

Procurement Logistics (MM) in SAP

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Presenting the functionality of SAP's Materials Management Module

Curran, T. A. and A. Ladd: "SAP R/3 Business Blueprint - Understanding Enterprise Supply Chain Management." Chapter 7, "Procurement Logistics", Prentice-Hall, 2000.

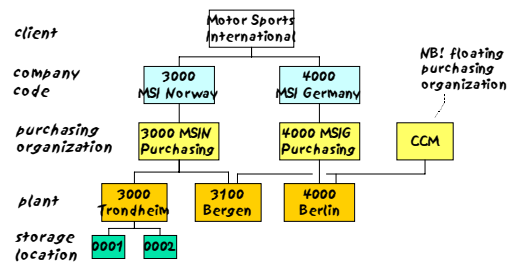
What is Procurement Logistics?

- Procurement Logistics = Materials Management (MM)
- "The heart of SAP R/3"
- Functions for purchasing, inventory management, warehouse operations, invoice verification
- Used by Purchasing department and Warehouse
- Integration with other SAP modules:
 - Material needs from PM, SM, SD, etc. (requisitions, reservations)
 - Accounting documents sent to FI
 - Purchasing costs registered in CO
 - Quality inspection of materials part of QM
 - Materials procured in projects from PS

MM Organizational Structures



SAP Procurement Structures



Organizational Structures: def. 1

- Client:**
 - Highest hierarchical level in SAP
 - All business areas to be integrated into SAP should be under one client
 - Some control tables (e.g. currency rates, measurement units)
 - Some master data: (e.g. basic vendor and customer data)
- Usage:**
 - Can be used to differentiate between a Development, Quality Assurance, and Production system within R/3

Organizational Structures: def. 2

- Company Code:**
 - Represents a legal/tax entity
 - Level of external reporting or legal sets of books
 - Maintains its own profit and loss statements and balance sheets
 - Example: Hydro Agri Europe solution has 46 legal company codes

Organizational Structures: def. 3

- **Purchasing organization:**
 - Responsible for procurement for one or more plants
 - Responsible for negotiating pricing and delivery terms
 - Assigned to a company code where inventory is legally tracked or costs are legally incurred (except for floating purch. org.)
 - Vendors defined at purchasing organization level
- Two typical configurations:
 - One purchasing organization for each company
 - One purchasing organization for each plant

Organizational Structures: def. 4

- **Plant:**
 - Manufacturing facility, warehouse, or location that stocks, manages, and values inventory
 - Usually a physical site
 - Assigned to a company code
 - One or more purchasing organizations assigned to plant
 - Materials defined at plant level
 - Usage:
 - MM procures materials to plant
 - PM maintains facilities at plant
 - PP produces products at plant
 - SD sells products from plant

Organizational Structures: def. 5

- **Storage location:**
 - Location within a plant where inventory is stored
 - Usage:
 - A physical storage place at plant
 - Grouping of materials in types or classes
- **Purchasing group:**
 - Corresponds to individual purchasers or group of purchasers
 - A purchasing organization contains one or several purchasing groups

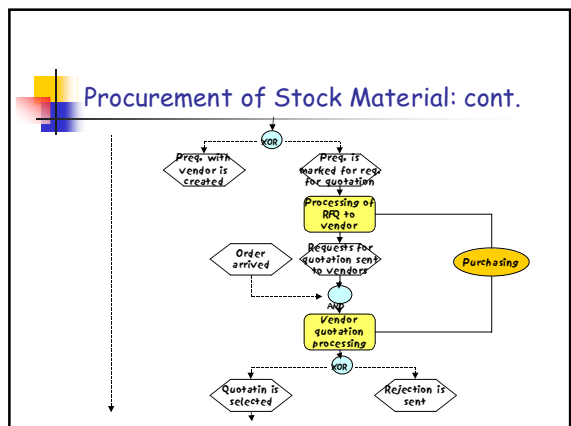
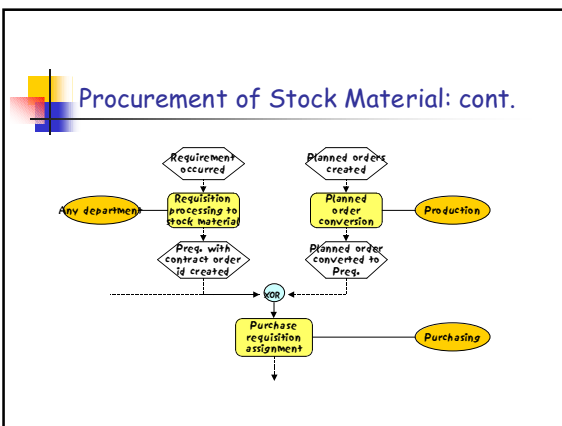
Procurement of Stock Material

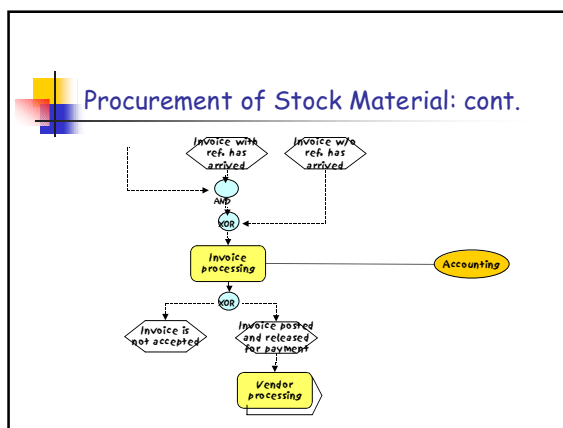
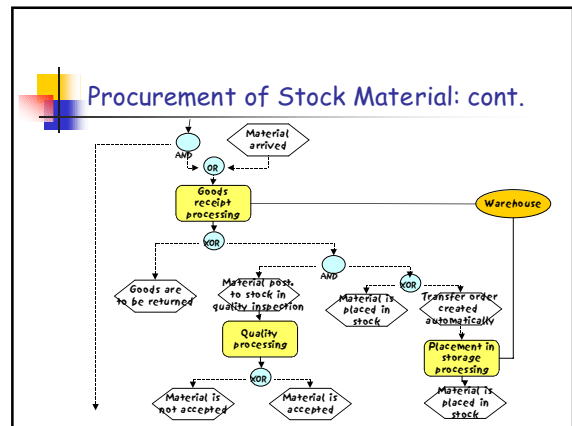
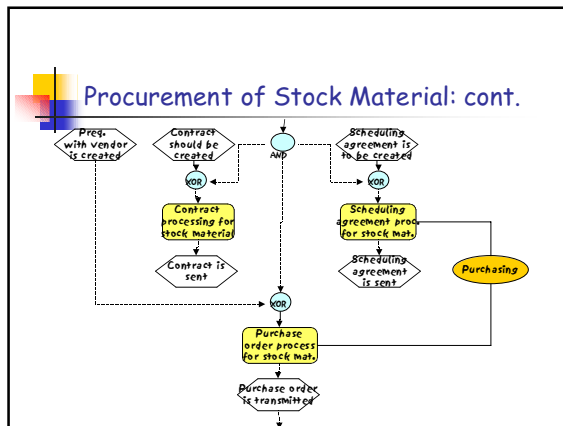
- When materials are needed, requisitions are sent to the purchasing department
- The materials are ordered and later received into the warehouse
- Stock value is updated
- The invoice is matched against what was received and later paid by the financial department

Value chain:

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    graph LR
      A[Purchase requisition] --> B[Purchasing]
      B --> C[Goods receipt]
      C --> D[Warehouse]
      D --> E[Quality inspection/verification]
      E --> F[Invoice]
      F --> G[Reporting]
      H[Vendor certification] --> G
  
```






- ### Procurement of Consumable Materials
- Some materials are not to be stored in stock
 - production materials
 - project materials
 - replacement items in plant maintenance
 - SAP implementation:
 - Consumable materials not linked to any stock account
 - Procement costs not included in inventory accounting, but posted to job order or cost center
 - Example: Pencils, buying a Handspring Visor on the project's budget


- ### Procurement of Consignment Materials
- Consignment material
 - owned by supplier
 - stored at customer's facility
 - Purpose:
 - faster maintenance delivery
 - customer do not need to pay before item in production
 - avoid production delays
 - SAP implementation
 - used like any other material type
 - vendor-owned inventory tracked like any other stock type
 - not valued on the company's books before issued to requester

- ### Procurement of Subcontract Work
- Subcontract orders:
 - outsourcing of manufacturing process
 - company purchases finished product, but provides some or all of the materials to the subcontractor
 - Inventory value of produced material:
 - net purchase order value + value of component materials posted out of inventory
 - SAP implementation:
 - create subcontract purchase order which specify component materials to send to subcontractor
 - when material is received, the quantities and values of component materials are posted out of inventory



Stock Transfer Processing

- Stock transfer:
 - Handling intersite inventory transfers of materials
 - "Transport orders" are used for transfers of stock between sites (plants)
- Procurement price:
 - valuation of material + costs of delivery
- Planning system may automatically generate transport orders
- SAP implementation:
 - *Convert planned transfer to planned order, receive material at issuing plant, issue material, process goods receipt at receiving plant*



Conclusions

- Procurement logistics = Materials Management:
 - Procurement of stock materials/ consumables/consignment materials, subcontracting, stock transfers, inventory management, invoice management
 - Highly integrated with other SAP modules
- Procurement logistics functionality:
 - SAP organizational structures: client, company code, purchasing organization, plant, storage location
 - SAP business processes described as EPC models