conditions
- Purchase Orders can be created manually
 - Reference a Purchase Order
 - Reference a Purchase Requisition
 - Reference a RFQ/Quotation
 - Without Reference
- Purchase Orders can be create automatically

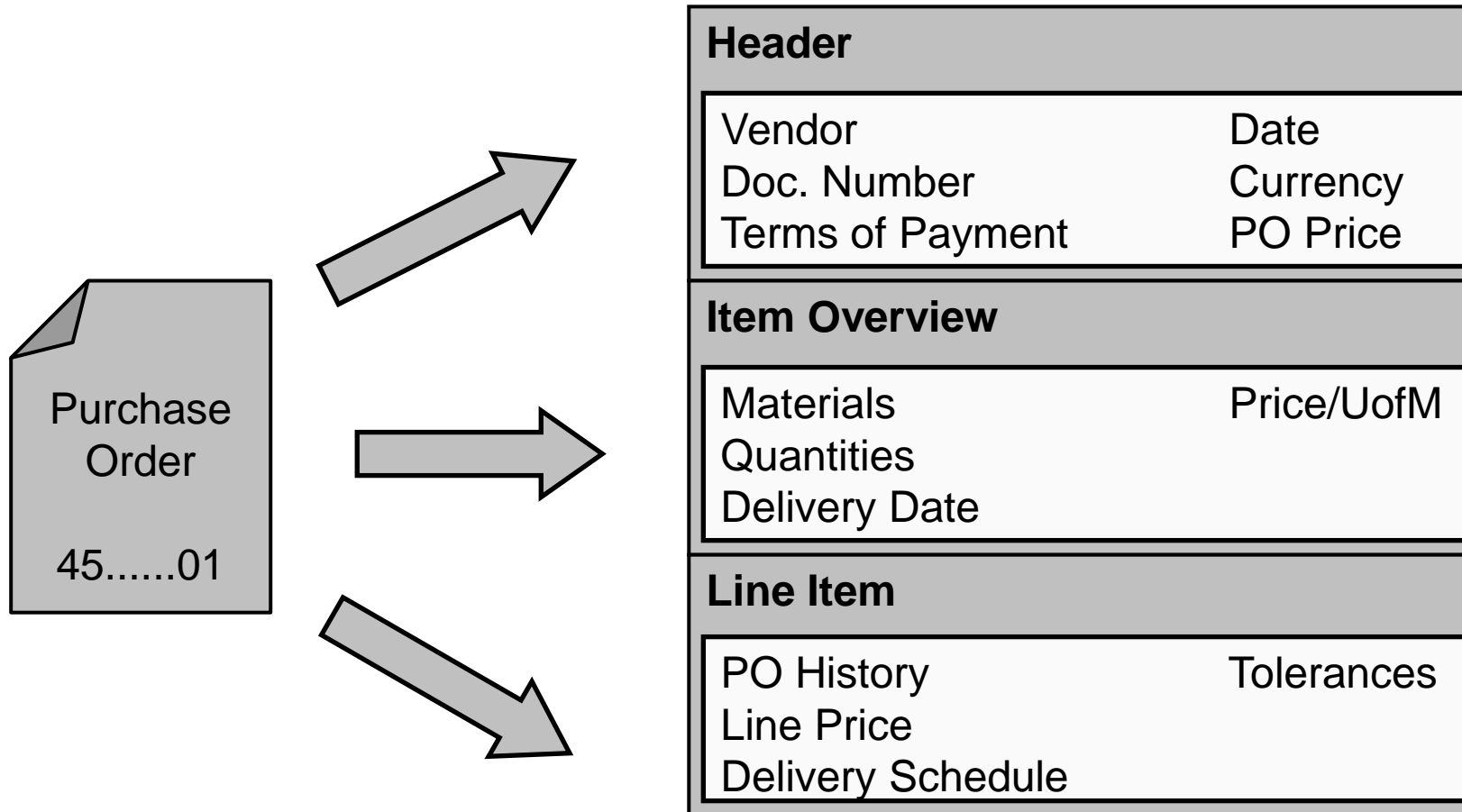
Purchase Order

- A purchase order can be used for a variety of purposes, the item category (procurement type) defined in the PO will dictate the use of the order and the process that the order will follow:
 - Standard
 - Stock or Consumption
 - Services
 - Subcontracting
 - Third-Party
 - Consignment

The screenshot displays the SAP Purchase Order (PO) interface. At the top, the SAP logo and 'Purchase Order' are visible. The PO number '4500000000' is shown, along with 'Standard PO'. Action buttons include 'Edit', 'Copy', 'Display Commitments', and a share icon. Below this, a summary row shows 'Status' as 'Follow-On Documents', 'Purchase Order Date' as '02.08.2021', and 'Net Value' as '5.250,00 USD'. A navigation bar includes tabs for 'General Information', 'Items', 'Limit Items', 'Delivery and Invoice', 'Supplier Contact Data', 'Notes', 'Output Management', and 'Attachments'. The 'General Information' tab is active, showing 'Basic Data' (Purchase Order Type: Standard PO (NB), Supplier: Olympic Protective Gear (101999), Currency: United States Dollar (USD), Language Key: English (EN)) and 'Organization' (Purchasing Group: North America (N00), Purchasing Organization: Global Bike US (US00), Company Code: Global Bike Inc. (US00)). A 'Further Information' section shows 'Created by: -', 'Purchase Order Date: 02.08.2021', 'Approval Status: -', and 'Approver: -'.

Purchase Order Details	
PO Number	4500000000
PO Type	Standard PO (NB)
Status	Follow-On Documents
Purchase Order Date	02.08.2021
Net Value	5.250,00 USD
Supplier	Olympic Protective Gear (101999)
Currency	United States Dollar (USD)
Language Key	English (EN)
Purchasing Group	North America (N00)
Purchasing Organization	Global Bike US (US00)
Company Code	Global Bike Inc. (US00)
Created by	-
Purchase Order Date	02.08.2021
Approval Status	-
Approver	-

Purchase Order Structure

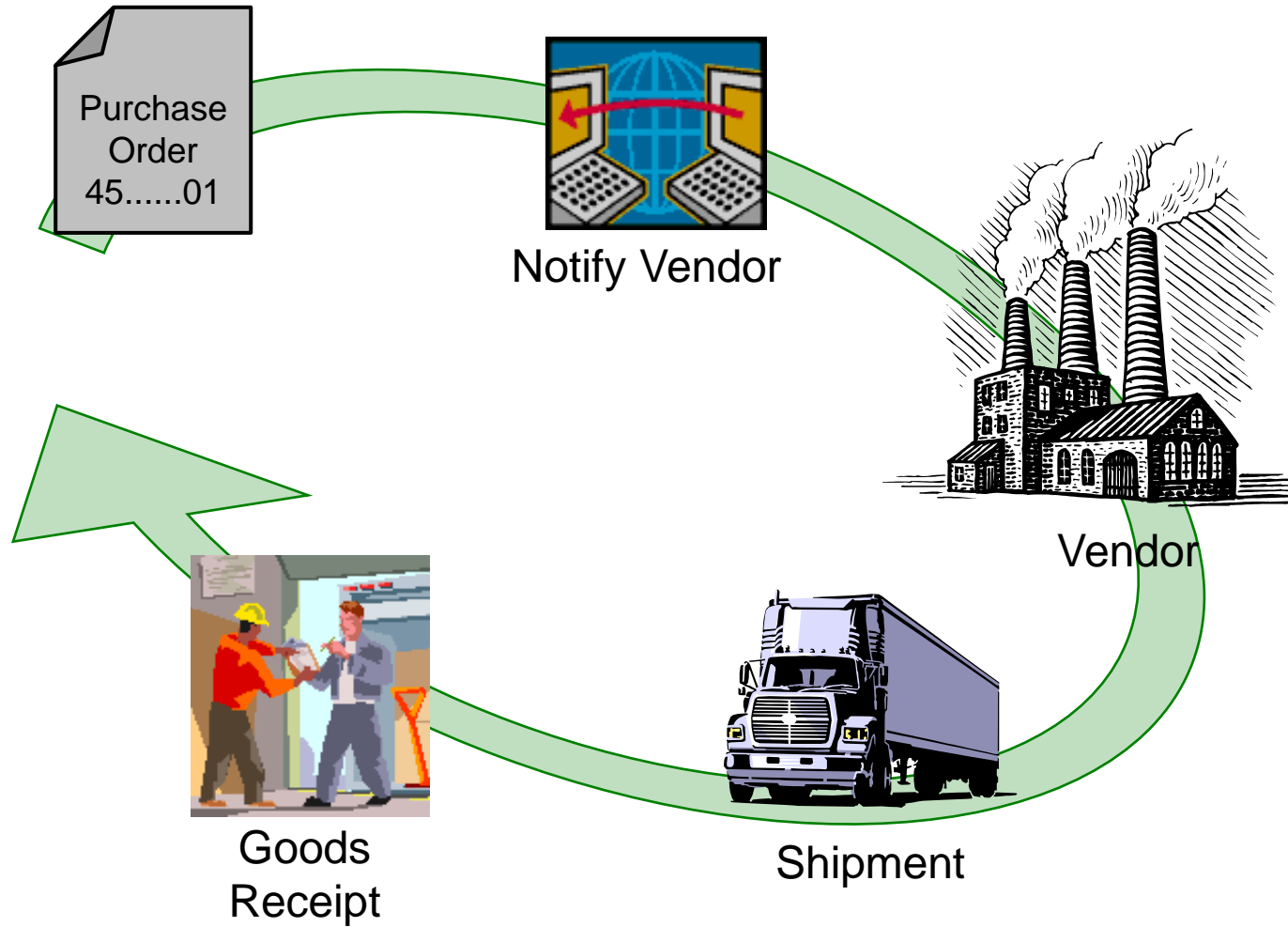


Purchase Order Output

- Once a Purchase Order has been created the vendor needs to be notified
 - Printed
 - E-mail
 - EDI
 - Fax
 - XML

- There are a variety of forms that aid in the purchasing process and are generated from the Purchase Order
 - Purchase Order Output
 - Order Acknowledgement Forms
 - Reminders
 - Schedule Agreements

Goods Receipt



Goods Receipt

- Goods movement in which we accept goods into our system
- If materials are delivered against a Purchase Order we will reference that Order
 - Determine if we got what we ordered
 - System can purpose data for us from the PO
 - Material, quantity
 - Purchase Order History is update with the receipt
 - Updates Physical Inventory
 - Updates Inventory G/L Account

Material Movements

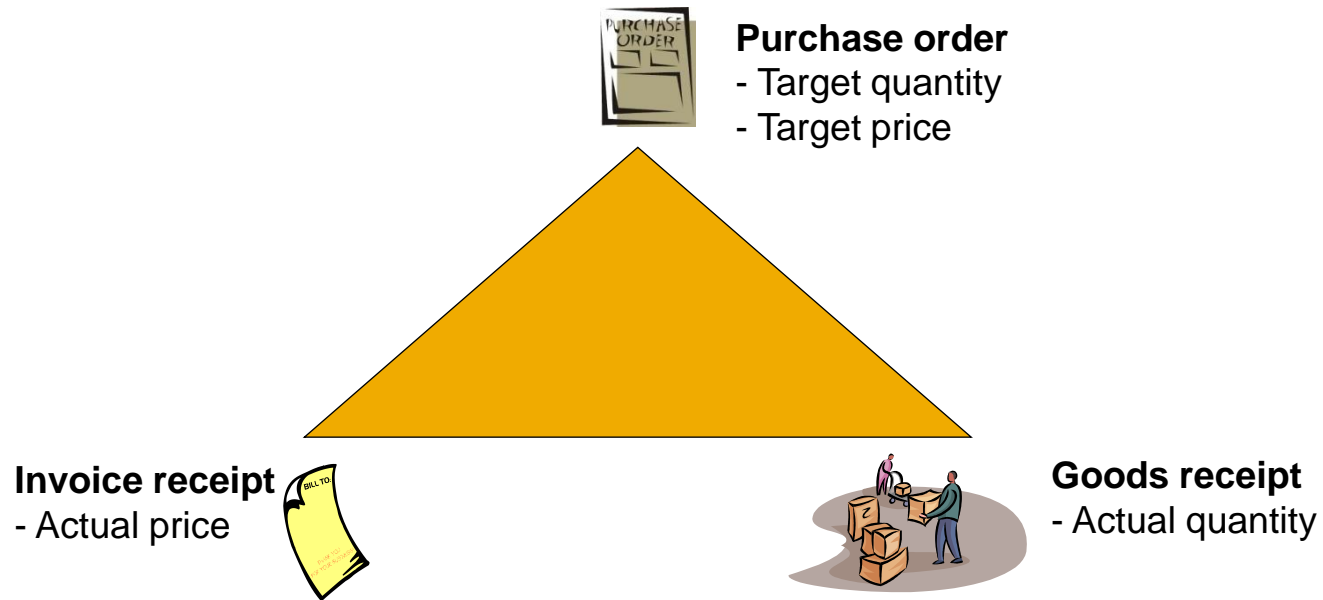
- When a goods movement takes place it is represented by a Movement Type
- Movement types are three-digit keys used to represent a movement of goods
 - 101 – goods receipt into warehouse
 - 103 – goods receipt into GR blocked stock
 - 122 – return delivery to vendor
 - 231 – consumption for a sales order
 - 561 – initial entry of stock
- Destinations for Receipt of Goods
 - Warehouse – Unrestricted, Quality, Blocked
 - Quality
 - Goods Receipt Blocked Stock

Effects of a Goods Receipt

- When a Goods Movement for the receipt of goods takes place a series of events occur
 - Material Document is Created
 - Accounting Document is Created
 - Stock Quantities are Updated
 - Stock Values are Updated
 - Purchase Order is Updated
 - Output can be generated (GR slip / pallet label)

Invoice Processing

- Incoming Invoices are reference against a Purchase Order to verify their content, prices, and arithmetic.
- If discrepancies arise between the purchase order or goods receipt and the invoice the system will generate a warning or an error
 - Depending on system configuration the difference could cause the system to Block the Invoice



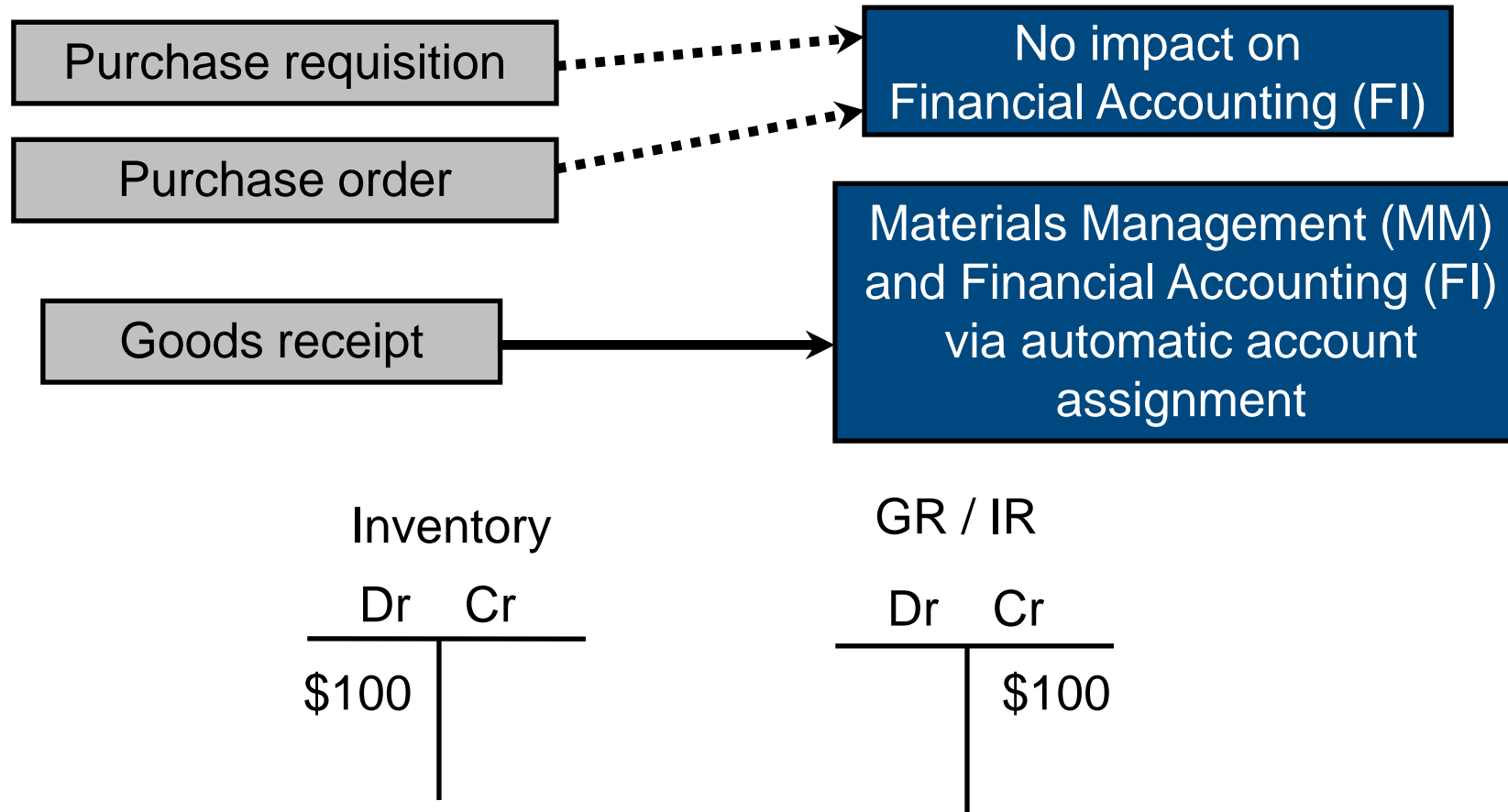
Invoice Processing

- When an invoice is saved it applies the liability from the Goods Receipt of our Purchase Order to a Vendor
- Upon verification the:
 - Purchase Order is updated
 - Material Master is Updated (MAP)
 - Accounting Document is created
- Once the Invoice has been posted the verification process is completed and the payment process is initiated within Financial Accounting

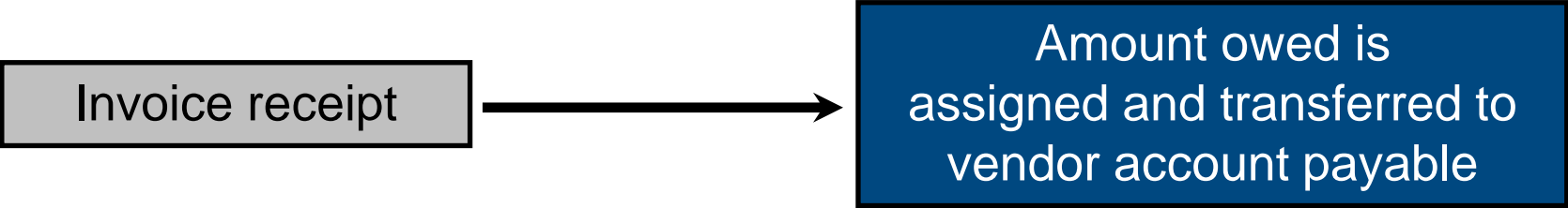
Payment to Vendor

- Can be done automatically or manually
 - Post Outgoing Payment vs. Payment Program
- Elements of the Payment Transaction:
 - Payment Method
 - Bank from which they get paid
 - Items to be Paid
 - Calculate Payment Amount
 - Print Payment Medium
- Process will create a financial accounting document to record the transaction

Goods Receipt / Invoice Receipt Reconciliation Account



Goods Receipt / Invoice Receipt Reconciliation Account



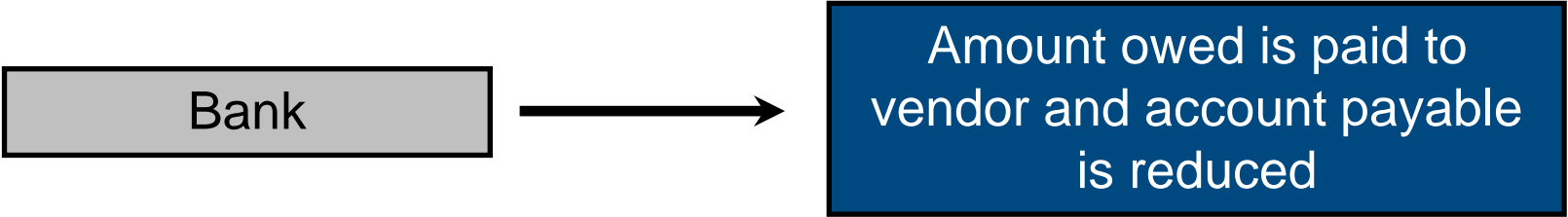
GR / IR

Dr	Cr
\$100	

Vendor A/P

Dr	Cr
	\$100

Vendor Payment



Bank

Dr	Cr
	\$100

Vendor A/P

Dr	Cr
\$100	

FI – MM Integration Point

