Key Concepts

Production processes and strategies
  - Assembling vs. manufacturing
  - Discrete vs. process manufacturing
  - Make-to-stock vs. make-to-order

Master Data in the Production Process
  - Bill of Material
  - Work Centers
  - Product Routing
**Production Approaches**

**Make-to-Stock**: Items produced based on forecasts. Sales from finished goods inventory.

Necessary/possible when:
- Products are __________________________
- Finished goods able to be ________________
- Production switching costs are ___________________
- _______________________________________
- Customer demand is _______; production ________ _______. (Possible lost sales) (time utility)
- Low risk of inventory ________________.

**Make-to-Order**: Items produced in response to an actual customer order. Sales from production output.

Necessary/possible when:
- Goods are __________________________
- Goods are ____________; cannot be ____________.
- Custom production able to be conducted at ______
- _______________________________________
- Demand is able to accommodate ________________.
- High risk of inventory ________________.

**Assemble-to-Order**: hybrid approach. Combination of techniques.
Bill of Material (BOM)

Identifies components needed to make one unit of finished product
All BOMs in SAP are __________, but a raw material may have its own ____.
Example: components of the standard truck assembly

Work Center

Where the work of assembling the product occurs
One or more tasks are completed in each work center
Product Routing

Define the steps or operations needed to produce the product
For each operation

_____________
Time needed (for some unit of measure, such as "each")
_____________

Product Routing

Essentials of Business Processes and Information Systems by Magal and Word
A Basic Production Process

1. Warehouse
   - Request Production

2. Production
   - Authorize Production

3. Warehouse
   - Issue Raw Materials

4. Production
   - Create Product

5. Warehouse
   - Receive Finished Goods

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Planned Order

1. Super Skateboard Builders, Inc.
   - Planned Order #2412
   - Production Order #4142

2. Request Date: 7/9/07
   - Requested Delivery Date: 7/22/07

3. Requester Name: Bloomberg
   - Requester Phone: 555-1234
   - Delivery Location: Warehouse

4. Material Number: SSB 2010
   - Material Description: 8th Skateboard
   - Quantity: 50

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Essentials of Business Processes and Information Systems by Magal and Word
Production Order – Initial State

Super Skateboard Builders, Inc.  
Production Order #444-2

Material Number | Material Description | Quantity
--- | --- | ---
SST6 2000 | Sand Skateboard | 50

| Date | Quantity Complete | Scrap Quantity | Completed by
--- | --- | --- | ---
Raw Material Staging | 
Assembly Completed | 

| Date | Quantity | Completed by | Received by
--- | --- | --- | ---
Move into Storage Location | 

Requisition number: 444-2
Authorized by: 
Date authorized: 7/10/09

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Material Withdrawal Slip

Super Skateboard Builders, Inc.  
Material Withdrawal Slip

Production Order #: 444-2
Production Quantity: 50

| Date | Issued by | Received by | Location
--- | --- | --- | ---
1/23 | TS | CS | Warehouse

| Material Number | Material Description | Quantity per Skateboard | Total Quantity Needed | Quantity Issued
--- | --- | --- | --- | ---
ALT 150 | Lock Nut | 8 | 400 | 400
BOLT 100 | Bolt | 8 | 400 | 400
STB6700 | Packaging Box | 1 | 50 | 50
UB600 | SSB Label | 1 | 50 | 50
GTP810 | Grip Tape | 1 | 50 | 50
RPA020 | Riser Pads | 2 | 100 | 100
STD22006 | Standard Deck | 1 | 50 | 50
STT23100 | Standard Truck Assembly | 2 | 100 | 100

Essentials of Business Processes and Information Systems by Magal and Word
Production Order – Completed State

Production Order

Material Number | Material Description | Quantity
--- | --- | ---
STK 2000 | Standard Skateboard | 50

Raw Material Staging
- Date: 7/23
- Quantity Complete: 50
- Completed by: CS

Assembly Completed
- Date: 7/24
- Quantity: 50
- Completed by: CS

Move into Storage Location
- Date: 7/25
- Quantity: 50
- Received by: TJ

Requisition Number: 7417
Authorized: 03/02/07
Date Authorized: 7/10/07

Goods Receipt Document

Super Skateboard Builders, Inc.
Goods Receipt
(for production order)

Date: 7/14/07
Production Order #: 4142
Material Number: STK 2000
Material Description: Standard Skateboard
Quantity: 50
Delivered by: MM
Received by: JS
EIS in Production

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