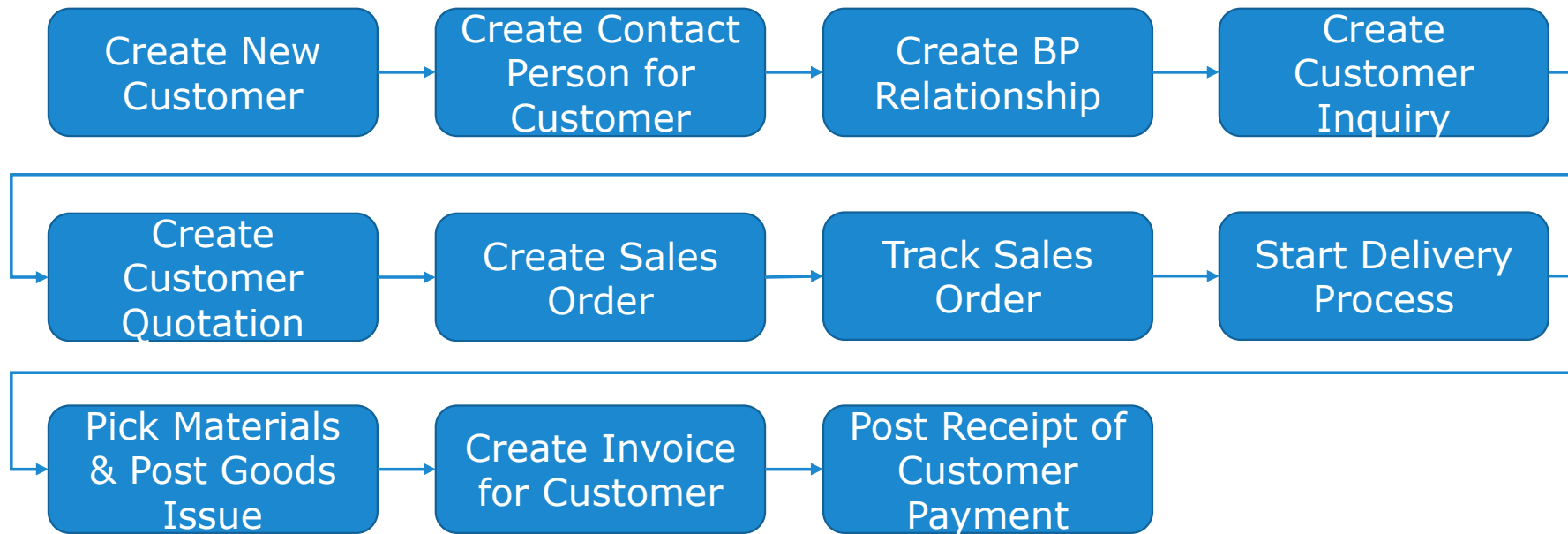# Integrated Value Flows

IVF6ILV

11 March 2025

Agenda

- Throwback Session 2

- Organizational issues

- complete with Integrated order-to-cash cycle (Create Invoice for Customer)

- Material Management (MM) - Procurement

- Production Planning (PP)

Throwback
Session 2

Integrated order-to-cash cycle

Create New Customer	→	Create Contact Person for Customer	→	Create BP Relationship	→	Create Customer Inquiry

Create Customer Quotation	→	Create Sales Order	→	Track Sales Order	→	Start Delivery Process

Pick Materials & Post Goods Issue	→	Create Invoice for Customer	→	Post Receipt of Customer Payment

Organizational issues

Sessions

Session	In class/VC/EL	Topic	
03.03.2025 09:00 - 12:30	In class	Introduction, course overview, self-conception, introduction to SAP S/4HANA, introduction logistics case study	✔
03.03.2025 14:00 - 17:30	In class	Master – organizational – transaction data, Introduction sales SD	✔
04.03.2025 18:00 - 19:45	E-learning – Tasks in MS Teams – no course	SCOR – SAP Activate – After Class	✔
05.03.2025 09:00 - 12:30	In class - Customizing	Review of the content from Session 1 and continuation with the SAP Sales Process + Custom Fields	✔
11.03.2025 09:00 - 12:30	In class	Introduction PP & MRP	
11.03.2025 14:00 - 17:30	In class	Introduction MM & MRP	
12.03.2025 09:00 - 13:15	In class	PP & MM Challenge - Time for prepration	
12.03.2025 14:00 - 17:30	In class	Intermediate Exam – Short individual presentation & time for Logistic Case Study	
26.03.2024 23:59 -00:00	only submission/no course	Deadline submission documentation – only submission/no course	

Information – Assessment

Intermediate exam: presentation – 12 March 2025

- **Presentation format:**
  - Please give an **individual** presentation!
  - Alone - no group work
  - System based / Slides
  - Present your final process with you own data's in the system
  - Describe the process
  - Show the process in the system

Intermediate exam	Presentation	single-exam	oral	- 30,00%	• S1_IVF6: 12.03.2025 09:00 - 13:15 (G1.E.25)
Intermediate exam	Submission (Deliverable)	single-exam	written	- 70,00%	26.03.2025 23:59

- **Presentation content:**
  - **Final Result:** SD Challenge (Session 1) - 2 Min/person
  - **Final Result:** PP Challenge (Session 2) - 2 Min/person ? (depending on how far we get today)
  - **Final Result:** MM Challenge (Session 3) - 2 Min/person
  - **Intermediate Status:** "CaseStudy" - 4 Min/person
  - Discussion/ Feedback audience - 5 Min

Information – Assessment

Intermediate exam: submission – 26 March 2025

▪ **Submission format:**

- Create one project documentation per person (Word or PDF)
- The documentation should include all the steps and process details that you have posted in the SAP system
  - All organizational-, master-, and transaction data (in tabular form)
  - Screenshots and descriptions of the posted process

▪ Submission: 26.03.2025 23:59 MS Teams

▪ **Documentation content:**
- **Final Result:** SD Challenge (Session 1)   - Descriptions / Screenshots
- **Final Result:** PP Challenge (Session 2)   - Descriptions / Screenshots
- **Final Result:** MM Challenge (Session 3)   - Descriptions / Screenshots
- **Final Result:** "CaseStudy"   - Descriptions / Screenshots

Intermediate exam	Presentation	single-exam	oral	- 30,00%	• S1_IVF6: 12.03.2025 09:00 - 13:15 (G1.E.25)
Intermediate exam	Submission (Deliverable)	single-exam	written	- 70,00%	26.03.2025 23:59

Please use the template from MS Teams

Create Invoice for Customer

Material Management (MM)

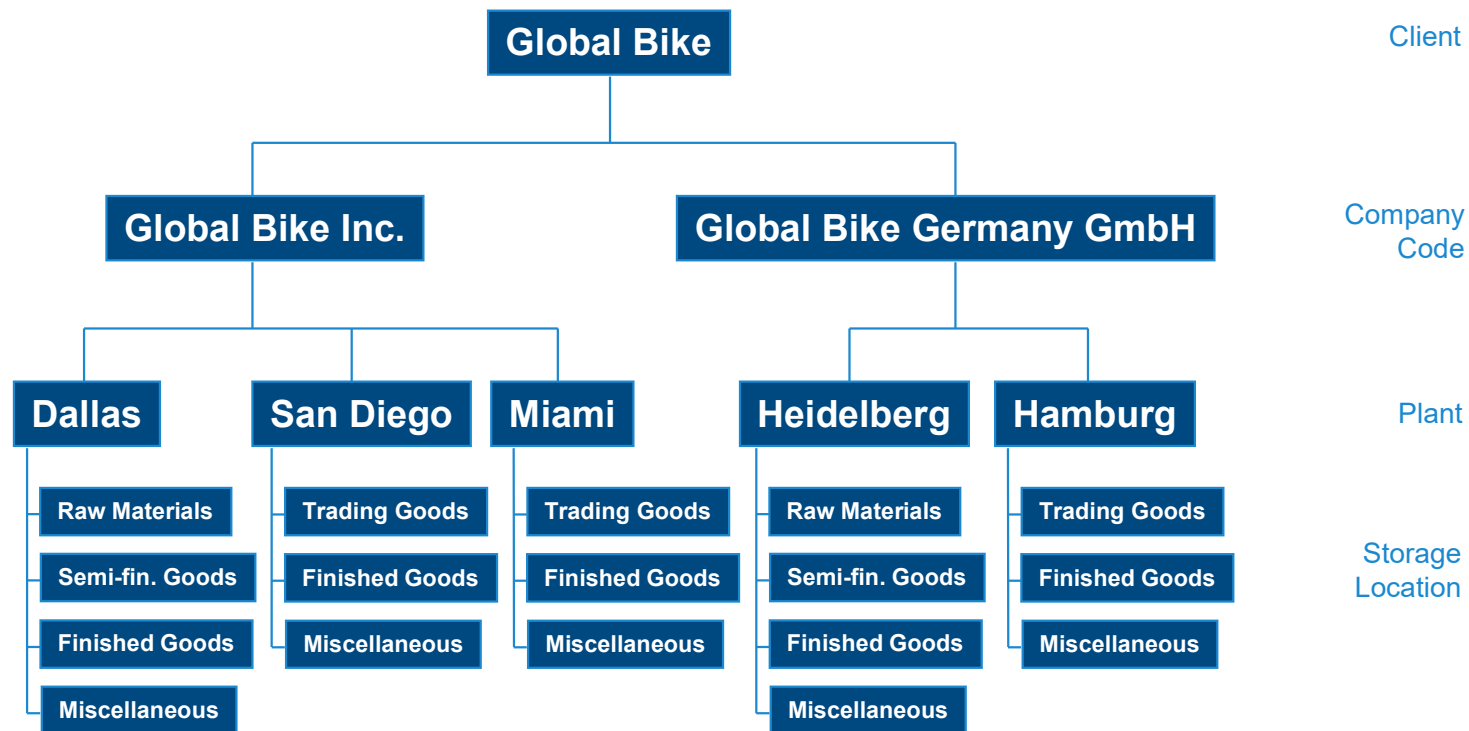# MM Organizational Structure (Materials Mgmt.)

- 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

Client

Global Bike

Company Code

Global Bike Inc. — **Global Bike Germany GmbH**

Plant

Dallas — **San Diego** — **Miami** — **Heidelberg** — **Hamburg**

Storage Location

Dallas:
- Raw Materials
- Semi-fin. Goods
- Finished Goods
- Miscellaneous

San Diego:
- Trading Goods
- Finished Goods
- Miscellaneous

Miami:
- Trading Goods
- Finished Goods
- Miscellaneous

Heidelberg:
- Raw Materials
- Semi-fin. Goods
- Finished Goods
- Miscellaneous

Hamburg:
- Trading Goods
- Finished Goods
- Miscellaneous

MM Master Data

Vendor Master Data

Material Master Data

Purchasing Info Record

Condition Master Data
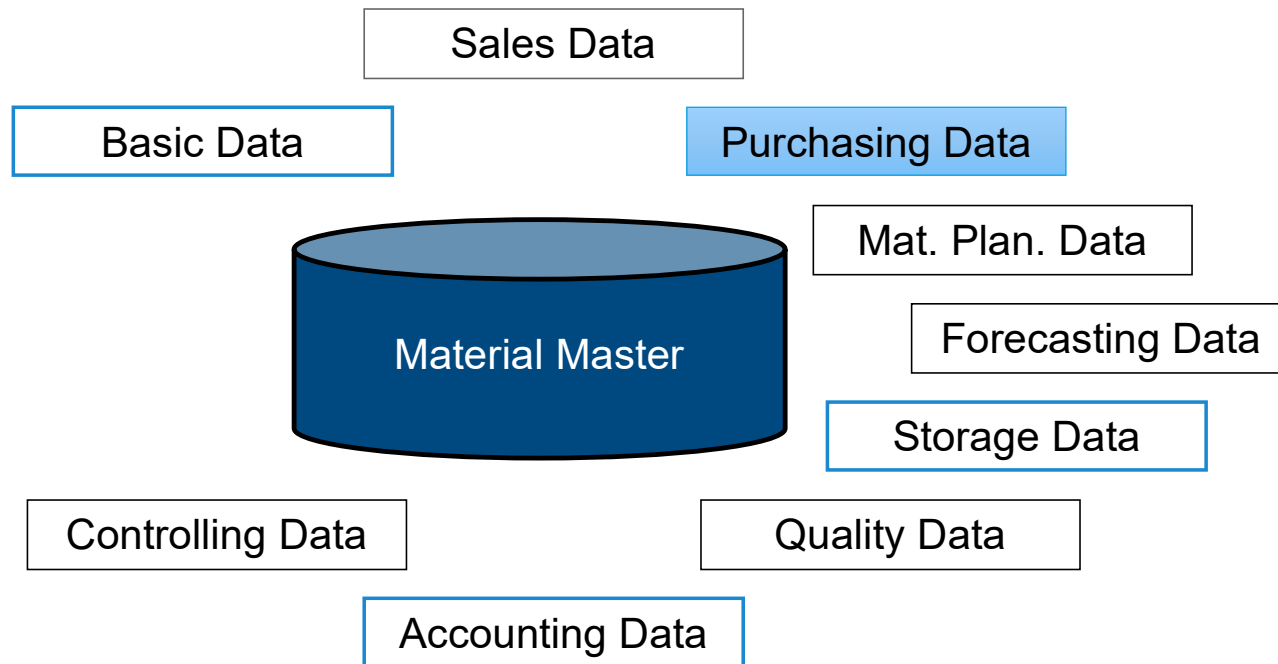
Output Master Data

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

Material Master Views

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

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:

Client XXX
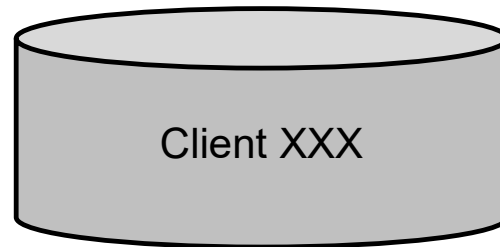
Name
Address
Communication

Company Code specific information:

Company Code US00
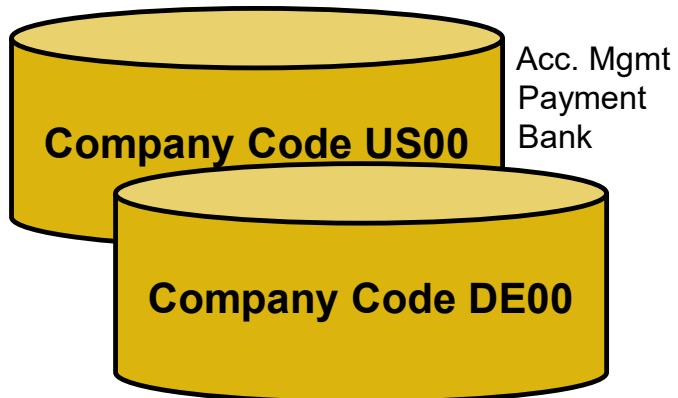
Company Code DE00

Acc. Mgmt
Payment
Bank

Purch. Organization specific information:

Purch. Org. US00

Purch. Org. DE00
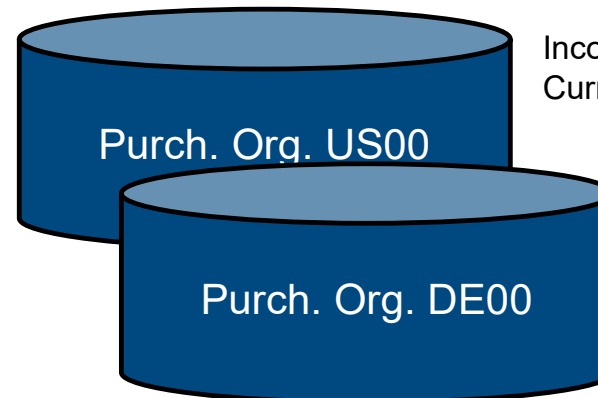
Incoterms
Currency

Create Vendor Master

- Name 1: Mid-West Supply S25_###

- Search Term 1: ###

- Roles:
  - FLVN00
  - FLVN01

- Company Code:
  - US00
  - Reconciliation Account: 3300000

- Purchasing Organisation
  - US00

Manage Business
Partner Master Data

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
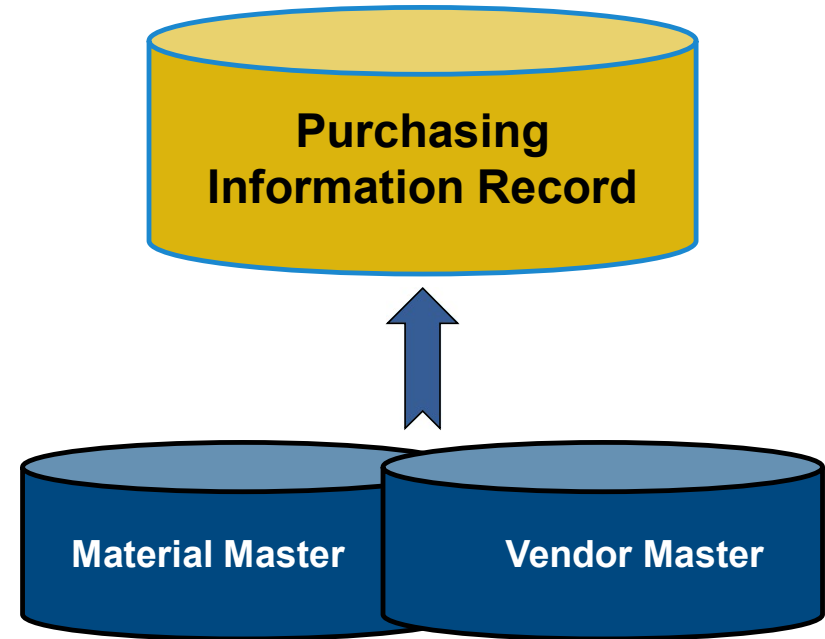
Purchasing Information Record

- 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

Create Purchasing Information Record

- Business Partner (Supplier): Mid-West Supply S25_###

- Material: TRTR1000

- Purchasing Organisation
  – US00

- Delivery Time in Days: 10

- Standard Order Quantity: 5

Manage Purchasing Info Records

Create Purchasing Information Record for all Raw materials

Mountainbike ### - Color

2x	1x	1x	1x	1x

TRWA1000
Touring Aluminum Wheel Assembly

TRFR3###
Touring Frame-Red

CHAN1###
Chain

TRHB1###
Touring Handle Bar

TRSK1###
Touring Seat Kit

1x
TRTR1###
Touring Tire

1x
TRWH1###
Touring Aluminum Wheel

Master Data in Use

Purchase Order

45......01

Material Master

Vendor Master

Purchasing Information Record
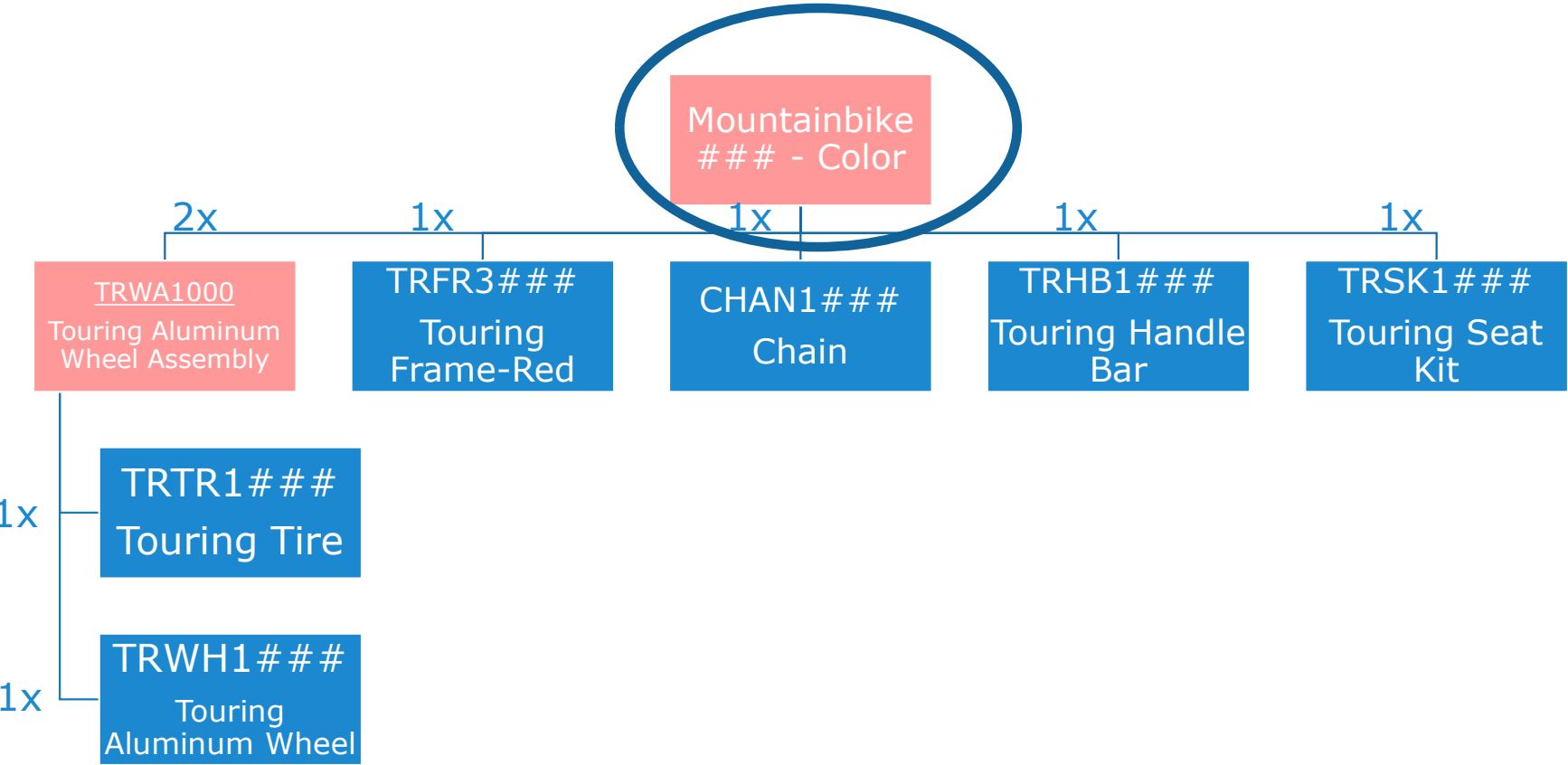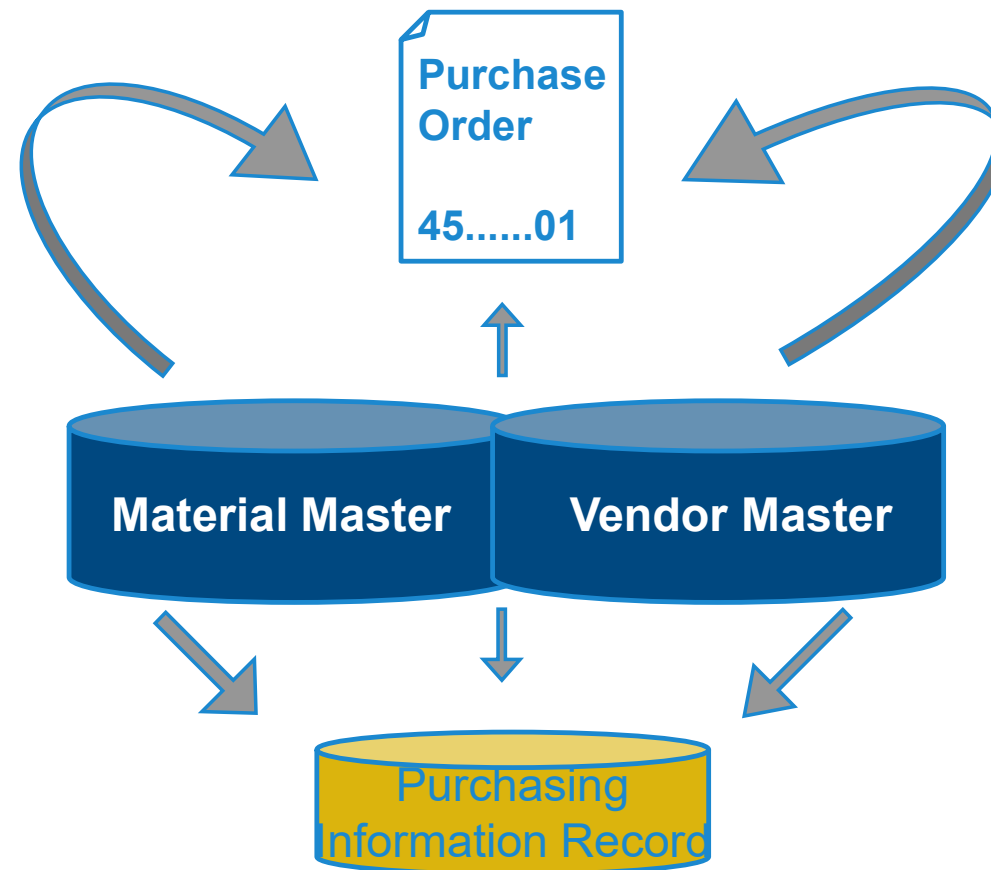
Procure-To-Pay Process

Purchase Requisition

Vendor Selection

Purchase Order

Notify Vendor

Vendor Shipment

Goods Receipt

Invoice Receipt

Payment to Vendor

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
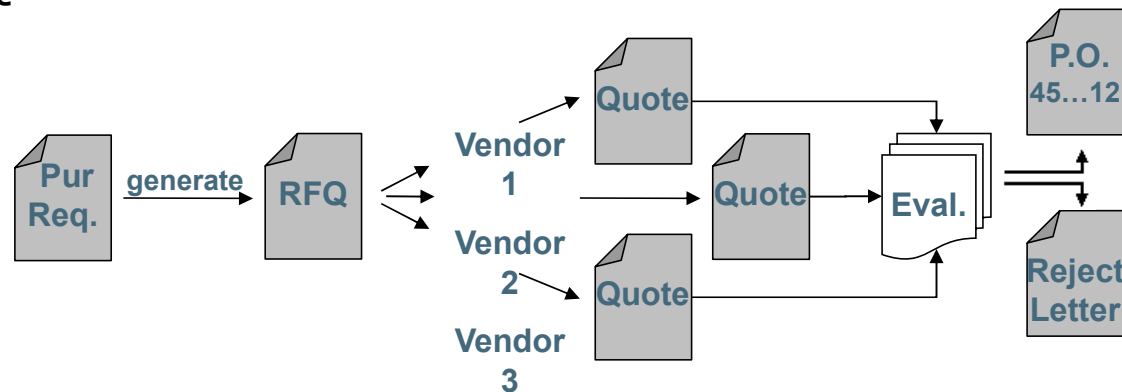
Quotation from Vendor

- 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

Purchase Order Structure

Purchase Order

45......01

Header

Vendor	Date
Doc. Number	Currency
Terms of Payment	PO Price

Item Overview

Materials	Price/UofM
Quantities	
Delivery Date	

Line Item

PO History	Tolerances
Line Price	
Delivery Schedule	
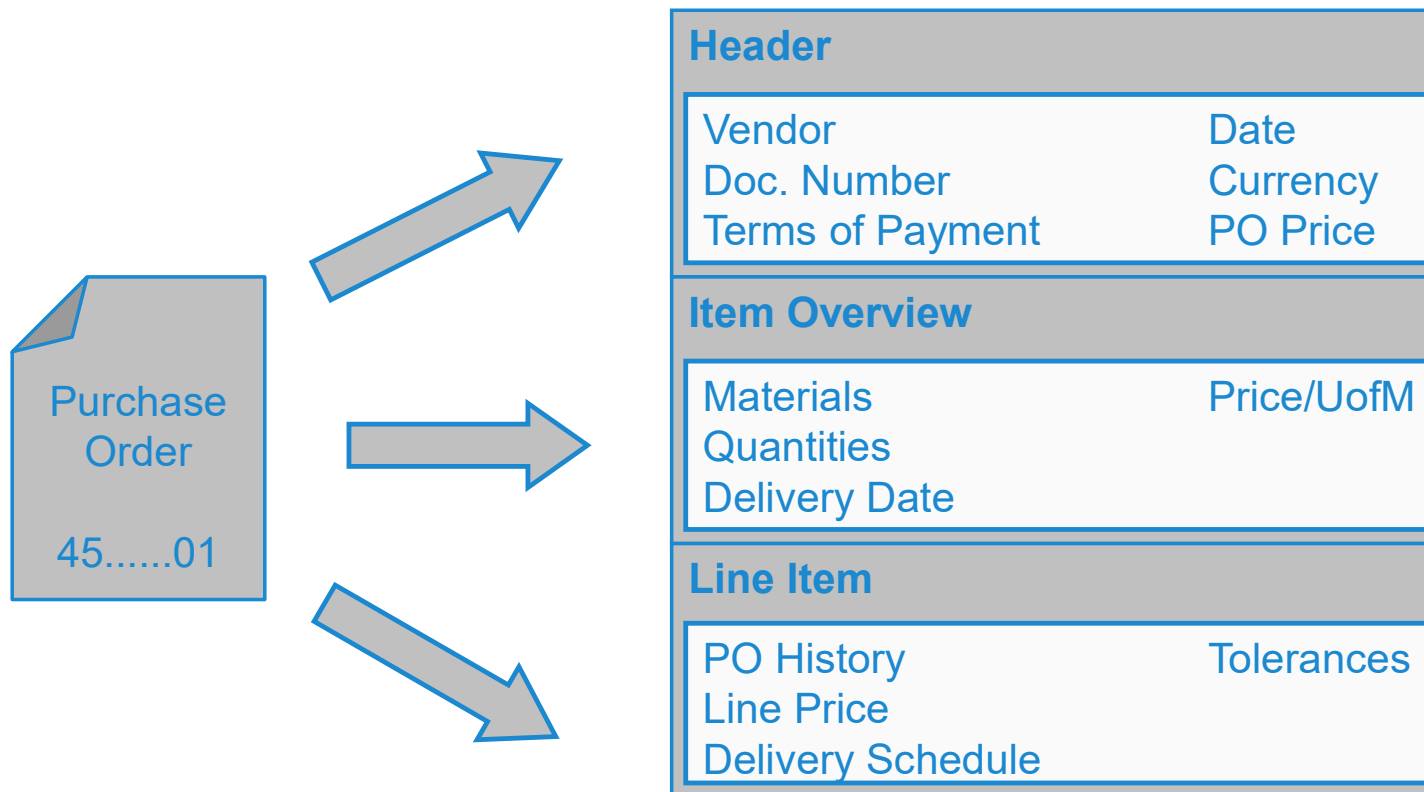
Purchase Order Output

- 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

Purchase Order 45......01

Notify Vendor

Vendor

Shipment
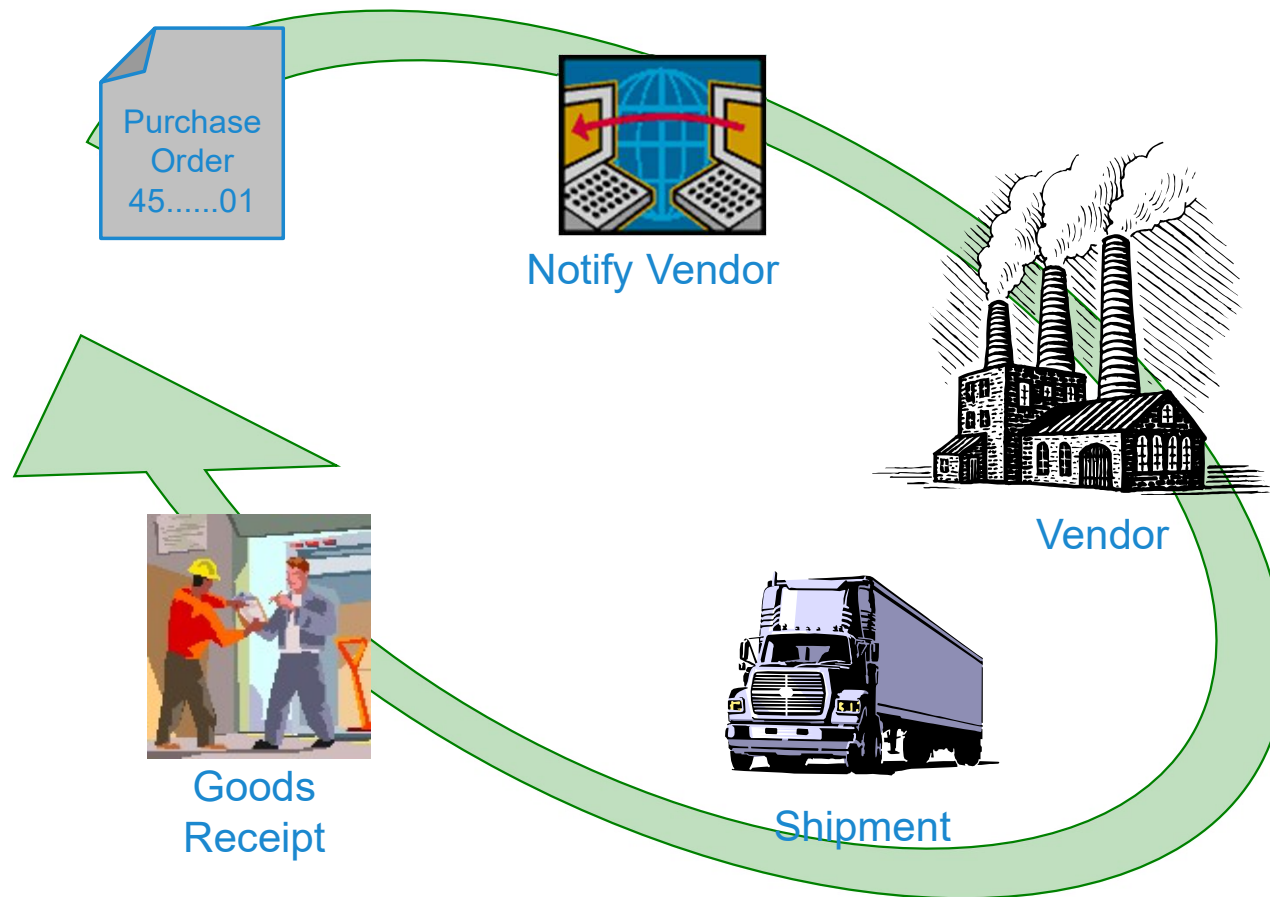
Goods Receipt

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 with generate a warning or an error
  - Depending on system configuration the difference could cause the system to Block the Invoice

Purchase order
- Target quantity
- Target price

Invoice receipt
- Actual price

Goods receipt
- Actual quantity
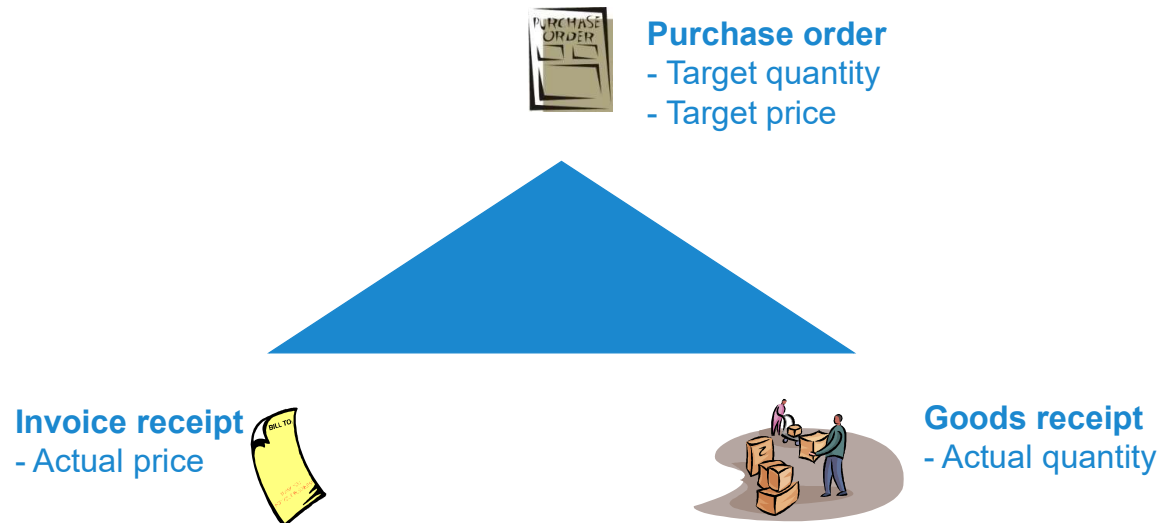
Invoice Processing

- 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

Integrated procurement process

To process a complete procurement process, you will assume various roles within Global Bike Inc., for example: Purchaser, Warehouse Worker, Accounting Clerk. In general, you will work in the Materials Management (MM) and Financial Accounting (FI) departments.
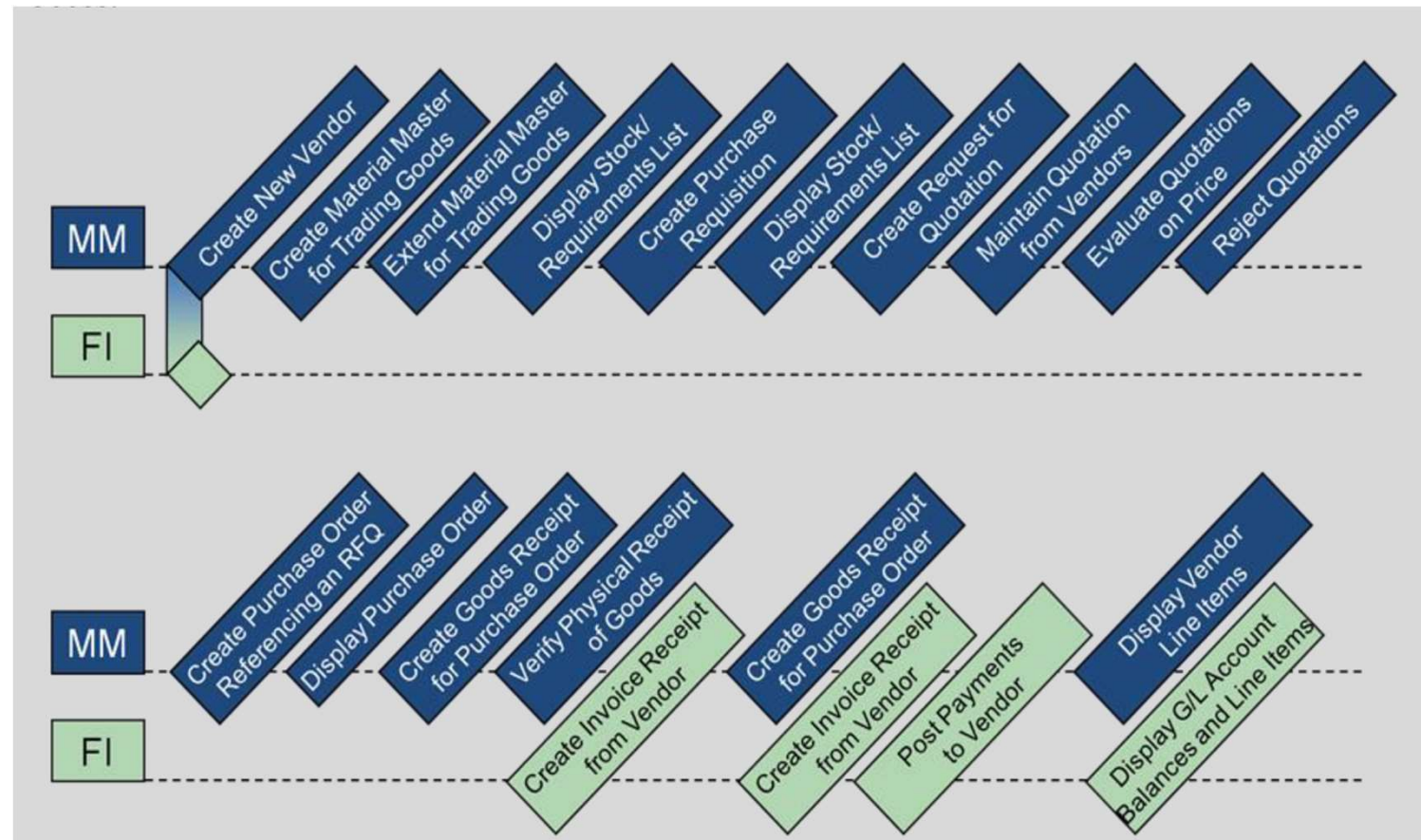
MM Challenge

Scenario

To produce the Repair Kit for the PP Challenge, you need the materials TRTR1###, BOLT1###, and TRWH1###. in stock. Generate purchase requisitions from the demand using the MRP run. Your purchasing department has identified a new cost-effective supplier (Max Accessories). TRTR1### = 20$, BOLT1### = 25$, and TRWH1### = 23$. Create this business partner and set up the purchasing info record for all three materials. Convert purchase requisitions into a purchase order and order all materials from this supplier. Then, post the goods receipt to the warehouse location MI00.

Note : After the MM Challenge, you can proceed with the PP Challenge.

Task Information Perform a complete procurement-process

MM Challenge

Please work on the example individually.

.. minutes until ..:.. PM.