Abstract
This teaching material is intended to explain how the fundamental business processes interact with SAP ERP in the functional areas of Sales and Distribution, Materials Management, Production Planning, Financial Accounting, Controlling, and Human Capital Management.
Course Content

- Introduction to SAP
- Navigation
- Sales & Distribution
- Materials Management
- Production Planning
- Financial Accounting
- Controlling
“Systems, Applications, and Products in Data Processing”

- Name of the Company
  - SAP AG
  - SAP America
  - SAP UK

- Name of the Software
  - SAP R/2
  - SAP R/3
  - SAP ERP
Who is SAP?

- SAP AG
  - Founded in Walldorf, Germany in 1972
  - World’s Largest Business Software Company
  - World’s Third-largest Independent Software Provider

- Company Statistics
  - Over 40,000 employees in more than 50 countries
  - 1500 Business Partners
  - 36,200 customers in more than 120 countries
  - 12 million users
  - 100,600 installations

Source: SAP AG website
Integrated Business Solution Vendors

- SAP (Systems, Applications, & Products in Data Processing)
  - SAP ERP, All-in-One, Business by Design, Business One

- Oracle Applications
  - Oracle, JD Edwards, PeopleSoft, Siebel, Retek

- Microsoft Business Solutions
  - Dynamics: Great Plains, Navision, Axapta, Soloman

- The Sage Group
  - Sage Software – Accpac ERP, PeachTree

- SSA Global Technologies
  - BAAN
- World-wide usage
- Designed to satisfy the information needs for business sizes (small local to large all international)
  - Multi-lingual
  - Multi-currency
- Designed to satisfy the information needs for all industries
- Enables a company to link its business processes
- Ties together disparate business functions (integrated business solution)
- Helps the organization run smoothly
- Real-time environment
- Scalable and flexible
Client/Server Environment
- Client – hardware/software environment that can make a request for services for a central repository of resources
- Server – hardware/software combination that can provide services to a group of clients in a controlled environment

Three – Tier Structure
- GUI
  • Graphical User Interface or Web Interface
- Application Server
  • One or more, help distribute work load
- Database Server
  • One single data repository
SAP ERP

SAP Software Applications

- Solutions
  - SAP ERP
  - SAP CRM
  - SAP PLM
  - SAP SCM
  - SAP SRM
  - SAP Analytics
  - SAP Manufacturing
  - SAP Service
  - SAP Mobile Solutions
  - SAP xApps

- Small & Medium Size Solutions
  - Business One
  - Business by Design
  - SAP All-in-One

- Platforms
  - Enterprise Services Architecture
  - SAP NetWeaver Platform
Collections of logically related transactions within identifiable business functions

- MM ("Buy")
- PP ("Make")
- SD ("Sell")
- FI and CO ("Track")
- HCM
Logistics
- Sales & Distribution
- Plant Maintenance
- Materials Management
- Production Planning
- Quality Management

Accounting
- Financial Accounting
- Controlling
- Asset Management
- Treasury

Human Resources
- Personnel Management
- Benefits
- Payroll
<table>
<thead>
<tr>
<th>SAP ERP</th>
<th>SAP Industry Solutions</th>
</tr>
</thead>
</table>
| • Aerospace & Defense  
  • Automotive  
  • Banking  
  • Chemicals  
  • Consumer Products  
  • Defense & Security  
  • Engineering, Const.  
  • Healthcare  
  • High Tech  
  • Higher Education  
  • Industrial Machinery  
  • Insurance  
  • Life Sciences  
  • Logistics Service Prod.  | • Media  
  • Mill Products  
  • Mining  
  • Oil & Gas  
  • Pharmaceuticals  
  • Postal Services  
  • Professional Services  
  • Public Sector  
  • Railways  
  • Retail  
  • Telecommunications  
  • Utilities  
  • Wholesale Distribution  |
Navigation

Abstract

This material explains how to navigate in SAP systems. It is aimed at students at educational institutions, such as schools, universities of cooperative education, universities of applied sciences, and other universities, with no previous experience of SAP software. It can be used in the classroom or for self-study.

On completion of the course, students will be able to navigate through the user interface to deal with business processes and case studies.
- User guidance
- User specific settings
- Navigation in SAP Easy Access Menu
- Help
At the end of this chapter you can

- Name the window elements
- Navigate in an SAP system
- Apply personal system settings
- Effectively use Help
Log on to an SAP system

![SAP Logon 840](image)

- **Client**: 000
- **User**: 
- **Password**: 
- **Language**: 

For help, press F1
<table>
<thead>
<tr>
<th>Position</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial screen</td>
<td>Displays the main screen of the purchase order creation.</td>
</tr>
<tr>
<td>Header data</td>
<td>Provides detailed information about the purchase order header, including vendor details, order date, and terms of delivery.</td>
</tr>
<tr>
<td>Position overview</td>
<td>Shows the detail of items included in the purchase order, such as material, quantity, and delivery dates.</td>
</tr>
<tr>
<td>Position details</td>
<td>Provides specific details about each item, including material, quantity, price, and delivery information.</td>
</tr>
</tbody>
</table>
Help Functions

F1: Description of Input Fields

F4: value list

Customer Account Number

A unique key used to clearly identify the customer within the SAP system.

Procedure

When creating a customer master record, the user either enters the account number of the customer or has the system determine the number when the record is saved, depending on the type of number assignment specified. The account group determines the type of number assignment used.
Welcome to the SAP Help Portal

The SAP Help Portal provides web-based documentation for all SAP solutions. This enables you to search the online library for the right information where and when you need it.

The library houses and makes available all online documentation. It also contains additional information about documents. The SAP Library is a comprehensive collection of online documentation, which can be accessed through the SAP CD-ROMs or on the internet.

The SAP Library is created, translated, and maintained by SAP.

http://help.sap.com
Multiple Selection

Materials List

Database selections:

Material
Plant

Material type
Material group
Created by

Valued materials only

Multiple Selection for Material

Single Value
P-100
P-101
P-103
User Profile Settings (SAP system)
You are now able to:
- Name the window elements
- Navigate in an SAP system
- Apply personal system settings
- Effectively use help
Global Bike Inc.

Abstract
This material explains the company on which the introduction material is based on. It describes its enterprise structure in detail.
• Company in the bicycle business
• Initially buys and re-sells different lines of bicycles
• Sells to both wholesale and Internet – procure and distribute
• Later acquires a production facility to manufacture its own product – produce and distribute
Global Bike Inc.

- Sell – Sales and Distribution (SD)
- Buy – Procurement (MM)
- Plan – Production Planning (PP)
- Make – Manufacturing Execution (PP)
- Track – Financial Accounting (FI)
- Track – Controlling (CO)
Two Approaches of Learning

- **Standard Training**
  - Level 1: Introductory
  - Level 2: Business processes
  - Level 3: Configuration

- **Business Process Integration Approach**
  - Cross functional
  - Understand business processes and their relationship to SAP's organizational structure
  - Highlight integration/configuration
Cross-functional integration

Source Unknown
Sales Order Process

- Sales Order Entry
- Check Availability
- Run MPS w/MRP
- Convert Production Proposal

Production Process

- Schedule and Release
- Quality Inspection
- Order Settlement
- Post Goods Issue
- Pick Materials

Procurement Process

- Purchase Order
- Purchase Requisition
- Goods Issue
- Goods Receipt
- Invoice Receipt
- Payment to Vendor

Goods Receipt

- Invoice Receipt
- Payment to Vendor
- Completion Confirmation
- Goods Receipt
- Order Settlement

- Pick Materials
- Quality Inspection
- Order Settlement
- Post Goods Issue
- Goods Receipt

- Sales Order Entry
- Check Availability
- Run MPS w/MRP
- Convert Production Proposal

Receipt of Payment

- Invoice Customer
- Receipt of Payment
Sales and Distribution (SD)

Product
SAP ERP 6.0
Global Bike Inc.

Level
Beginner

Focus
Cross-functional integration
Sales and Distribution
SAP ERP

Functionality

- Sales Support
- Sales
- Shipping and Transportation
- Billing
- Credit Management
- Foreign Trade
Chapter Overview

- Sales and Distribution Org. Levels
- Sales and Distribution Master Data
- Sales Order Process
  - Order-to-Cash
SAP ERP Organizational Structure

- S&D Structure
- Client
- Company Code
- Sales Area
  - Sales Organization
  - Distribution Channel
  - Division
- Plant

- Shipping Point
- Loading Point
- Internal Sales Structure
- Sales Offices
- Sales Groups
- Salesperson
Structure for Sales Order Processing

- Client 410
- Company Code C100
- Plant P100
- Plant P101
- Sales Area
  - Sales Org S100
  - Distribution Channel (RE)
  - Division (01)
Structure for Distribution

Client 410

Company Code C100

Plant P100
- Shipping Point Rail Dock
  - Loading Point LP03

Plant P101
- Shipping Point Express Dock
  - Loading Point LP02
- Shipping Point Freight Dock
  - Loading Point LP01
Customer Master Data

- Customer Master
  - Contains all of the information necessary for processing orders, deliveries, invoices and customer payment
  - Every customer MUST have a master record

- Created by Sales Area
  - Sales Organization
  - Distribution Channel
  - Division
The customer master information is divided into 3 areas:
- General Data
- Company Code Data
- Sales Area Data
Customer Master

**General Information** relevant for the entire organization:
- Name
- Address
- Communication

Client 410

**Company Code specific information:**
- Acc. Mgmt
- Payment
- Bank

Company Code 102
Company Code 101
Company Code 100

**Sales Area specific information:**
- Sales Office
- Currency

Sales Org. 101
Sales Org. 100
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

- Basic Data
- Sales Data
- Purchasing Data
- Mat. Plan. Data
- Forecasting Data
- Storage Data
- Controlling Data
- Accounting Data
- Quality Data
General Information relevant for the entire organization:
- Name
- Weight
- U/M

Sales specific information:
- Delivery Plant
- Loading Grp

Sales Org 102
Sales Org 101
Sales Org 100

Storage Location specific information:
- Stock Qty

Storage Location 20
Storage Location 10

Material Master
Data on a material defined for a specific customer is stored in a Customer material info record.

Info Records contain:
- Customer-specific material number
- Customer-specific material description
- Customer-specific data on deliveries and delivery tolerances

You can also maintain default text to appear on sales orders for that customer.
Condition master data includes:
- Prices
- Surcharges
- Discounts
- Freights
- Taxes

You can define the condition master to be dependent on various data:
- Material specific
- Customer specific

Conditions can be dependent on any document field.
Output is information that is sent to the customer using various media, such as:
- E-mail
- Mail
- EDI
- Fax
- XML

Output examples:
- Quotation
- Confirmation
- Invoice
Sales Support is a component of SD that assists in the sales, distribution, and marketing of a company's products and services to its customers. It contains the following functionality:

- Creating and tracking customer contacts and communications (sales activity)
  - Phone call records
  - On-site meeting
  - Letters
  - Campaign communication
- Implementing and tracking direct mailing, internet, and trade fair campaigns based on customer attributes

Pre-sales documents need to be managed within the presales activities: Inquiries and Quotations. These documents help identify possible sales related activity and determine sales probability.
The ultimate goal of all pre-sales activities is to equip the sales technician with all the information necessary to negotiate and complete the potential sale.

Information needed:
- Past sales activity
- Past communication
- Contact information
- General Company info
- Credit limits and usage
- Current backorders

360° view of your customer
An inquiry is a customer’s request to a company for information or quotation in respect to their products or services without obligation to purchase.

- How much will it cost
- Material/Service availability
- May contain specific quantities and dates

The inquiry is maintained in the system and a quotation is created to address questions for the potential customer.
The quotation presents the customer with a legally binding offer to deliver specific products or a selection of a certain amount of products in a specified timeframe at a pre-defined price.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
<th>Unit Price</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>KB-0013-00</td>
<td>185.00</td>
<td>1,850.00</td>
</tr>
<tr>
<td></td>
<td>Discount</td>
<td>(5.00)</td>
<td>(50.00)</td>
</tr>
<tr>
<td>5</td>
<td>TB-0014-00</td>
<td>269.00</td>
<td>1,345.00</td>
</tr>
<tr>
<td></td>
<td>Discount</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Total Discount</td>
<td>5.00%</td>
<td>(157.25)</td>
</tr>
</tbody>
</table>

If you have any questions concerning this quotation, contact:
Steve Tracy
(605) 555-1212
12345@GBI.com

THANK YOU FOR YOUR BUSINESS!
Sales order processing can originate from a variety of documents and activities
- Customer contacts us for order: phone, internet, email
- Existing Contract
- Quotations

The electronic document that is created should contain the following basic information:
- Customer Information
- Material/service and quantity
- Pricing (conditions)
- Specific delivery dates and quantities
- Shipping information
- Billing Information
The sales document is made up of three primary areas:

- **Header**
  - Data relevant for the entire sales order: Ex: customer data, total cost of the order

- **Line Item**
  - Information about the specific product: Ex: material and quantity, cost of an individual line

- **Schedule Lines**
  - Uniquely belongs to a Line Item, contains delivery quantities and dates for partial deliveries
The sales order contains all of the information needed to process your customers request, the following information is determined for each sales order:

- Delivering Schedule
- Shipping point and route determination
- Availability Check
- Transfer of requirements to MRP
- Pricing
- Credit limit check
When an order is created you must enter a requested delivery date for the order or each line item.

The system will then determine a delivery timeline, this will be used when determining our material availability, or ATP (Availability to Promise) date.

The system will determine this date using forward and backward scheduling rules you have defined.
Backward Scheduling

Order Date | Material Availability | Transp. Sched. | Loading | Goods Issue | Requested Delv. Date
---|---|---|---|---|---
1st | 2nd | 3rd | 4th | 5th | 6th

- Pick & Pack Time (2 days)
- Transp. Sched. Time (1 day)
- Loading Time (1 day)
- Transit Time (2 days)
**Forward Scheduling**

- **Order Date**: 1st
- **Material Availability**: 2nd
- **Transp. Sched.**: 3rd
- **Loading**: 4th
- **Goods Issue**: 5th
- **Requested Delv. Date**: 6th
- **New Delv. Date**: 7th

**Timeline**:
- **Pick & Pack Time (2 days)**
- **Transp. Sched. Time (1 day)**
- **Loading Time (1 day)**
- **Transit Time (2 days)**
During the creation of the sales order the system must determine the shipping point from which the material will be shipped and the route the material will take to get from your warehouse to your customers location.

A shipping point is determined for each line item within the order.

The route determination will is used to define the transit time of the material that we used in scheduling.
Availability Check
- Determines the material availability date
- Considers all inward and outward inventory movements

Proposes 3 methods of delivery
- One-time delivery
- Complete delivery
- Delayed proposal

Rules are created by YOU
The order is transferred to Material Requirements Planning as an (CIR) Customer Independent Requirement. If a deficit is found the system will propose a Purchase Req. or Order to fulfill the shortage.
The system displays pricing information for all sales documents on the pricing screens at both the header and the line item level.
- Header pricing is valid for the whole order it is the cumulative of all line items within the order
- Line item pricing is for each specific material.

The system will automatically search for price, discounts, surcharges, calculate taxes and freight. You have the ability to manually manipulate the pricing at both the header and line item level within the sales order by entering a condition type and amount.
- Taxes and freight can be set-up so we can’t manually enter
**Credit Check**

- Allows your company to manage its credit exposure and risk for each customer by specifying credit limits.
- During the sales order process the system will alert the sales rep about the customers credit situation that arises, if necessary the system can be configured to block orders and deliveries.

<table>
<thead>
<tr>
<th>Line layout:</th>
<th>ST1 Credit limit/credit limit used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorting:</td>
<td>Credit account / control area</td>
</tr>
<tr>
<td>Scaling:</td>
<td>NORMAL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CC# Customer</th>
<th>Credit Limit</th>
<th>Credit exposure %</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>162</td>
<td>25,000.00</td>
<td>9,000.00</td>
<td>07/15/2004</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BPI-Overview US</th>
<th>Credit Overview</th>
<th>Time 18:10:44</th>
<th>Date 10/04/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under Const</td>
<td>Credit Overview</td>
<td>Time 18:10:44</td>
<td>Date 10/04/2008</td>
</tr>
</tbody>
</table>

© 2009 SAP AG
The shipping process begins when you create the delivery document for the sales order. This document controls, supports, and monitors numerous sub-processes for shipping processing:

- Picking
- Packing
- Post Goods Issue

Integrated with the Material Management (MM) and Finance (FI) modules
Checks order and materials to determine if a delivery is possible — delivery block (hold), completeness
Confirms availability
Confirms export/foreign trade requirements
Determines total weight & volume
Delivery Creation

- Generates packing proposal
- Calculates weight and volume
- Checks scheduling
- Considers partial deliveries
- Updates route assignment
- Assigns picking location
- Updates sales order
- Determines batches
- Quality check (if needed)
- Updates sales order
The Delivery Document initiates the delivery process and is the control mechanism for this process:
- Picking
- Packing
- Loading
- Posting Goods Issue

Changes to delivery are allowable - products, quantities
Picking

- Quantities based on delivery note
- Assigned date when picking should begin
- Automated storage location assignment
- Supports serial number/lot number tracking and batch management
- Integrated with Warehouse Management (WM)
Loading and Packing

- Identifies which packaging is to be used for specified products (customer preference and UCC-128 considerations)
- Identifies and updates accounts associated with returnable packaging
- Tracks the packed product by container
- Insures weight/volume restrictions are enforced
- All packed items are assigned to the required means of transportation
### SAP ERP: Goods Issue

- Event that indicates the legal change in ownership of the products
- Reduces inventory and enters Cost of Goods Sold
- Automatically updates the General Ledger (G/L) accounts
- Ends the shipping process and updates the status of the shipping documents
The billing document is created by coping data from the sales order and/or delivery document.
- Order-based billing
- Delivery-based billing

The billing process is used to generate the customer invoice.
It will update the customer’s credit status.
• The billing document will automatically create a debit posting to your customer sub-ledger account and credit your revenue account.

• It is at this point that the sales process is passed over to Financial Accounting to await payment.
Billing Methods

Delivery based Invoicing
- Order 6
  - Delivery 8…20
  - Delivery 8…21
    - Invoice 9…45
    - Invoice 9…46

Collective Invoicing
- Order 9
  - Delivery 8…33
    - Invoice 9…68
- Order 14
  - Delivery 8…34
  - Delivery 8…56

Split Invoicing
- Order 32
  - Delivery 8…86
    - Invoice 9…91
    - Invoice 9…92
Payment is the final step in the sales order process, this step is managed by the Financial Accounting department.

Final payment includes:
- Posting payments against invoices.
- Reconciling differences between payment and invoice.

Payment will create a posting clearing the liability in the A/R account and increases your bank account.
The document flow and order status feature allows you to find the status of an order at any point in time. The SAP updates the order status every time a change is made to any document created in the customer order management cycle (Order-to-Cash).
“Never again did I learn so much in such a short time, because twenty participants made mistakes for me! You cannot make so many mistakes all alone”

SAP Co-founder Klaus Tschira, on his experiences teaching COBOL to clients at IBM.
- Document Flow
  - Gives Order Process Status

- List of Sales Orders (VA05)
  - Tool to Find Order
  - Need student’s user id/data set number
Sales Order Process Debugging

Business partner: 000000101 Heartland Bike Company

- Standard Order 0000000015: 05/16/2008, Completed
- Outbound Delivery 0080000006: 05/16/2008, Completed
- Picking request 20080516: 05/16/2008, Completed
- GD goods issue: delivery 4900003010: 05/16/2008, complete
- Invoice 0090000007: 05/16/2008
- Accounting document 0090000002: 05/16/2008, Cleared

SD1, SD2, SD3, SD4, SD5, SD6
Materials Management (MM)

Product
SAP ERP 6.0
Global Bike Inc.

Level
Beginner

Focus
Cross-functional integration
Materials Management
<table>
<thead>
<tr>
<th>SAP ERP</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Inventory Management</td>
</tr>
<tr>
<td></td>
<td>- Purchasing</td>
</tr>
<tr>
<td></td>
<td>- MRP</td>
</tr>
<tr>
<td></td>
<td>- Physical Inventory</td>
</tr>
<tr>
<td></td>
<td>- Valuation</td>
</tr>
<tr>
<td></td>
<td>- Service Master</td>
</tr>
<tr>
<td></td>
<td>- Invoice Verification</td>
</tr>
<tr>
<td></td>
<td>- Product Catalogs</td>
</tr>
</tbody>
</table>
Chapter Overview

- Organization Structure
- Master Data
- Procurement Process
  - Procure-to-Pay Process
Organizational Structure for Procurement

- **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
    - i.e. manufacturing facility or distribution facility

- **Purchasing Organization**
  - The buying activity for a plant takes place at the purchasing organization

- **Purchasing Group**
  - Key that represents the buyer or group of buyers
Purchasing Specific Structure

- **Purchasing Organization**
  - Organization unit responsible for procuring services and materials
  - Negotiates conditions of the purchase with the vendors

- **Purchasing Group**
  - Buyer or group of buyers who are responsible for certain purchasing activities
  - Channel of communication for vendors
Centralized vs. Decentralized Purchasing
MM Master Data

Vendor Master Data

Material Master Data

Purchasing Info Record

Condition Master Data

Output Master Data
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
SAP ERP
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:
- Name
- Address
- Communication

**Company Code specific information:**
- Acc. Mgmt
- Payment
- Bank

**Purchasing Org. specific information:**
- Incoterms
- Currency

Company Code 102
Company Code 101
Company Code 100

Purchasing Org. 101
Purchasing Org. 100
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

- Basic Data
- Sales Data
- Purchasing Data
- Mat. Plan. Data
- Forecasting Data
- Storage Data
- Controlling Data
- Quality Data
- Accounting Data
Material Master

**General Information** relevant for the entire organization:
- Name
- Weight
- U/M

**Plant specific information:** Purchasing Data
- Work Sch.
- MRP

**Storage Location specific information:**
- Stock Qty
- Picking

- Client 410
- Plant 102
- Plant 101
- Plant 100
- Storage Location 20
- Storage Location 10
- Framework for Purchase Order
  - Contains the relationship between a vendor and a material
- Can be created:
  - Manually
  - Automatically – Quotations
  - Automatically – Pur 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
Master Data in Use

Material Master

Vendor Master

Purchasing Information Record

Purchase Order
45......01
Procurement Process

1. Purchase Requisition
2. Vendor Selection
3. Purchase Order
4. Notify Vendor
5. Vendor Shipment
6. Goods Receipt
7. Invoice Receipt
8. 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
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
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)
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.
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
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
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 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 subcriteria 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.
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 created automatically.
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

**Header**
- Vendor: Date
- Doc. Number: Currency
- Terms of Payment: PO Price

**Item Overview**
- Materials: Price/UofM
- Quantities
- Delivery Date

**Line Item**
- PO History
- Line Price
- Delivery Schedule
- Tolerances
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

- 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
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)
- Incoming Invoices are referenced 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 will 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
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
Goods Receipt / Invoice Receipt
Reconciliation Account

- Purchase requisition
- Purchase order
- Goods receipt

- No impact on Financial Accounting (FI)
- Materials Management (MM) and Financial Accounting (FI) via automatic account assignment

- Inventory
  - Dr $100
  - Cr

- GR / IR
  - Dr
  - Cr $100
Goods Receipt / Invoice Receipt
Reconciliation Account

Amount owed is assigned and transferred to vendor account payable

<table>
<thead>
<tr>
<th>GR / IR</th>
<th>Vendor A/P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr</td>
<td>Cr</td>
</tr>
<tr>
<td>$100</td>
<td>$100</td>
</tr>
</tbody>
</table>
Vendor Payment

Amount owed is paid to vendor and account payable is reduced

Bank

<table>
<thead>
<tr>
<th>Dr</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100</td>
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</table>

Vendor A/P

<table>
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<tr>
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<th>Cr</th>
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</thead>
<tbody>
<tr>
<td>$100</td>
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</tr>
</tbody>
</table>
SAP University Alliances

Version 1.0

Authors Bret Wagner
          Stefan Weidner
          Stephen Tracy

Product
SAP ERP 6.0
Global Bike Inc.

Level
Beginner

Focus
Cross-functional integration
Production Planning
Production Execution
SAP Divides Production into multiple processes
- Production Planning

- Manufacturing Execution
  - Discrete Manufacturing
  - Repetitive Manufacturing
  - KANBAN

- Production – Process Industries
  - Integrated planning tool for batch-orientated process manufacturing
  - Design primarily for chemical, pharmaceutical, food and beverage industries along with batch-oriented electronics
SAP ERP

Structure

- Client
- Company Code
- Plants
- Storage Locations
- Work Center Locations
SAP ERP

PP Master Data

- Materials
- Bill of Materials (BOM)
- Routings
- Work Centers
- Product Groups
Bill of Materials (BOM)

- List of components that make up a product or assembly

- Frame
- Pedal
- Break Kit
- Front Wheel
  - Front Rim
  - Front Tire
  - Front Tube
- Rear Wheel
  - Rear Rim
  - Rear Tire
  - Rear Tube
  - Gear

- Saddle
  - Post
  - Seat
  - Clip

- Handle Bar
  - Bell
  - Clasp
  - Handle
- Single-Level

```
  Finished Bike
    Frame       Front Wheel
    Pedal Kit   Rear Wheel
    Brake Kit   Saddle
    Handle Bars
```

Bill of Materials (BOM)
Bill of Materials (BOM)

- Single-Level vs. Multi-Level

### Single-Level
- Finished Bike
- Frame
- Pedal
- Brake
- Handle Bars
- Saddle
- Bell
- Clasp
- Handle Bar

### Multi-Level BOM
- Rear Wheel
- Front Wheel
- Rear Rim
- Front Rim
- Rear Tire
- Front Tire
- Tube
- Gear

### Multi-Level BOM
- Frame
- Pedal
- Brake
- Handle Bars
- Saddle
- Bell
- Clasp
- Handle Bar
- Variant Bill of Material (BOM)
  - Several products with a large proportion of identical parts.
**Item Category**
- Stock Item
- Non-stock Item
- Variable Material – Sheet of steel
- Intra Item – Phantom material – process industry
- Class Item – place holder
- Document Item
- Text Item
Routings enable you to plan the production of materials (products).

Routings are used as a template for production orders and run schedules.

Routing are also used as a basis for product costing.

Series of sequential steps (operations) that must be carried out to produce a given product.

Routings contain:
- What, Where, When, How
**Routings**

- **Routing – Operation 10**
  - Explains the steps involved in this operation

- **BOM – Front Wheel, Rear Wheel and Frame**
  - Outlines the components that will be consumed in the routing

- **Work Center – 00WC1**
  - Identifies where the operations will take place and identifies the business transaction to be carried

---

![Chart showing routing details](image-url)
### Routing for Finished Bike

<table>
<thead>
<tr>
<th>Operation</th>
<th>Plant</th>
<th>Work Center</th>
<th>Control Key</th>
<th>Description</th>
<th>Base Quantity</th>
<th>Unit</th>
<th>Setup</th>
<th>Unit</th>
<th>Activity Type</th>
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<tbody>
<tr>
<td>0010</td>
<td>00WC1</td>
<td>00A1</td>
<td>ASSY</td>
<td>Attach Front and Rear Wheel to Frame</td>
<td>1</td>
<td>ST</td>
<td>3</td>
<td>MIN</td>
<td>LABOR</td>
</tr>
<tr>
<td>0020</td>
<td>00WC1</td>
<td>00A1</td>
<td>ASSY</td>
<td>Saddle connected to Frame</td>
<td>1</td>
<td>ST</td>
<td>4</td>
<td>MIN</td>
<td>LABOR</td>
</tr>
<tr>
<td>0030</td>
<td>00WC1</td>
<td>00A1</td>
<td>ASSY</td>
<td>Handle Bars connected to Frame</td>
<td>1</td>
<td>ST</td>
<td>3</td>
<td>MIN</td>
<td>LABOR</td>
</tr>
<tr>
<td>0040</td>
<td>00WC1</td>
<td>00A1</td>
<td>ASSY</td>
<td>Attach Pedals</td>
<td>1</td>
<td>ST</td>
<td>3</td>
<td>MIN</td>
<td>LABOR</td>
</tr>
<tr>
<td>0050</td>
<td>00WC1</td>
<td>00A1</td>
<td>ASSY</td>
<td>Install Break Kits - Assembly Finished</td>
<td>1</td>
<td>ST</td>
<td>2</td>
<td>MIN</td>
<td>LABOR</td>
</tr>
</tbody>
</table>
Material Master – Finished Bike

Routing

Oper. 10
Oper. 20
Oper. 30
Oper. 40
Oper. 50

BOM

Front Wheel
Rear Wheel
Frame
Saddle
Handle Bars
Pedals
Pedals

Component assignment in routing

Products arrive at the beginning of the operation to which they are assigned
### Work Center

- A location within a plant where value-added work (operations or activities) are performed
  - Work Centers can represent
    - People or Groups of People
      - Johnny Storm, Day Shift 1
    - Machines or Groups of Machines
      - Ink Mixer, Ink Injection Machine
    - Assembly Lines
      - Pen Assembly Line 2

- Work center used to define capacities
  - Labor
  - Machine
  - Output
  - Emissions

- Capacities used in
  - Capacity requirements planning (CRP)

- Detailed scheduling

- Costing
Work centers capture and use the following Resource Related data:

- **Basic Data**
  - Person Responsible, Location of Work Center

- **Scheduling Information**
  - Queues and Move Times (interoperation), Formula Keys

- **Costing Data**
  - Cost Center, Activity Types

- **Personnel Data**
  - People, Positions, Qualifications

- **Capacity Planning**
  - Available Capacity, Formulas, Operating Time

- **Default Data**
  - Control Key, Standard Text Key
- Aggregate planning that group together materials or other product groups (Product Families)
- Multi- or Single- Level Product Groups
  - The lowest level must always consist of materials

```
  Bikes
  /   \
Mountain  Touring
   /     \
  18 Speed  24 Speed   18 Speed  24 Speed
   /     \
Red 24M  Blue 24M    Red 24T  Blue 24T
```
SOP provides a method for Sales Planning, Production Planning, Feasibility.
Players in the Game

- Strategic Planning
  - CEO, COO, CIO, CFO, Controller, Marketing Director
- Detailed Planning
  - Line Managers, Production Scheduler, MRP Controller, Capacity Planners
- Execution
  - Line Workers, Shop Floor Supervisors
Forecasting is the foundation of a reliable SOP

Accurate forecasts are essential in the manufacturing sector

Overstocked & understocked warehouses result in the same thing: a loss in profits.

Forecasts are ALWAYS WRONG
Forecasting Models
- Trend
- Seasonal
- Trend and Seasonal
- Constant

Selecting a Model
- Automatically
- Manually
Planning Levels

**Planning at Product Group Level**

- **Bikes**
  - 45% Mountain
    - 30% 18 Speed
    - 70% 24 Speed
  - 55% Touring
    - 40% 18 Speed
    - 60% 24 Speed

**Planning at Material Level**

- 40% Red 24M
- 60% Blue 24M
- 50% Red 24T
- 50% Blue 24T
- Information Origination
  - Sales
  - Marketing
  - Manufacturing
  - Accounting
  - Human Resources
  - Purchasing

- Intra-firm Collaboration
  - Institutional Common Sense
- Flexible forecasting and planning tool
- Usually consists of three steps:
  - Sales Plan
  - Production Plan
  - Rough Cut Capacity Plan
- Planned at an aggregate level in time buckets
- Link between Strategic Planning (SOP) & Detailed Planning (MPS/MRP)
- The results of Demand Mgmt is called the Demand Program, it is generated from our independent requirements - PIR and CIR

**Disaggregation**

**Product Groups**

- **Bikes**
  - **Mountain** 45%
    - 18 Speed 30%
    - 24 Speed 70%
  - **Touring** 55%
    - 18 Speed 40%
    - 24 Speed 60%

**Material**

- Red 24M 40%
- Blue 24M 60%
- Red 24T 50%
- Blue 24T 50%
Demand Management

Forecast

Planned Independent Requirements

Customer Independent Requirements

Demand Program

MPS / MRP

Sales
Transfer from High Level to Detailed Planning

Planning at Group Level
Disaggregation
Planning at Material Level

Bikes

45%
Mountain
30%
18 Speed
70%
24 Speed

55%
Touring
40%
18 Speed
60%
24 Speed

40%
Red 24M
60%
Blue 24M

50%
Red 24T
50%
Blue 24T

Transfer

Operative Planning Data

Planned Independent Requirements
At Material and Plant Level

Demand Planning Data
Planning strategies represent the business procedures for
- The planning of production quantities
- Dates

Wide range of strategies

Multiple types of planning strategies based upon environment
- Make-To-Stock (MTS)
- Make-To-order (MTO)
  - Driven by sales orders
- Configurable materials
  - Mass customization of one
- Assembly orders
Planning Strategy for Make-to-Stock

- Planning takes place using Independent Requirements
  - Sales are covered by make-to-stock inventory

- Strategies
  - 10 – Net Requirements Planning
  - 11 – Gross Requirements Planning
  - 30 – Production by Lot Size
  - 40 – Planning with Final Assembly
Planning Strategy for Make-to-Order

- Planning takes place using Customer Orders
  - Sales are covered by make-to-order production

- Strategies
  - 20 – Make to Order Production
  - 50 – Planning without Final Assembly
  - 60 – Planning with Planning Material
MPS allows a company to distinguish planning methods between materials that have a strong influence on profit or use critical resources and those that do not.
In MRP, the system calculates the net requirements while considering available warehouse stock and scheduled receipts from purchasing and production.

During MRP, all levels of the bill of material are planned.

The output of MRP is a detailed production and/or purchasing plan.

**Detailed planning level**
- Primary Functions
- Monitor inventory stocks
- Determine material needs
  - Quantity
  - Timing
- Generate purchase or production orders
- Independent Demand – Original source of the demand.
- Dependent Demand – Source of demand resides at another level.
Material Requirement Planning (MRP)

- MRP is used to ensure the availability of materials based on the need generated by MPS or the Demand Program
  - 5 Logical Steps
    - Net Requirements Calculation
    - Lot Size Calculation
    - Procurement Type
    - Scheduling
    - BOM Explosion
Net Requirements

Procurement Proposal

Firmed Receipts

Firmed Orders or Purchase Requisitions

Stock

Requirements – Planned Ind. Req., Reservations Sales Orders, Etc.

Safety Stock

Shortage
Lot sizing

- **Static**
  - Based on fixed values in the Material Master

- **Periodic**
  - Groups net requirements together from multiple periods

- **Optimum**
  - Calculates the optimum lot size for a several periods of net requirements
## Procurement Type

- **External Procurement**
  - Purchase Requisition
  - Purchase Order
  - Schedule Line

- **Internal Procurement**
  - Planned Order
  - Production Order
  - Process Order
Multi-Level Scheduling

- Planned Order
- Purchase Requisition
- Requirements Date
- Finished Product
- Assembly 1
- Semi-Finished Good
- Raw Material
- Component

Time
Whether or not a material is planned using MRP or Consumption Based is determined by the MRP Type on the MRP1 screen of the Material Master.

- **MRP**
  - PD – MRP
  - VSD – Seasonal MRP

- **Consumption Based**
  - VB – Reorder-Point
  - VV – Forecast Based
  - RP – Replenishment
Output of MRP

- MRP
- Planned Order
- Convert to
  - In-House Production
    - Production Orders
    - Process Orders
  - External Procurement
    - Purchase Requisitions
    - Purchase Orders
    - Schedule Lines
- **Planned Order (planning)**
  - A request created in the planning run for a material in the future (converts to either a production or purchase order)

- **Production Order (execution)**
  - A request or instruction internally to produce a specific product at a specific time

- **Purchase Order (execution)**
  - A request or instruction to a vendor for a material or service at a specific time
Production orders are used to control production operations and associated costs
- Production Orders define the following
  - Material produced
  - Quantity
  - Location
  - Time line
  - Work involved
  - Resources used
  - How to costs are settled
Production Order

- How
- BOM
- Time Line
- What
- Quantity
Schedule

- Calculates the production dates and capacity requirements for all operations within an order
  - Determines a Routing
    - Operation specific time lines
    - Material Consumption Points
  - Material Master
    - Scheduling Margin Key (Floats)
  - Work Center
    - Formulas
    - Standard Inter-operation Times
Two release processes

- Header Level
  - Entire order and all operations are released for processing, order is given a REL status

- Operation Level
  - Individual operations within an order are released, not until the last operation is released does the order obtains a REL status until then it is in a PREL status

Automatic vs. Manual
Availability Check

- Automatic check to determine whether the component, production resource tools, or capacities in an order are available
  - Can be automatic or manually executed
  - Determines availability on the required date

- Generates an availability log
  - Displays results of the check
  - Missing parts list
  - Reservations that could not be verified
The time between scheduling and releasing an order is used for company checks and any preparation needed for the processing of the order.

Once an order has been released it is ready for execution, we can at this time:
- Print shop floor documents
- Execute goods movements
- Accept confirmations against the order
Shop Floor Documents are printed upon release of the Production Order, examples would be:
- Operation-based Lists
  - Time Tickets, Confirmation Slips
- Component-based Lists
  - Material Withdrawal Slips, Pull List (consumption list)
- PRT Lists
  - Overview of PRT’s used and in which operations
- Multi-Purpose Lists
  - Operation Control Ticket, Object Overview
Material Withdrawal

- When a production order is created it references a BOM to determine the necessary components to produce the material, it then places a reservation on each of the components.

- Upon release of the order (or operation) you can withdraw the reserved materials from inventory:
  - Reservation is updated
  - Inventory is updated
  - Costs are assigned to the order as actual costs
Confirmations are used to monitor and track the progression of an order through its production cycle.
- Confirmation can be done at the operation or order level.

Exact confirmation shortly after completion of an operation is essential for realistic production planning and control.

Data that needs confirmation include:
- Quantities – yield, scrap, rework
- Activity data – setup time, machine time
- Dates – setup, processing, teardown started or finished
- Personnel data – employee who carried out the operation, number of employee involved in the operation
- Work center
- Goods movements – planned and unplanned
- Variance reasons
- PRT usage
## Confirmations

**Enter time ticket for production order**

<table>
<thead>
<tr>
<th>Confirmation</th>
<th>893</th>
</tr>
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<tbody>
<tr>
<td>Order</td>
<td>18888888</td>
</tr>
<tr>
<td>Material</td>
<td>EPEN125</td>
</tr>
<tr>
<td>Executing Pre</td>
<td>Executive Pen</td>
</tr>
<tr>
<td>Operation</td>
<td>0828</td>
</tr>
<tr>
<td>Sequence</td>
<td>0</td>
</tr>
<tr>
<td>Place Cartridge in Barrel</td>
<td></td>
</tr>
<tr>
<td>Sub-Operation</td>
<td></td>
</tr>
<tr>
<td>Capacity Unit</td>
<td></td>
</tr>
<tr>
<td>Workcenter</td>
<td>KC125</td>
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<tr>
<td>Plant</td>
<td>P125</td>
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<tr>
<td>Assembly Line</td>
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</tr>
</tbody>
</table>

**Confirmation Type**

- Partial confirmation

**Quantities**

<table>
<thead>
<tr>
<th>To confirm</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Yield</td>
<td>188 EA</td>
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<tr>
<td>Scrap</td>
<td></td>
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<tr>
<td>Rework</td>
<td></td>
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</table>

**Reason for Var**

<table>
<thead>
<tr>
<th>Activities</th>
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</thead>
<tbody>
<tr>
<td>Personnel</td>
</tr>
</tbody>
</table>

**Personnel Info**

<table>
<thead>
<tr>
<th>Time ID</th>
<th>Even Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates</td>
<td></td>
</tr>
</tbody>
</table>

**To confirm**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Already confirmed</th>
<th>Planned for cont.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/06/2005</td>
<td>08:00</td>
<td>00:00:00</td>
<td>10:00:00</td>
</tr>
<tr>
<td>11/06/2005</td>
<td>13:00</td>
<td>00:00:00</td>
<td>12:30:59</td>
</tr>
</tbody>
</table>

**Dates**

<table>
<thead>
<tr>
<th>Supplement</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Acceptance of the confirmed quantity of output from the production order into stock

- Effects of the Goods Receipt
  - Updates stock quantity
  - Updates stock value
  - Price stored for future valuation changes
  - Production order is updated

- Three documents are created
  - Material document
  - Accounting document
  - Controlling document
Order Settlement

- Consists of settling the actual costs incurred in the order to one or more receiver cost objects
  - Receivers could include: a material, a cost center, an internal order, a sales order, a project, a network, a fixed asset

- Parameters for Order Settlement
  - Settlement Profile
    - Specifics the receivers, distributions rules and method
  - Settlement Structure
    - Determines how the debit cost elements are assigned to the settlement cost elements

- Settlement Rule
  - Automatically assigned on creation of order, the parameters are used to define this rule
    - Has one or more distribution rules assigned to it
    - Distribution rules defines: cost receiver, settlement share, settlement type
## Order Settlement

- **Settling a Production Order to Stock**
  - Debt posting is made to the Production Order with the value of the material.
  - Difference between the debt posting and credit posting is posted to a price difference account.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>100</td>
<td>20</td>
</tr>
</tbody>
</table>

**Material Price determine by the quantity produced times the Standard Price in the Material Master.**
Costs analyzed
- Primary
  - Materials
  - External Processing
- Secondary
  - Production, Material, and Administrative Overhead
  - Labor

Cost Analysis Reporting
- Calculate and analyze planned costs, target costs, and actual costs of the production order.
- Calculate and analyze variances
### Orders: Actual/Plan/Variance

**Order Group:** 1000675  60600900675

**Fiscal Year:** 2005

**Period:** 1 - 11

<table>
<thead>
<tr>
<th>Cost Elements</th>
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<th>Plan</th>
<th>Var.(abs.)</th>
<th>Var.%</th>
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<tr>
<td>720100 Raw Mat. Cons. Exp</td>
<td>75,500</td>
<td>75,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>980100 Labor</td>
<td>122,800</td>
<td>122,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs</td>
<td>196,700</td>
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<td>731100 Prod Ord Settle Exp</td>
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<tr>
<td>Settlement costs</td>
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<td>731100 Prod Ord Settle Exp</td>
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<td>207,000</td>
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<tr>
<td>Deliveries to stock</td>
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<tr>
<td><strong>Balance</strong></td>
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<td>8,300</td>
<td>8,300</td>
<td>100.00</td>
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</table>
SAP ERP

Order Status

Production order Display: Header

System status:
- REL Released
- CNF Confirmed
- DLV Delivered
- PRC Pre-priced
- GMPS Goods movement posted
- MACM Material committed
- SETC Settlement rule created

Active Status

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The End