

Warehouse Management (WM)

Curriculum: Introduction to ERP using Global Bike

Teaching material - Information

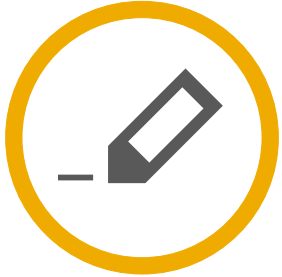


Teaching material - Version

- 3.2 (April 2018)
- Software used
 - SAP ERP 6.08
- Model
 - Global Bike
- Prerequisites
 - No Prerequisites needed



Module Information



Authors

- Chris Bernhardt



Target Audience

- Beginner

Module Information



Learning Objectives

You are able to

- name some functionalities of the WM module.
- define the central organizational structures of the WM module.
- summarize the master data which is most important for the WM module.
- explain standard Warehouse Management processes.

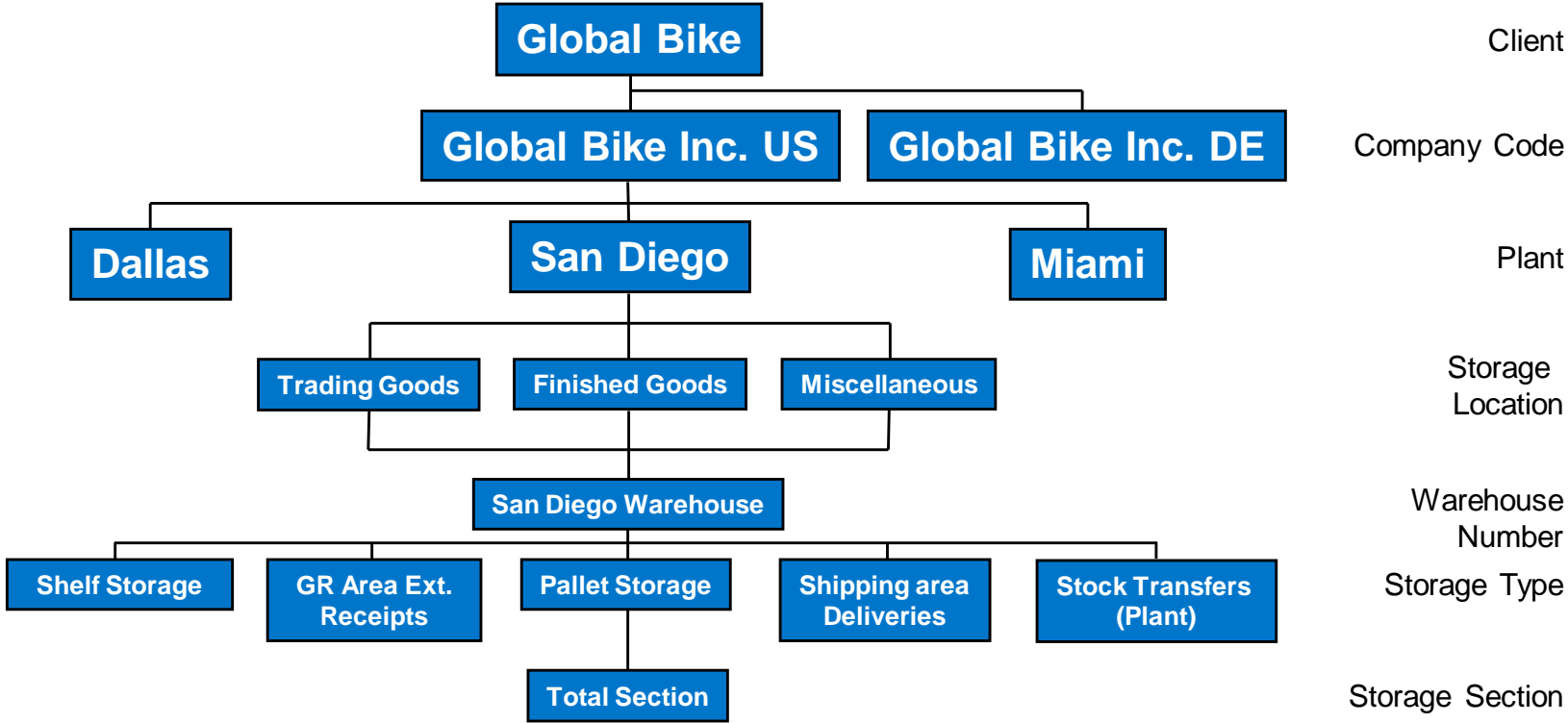
Functionality

- Goods Receipt
- Goods Issue
- Picking
- Packing
- Shipping
- Inventory

Agenda

- WM Organizational Structure
- WM Master Data
- WM Process Management and Control

WM Organizational Structure



WM Organizational Structure

- 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

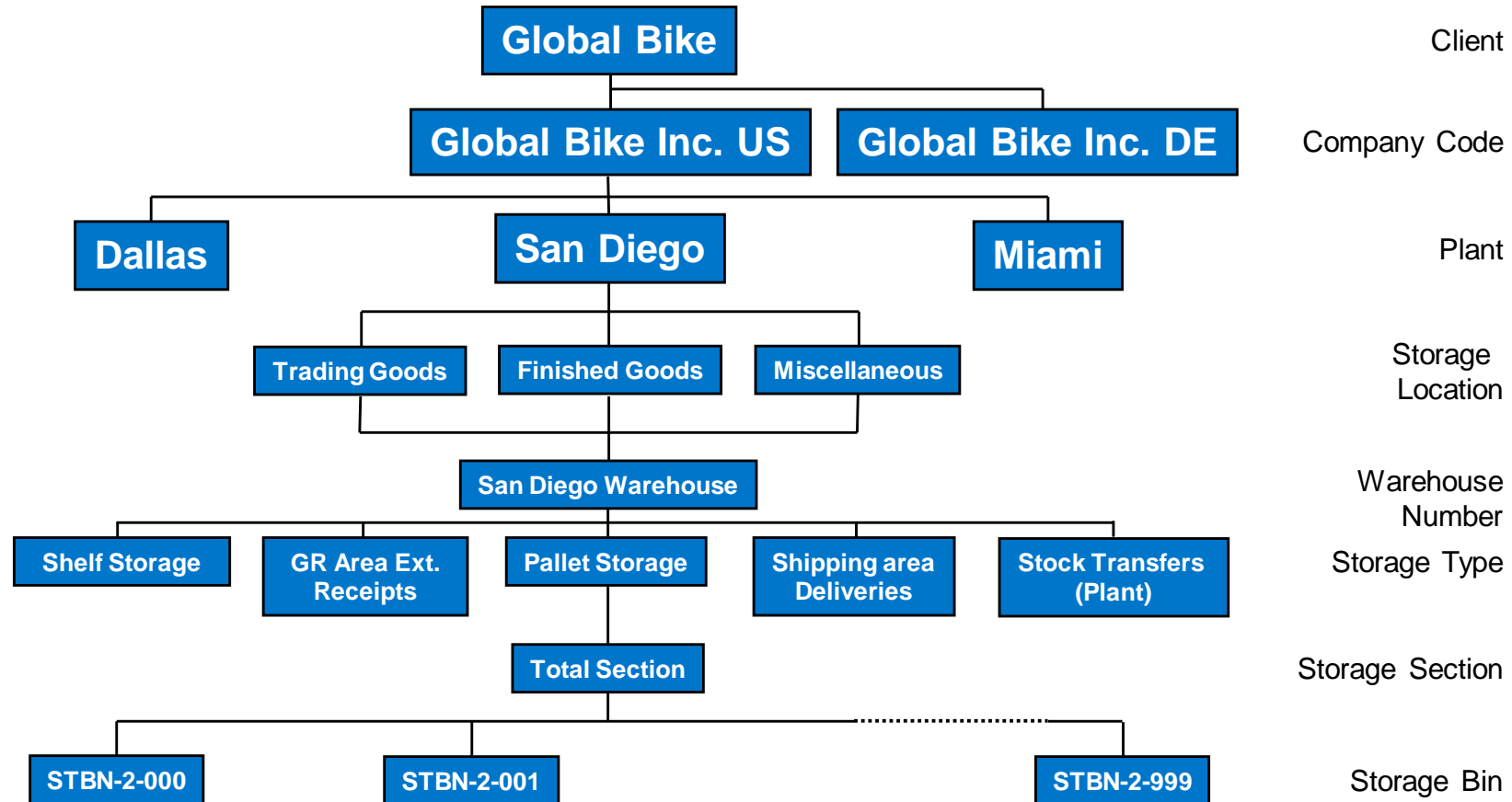
WM Organizational Structure

- Warehouse Number
 - Number that identifies a complex, physical warehouse structure within the warehouse management system
- Storage Type
 - Subdivision of a complex, physical warehouse
 - Is identified by its warehousing technique, form of organization, or its function
- Storage Section
 - Logical or physical subdivision of a storage type
 - Groups together a series of similar storage bins
- Picking Area
 - Groups storage bins together from the standpoint of picking strategies

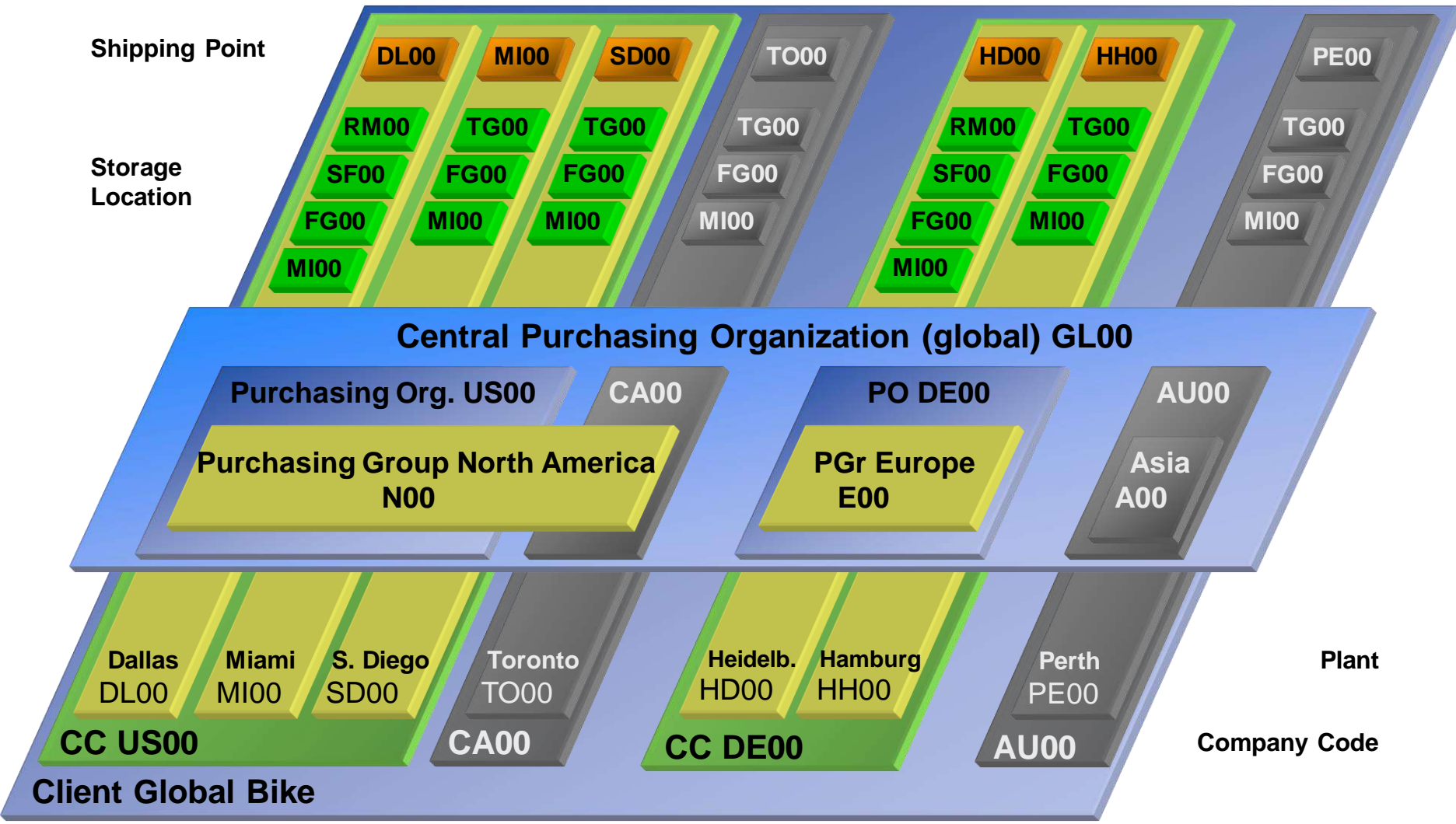
WM Organizational Structure

- Warehouse door
 - Marks the point where the means of transport changes to an internal transportation
- Allocation Zone
 - Temporary storage of goods, which have just arrived or will be shipped soon
- Shipping Point
 - Is the part of the company responsible for the type of shipping, the necessary shipping materials and the means of transport
- Storage Bin
 - Smallest addressable unit in a warehouse, which identifies the exact location in the warehouse where goods can be stored
 - Master Data

Global Bike Structure for Warehouse Management



Global Bike Enterprise Structure in SAP ERP (Logistics)




Agenda

- WM Organizational Structure
- **WM Master Data**
- WM Process Management and Control

WM Master Data

Display Transfer Requirement: List for Material

Warehouse Number 

Material Stock Cat.

Plant Special Stock

Stor. Location

Batch

Shipment Type

Status of Movement

☐ Processing Complete

General Selection Criteria

Transfer Priority

Execute From (Date)

Execute to (Date)

Requirement Number

Additional Number

Source Storage Type

Dest. Storage Type

Layout

Storage Bin Master Data

Material Master Data

Hazard Master Data

Batch Master Data

Storage Bin Master Data

- Storage Bin Master Data
 - Two different organizational levels
 - Warehouse Level:
All indicators and fields which are valid for the whole warehouse
 - Storage Type Level:
All indicators which are only valid for specific storage types
 - Also includes Storage Bins and Quants

Display Storage Bin

Warehouse No. 100
Storage Type 001 Shelf Storage
Storage Bin STBN-1-100

Stor. bin Stock Invent. Bin sectioning Statistic

Storage Section 001 Total Section
Picking Area
Fire-cont.sect.
Stor. bin type S1 Shelf

Maximum Weight 9,999.000 LB Occupied weight 150.003
Total capacity 0.000 Cap.used 0.000
Utilization X 1.50 No. of quants 2
No.stor.units 0.000

Status
☐ Putaway block
☐ Stock Removal Block
Blk.reason

Stock per storage bin

Material	Pl...	St...	Total Stock	B..	Batch	Spec.Stoc
KPAD1100	SD00	TG00	50	EA		
EPAD1100	SD00	TG00	50	EA		

Quant Stor.unit

Storage Bin Master Data

- Storage Bin

- Smallest addressable unit in a warehouse

- General Data

- Warehouse
- Storage type
- Storage bin number

- Storage Bin Data

- Storage section
- Picking area
- Fire-containment section
- Bin type
- Max. weight

- Status

- Blocked for putaway
- Stock removal block
- Blocking reason

General Data

Storage Bin Data (WM)

Status (MM)

Storage Bin Master Data

- Quant
 - Smallest addressable unit of measure for a material in SAP ERP
 - General Data
 - Material
 - Plant / Storage location
 - Batch
 - Warehouse
 - Storage type
 - Storage bin
 - Stock Data
 - Total stock
 - Available stock
 - Block Indicator
 - Block
 - Putaway/removal status

General Data

Stock Data (MM)

Blocking Indicator (MM)

Material Master Data

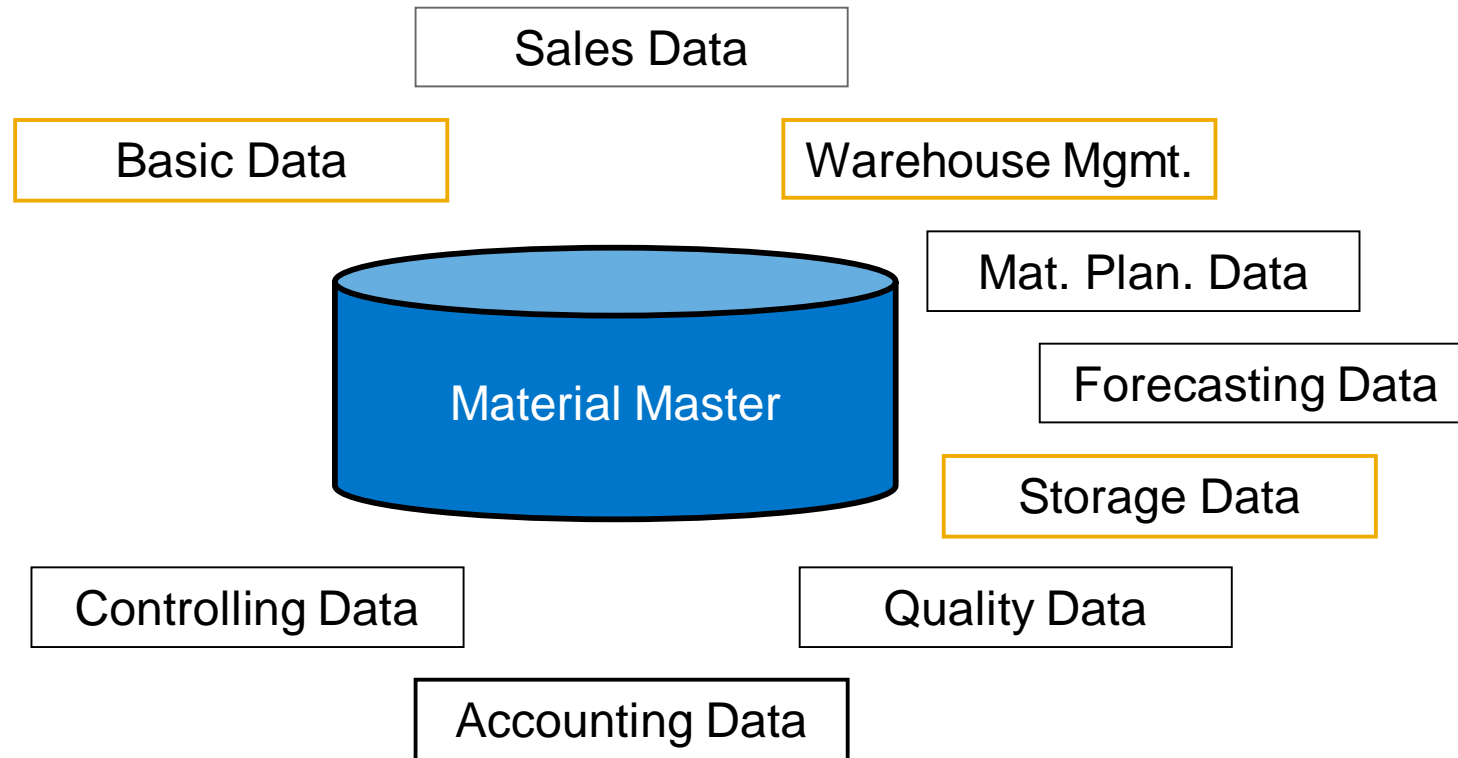
■ Material Master

- 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

The screenshot displays the SAP 'Display Material' interface for material DXTR1000, a 'Deluxe Touring Bike (black)'. The interface is organized into several functional segments:

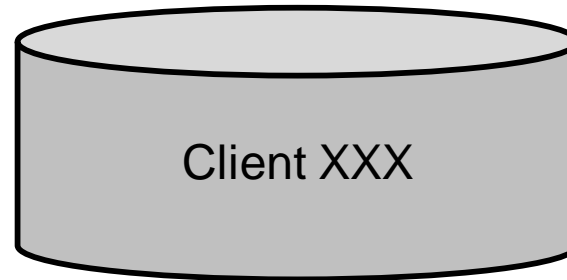
- General data:** Includes fields for Base Unit of Measure (EA, each), Material Group (BIKES), Old material number, Division (BI), Product allocation, X-plant matl status, Valid from, GenItemCatGroup (NORM), and Standard item.
- Material authorization group:** Includes the Authorization Group field.
- Dimensions/EANs:** Includes Gross Weight (8.510), Net Weight (8.510), Volume (0.000), Size/dimensions, EAN/UPC, Weight unit (6), Volume unit, and EAN Category.
- Packaging material data:** Includes the Matl Grp Pack.Matls field.
- Basic Data Texts:** Includes Languages Maintained (0), a 'Basic Data Text' button, and a Language dropdown menu.

Material Master Views



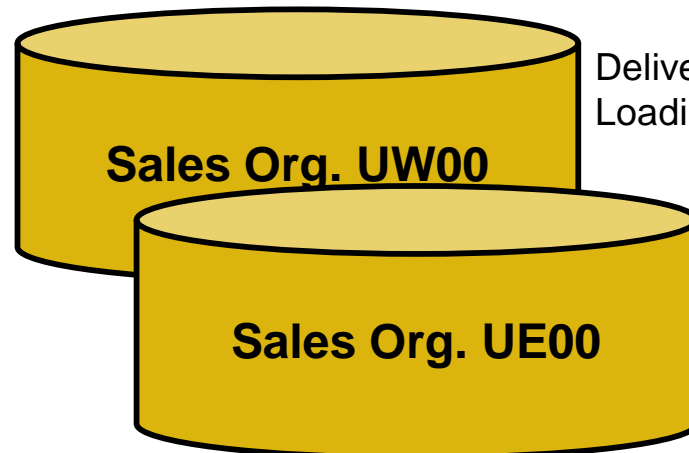
Material Master

General Information relevant for the entire organization:



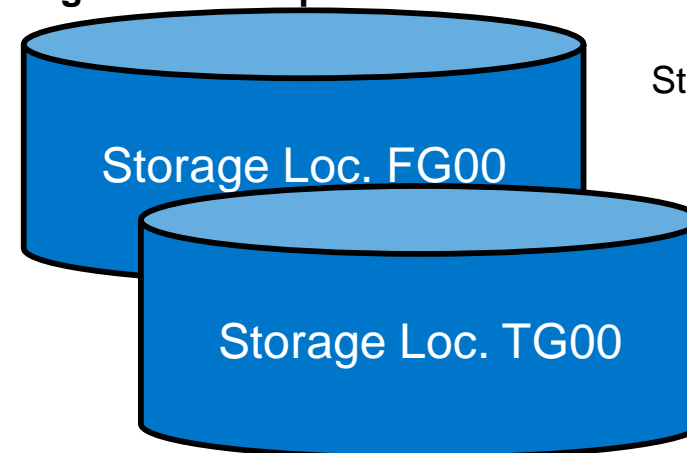
Name
Weight
Unit of Measure

Sales specific information:



Delivering Plant
Loading Grp

Storage Location specific information:



Stock Qty

Hazard Master Data

- Storage area for hazardous materials
 - Flammable liquids
 - Toxic materials
 - Radioactive materials
- General Data
 - Storage class
 - Water pollution class
 - Flash point
 - Aggregate state
 - Hazardous material warning
 - Hazardous substance number

[illegible]

Batch Master Data

- Subset of Material
 - homogeneous series of unreproducible units with an unique specification
- Basic Data 1 & 2
 - Expiration date
 - Inspection date
 - Trading data
 - Administration data
 - Text data
- Classification of Batch
- Material data

Create Batch

Material: TEST_CB
Batch: 1

Basic data 1 | Basic data 2 | Classification | Material data

Expiration Date

Date of Manufacture:
Shelf Life Exp. Date:
Available From:
Period Indicator: D

Miscellaneous

Next Inspection:

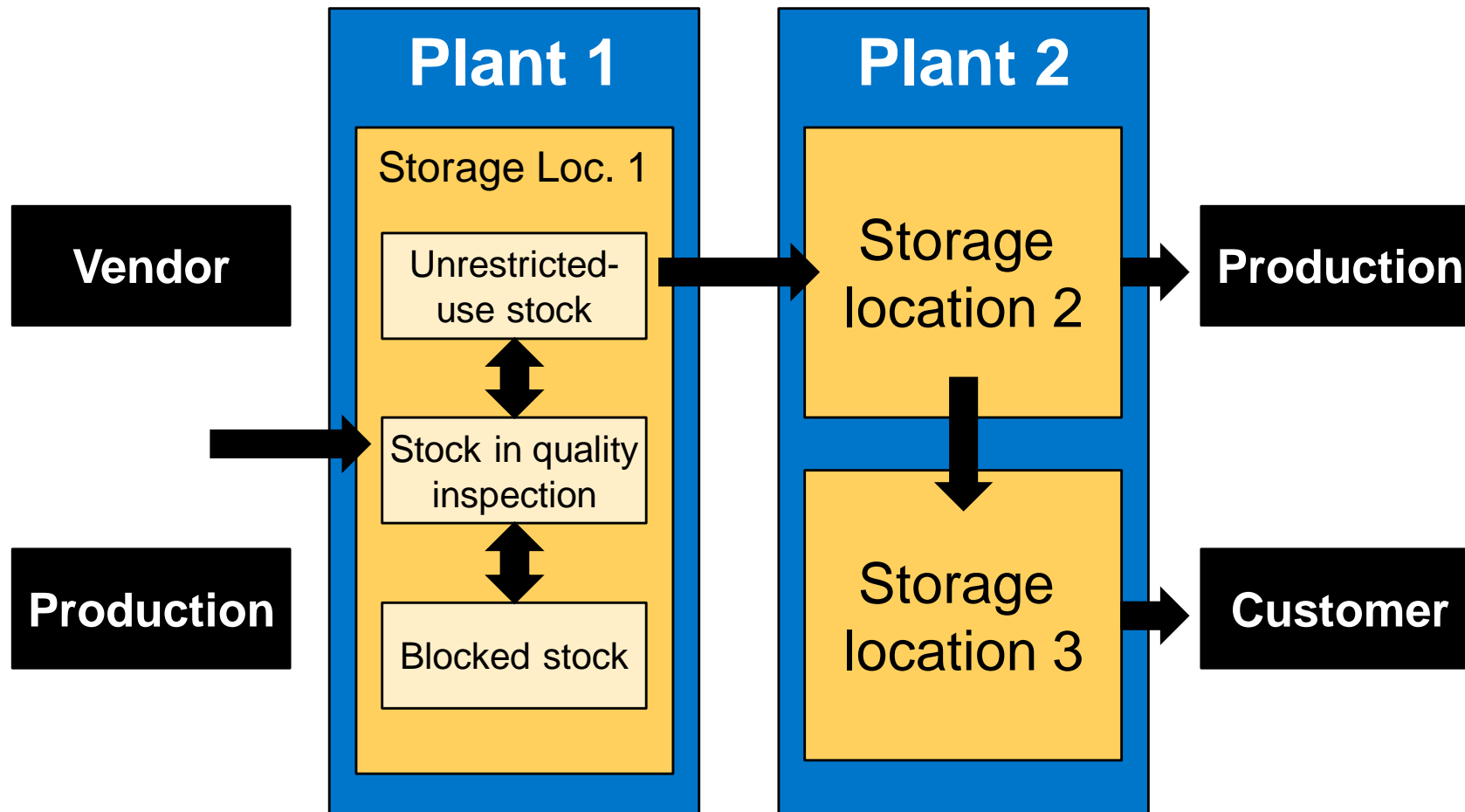
Trading Data

Vendor	<input type="text"/>	Ctry of origin	<input type="text"/>
Vendor Batch	<input type="text"/>	Reg. of origin	<input type="text"/>
Last Goods Receipt	<input type="text"/>	Exp/imp group	<input type="text"/>

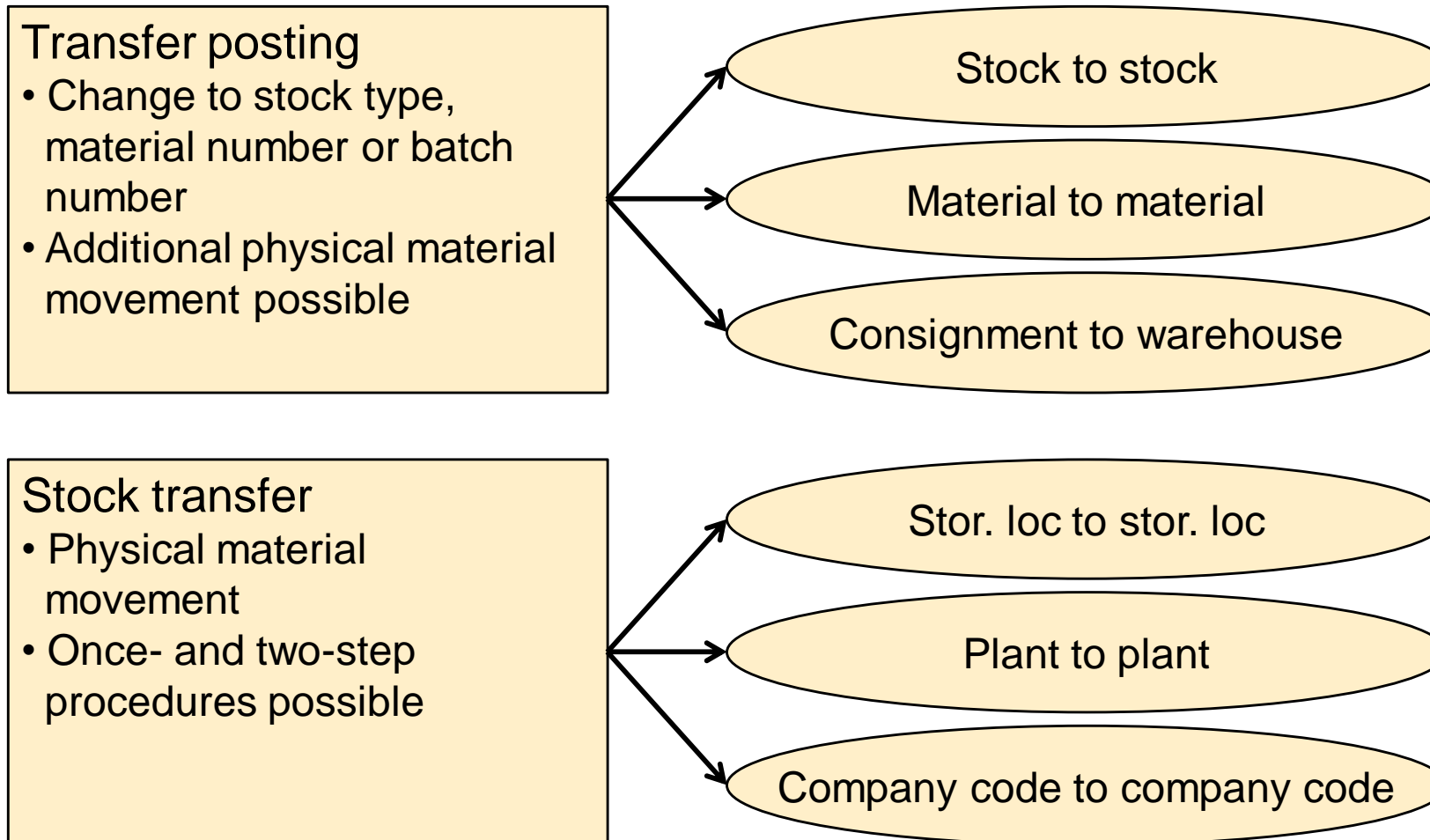
Agenda

- WM Organizational Structure
- WM Master Data
- WM Process Management and Control

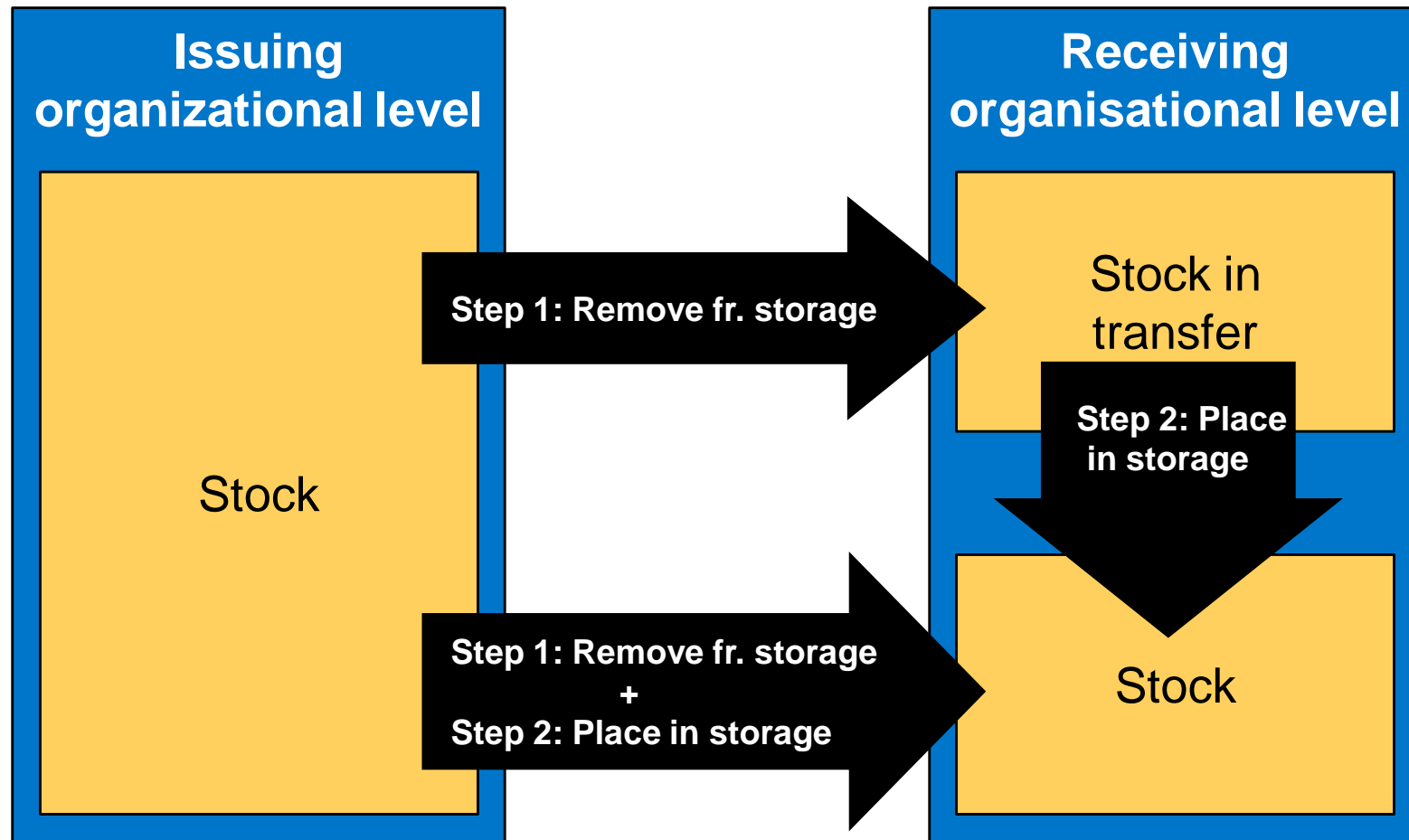
WM Types of goods movements



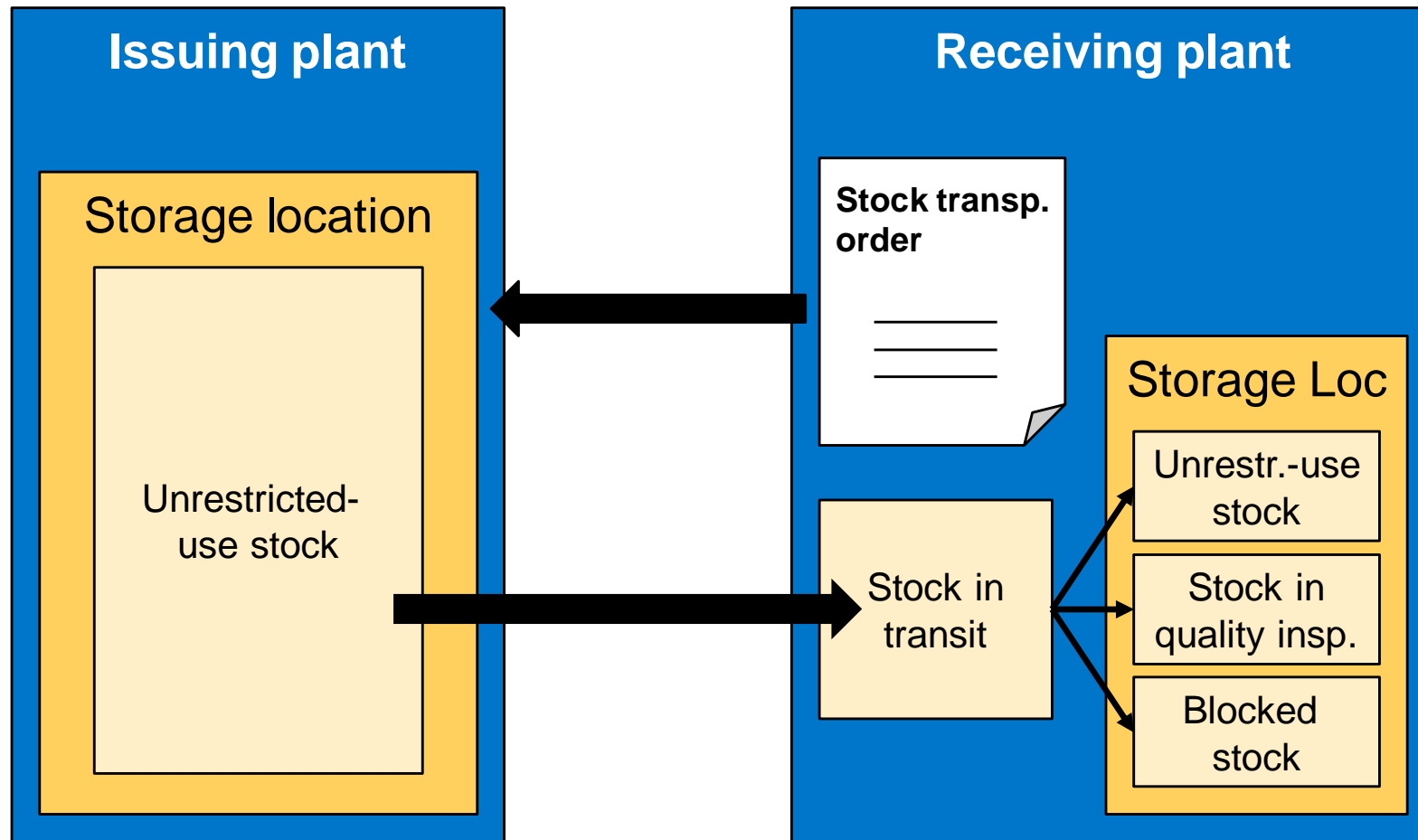
Transfer posting and stock transfer



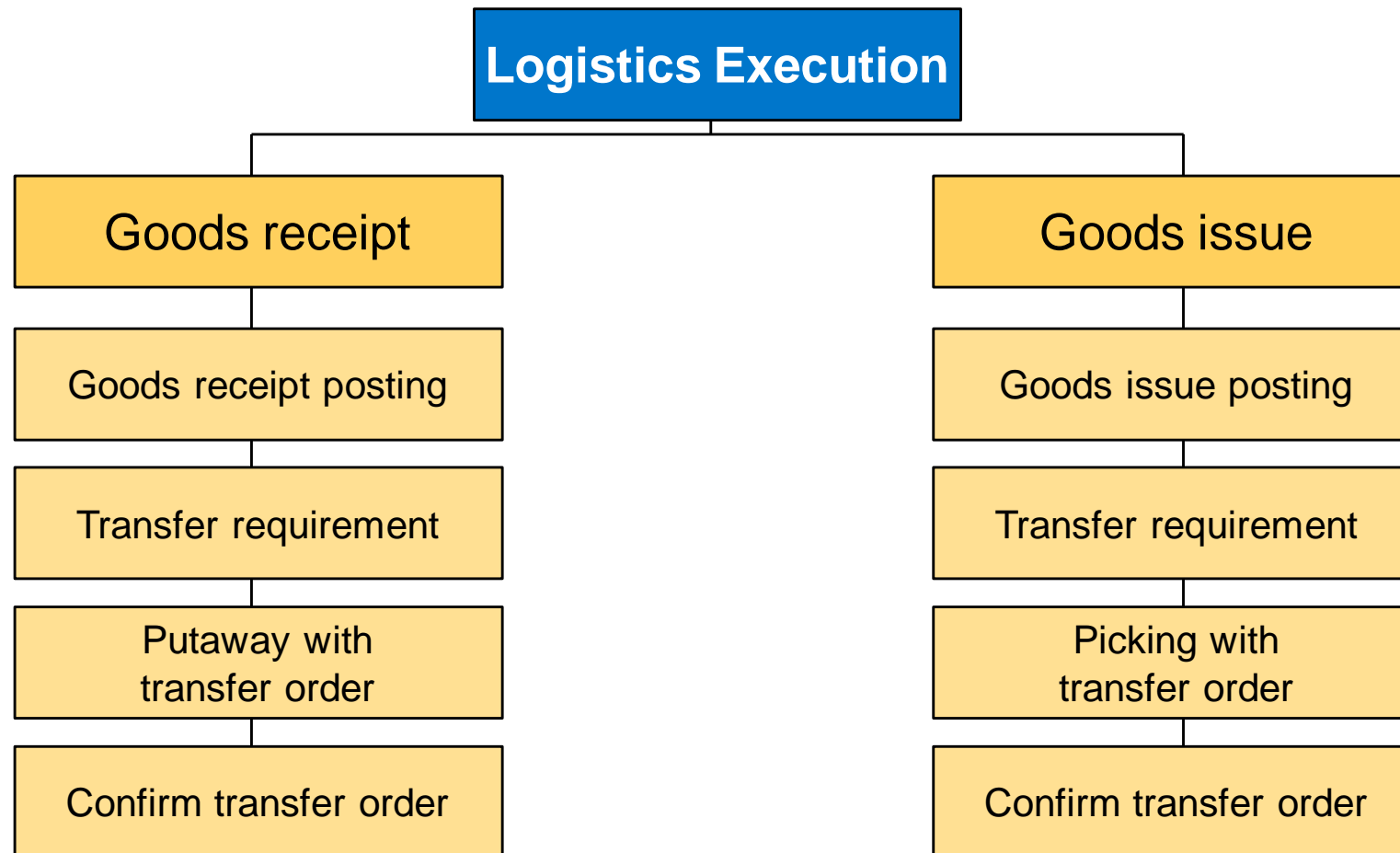
One-Step/Two-Step Procedures



Stock transport order



WM Process



WM Process Management and Control

- Posting change notice (PCN)
 - Generated by posting change processes in WM-administrated stocks
 - Functionality similar to transfer requests
 - Not necessarily combined with a physical goods movement
- Transfer requirement (TR)
 - A request to transfer materials at a particular time from a source storage bin to a destination storage bin in a warehouse complex
 - Represents the expected and scheduled goods movements in WM
 - Generally generated by postings in the inventory management
 - Consists of transfer request header and line items
- Transfer order (TO)
 - Central documents for WM
 - Every material movement requires a transfer order
 - No difference between real and logical movement

Transfer Order

- Creation of transfer order depends on preceding document
 - Transfer request
 - Posting change notice
 - Outbound delivery
 - Inbound delivery

- Types of Transfer Order Creation
 - Manual (TR, PCN, material document)
 - Direct TO-Creation
 - Automatic TO-Creation
 - Manual (Delivery Monitor)

Inventory

- Periodic inventory
- Continuous inventory
- Inventory on putaway
- Zero stock check
- Sample-based physical inventory
- Cycle-Counting

Inventory process

