

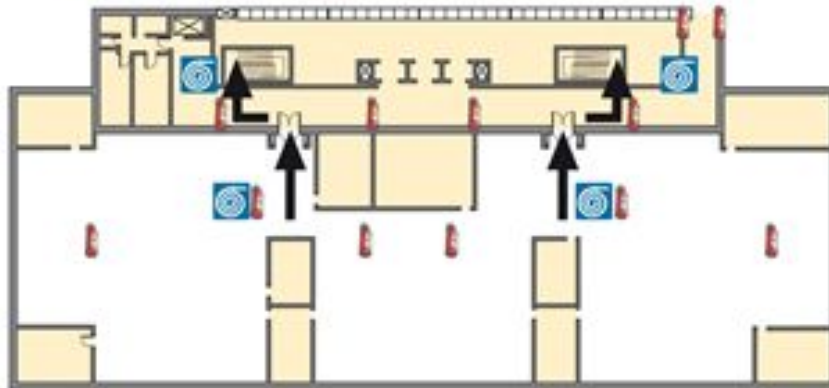


# MAN Inventory Management

Stock strategy definition

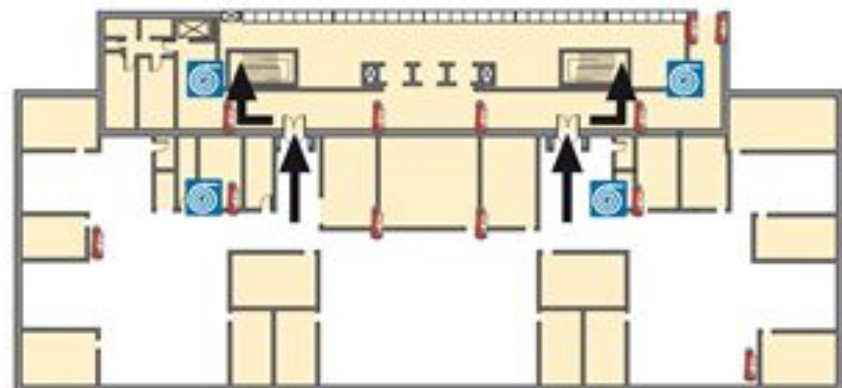
# EITS Evacuation plan

## 1. Third floor



There are 6 fire extinguishers and 2 hoses inside each floor and 5 extinguishers and 2 hoses on the hall outside the office. There is also 1 extinguisher inside each kitchen. Exit is always through the entrance doors and down the stairs.

## 2. Fourth floor



There are 6 fire extinguishers and 2 hoses inside each floor and 5 extinguishers and 2 hoses on the hall outside the office. There is also 1 extinguisher inside each kitchen. Exit is always through the entrance doors and down the stairs.

## 3. Meeting Point



In case of evacuation: The Meeting point is Albasanz, 16. When you leave the building, go to the right. About 50 meters away is a building similar to ours with a restaurant on the ground floor. Meeting point is the esplanade in front of the building.

## 4. Emergency Team

In case of Emergency  
**ALWAYS** follow the instructions of the  
**EMERGENCY TEAM** wearing yellow vests,  
or call to the Emergency Telephone: **112**

# Training Rules

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- **Be punctual**
- **Turn off your mobile phone**
  - In case you need to attend a call, please go out training room or use coffee breaks
- **Participate actively**
  - In case of questions ask

**Any Other??**



# Training Summary

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- **Description:** Understanding of the elements use for define the stock strategy. Understanding of concept as consignment, batch management, material types and material master data. Understanding SAP main transaction involve



- **Duration:** 3 hours



- **Target group:** Purchasing, Stock usage responsible, Warehouse responsible, Virtual Warehouse administrator



- **Topics:** Stock strategy definition



- **Tools:** SAP MM.

# Key Process Description: Stock Strategy Definition

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**Inventory management process objectives:** adequate compromise between the Material Availability, its impact on Plant Operation and on Optimum Stock Level, meaning lowest sustainable Net Working Capital, at plant / OpCo / Region level.

## Stock strategy Objectives:

- Stock strategy and material availability defined for each material:
  - Stockable Materials
    - Stock: Normal
    - Stock: Consignment
    - Stock: Capitalized Spare
    - Stock: Virtual Warehouse
  - Non Stockable Materials
    - Ordering Process scenario to be used
- Material Requirement Planning —> MRP
  - Valid for Stockable Materials

Stock strategy definition is part of the Inventory Management process



## Process Steps definition (1/2)

No.	Step Name	Input	Description of Step	Output
1	Inventory Directives	<ul style="list-style-type: none"> <li>- FOCFI target</li> <li>- Current Inventory Level</li> <li>- EMEA / Regional Initiatives</li> </ul>	- Define and communicate the targets and directives for Inventory Management	- Guidance and targets known by the inventory stakeholders
2	Criticality	<ul style="list-style-type: none"> <li>- FMEA</li> <li>- Risk Analysis</li> <li>- BOM Update</li> </ul>	- Define the level of criticality of the material	<ul style="list-style-type: none"> <li>- Criticality of the material</li> <li>- Material Availability requested</li> </ul>
3	FC Consumption	<ul style="list-style-type: none"> <li>- History analysis</li> <li>- Supplier Manual</li> </ul>	- Estimate the consumption of the material based on FC and historical data	- Stock Strategy analysis
4	Lead Time	- Vendors / Market evaluation	- Define the lead time for the material	- Stock Strategy Analysis
5	Value	- Vendors / Market evaluation	- Define the price of the material	- Stock Strategy Analysis
6	Stock Strategy Analysis	<ul style="list-style-type: none"> <li>- Inventory Directives</li> <li>- Material Availability Requested</li> <li>- Criticality of the material</li> <li>- FC Consumption</li> <li>- Lead Time</li> <li>- Value</li> </ul>	- Analyze the inputs to define the stock strategy to be implemented for the material	<ul style="list-style-type: none"> <li>- Stock Item</li> <li>- Capitalize Maintenance Material</li> <li>- Critical Maintenance Material</li> <li>- Stock</li> <li>- Non-Stock Item</li> </ul>
7	Non-stock item	- Stock strategy analysis	- Decision not to have on stock	- Material Master Update
8	Capitalize Maintenance Material	<ul style="list-style-type: none"> <li>- Stock Strategy analysis</li> <li>- LHARP</li> </ul>	- Define the material as Capitalize Maintenance Material (status in MMD = CR and split valuation)	<ul style="list-style-type: none"> <li>- Critical Maintenance Material</li> <li>- Capex required for purchasing</li> <li>- Material as "Project on stock"</li> </ul>

## Process Steps definition (2/2)

No.	Step Name	Input	Description of Step	Output
9	Strategic Maintenance Material	- Stock strategy analysis	- Define the material as Strategic Maintenance Material (Status in MMD = ST and split valuation and out of slow moving items list)	- Virtual Warehouse
10	Stock	- Stock Strategy analysis	- Define as stock material	- Virtual Warehouse
11	Virtual Warehouse?	- Stock item	- Check if the material is covered by Virtual Warehouse	- Virtual Warehouse Process - Central Warehouse - Plant Stock
12	Central Warehouse?	- Stock Item - Virtual Warehouse	- Check if the material is covered by Central Warehouse	- Central Warehouse - Virtual Warehouse
13	Plant stock	- Stock Item non covered by Virtual Warehouse - Vendors / Market evaluation	- After having defined that the material will be only plant stock material, define the stock type to be used	- Standard stock - Consignment stock - Self-service stock
14	Standard stock	- Plant stock - FC Consumption / turnover	- Analyze the possibility and the requirements to decide if the material has to be covered by the MRP	- MRP - Material Master Update
15	Consignment stock	- Plant Stock - Vendors / Market evaluation - FC Consumption / turnover	- Define the conditions to be covered by the consignment stock by supplier and finalize the contract	- MRP - Material Master Update - Contract
16	Self-service stock	- Plant Stock - Vendors / Market Evaluation - FC Consumption / turnover	- Define the conditions to be covered by the self-service stock by supplier and finalize the contract	- Material Master Update - Contract
17	MRP Parameters	- Vendors / Market evaluation - FC Consumption / turnover - Criticality - Material Availability Requested - Stock item - Material to be covered by MRP	- Define the settings for the MRP Planning	- Reordering point - MRP Type - MRP Controller - Lot size (type/min/max/max level) - Procurement type - Delivery and processing time



## Process Roles & Responsibilities

No.	Step Name	Plant / Regional Manager	Stock usage responsible	Warehouse Responsible	Purchasing	Virtual Warehouse Administrator	Central Warehouse Coordinator	MRP Controller	Material Master Administrator
1	Inventory Directives	A, R	C	C	C			C	
2	Criticality		A, R	I	I			C	
3	FC Consumption		A, R	C	I			C	
4	Lead Time		C	I	A, R			I	
5	Value		C	I	A, R			I	
6	Stock Strategy Analysis	I	A, R	R	R			R	
7	Non-stock item		A, R	C	C			C	I
8	Capitalize Maintenance Material		A, R	I	I	I		C	I
9	Strategic Maintenance Material		A, R	I	I	I		C	I
10	Stock		A, R	R	I			C	I
11	Virtual Warehouse?		I	I	I	R	R	I	A
12	Central Warehouse?		I	I	I	R	R	I	A
13	Plant stock		I	I	I	C	C	I	A
14	Standard stock		C	A, R	R			C	I
15	Consignment stock		C	A, R	R			C	I
16	Self-service stock		C	A, R	R			C	I
17	MRP Parameters		R	A	C	R		R	I



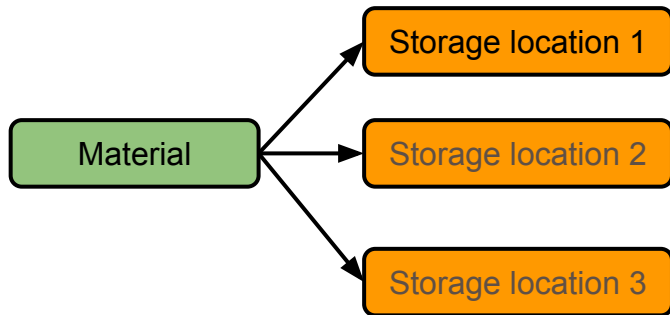
# Key Process Description: Stock Strategy Definition

MATERIAL MASTER DATA EBM System Design																		
EBM MATERIAL TYPES																		
Material	Description	EBM usage	Old Mat. Type	No. Range	No. Range	Price Contro	Price Control	Stock Qty.	Stock Value	Allowed Material Views								
										K	C	E	V	D	P	A	L	G
ZRAW	Raw materials	CEM: gypsum, slag, fly ashes, ... RMC: cement, aggregates, ...	ZMPR	1E+07	1,1E+07	V	X	Y	Y	X	X	X	X	X	X	X	X	X
ZAFR	AFR non-valuated	AFR materials	ZAFR/ZNVA	1,1E+07	1,2E+07	V	X	Y	N	X	X	X	X	X	X	X	X	X
ZSMF	Semifinished Products	raw meal, ...	ZMST	1,3E+07	1,4E+07	S	X	Y	Y	X	X	X	X	X	X	X	X	X
ZCEM	Finished Products CEM	Finished Cementitious Materials	ZMGR	1,4E+07	1,5E+07	S	X	Y	Y	X	X	X	X	X	X	X	X	X
ZAGG	Finished & Semifinished	Finished & Semi-finished Aggregates	ZMGR	1,5E+07	1,6E+07	S	X	Y	Y	X	X	X	X	X	X	X	X	X
ZRMX	Finished Ready-mix Concrete	Ready-mix Concrete	ZPTH, ZPMC	1,6E+07	1,7E+07			N	N	X	X	X					X	
ZCPR	Finished Concrete Products	Stockable Concrete Products (dry mortar, precasted product, etc...)	ZMGR	1,7E+07	1,8E+07	S	X	Y	Y	X	X	X	X	X	X	X	X	X
ZFUE	Energy & Fuels	Coal, coke, oil, etc...	ZMCO	2E+07	2,1E+07	V	X	Y	Y	X	X	X	X	X	X	X	X	X
ZSWP	Spare Parts & Wear parts	Spare parts, wear parts	ZMCO	3E+07	4E+07	V	X	Y	Y	X	X	X	X	X	X	X	X	X
ZCON	Consumables	Explosives, lubricants, safety materials, laboratory chemicals, etc.	ZMCO	4E+07	5E+07	V	X	Y	Y	X	X	X	X	X	X	X	X	X
ZTRA	Trading Goods	Materials bought to third parties to be sold	ZMER	1,2E+07	1,3E+07	V	X	Y	Y	X	X	X	X	X	X	X	X	X
ZNVL	Non-valuated materials	Quarry limestone, quarry clay, ... Produced material as a result of a pre-process needed for the main production phase (Coal grinding, Slag dryer ...). Safety materials which are valued on quantity (for MRP purposes), but not on value.	ZNVA	5,1E+07	5,2E+07	V	X	Y	N	X	X	X	X	X	X	X	X	X
ZNST	Non-stock materials	Generic materials ≠ non storage materials created with the purpose of getting a default account assignment when creating purchase documents (office materials, ...).	ZDIR, ZNAL	5,2E+07	5,3E+07			N	N	X	X	X					X	
ZSDS	Sales&Distribution Services	Pumping services, transposting services, ... H.Trading => freights, insurances, ...	ZSER	6E+07	6,1E+07			N	N	X	X	X	X				X	
ZPAC	Packaging materials	Packaging bags, pallets, trucks, ...	ZEMB, ZTRK	7E+07	7,1E+07	V	X	Y	Y	X	X	X	X	X	X	X	X	X
ZPIP	Pipeline materials	Gas, electricity, water, ...	ZPIP	2,1E+07	2,2E+07	V	X	N	N	X	X	X					X	X
ZASS	Maintenance assemblies	Maintenance assemblies are group of materials to separate technical objects (equipments) into more clearly defined units in plant maintenance.	IBAU	External				N	N	X	X							

Material types (highlighted in green color) for which stock are managed, and therefore Inventory Management processes are applicable.

•Non Valuated Materials and AFR stocks are not managed in value.

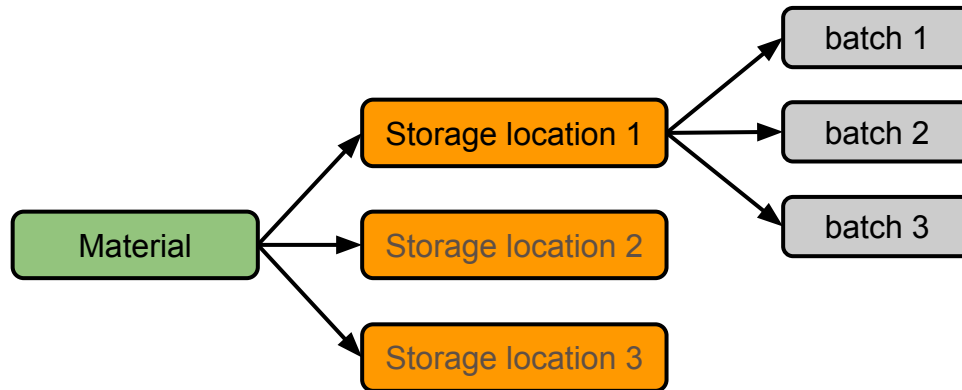
# Key Process Description: Stock Strategy Definition



- material **value** manage at plant level
- **quantity** manage at storage location level
- further subdivisions for a material manage batches

- Status
  - Critical (CR): Capitalizable materials
  - Strategic (ST): Materials not capitalizable but critical for the plant.
  - Normal Stock (NS): Regular stock not capitalizable.
- ABC Indicator
  - X=high rotation (recurrent)
  - Y=medium rotation (shutdown)
  - Z=low (on purpose)
- Material Group (PSCS)
  - materials that are Maintenance Material will be allocated to the groups 03 & 04.
- MRP data
  - MRP Controller (control of the accuracy of the need generated)
  - MRP Group (production phase, 1000 Raw Material Extraction, etc..)

# Key Process Description: Stock Strategy Definition



## EBM BATCH MANAGEMENT EXAMPLES

- Managing the different sizes of selected materials (e.g. Working clothes,....)
- AFR- Traceability: Control and visibility of the Lifecycle of AFR (to assure it has been properly pre or co-processed)

## Batch Management

- If a material is managed in batches, every quantity of that material must be assigned to a batch.
- The master batch and the stock data for the batch are created automatically during the first goods receipt.
- Specific data for a batch, such as the shelf life expiration date, should be manually maintain in the batch data
- The following stocks are managed separately at batch level:
  - Unrestricted-use stock
  - Restricted-use stock
  - Quality inspection stock
  - Blocked stock
  - Stock in transfer
  - Blocked stock returns
- Goods movements for materials handled in batches require batch number in addition to the material number

# Reporting Inventory Management Cement

## ZMM003 – Inventory Management Cockpit

Exhaustive report to extract the material master data per storage location, together with some additional data from the material master.

The screenshot shows the 'Inventory Management Cockpit' window with the 'Selection Parameters' section. It includes fields for Material, Plant (B100), Valuation type, Storage location, Storage bin, Material type (ZSMF), Material group, Plant-sp. material status, MRP type, MRP group, MRP controller, Lot size, Last G/I (Date), Last G/R (Date), Equipment number (SAP), and Year for Analysis (2011). There are also checkboxes for 'No zero stock lines', 'Materials w/o BOMs only', 'Stock levels exceeding the MAX', and 'Materials with transfers only'. At the bottom, there is a 'Deletion Flag' section with radio buttons for 'All material', 'Deleted materials only', and 'Non-deleted materials only'.

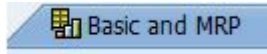
Report will provide information of the following data:

- Basis and MRP
- Equipment BOM
- Material w/o BOM
- Purchasing
- Inventory
- Inventory Storage Location
- Data Merge (Inventory + MRP)



# Reporting Inventory Management Cement

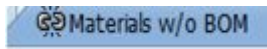
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**Basic and MRP tab:** Information regarding material master data fields



**Equipment BOM tab:** Display material in BOM per equipment



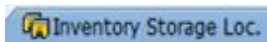
**Material w/o BOM**



**Purchasing:** Check the vendor, Purchase organization, Number of Purchasing Info Record, quantity (max, min and standard), price, currency for each purchased material



**Inventory:** Total and Own Stock, the Value, the Valuation Area, Type and Class of each material.



**Inventory storage location:** Data by storage location



**Data merge (Inventory + MRP) tab**

Detailed Training material for **Inventory Cockpit Report**



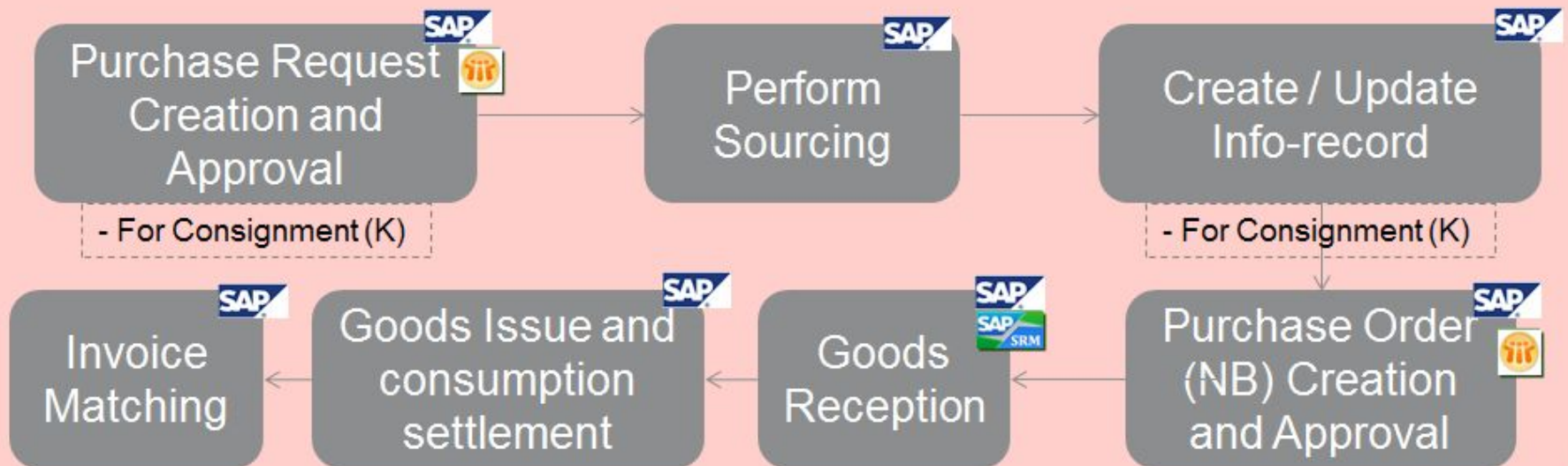


# P2P Inventory Management

Consignment Stock

Special type of purchase where the goods are stock at LafargeHolcim warehouse but supplier is still the owner of the materials (until it is removed from the warehouse).

### BASED ON NEED



- Any goods which are surplus or not required may be returned to the vendor and are not charged as per the contract terms.
- Commonly used to procure items which are specific to particular project (will avoid unnecessary expenditure and storage costs for excess/ obsolete inventory).

- Good issue can be done directly from a consignment stock
- Physical Inventory of consignment stock can be done (no invoices will be created)
- Material requirement can be done automatically through a consignment stock
  - Prerequisite: Material master data should MRP data should be fulfilled as a normal MRP material + **special procurement 10 consignment**
  - Output: After planned order creation it will transform into purchase request **with item category K** (consignment)

The screenshot displays the SAP MRP 2 transaction interface. At the top, the material is identified as 'COURROIE TRAPEZ B17X11MM LONG PRIM 4612M' and the plant as 'F106'. The 'Procurement' section shows 'Special procurement' selected with a value of '10', which is highlighted by a yellow box. Other fields in this section include 'Batch entry', 'Prod. stor. location' (set to 'G200'), 'Default supply area', 'Storage loc. for EP', 'Stock det. grp', and a 'Bulk Material' checkbox. The 'Scheduling' section at the bottom shows 'GR Processing Time' as '3 days', 'Planned Deliv. Time' as '10 days', and 'SchedMargin key' as '000'.

# Summary

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## Questions / Doubts

## Comments





# CONGRATULATIONS



# THANK YOU FOR YOUR ATTENTION



**LafargeHolcim**