

SAP University Alliances

Version 1.0

Authors Bret Wagner
Stefan Weidner
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Introduction to SAP ERP

Product

SAP ERP 6.0
Global Bike Inc.

Level

Beginner

Focus

Cross-functional integration
SD, MM, PP, FI, CO

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.

- 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

- 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

- 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

SAP ERP

SAP ERP

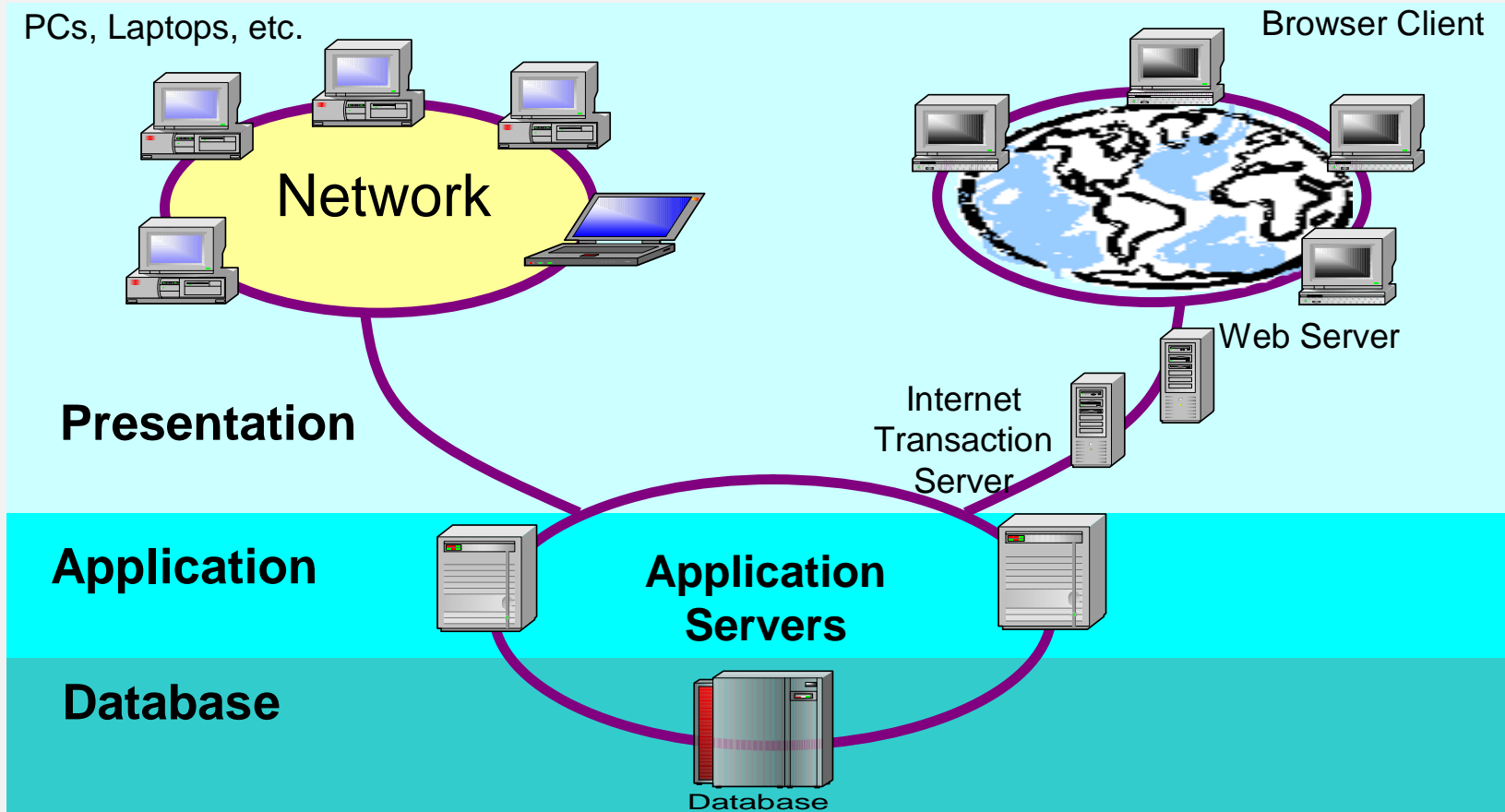
- Enables a company to link it's business processes
- Ties together disparate business functions (integrated business solution)
- Helps the organization run smoothly
- Real-time environment
- Scalable and flexible

- 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

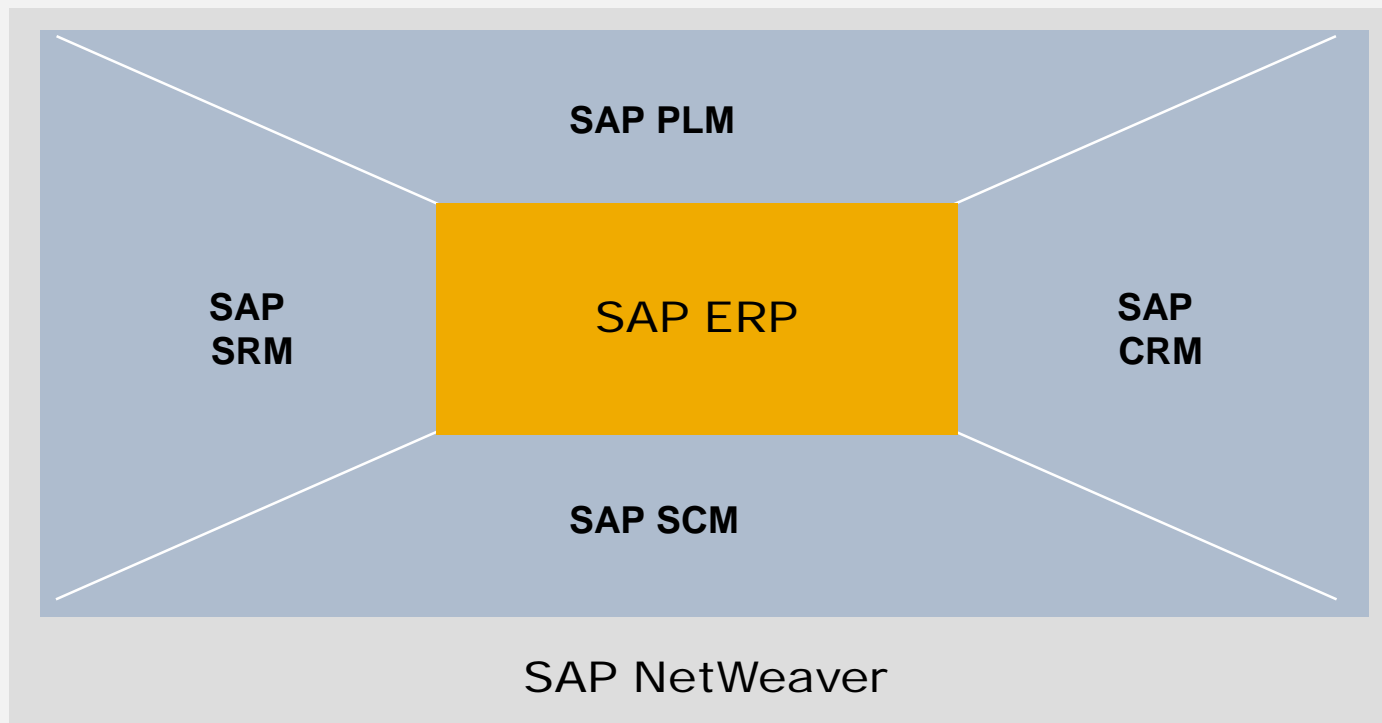
SAP ERP

SAP Architecture



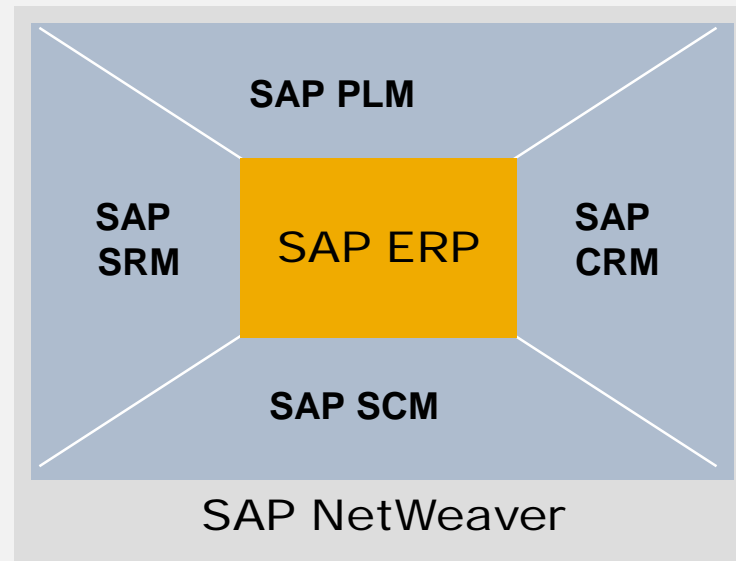
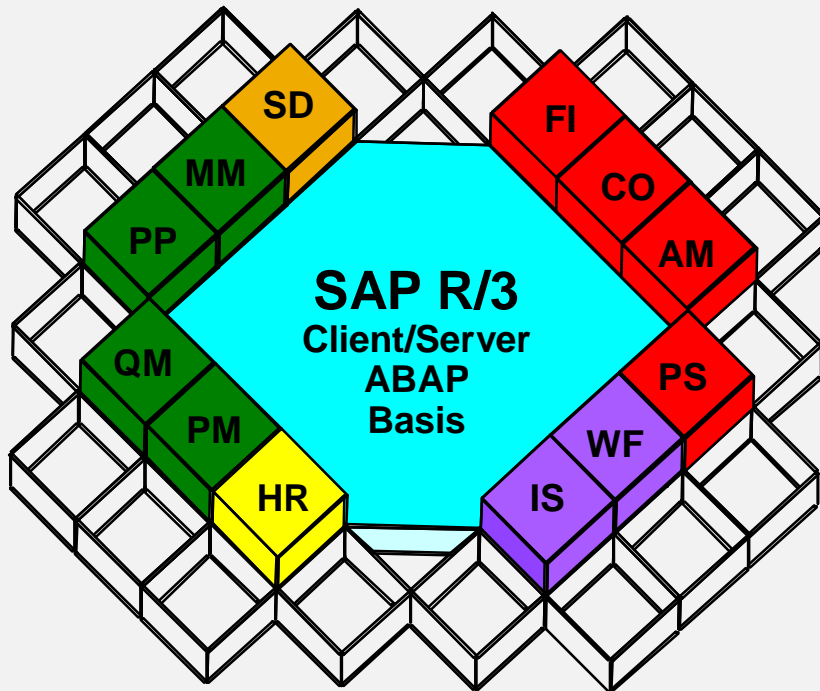
SAP ERP

SAP Business Suite



SAP ERP

SAP Business Suite



- 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

- 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

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Navigation

Product

All

Level

Beginner

Focus

SAP ERP

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.

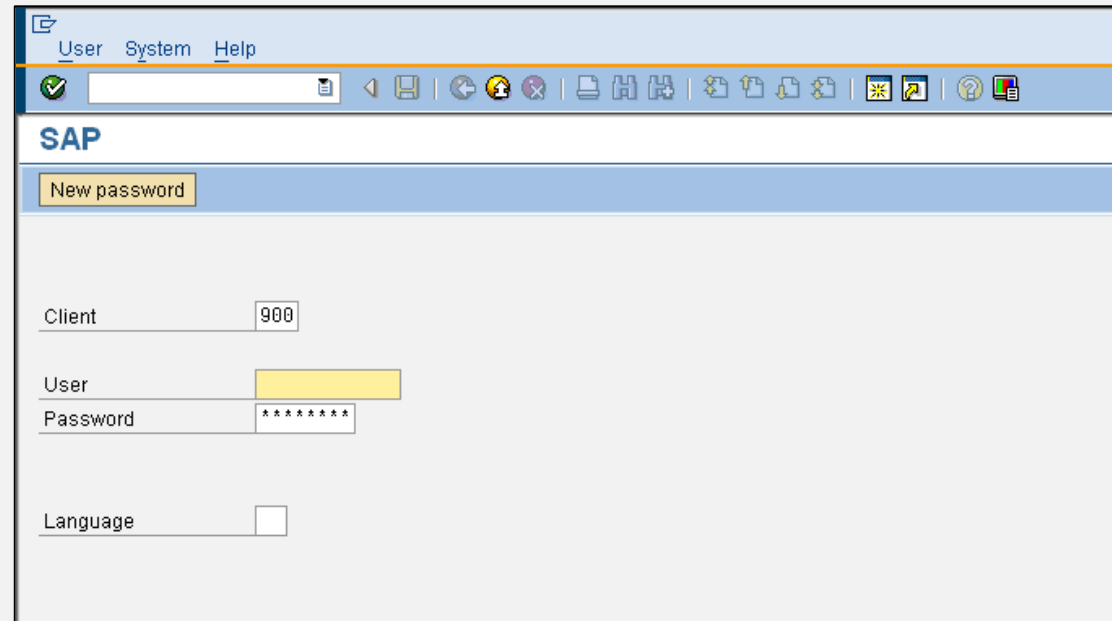
- User guidance
- User specific settings
- Navigation in SAP Easy Access Menu
- Help

At the end of this chapter you can

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

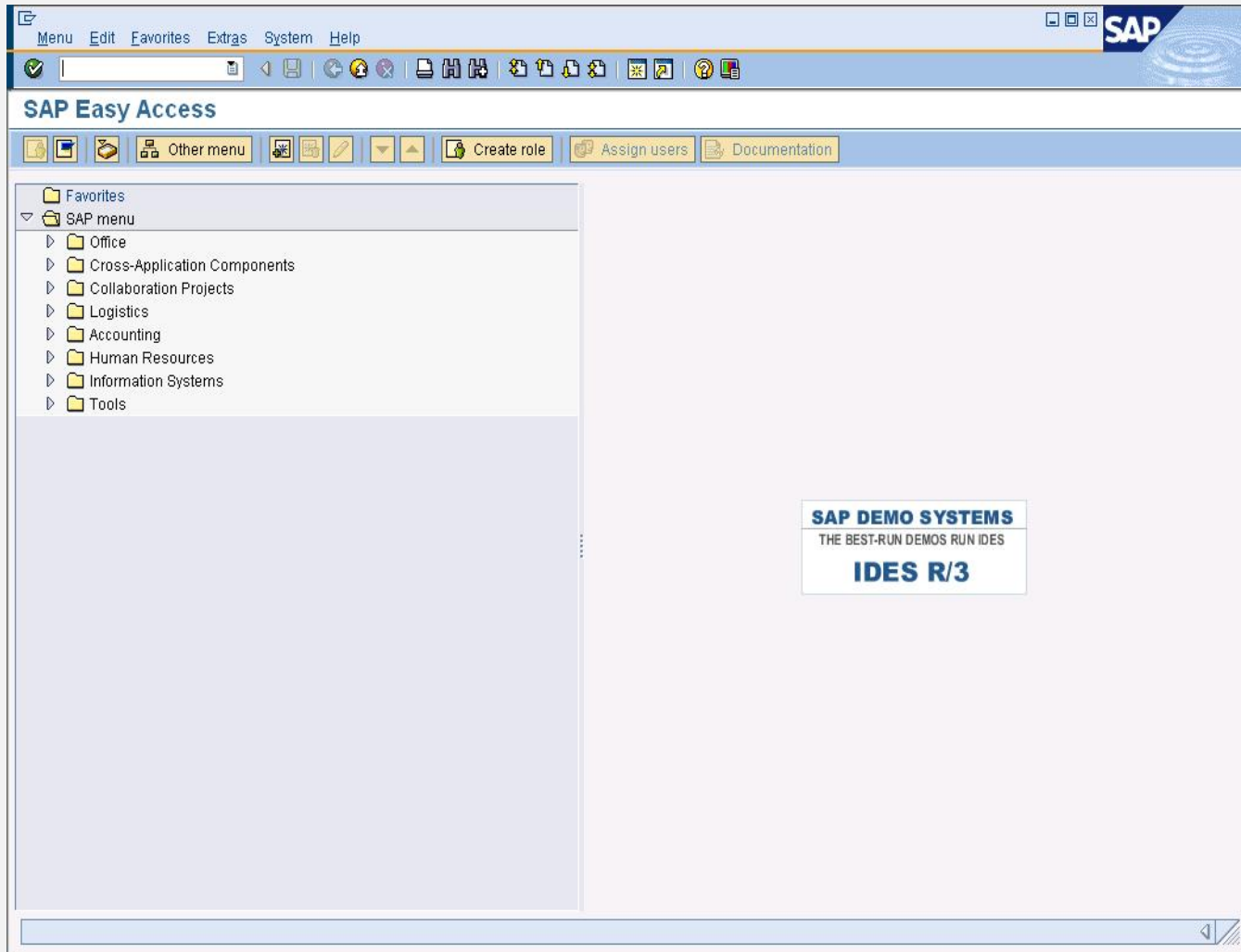
SAP ERP

Log on to an SAP system



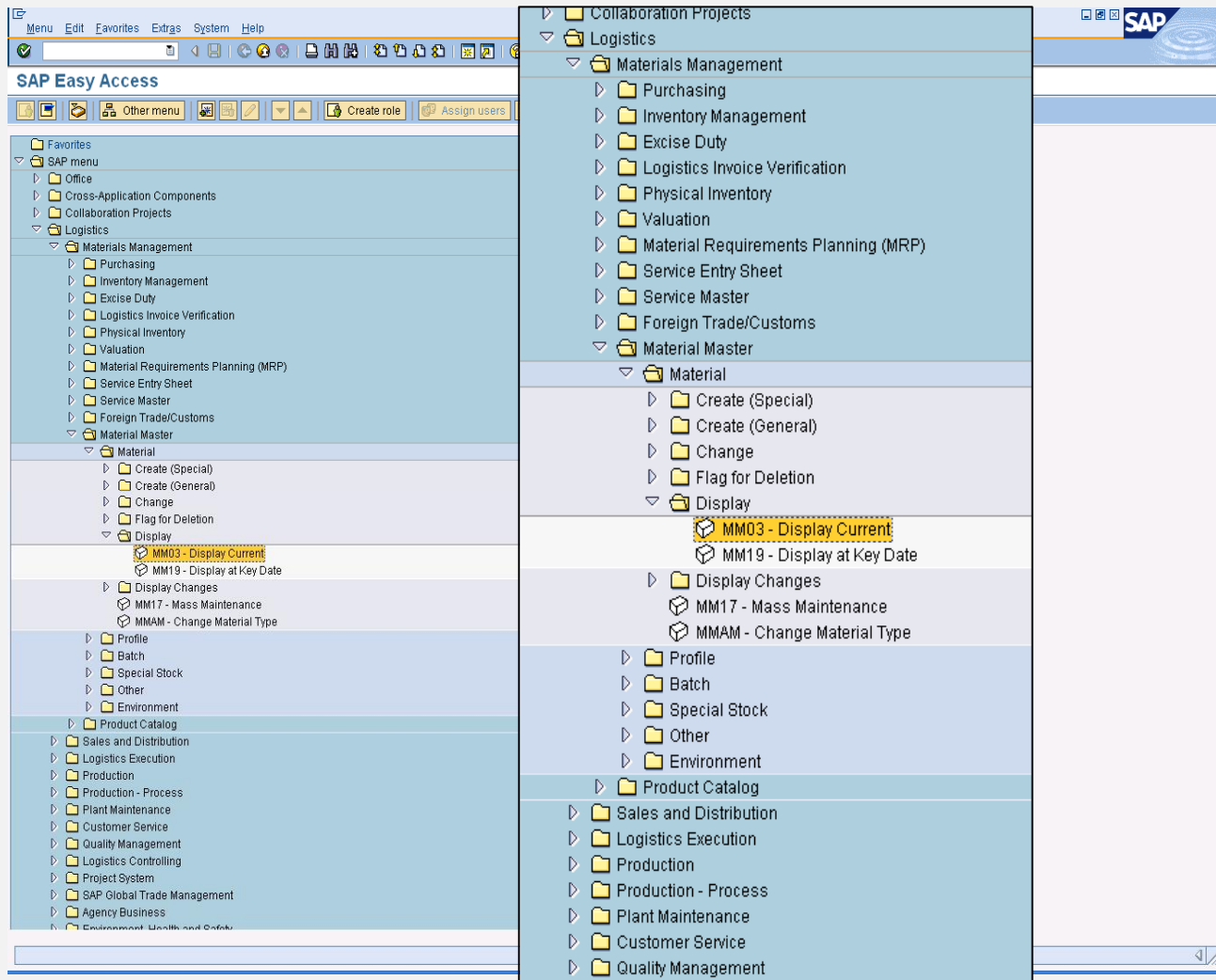
SAP ERP

SAP Easy Access Menu



SAP ERP

SAP Easy Access Menu



SAP ERP

Role-based User Menu

The screenshot shows the SAP Easy Access interface. The 'Other menu' button is highlighted with a red box. The main window displays a list of roles with the following columns: 'Single role' and 'Role name'.

Single role	Role name
AAA_INFOBASE	
AAA_ROLESWITCH	IDES Role Switcher
AC280_RECHERCHE	
AC280-RECHERCHE	
ADSCALLER	
AIS_APAY_CLERK_US00	AIS - Accounts Payable Clerk
AIS_AR_CLERK_US00	AIS - Accounts Receivable Clerk
ASAP_AUTORENUMGEBUNG	Profile for the ASAP Authoring Environment
CA940_BC_ADMIN	CA940_BC_ADMIN: User Administrator CA940
CA940_DISPLAY	CA: Display authorizations for all modules (except BC, CA, HR)
CA940_PLUS	
CA940_SD_SALES	
CA940_USER	
CFM_INSURANCE_COMPANIES	
CH_ADMI	HR-Administration Switzerland
CH_MANAGER	Manager Switzerland
CH_MINI	
CH_PAYROLL	Payroll Administration Switzerland
CH-PK-EXPERTE	HR: Compensation Specialist

More than 500 input options

SAP ERP

DYNPRO Elements

Command field (transaction code) →

System function bar

Application function bar

Input fields

Check box

Radio buttons

Press buttons

Status bar

Checkbox

- Auswahl 1 (Mehrfachwahl möglich!)
- Auswahl 2
- Auswahl 3
- Auswahl 4

Radiobutton

- Alternative 1 (nur eine Alternative möglich!)
- ODER Alternative 2
- oder
- oder
- oder

Tabs

Überblick

Anzeigen | Ändern

CK11N | h02 | INS

SAP ERP

ENJOY Initiative – Old Design

Create Purchase order : Initial Screen

Purchase order Edit Header Item Environment System Help

Vendor:

Order type: **NB**

Purchase order date: **15.03.1999**

Purchase order:

Organizational data

Purch. organization: **0001**

Purchasing group: **001**

Default data for items

Display Purchase order : Item Overview

Purchase order: **4500000343** Order type: **NB** Order date: **15.03.1999**

Vendor: **100010** Johnson LTD Currency: **DEM**

Item	Material	Short text	PO quantity	OUr	Deliv. date	Net price
10	K	hammer	10	PU	11.11.19...	
20	K	bot, 18ges	50	PU	11.11.19...	
30	K	nut, 1/2 cm	50	PU	11.11.19...	

Initial screen

Change Purchase order : Header Data

Purchase order Edit Header Item Environment System Help

Purchase order: **4500000343** Company code: **0001** Purchasing group: **001**

Document type: **NB** Purch. organization: **0001**

Vendor: **100010** Johnson LTD

Adminstr. fields

Order date: **15.03.1999** Item interval: **10**

Language key: **DE** Sub-item inter.: **1** Complete deliv.

Terms of delivery and payment

Payment terms: Currency: **DEM**

Days: % Exch. rate: **1.00000** Ex.rate fix

Header data

Display Purchase order : Item Overview

Purchase order: **4500000343** Order type: **NB** Order date: **15.03.1999**

Vendor: **100010** Johnson LTD Currency: **DEM**

Item	Material	Short text	PO quantity	OUr	Deliv. date	Net price
10	K	hammer	10	PU	11.11.19...	
20	K	bot, 18ges	50	PU	11.11.19...	
30	K	nut, 1/2 cm	50	PU	11.11.19...	

Position overview

Change Purchase order : Item 00010

Purchase order Edit Header Item Environment System Help

Item: **4500000343** **10** Item cat.: AcctAssCat: **K**

Material: Mail group: **01** Plant: **0001**

Description: **hammer** Stor. loc.:

Quantity and price

Order quantity: **10** **PU** Info rec. update:

Net order price: **20,00** **DEM** / **1** **PU** Estimated price

Qty. conversion: **1** **PU** <-> **1** **PU** Print price

Deadline monitoring

Delivery date: **D 11.11.1999** Reminder 1: ContContK: Ackn.reqd.

Stat. del. date: **11.11.1999** Reminder 2: Acknowl.no:

Reminder 3: TrackingNo:

GR proc. time: Vend. mat.:

GR/IR control

Underdel. tol: % Qual insp. GR

Overdelv. tol: % Unlimited Del. compl GR non-val

Tax code: Final inv. IR

Shipping instr.: GR-basedIV

Position details

SAP ERP

ENJOY Initiative – New Design

Standard PO 4500014381 Created by Dan Gallagher

Document overview off | Print preview | Messages | Personal setting

NB Standard PO 4500014381 Vendor 3902 SCT Inc. Doc. date 27.09.2002

Delivery/invoice Conditions Texts Address Communication Partners Additional data Org. data Status

Purch. Org. 9000 IDES USA
 Purch. group 100 Corporate Purchsng
 Company Code 3000 IDES US INC

S	Item	A	I	Material	Short text	PO quantity	O	C	Deliv. date	Net price	Curr.	Per	O	Matl Group	Plant	SLoc
	10			100-110	Slug for spiral casing	140	PC	D	28.09.2002	3,00USD	1		PC	Metal proces	New York	Warehouse 000
	20			100-120	Flat gasket	106	PC	D	28.09.2002	5,00USD	1		PC	Metal proces	New York	Warehouse 000
	30			100-130	Hexagon head screw M10	1.169	PC	D	28.09.2002	21,00USD	1		PC	Metal proces	New York	Warehouse 000
	40			100-210	Slug for fly wheel	170	PC	D	28.09.2002	3,50USD	1		PC	Metal proces	New York	Warehouse 000

Item 1 [10] 100-110, Slug for spiral casing

Material data Quantities/weights Delivery schedule Delivery Invoice Conditions Texts Delivery address Confirmations Condition control

Material group 001 Revision level
 Vendor mat. no. EAN/UPC
 Vendor sub-range Cross-plant CM
 Batch Vendor Batch Info Update

header data

position overview

position details

SAP ERP

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

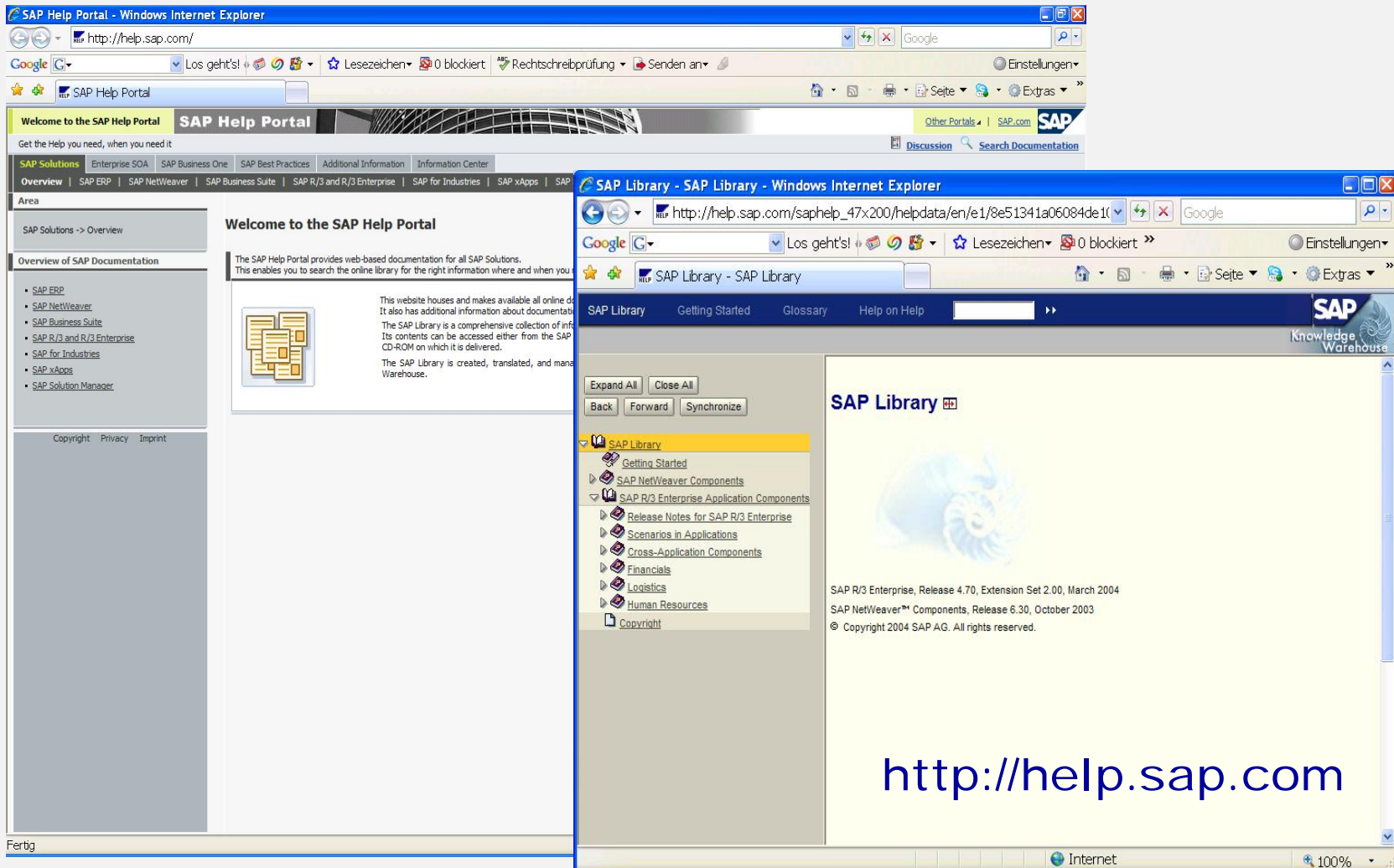
When creating a customer master record, the user either enters the account number of the customer or has the system determine the number when the record is saved, depending on the type of number assignment specified. The account group determines the type of number assignment used.

Customer Account Number (1) 500 Entries found

SearchTerm	PostalCode	City	Name 1	Customer
01305-000	SAO PAULO - CONSOLACAO	MARCELO DA SILVA	484	
10036	NEW YORK	MCDANIELS REALTY CORPORAT	4259	
12045	BERLIN	BARBARA BECKMANN	3471	
12045	BERLIN	HERBERT HUBER	3469	
12045	BERLIN	KAROLINE KRAFT	3472	
12045	BERLIN	MARKUS MILLER	3464	
12045	BERLIN	MATTHIAS MAYER	3470	
12045	BERLIN	MICHAELA MEIER	3465	

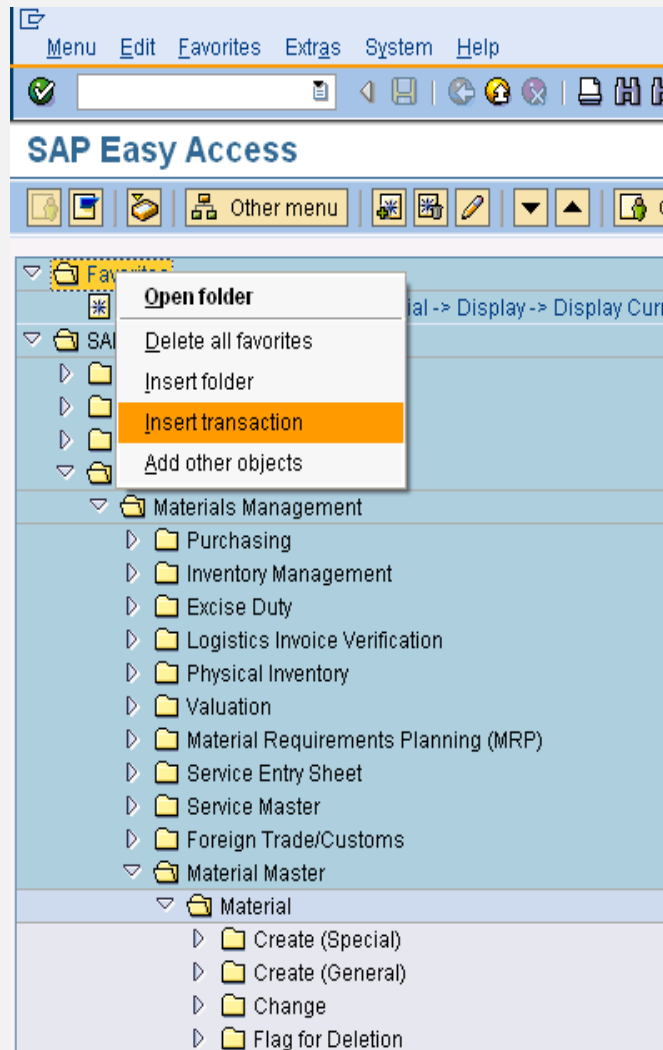
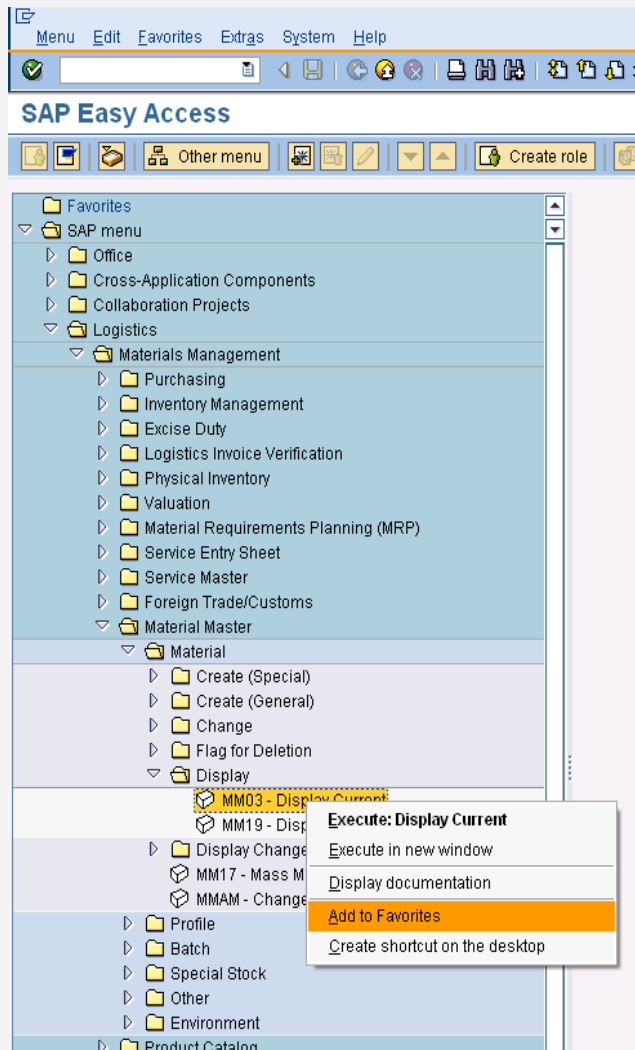
SAP ERP

SAP Help Portal



SAP ERP

Favorites



SAP ERP

Transaction Codes

The screenshot illustrates the SAP Easy Access interface. A context menu is open over the 'Settings' option, listing the following actions and shortcuts:

- Administration information (Ctrl+Shift+F8)
- Assign users
- Display documentation (Shift+F6)
- Technical details (Shift+F11)
- Settings (Shift+F9)**
- Set start transaction (Shift+F7)

The 'Settings' dialog box is open, containing the following options:

- Display favorites at end of list
- Do not display menu, only display favorites
- Do not display screen
- Display technical names

The background shows the SAP Easy Access tree structure. The 'Material Master' folder is expanded, and the 'Display' sub-folder is selected, with 'MM03 - Display Current' highlighted.

SAP ERP

Transaction SEARCH_SAP_MENU

The screenshot displays the SAP SEARCH_SAP_MENU transaction interface. The main window shows a search for the transaction code 'MM03'. The results are organized into a table with columns for 'Node', 'Transaction code', and 'Text'. An arrow points to the second row of results, which is highlighted. A search dialog box is overlaid on the right side of the screen, showing the search text entry 'mm03' and a green checkmark icon, indicating a successful search.

Node	Transaction code	Text
Nodes	MM03	Material
Preceding node		Master Data
Preceding node		Environment
Preceding node		Purchasing Information System
Preceding node		Reporting
Preceding node		Purchase Order
Preceding node		Purchasing
Preceding node		Materials Management
Preceding node		Logistics
Nodes	MM03	Material
Preceding node		Master Data
Preceding node		Environment
Preceding node		Purchasing Information System
Preceding node		Reporting
Preceding node		Outline Agreement
Preceding node		Purchasing
Preceding node		Materials Management
Preceding node		Logistics
Nodes	MM03	Material
Preceding node		Master Data
Preceding node		Environment
Preceding node		Purchasing Information System
Preceding node		Reporting
Preceding node		Request for Quotation
Preceding node		RFQ/Quotation
Preceding node		Purchasing
Preceding node		Materials Management
Preceding node		Logistics
Nodes	MM03	Material master
Preceding node		Material
Preceding node		Sales info system
Preceding node		Environment
Preceding node		Customer
Preceding node		Environment
Preceding node		Customer Rebate Arrangements
Preceding node		Subsequent Settlement
Preceding node		Master Data
Preceding node		Purchasing
Preceding node		Materials Management
Preceding node		Logistics
Nodes	MM03	Material
Preceding node		Information
Preceding node		Environment
Preceding node		Inventory Management
Preceding node		Materials Management
Preceding node		Logistics
Nodes	MM03	Material master data
Preceding node		Environment

SAP ERP

Transaction ICON

Table View Edit Goto Selection Utilities System Help

Display View "Icon maintenance": Overview

Icon maintenance

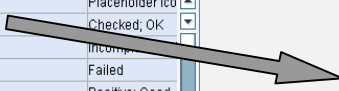
ID	Text	Quickinfo
ICON_DUMMY	Placeholder icon	Placeholder icon
ICON_CHECKED	Checked; OK	Checked; OK
ICON_INCOMPLETE	Incomplete; critical	Incomplete; critical
ICON_FAILURE	Failed	Failed
ICON_POSITIVE	Positive; Good	Positive; Good
ICON_NEGATIVE	Negative; Bad	Negative; Bad
ICON_LOCKED	Locked; Lock	Locked; Lock
ICON_UNLOCKED	Free; unlock	Free; unlock
ICON_GREEN_LIGHT	Green Light; Go; Okay	Green Light; Go; Okay
ICON_YELLOW_LIGHT	Yellow light; caution	Yellow light; caution
ICON_RED_LIGHT	Red light; stop; errors	Red light; stop; errors
ICON_TOTAL_LEFT	Extreme left; first ...	Extreme left; first ...
ICON_TOTAL_RIGHT	Extreme right; last ...	Extreme right; last ...
ICON_COLUMN_LEFT	Column left; previous ...	Column left; previous ...
ICON_COLUMN_RIGHT	Column right; next ...	Column right; next ...
ICON_PAGE_RIGHT	Page right	Page right
ICON_PAGE_LEFT	Page left	Page left
ICON_PREVIOUS_VALUE	Previous value; next entry	Previous value; next entry
ICON_NEXT_VALUE	Next value; previous entry	Next value; previous entry
ICON_ANNOTATION	Note; change note; remark	Note; remark
ICON_CREATE_NOTE	Create note	Create note
ICON_DISPLAY_NOTE	Display note	Display note
ICON_CALCULATION	Costing	Costing
ICON_GRAPHICS	Graphic	Graphic
ICON_CREATE_TEXT	Create text	Create text
ICON_DISPLAY_TEXT	Display text	Display text
ICON_CHANGE_TEXT	Text; change text; long text	Text
ICON_VARIANTS	Variants	Variants
ICON_INFORMATION	Information	Information
ICON_ADDRESS	Address	Address
ICON_VIEWER_OPTICAL_ARCHIVE	Optical archive viewer	Optical archive viewer
ICON_OKAY	OK; Continue; Choose <value>	OK; Continue; Choose <value>
ICON_CANCEL	Cancel	Cancel
ICON_PRINT	Print	Print
ICON_CREATE	Create	Create

Restrict Value Range (2) 1107 Entries Found

Restrictions

ID	Text	Quickinfo
Placeholder icon	Placeholder icon	Placeholder icon
Checked; OK	Checked; OK	Checked; OK
Incomplete; critical	Incomplete; critical	Incomplete; critical
Failed	Failed	Failed
Positive; Good	Positive; Good	Positive; Good
Negative; Bad	Negative; Bad	Negative; Bad
Locked; Lock	Locked; Lock	Locked; Lock
Free; unlock	Free; unlock	Free; unlock
Green Light; Go; Okay	Green Light; Go; Okay	Green Light; Go; Okay
Yellow light; caution	Yellow light; caution	Yellow light; caution
Red light; stop; errors	Red light; stop; errors	Red light; stop; errors
Extreme left; first ...	Extreme left; first ...	Extreme left; first ...
Extreme right; last ...	Extreme right; last ...	Extreme right; last ...
Column left; previous ...	Column left; previous ...	Column left; previous ...
Column right; next ...	Column right; next ...	Column right; next ...
Page right	Page right	Page right
Page left	Page left	Page left
Previous value; next entry	Previous value; next entry	Previous value; next entry
Next value; previous entry	Next value; previous entry	Next value; previous entry
Note; change note; remark	Note; remark	Note; remark
Create note	Create note	Create note
Display note	Display note	Display note
Costing	Costing	Costing
Graphic	Graphic	Graphic
Create text	Create text	Create text
Display text	Display text	Display text
Text; change text; long text	Text	Text

1107 Entries Found



- Copy
- Help
- Create values
- Sort in ascending order
- Close
- Technical info
- Sort in descending order
- Find
- Search again
- Print locally
- Print (server)
- Download

SAP ERP

Multiple Selection

The screenshot displays the SAP ERP Materials List interface. In the background, the 'Database selections' section shows a search field for 'Material' with a red box highlighting the right arrow button. The foreground shows a 'Multiple Selection for Material' dialog box with the following elements:

- Navigation bar: Program Edit Goto System Help
- Database selections: Material, Plant, Material type, Material group, Created by, Valuated materials only (checked)
- Dialog Title: Multiple Selection for Material
- Dialog Tabs: 3Single Vals (selected), Ranges, Single Vals, Ranges
- Dialog Content: A list of material values including 'O.. Single value', 'P-100', 'P-101', and 'P-103'. A yellow highlight is on the row below 'P-103'.
- Dialog Footer: Multiple selection..

SAP ERP

User Profile Settings (local PC)

The screenshot displays the SAP Easy Access user interface. The top menu bar includes 'Menu', 'Edit', 'Favorites', 'Extras', 'System', and 'Help'. Below the menu bar is a toolbar with various icons. The left sidebar shows a 'Favorites' list with 'MM03 - Material Master -> Material -> Display -> Display Current' selected, and a 'SAP menu' with categories like Office, Cross-Application Components, Collaboration Projects, Logistics, Accounting, Human Resources, Information Systems, and Tools. A context menu is open over the 'SAP menu' area, listing options such as 'Options ...', 'New Visual Design ...', 'Set Color to System ...', 'Clipboard', 'Generate Graphic', 'Create Shortcut ...', 'Activate GuiXT', 'Script Recording and Playback...', 'Script Development Tools...', 'Default Size', 'Hard Copy', 'Quick Cut and Paste', 'Spell Checker', 'SAP GUI Help', and 'About...'. The 'Options' dialog box is also open, showing settings for 'Quick Info' (radio buttons for None, Slow, Quick), 'Messages' (checkboxes for Beep at Message, Dialog Box at Success Message, Dialog Box at Warning Message, and Dialog Box at Error Message), and 'System' (Libraries set to 'Keep Loaded' and Automated Timeout in Sec. set to 8). The dialog box has 'OK', 'Cancel', 'Apply', and 'Help' buttons at the bottom.

SAP ERP

User Profile Settings (SAP system)

The screenshot illustrates the process of accessing user profile settings in SAP ERP. On the left, the 'SAP Easy Access' menu is shown with the 'User Profile' option selected. A secondary menu is open, highlighting 'Own Data'. An arrow points from this menu to the 'Maintain User Profile' form on the right.

The 'Maintain User Profile' form displays the following information for user MASTER-ADM:

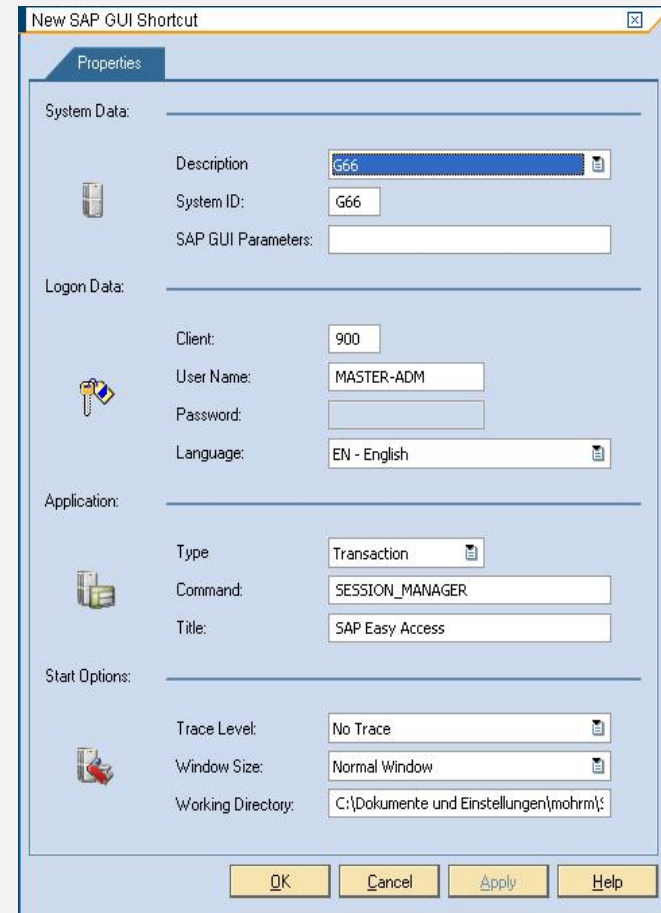
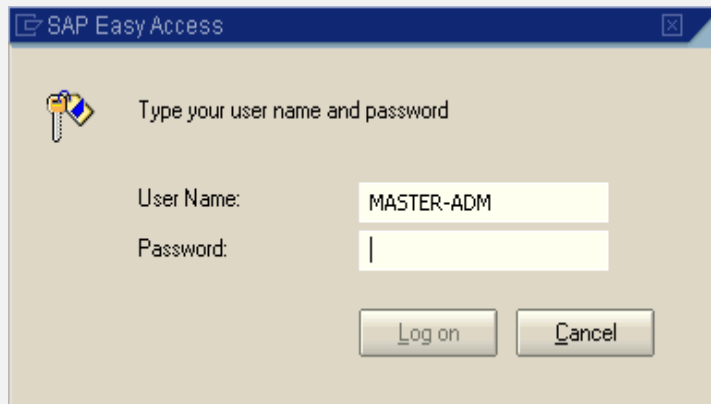
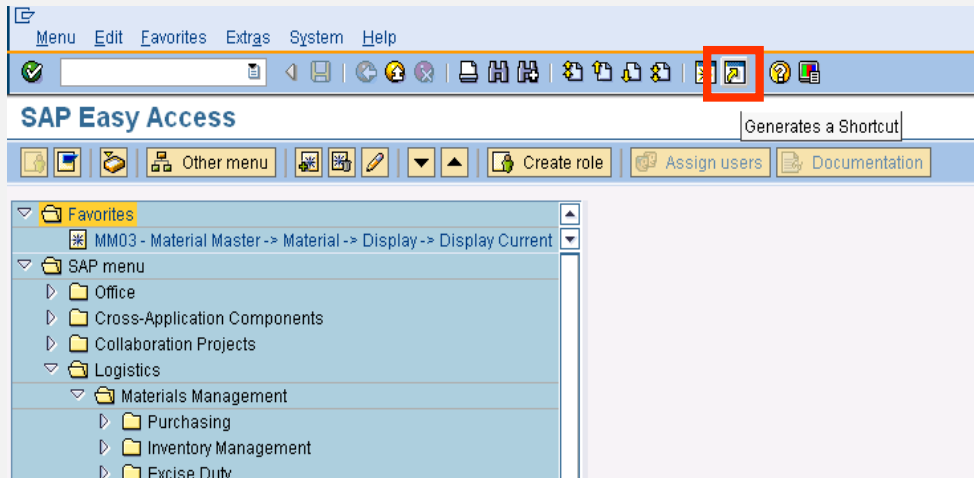
User	MASTER-ADM
Last Changed On	SAP* 06.03.2007 11:23:57
Status	Revised

The form is divided into several sections:

- Person:** Fields for Title, Last name (Mohr), First name (Matthias), Academic Title, Format (Matthias Mohr), Function, Department, Room Number, Floor, and Building.
- Communication:** Fields for Language, Telephone, Extension, Mobile Phone, Fax, Extension, E-Mail, and Comm. Meth.
- Company:** Field for IDES / Lyoner Stern 231 / 60441 Frankfurt.

SAP ERP

Desktop Shortcut



You are now able to:

- Name the window elements
- Navigate in an SAP system
- Apply personal system settings
- Effectively use help

SAP University Alliances

Version 1.0

Authors Bret Wagner
Stefan Weidner
Stephen Tracy

Global Bike Inc.

Product

SAP ERP

Level

Beginner

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Global Bike Inc.
Integration

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.

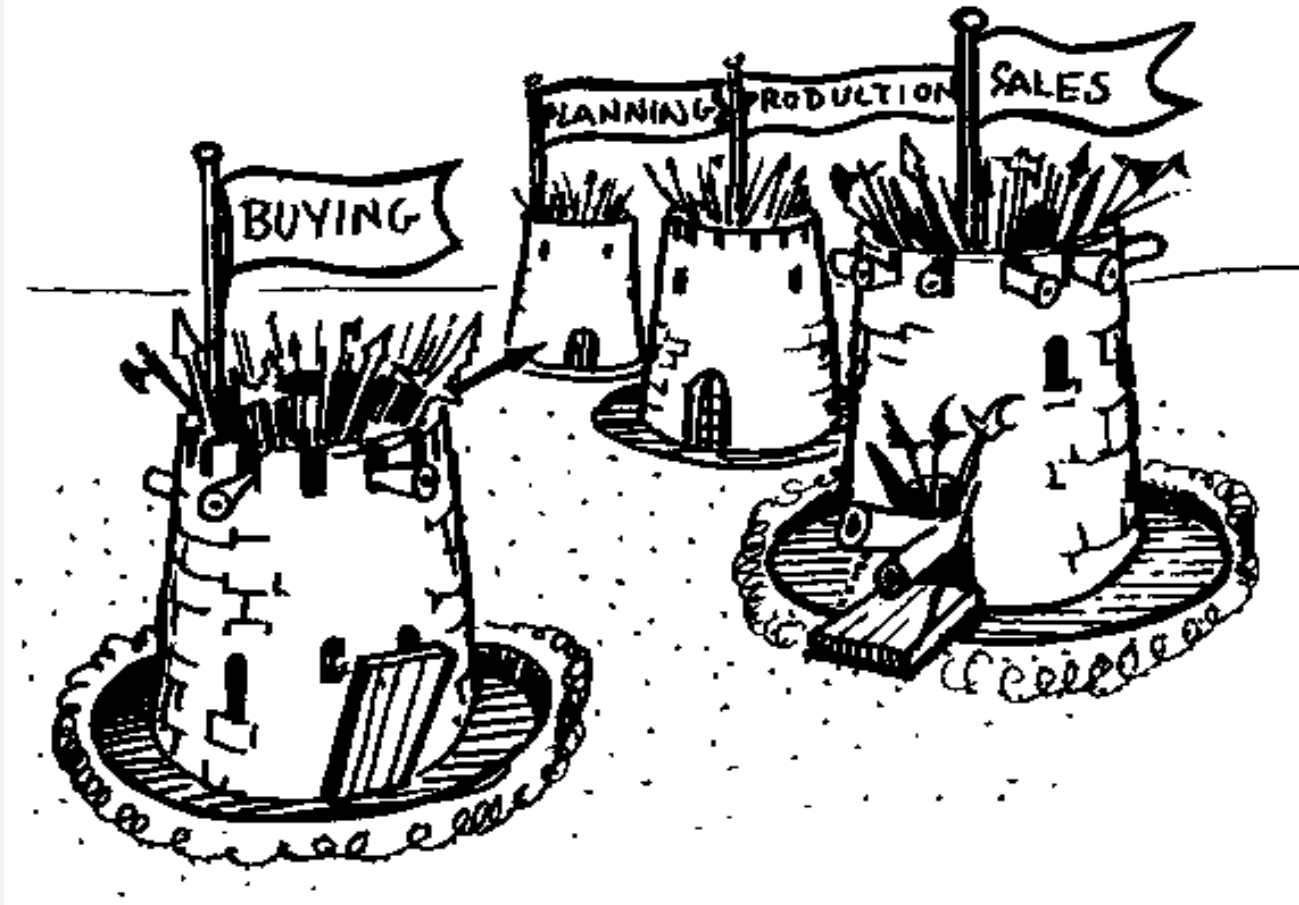
- Sell – Sales and Distribution (SD)
- Buy – Procurement (MM)
- Plan – Production Planning (PP)
- Make – Manufacturing Execution (PP)
- Track – Financial Accounting (FI)
- Track – Controlling (CO)

- 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

SAP ERP

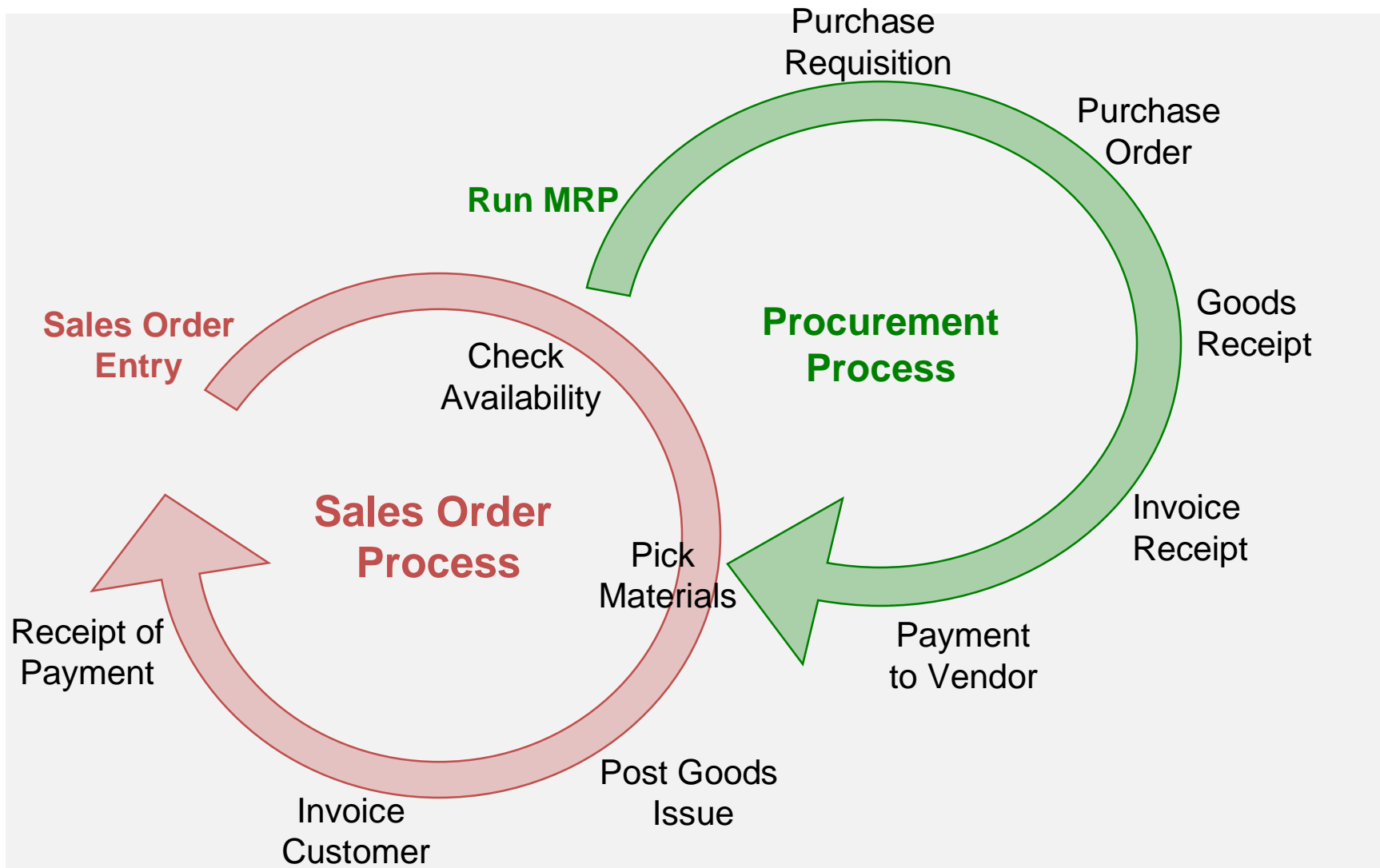
Cross-functional integration



Source Unknown

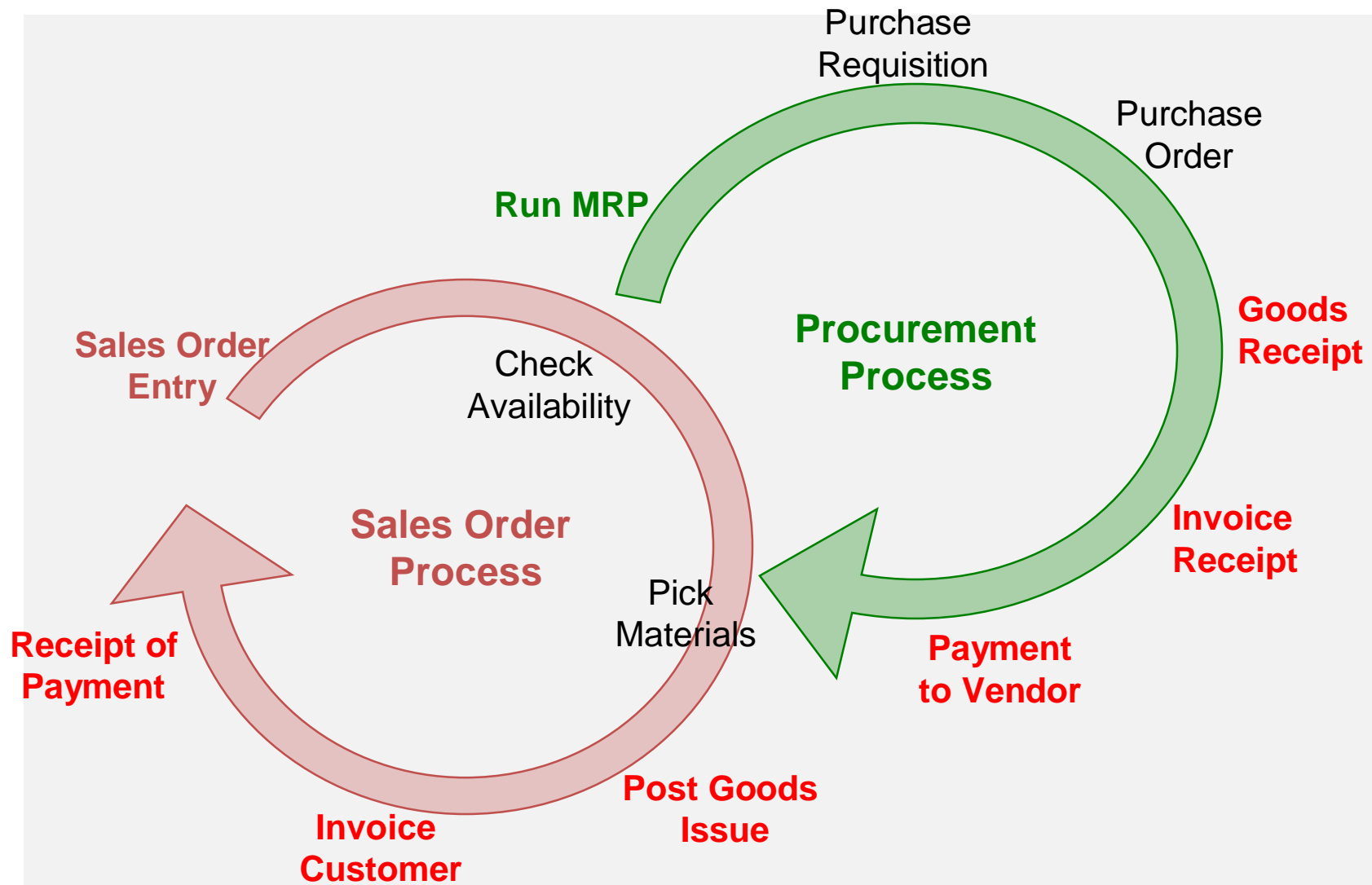
SAP ERP

Process Integration



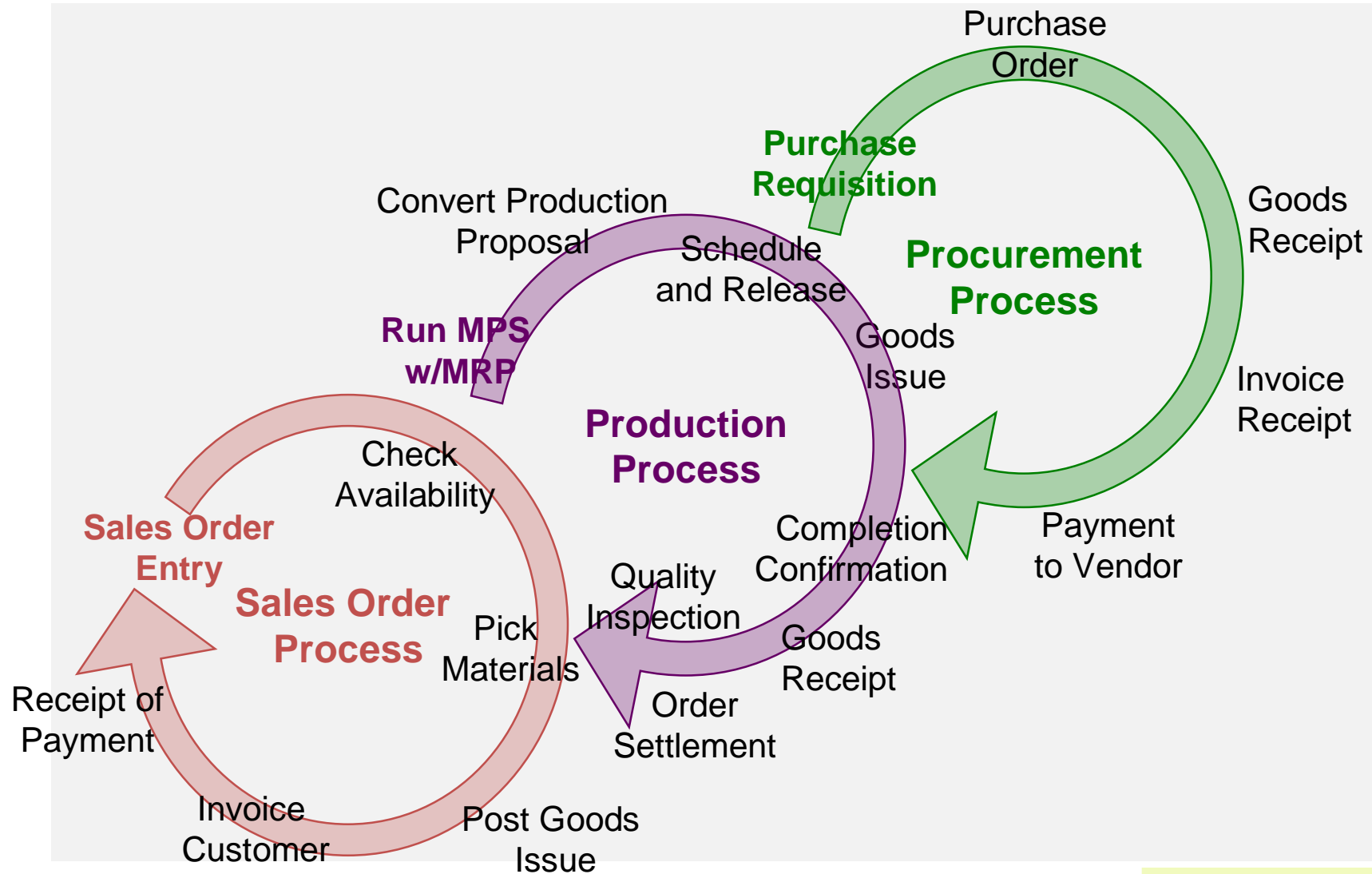
SAP ERP

Process Integration



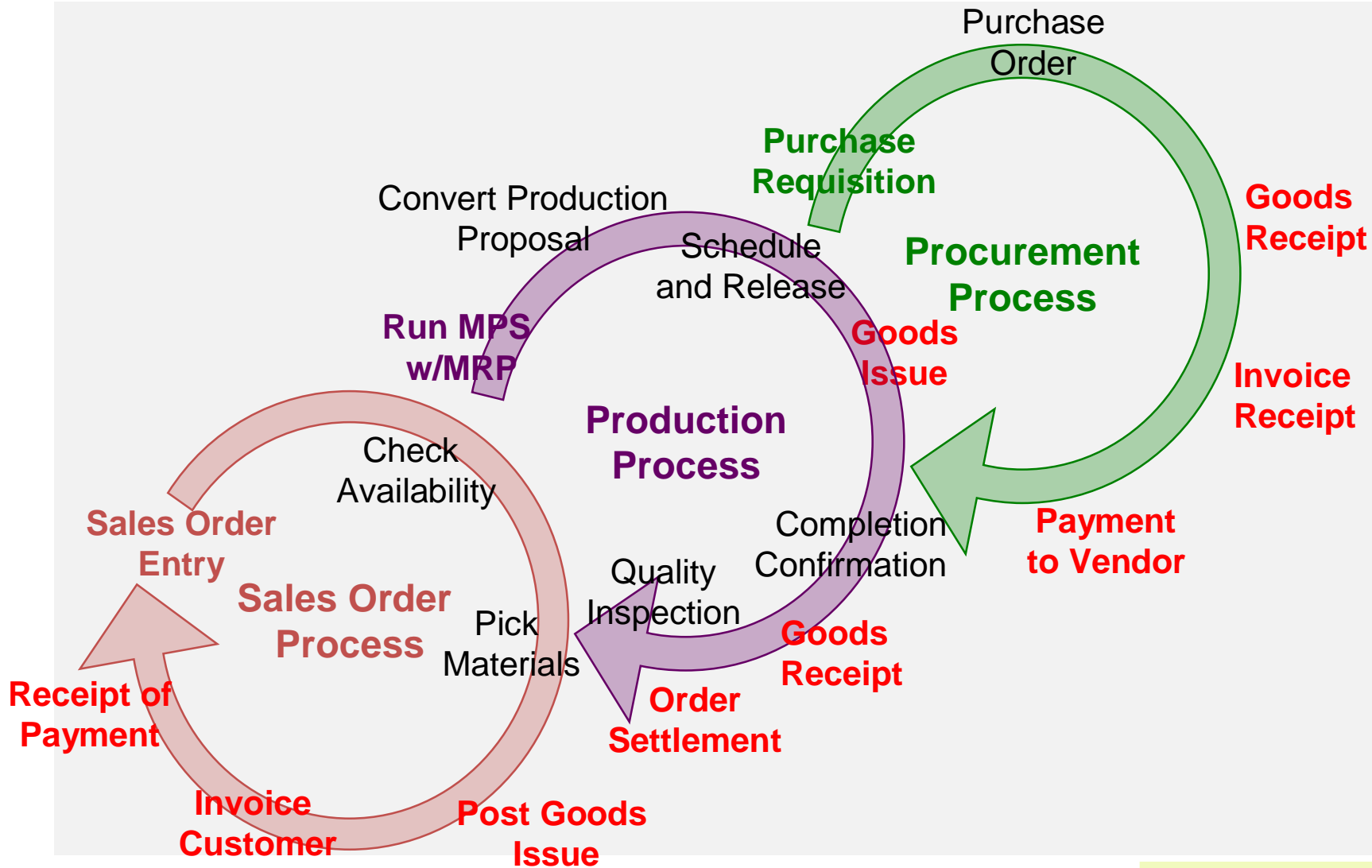
SAP ERP

Process Integration



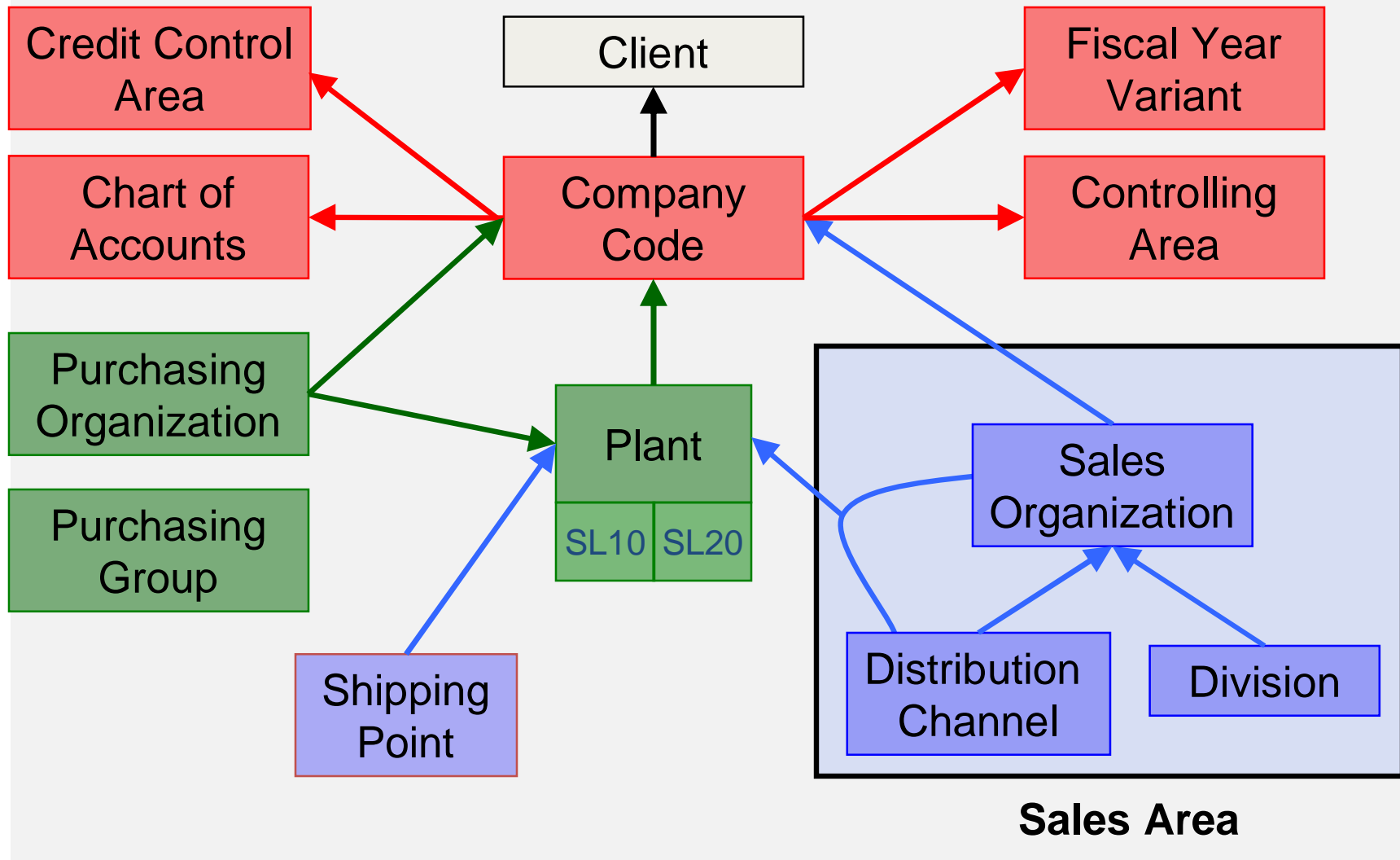
SAP ERP

Process Integration



SAP ERP

Enterprise Structure (Global Bike Inc.)



SAP ERP

SAP ERP

SAP University Alliances

Version 1.0

Authors Bret Wagner
Stefan Weidner
Stephen Tracy



Sales and Distribution (SD)

Product

SAP ERP 6.0
Global Bike Inc.

Level

Beginner

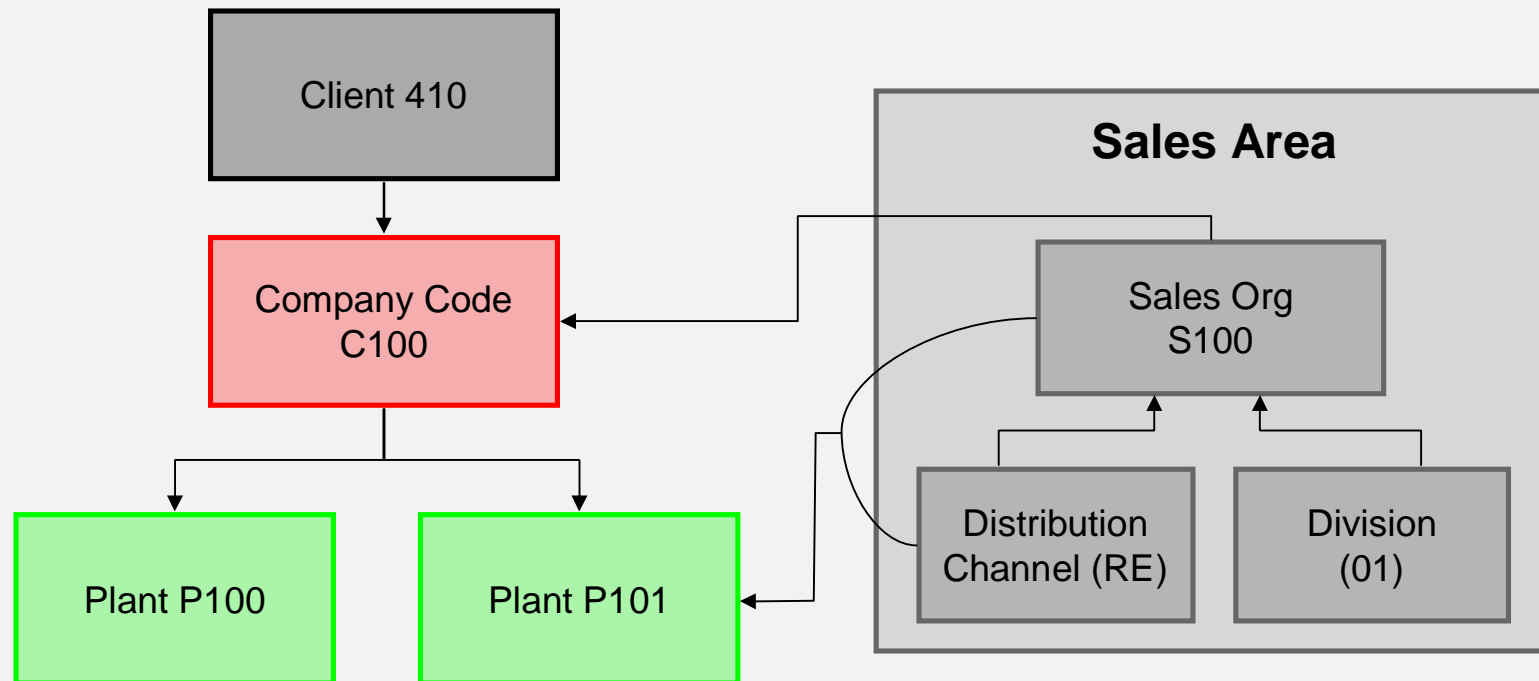
Focus

Cross-functional integration
Sales and Distribution

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

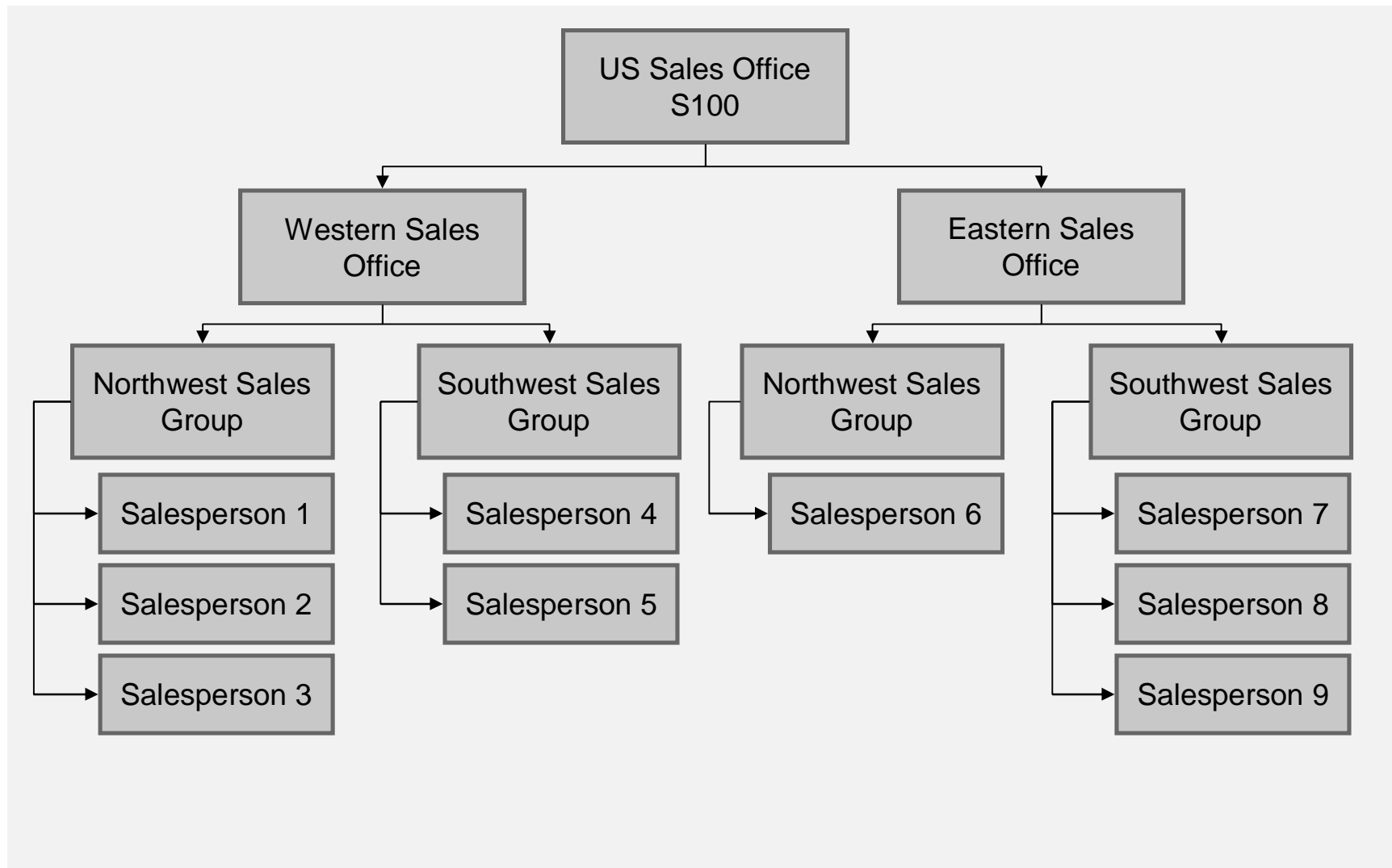
- Sales and Distribution Org. Levels
- Sales and Distribution Master Data
- Sales Order Process
 - Order-to-Cash

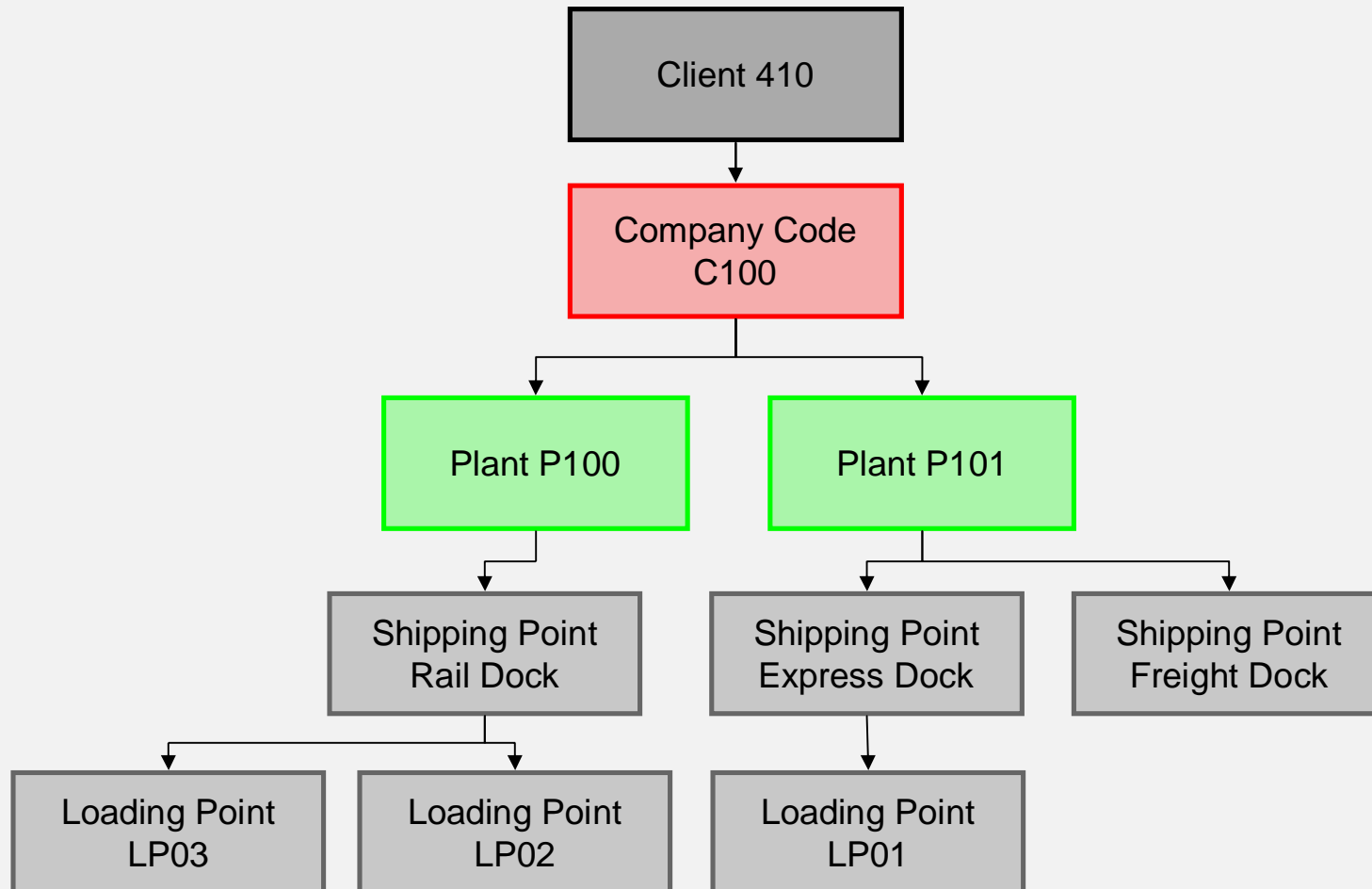
- S&D Structure
- Client
- Company Code
- Sales Area
 - Sales Organization
 - Distribution Channel
 - Division
- Plant
- Shipping Point
- Loading Point
- Internal Sales Structure
- Sales Offices
- Sales Groups
- Salesperson



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Internal Sales Structure





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SD Master Data

The screenshot displays the SAP SD Master Data interface. Red circles and arrows highlight specific data points and their relationships to external master data tables:

- Customer Master:** Red circles around 'CLIENT-00' in the 'Sold-to party' and 'Ship-to party' fields, with arrows pointing to a yellow cylinder labeled 'Customer Master'.
- Material Master:** Red circles around 'UCC-MOTORCYCLE-00' in the 'Material' column of the 'All items' table, and '44.100 LB' in the 'Total Weight' field, with arrows pointing to a purple cylinder labeled 'Material Master'.
- Sales Condition:** Red circles around 'ZB01' in the 'Payment terms' field and 'CIF Berlin' in the 'Incoterms' field, with arrows pointing to a yellow cylinder labeled 'Sales Condition'.

Other visible data includes: Standard Order 10697, Net value 349.900,00 EUR, Req. deliv. date 23.10.2006, Deliver. Plant, Total Weight 44.100 LB, Volume 5.000 FT3, Pricing date 12.10.2006, Exp. date, Order reason, Sales area 1000 / 10 / 00, Germany Frankfurt, Final customer sales, Cross-division.

Item	Material	Order quantity	BU	Description	S	Custom...	ItCa	DGI...	HgLvlt	D	First date	Pist	Bat...	CnTy	Amount	CrCy	Net price	per	U...	Ne	
1	UCC-MOTORCYCLE-00	100	PC	UCC Motorcycle 00	✓		TAN			00	23.10.2006	1000		PR00	3.499,00	EUR	3.499,00		1	PC	
											23.10.2006										
											23.10.2006										
											23.10.2006										
											23.10.2006										

- 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

Change Customer: General Data

Other Customer | Company Code Data | Sales Area Data | CIN Details | Additional Data, Empties

Customer 301 00 The Bike Zone Portland

Address | Control Data | Payment Transactions | Marketing | Unloading Points | Export Data

Preview | Internat. versions

Name

Title

Name 00 The Bike Zone

Search Terms

Search term 1/2 00

Street Address

Street/House number

Postal Code/City 97204 Portland

Country US USA Region OR Oregon

Time zone PST

PO Box Address

PO Box

Postal code

Company postal code

Communication

Language EN English Other communication...

Telephone Extension

Mobile Phone Extension

Fax Extension

E-Mail

StandardComm.Mtd

Data line

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Customer Master Data

- The customer master information is divided into 3 areas:
 - General Data
 - Company Code Data
 - Sales Area Data

Change Customer: General Data

Other Customer | **Company Code Data** | Sales Area Data | CIN Details | Additional Data, Empties

Customer: 301 00 The Bike Zone Portland

Address | Control Data | Payment Transactions | Marketing | Unloading Points | Export Data

Preview | Internat. versions

Name

Title

Name: 00 The Bike Zone

Search Terms

Search term 1/2: 00

Street Address

Street/House number

Postal Code/City: 97204 Portland

Country: US USA Region: OR Oregon

Time zone: PST

PO Box Address

PO Box

Postal code

Company postal code

Communication

Language: EN English Other communication...

Telephone Extension

Mobile Phone

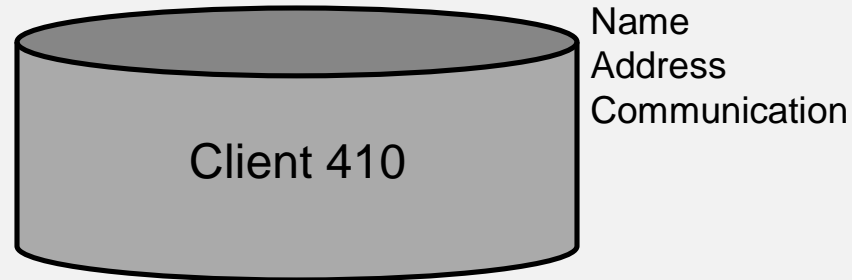
Fax Extension

E-Mail

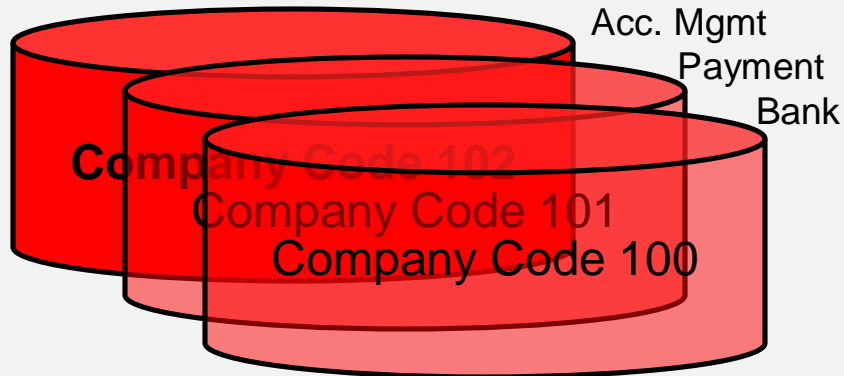
StandardComm.Mtd

Data line

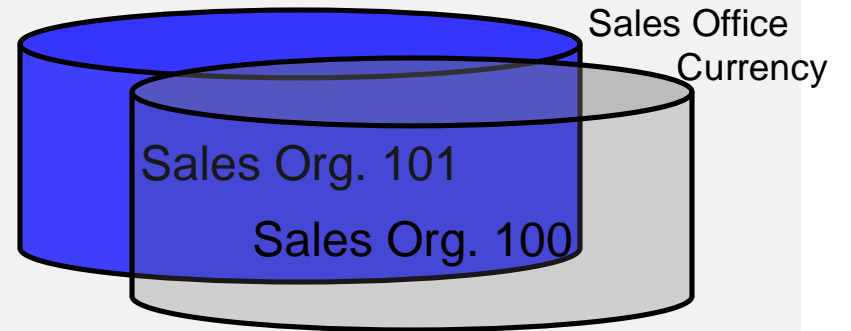
General Information relevant for the entire organization:



Company Code specific information:



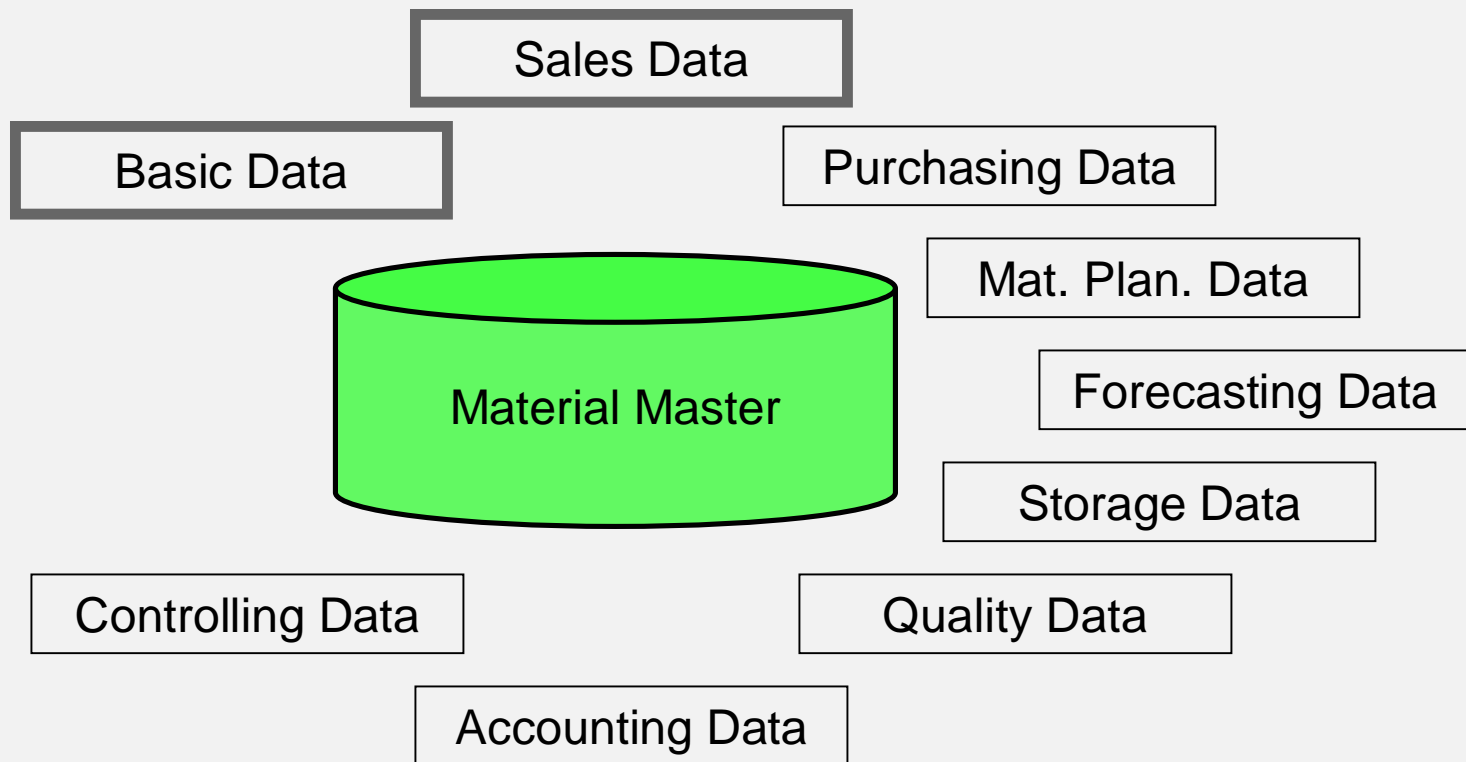
Sales Area specific information:



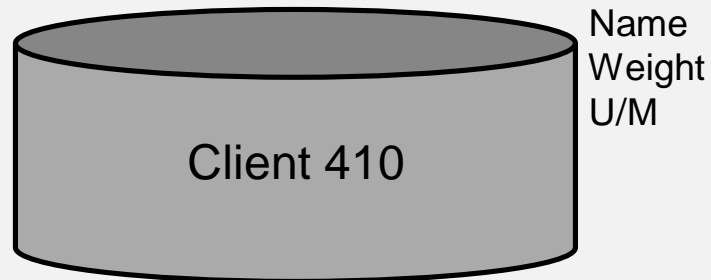
- Material Master
 - Contains all the information a company needs to manage about a material
 - It is used by most components within the SAP system
 - Sales and Distribution
 - Materials Management
 - Production
 - Plant Maintenance
 - Accounting/Controlling
 - Quality Management
 - Material master data is stored in functional segments called Views

The screenshot displays the SAP Material Master Data interface for material KB-0013-00 (Trading Goods). The interface is organized into several functional segments (Views):

- General data:** Base Unit of Measure (ST), Material Group (02022), Division (01), Product allocation, X-plant matl status, Assign effect. vals (checkbox), GenitemCatGroup (NORM), Standard item.
- Material authorization group:** Authorization Group.
- Dimensions/EANs:** Gross Weight (10), Net Weight (10), Weight unit (KG), Volume, Size/dimensions, EAN/UPC, EAN Category.
- Packaging material data:** Matl Grp Pack.Matis.
- Basic Data Texts:** Languages Maintained (0), Basic Data Text, Language.



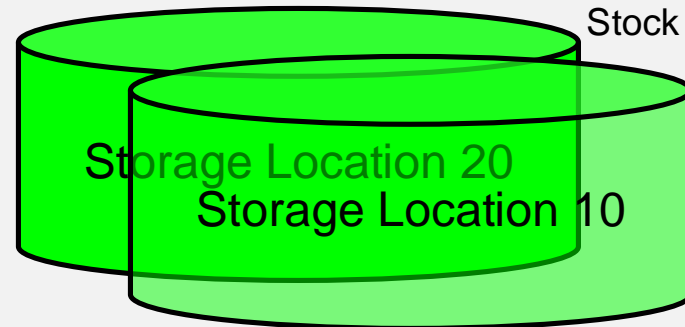
General Information relevant for the entire organization:



Sales specific information: Delivery Plant
Loading Grp



Storage Location specific information:
Stock Qty



- 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

The screenshot displays the SAP 'Change Customer Material Info Record : Item Screen' interface. The window title is 'Cust-material info Edit Goto System Help'. The main title is 'Change Customer Material Info Record : Item Screen'. The interface is divided into several sections:

- Material Data:** Material (KB-0013-00), Sales Organization (00A1), Distribution Channel (WH), Customer (301), Mekena, Bike - USA, Wholesale, 00 The Bike Zone.
- Customer material:** Customer Material (1234567), Customer description (Kids Bike - Mek), Search term (KB).
- Shipping:** Plant (00a2), Delivery Priority (2 Normal item), Minimum delivery qty (10 ST).
- Partial delivery:** Part.div./item, Underdel. Tolerance (5 %), Max.Part.Deliveries (2), Overdelv. Tolerance (5 %), Unlimited tolerance.
- Control data:** Item usage.

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Condition Master (Pricing)

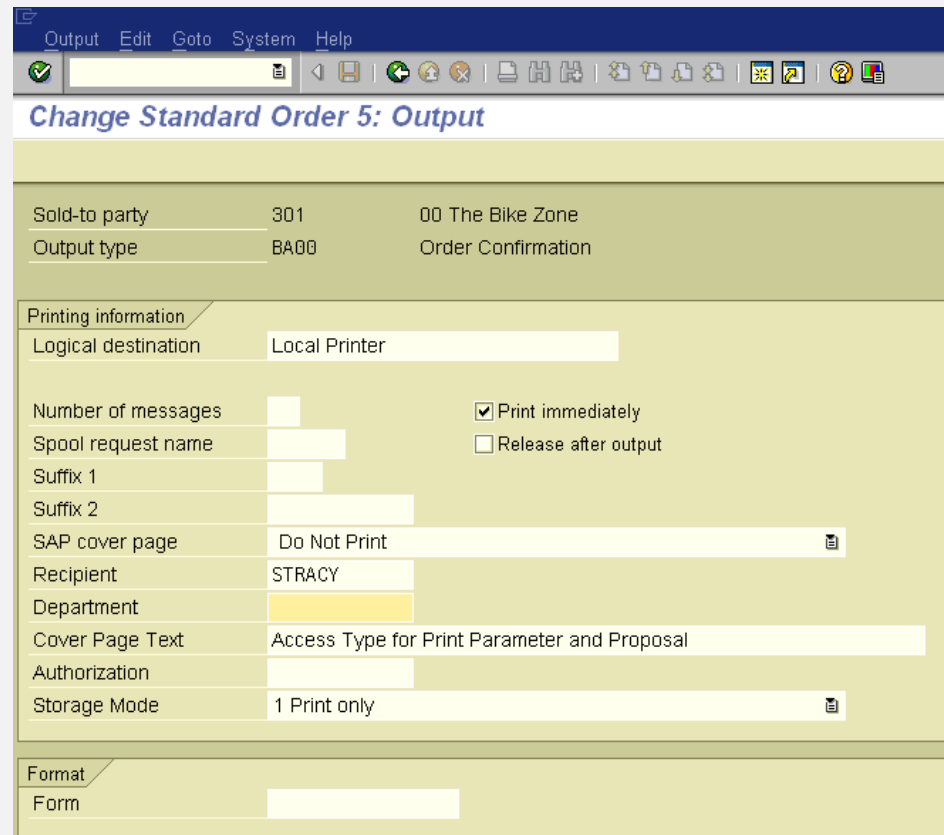
- Condition master data includes:
 - Prices
 - Surcharges
 - Discounts
 - Freights
 - Taxes
- You can define the condition master to be dependent on various data:
 - Material specific
 - Customer specific
- Conditions can be dependent on any document field

Qty		500	ST	Net		85,500
				Tax		0
Pricing Elements						
N...	CnTy	Name	Amount	Crcy	per	Uo... Condition value
PR00		Price	185.00	USD	1	ST 92,500.00
		Gross Value	185.00	USD	1	ST 92,500.00
K004		Material	5.00	USD	1	ST 2,500.00
RA00		% Discount from Net	5.000	%		4,500.00
		Discount Amount	14.00	USD	1	ST 7,000.00
		Rebate Basis	171.00	USD	1	ST 85,500.00
		Net Value for Item	171.00	USD	1	ST 85,500.00
		Net Value 2	171.00	USD	1	ST 85,500.00
		Net Value 3	171.00	USD	1	ST 85,500.00
		Total	171.00	USD	1	ST 85,500.00
SKT0		Cash Discount	0.000	%		0.00
VPRS		Internal price	155.00	USD	1	ST 77,500.00
		Profit Margin	16.00	USD	1	ST 8,000.00

Qty		250	ST	Net		63,887
				Tax		0
Pricing Elements						
N...	CnTy	Name	Amount	Crcy	per	Uo... Condition value
PR00		Price	269.00	USD	1	ST 67,250.00
		Gross Value	269.00	USD	1	ST 67,250.00
K007		Customer Discount	5.000	%		3,362.50
		Discount Amount	13.45	USD	1	ST 3,362.50
		Rebate Basis	255.55	USD	1	ST 63,887.50
		Net Value for Item	255.55	USD	1	ST 63,887.50
		Net Value 2	255.55	USD	1	ST 63,887.50
		Net Value 3	255.55	USD	1	ST 63,887.50
		Total	255.55	USD	1	ST 63,887.50
SKT0		Cash Discount	0.000	%		0.00
VPRS		Internal price	225.00	USD	1	ST 56,250.00
		Profit Margin	30.55	USD	1	ST 7,637.50

- 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



Output Edit Goto System Help

Change Standard Order 5: Output

Sold-to party	301	00 The Bike Zone
Output type	BA00	Order Confirmation

Printing information

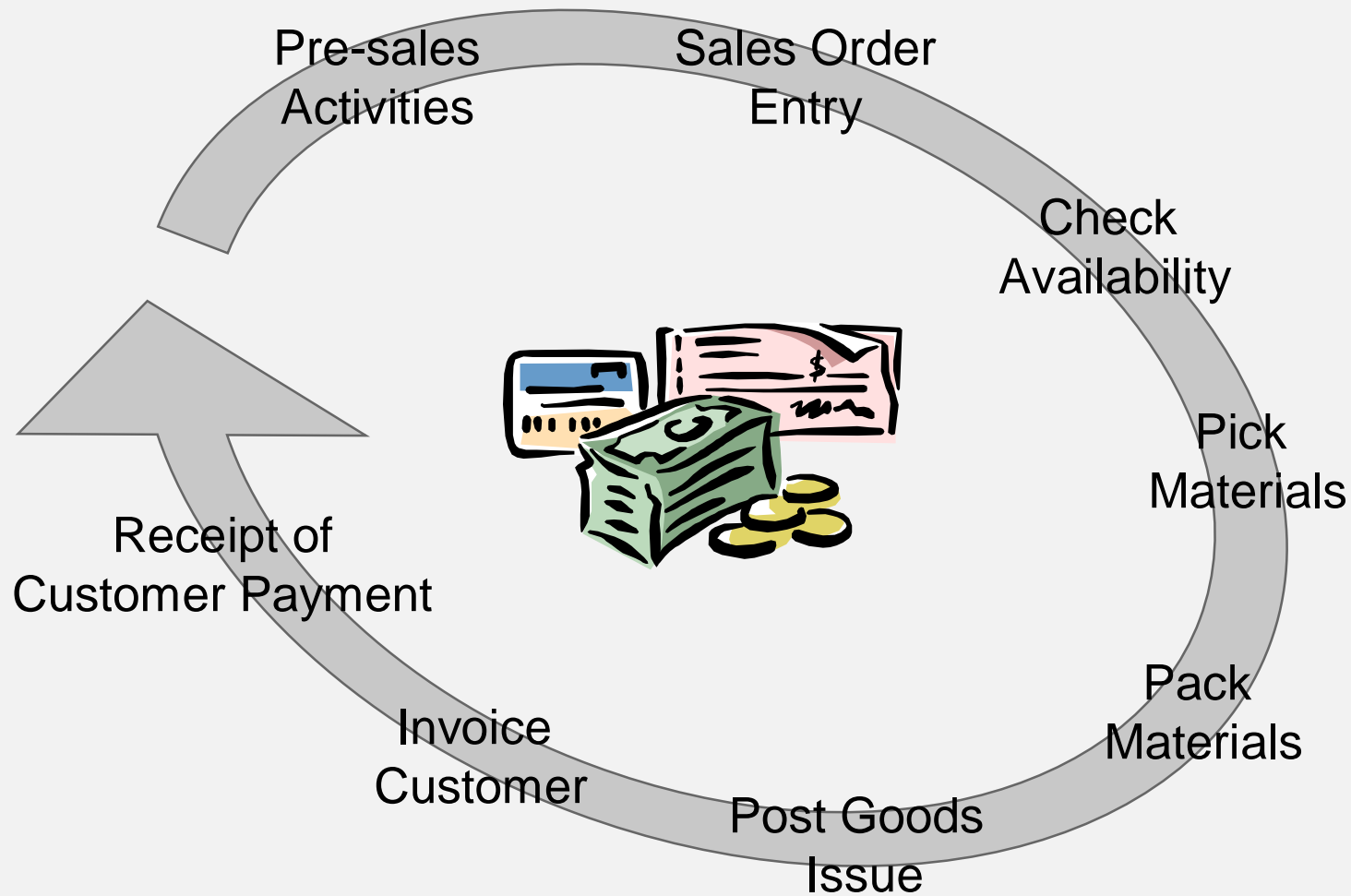
Logical destination	Local Printer
Number of messages	<input type="text"/> <input checked="" type="checkbox"/> Print immediately
Spool request name	<input type="text"/> <input type="checkbox"/> Release after output
Suffix 1	<input type="text"/>
Suffix 2	<input type="text"/>
SAP cover page	Do Not Print <input type="button" value="..."/>
Recipient	STRACY
Department	<input type="text"/>
Cover Page Text	Access Type for Print Parameter and Proposal
Authorization	<input type="text"/>
Storage Mode	1 Print only <input type="button" value="..."/>

Format

Form	<input type="text"/>
------	----------------------

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Sales Order Process



- Sales Support is a component of SD that assists in the sales, distribution, and marketing of a companies 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.

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Pre-Sales Activities (CRM Light)

- 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

The screenshot displays the SAP CRM Light interface for a sales activity. It includes sections for Sales activity, Contact persons, Follow-up actions, and a detailed view of statistics and documents.

Sales activity

Type	Sales Call
From	10/04/2006 09:45
To	10/04/2006 10:22
Comment	Status HOT

Contact persons

Company	162	SAP, America // Newton Square PA
Contact person	Eva Romero	
Employee respons.	21	Grayson / 150 Forest Ave / US / 5

Follow-up actions

Create standard order [Start] [Link objects]

Info block: Key figures View: Statistical info Customer: 000000162

Statistics measures

Document category	Value in T				
	Min	Max	Totals	Average	Open
Sales activities (CAS)	0	0	0	0	

Last SD documents

Sales activities (CAS)	Date	Net value	Status
0100000003	03/10/06	0.00	Open
Order	Date	Net value	Status
000000146	10/03/06	1,452.25 USD	Open
000000145	09/25/06	1.09 USD	Open
000000140	03/15/06	49,750.00 USD	Completed
000000133	09/14/05	18,000.00 USD	Open
000000132	09/14/05	13,500.00 USD	Being processed

- 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.

GBI

123 Any Street
Battle Creek, MI 49015
Phone (605) 555-1212 Fax (605) 555-1414

Bill To:
Heartland Bike Company
1234 North Main
Kansas City, MO 64118
(123) 555-1212

Quotation

DATE February 25, 2008
Quotation # 20000001
Customer ID

Quotation valid until: June 4, 2008
Prepared by: S. Tracy

Comments or special instructions:

Quantity	Description	Unit Price	AMOUNT
10	KB-0013-00	185.00	1,850.00
	Discount	(5.00)	(50.00)
5	TB-0014-00	269.00	1,345.00
	Discount	-	-
	Total Discount	5.00%	(157.25)
TOTAL			\$ 2,987.75

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

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Sales Order

- 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

Standard Order 5 Net value 159,750.00 USD

Sold-to party 301 00 The Bike Zone // Portland OR 97204

Ship-to party 301 00 The Bike Zone // Portland OR 97204

PO Number 1234456 PO date 02/25/2008

Sales Item overview Item detail Ordering party Procurement Shipping Reason for rejection

Req. deliv. date D 02/25/2008 Deliver.Plant

Complete delv. Total Weight 7,500 KG

Delivery block Volume 0.000

Billing block Pricing date 02/25/2008

Payment card Exp.date

Payment terms 0001 Pay immediately w/o Incoterms FOB Origin Shipping Dock

Order reason

Sales area 00A1 / WH / 01 Bike - USA, Wholesale, Bicycles

All items

Item	Material	Order Quantity	SU	S	Description	ItCa	DGI	HgLvt	D	First date	Plnt
10	KB-0013-00	500	ST	<input checked="" type="checkbox"/>	Mekena	TAN			D	02/25/2008	00A2
20	TB-0014-00	250	ST	<input type="checkbox"/>	Star Lady Bike 28	TAN			D	02/25/2008	00A2
				<input type="checkbox"/>					D	02/25/2008	

Sales document Edit Goto Extras Environment System Help

Change Standard Order 5: Item Data

Sales Document Item 10 Item category TAN Standard Item

Material KB-0013-00 Mekena

Sales A Sales B Shipping Billing Document Conditions Account assignment Schedule

Fixed date and qty Order Quantity 500 ST

Delivery time Delivered qty 0

Quantities/Dates

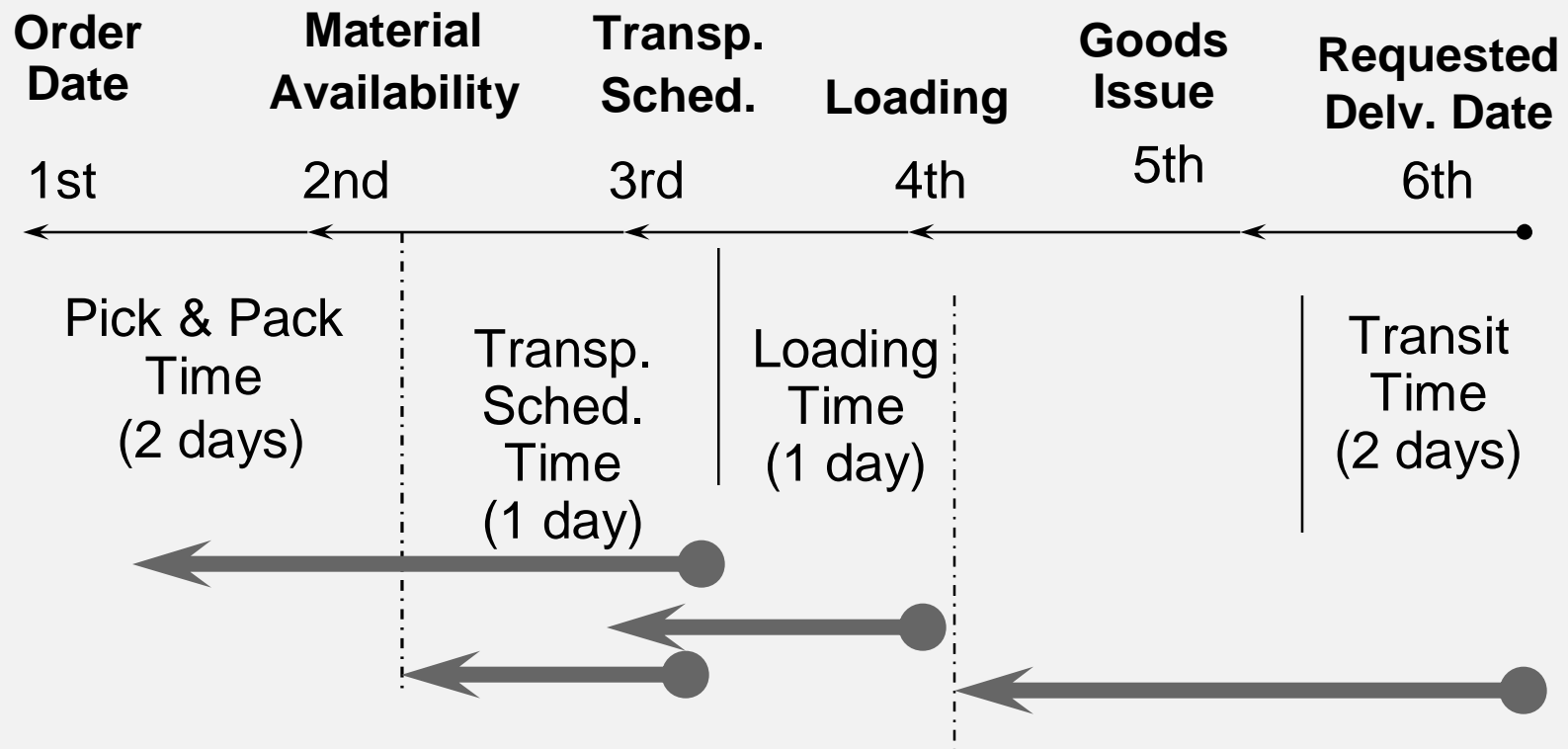
P	Delivery Date	Order quantity	Rounded qty	Confirmed Qty	Sa	Delivery block
D	02/25/2008	500	500	440	ST	
D	02/28/2008	0	0	60	ST	

- 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 the 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.

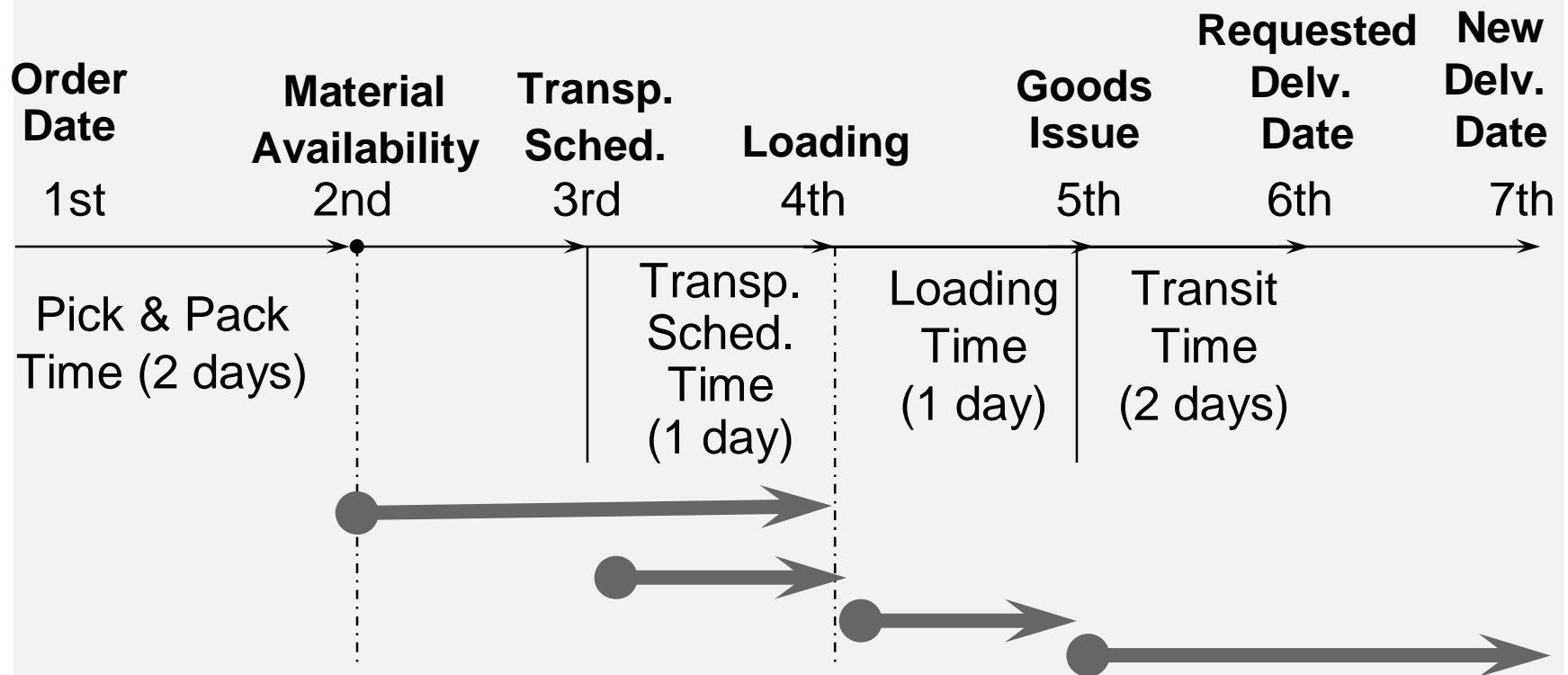
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Backward Scheduling



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Forward Scheduling



- 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.

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Availability Check

- 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 screenshot displays the SAP 'Standard Order: Availability Control' window. It shows a summary of material availability for item 10 (Material: KB-0013-00, Plant: 00A2) with a required quantity of 500. The interface is divided into three sections for different delivery methods:

Method	Dely/Conf.Date	Confirmed Quantity	Status
One-time del. on req. del. dte	02/25/2008 / 02/25/2008	440	✓
Complete delivery	02/28/2008 / 02/28/2008		✓
Dely proposal	02/25/2008 / 02/25/2008	440	✓
	02/28/2008 / 02/28/2008	60	

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Transfer to Planning

- 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.

Material		KB-0013-00		Mekena			
Plant		00A2		MRP type PD			
Material Type		HAWA		Unit ST			
A...	Date	MRP e...	MRP element data	Reschedulin...	E...	Rec./reqd. qty	Available qty
	02/25/2008	Stock					490
	02/25/2008	SafeSt	Safety stock			50-	440
	02/25/2008	CusOrd	0000000005/000010/000			500-	60-

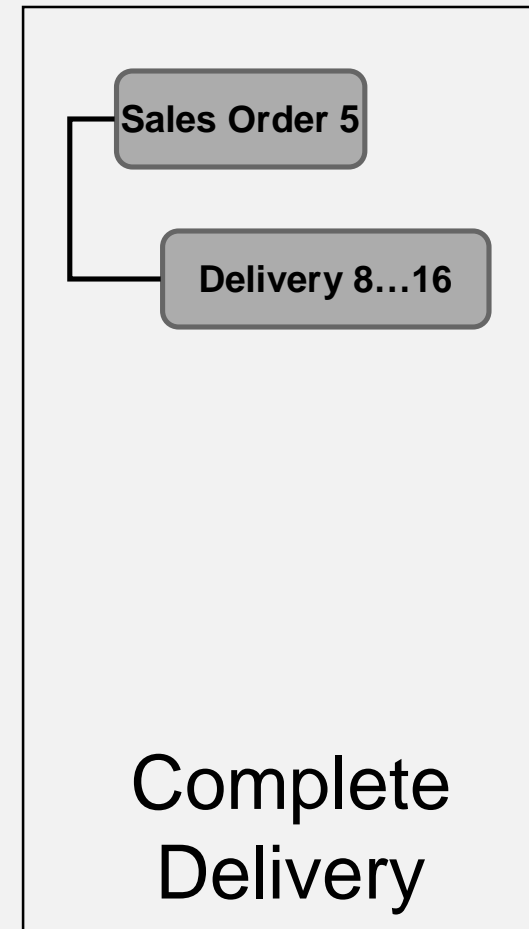
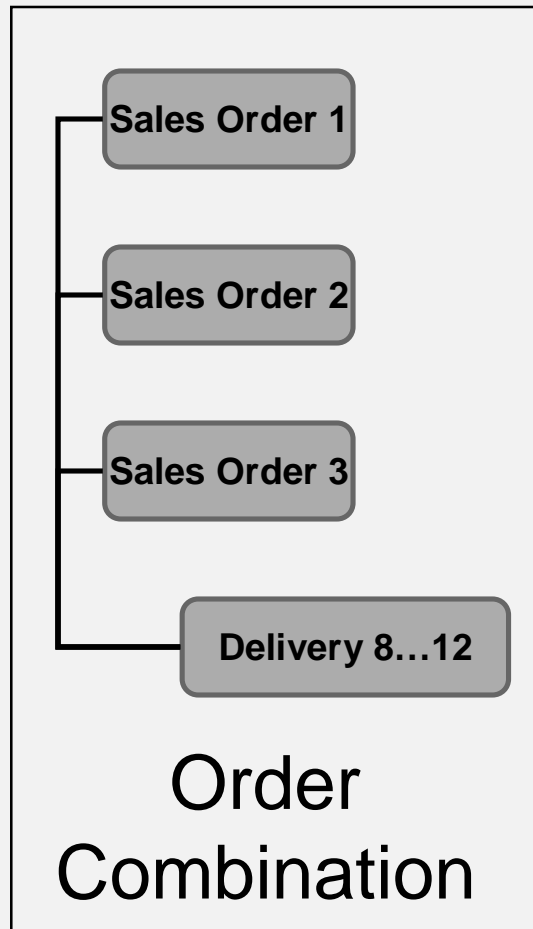
- The system displays pricing information for all sales documents on the pricing screens at both the header and the line item level.
 - Header pricing is valid for the whole order it is the cumulative of all line items within the order
 - Line item pricing is for each specific material.

- 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

- 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.

BPI-Overview US		Credit Overview			Time 18:10:44	Date 10/04/2006
Under Const					RFDKLI40/GTRACY	Page 1
Line layout:	ST1 Credit limit/credit limit used					
Sorting:	Credit account / control area					
Scaling :	NORMAL					
Credit act	Name	Tel.	Fax	Creat.data		
CCAr Customer	RC	Curr.	Credit limit	Credit exposure	%	
162	SAP, America				DBURKE	07/15/2004
C100 162	USD	25,000.00	9,000.00	36.00		
BPI-Overview US		Credit Overview			Time 18:10:44	Date 10/04/2006
Under Const					RFDKLI40/GTRACY	Page 2

- 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

- 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

- 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)

- 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

- 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.

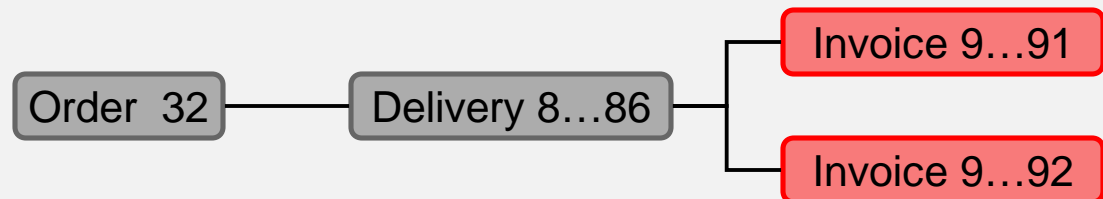
Delivery based
Invoicing



Collective
Invoicing



Split
Invoicing



- 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.

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Document Flow

- 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).

Document flow Edit Goto Environment System Help

Document Flow

Status overview Display document Service documents Additional links

Business partner 0000000302 60 The Bike Zone

Document	On	Status
▼ Inquiry 0010000001	02/24/2008	Completed
▼ Quotation 0020000002	02/24/2008	Completed
▼ Standard Order 0000000004	02/24/2008	Completed
▼ Outbound Delivery 0080000003	02/24/2008	Completed
Picking request 20080224	02/24/2008	Completed
GD goods issue:delvy 4900003004	02/24/2008	complete
▼ Invoice 0090000003	02/24/2008	
Accounting document 0090000001	02/24/2008	Cleared


Standard Order 4
Sold-to 302 60 The Bike Zone

Status overview

Item	Material	Quantity	Unit	Status	Rejection
Current hdr status				Completed	Nothing rejected
Current item status					
ItemNo Material					
000010 Mekena		10.000	ST	Completed	Nothing rejected
Total processing				Completed	
Completeness				Complete item data	
Rejection status				Nothing rejected	
Delivery complete				Complete item data	
Delivery status		10.000	ST	Delivered	0.000 ST open
Goods issue status		10.000	ST	Issued	0.000 ST open
Billg doc. complete				Complete item data	
Billing status		10.000	ST	Billed	0.000 ST open
000020 Star Lady Bike 28		5.000	ST	Completed	Nothing rejected
Total processing				Completed	
Completeness				Complete item data	
Rejection status				Nothing rejected	
Delivery complete				Complete item data	
Delivery status		5.000	ST	Delivered	0.000 ST open
Goods issue status		5.000	ST	Issued	0.000 ST open
Billg doc. complete				Complete item data	
Billing status		5.000	ST	Billed	0.000 ST open

- “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

SAP ERP

Sales Order Process Debugging

Document flow Edit Goto Environment System Help

Document Flow

Status overview Display document Service documents Additional links

Business partner 0000000101 Heartland Bike Company

Document	On	Status	
Standard Order 0000000015	05/16/2008	Completed	SD1
Outbound Delivery 0080000006	05/16/2008	Completed	SD2
Picking request 20080516	05/16/2008	Completed	SD3
GD goods issue:dely 4900003010	05/16/2008	complete	SD4
Invoice 0090000007	05/16/2008		SD5
Accounting document 0090000002	05/16/2008	Cleared	SD6

Arrows point from SD5 to the 'Cleared' status of the Accounting document and from SD6 to the 'Cleared' status of the Accounting document.

SAP University Alliances

Version 1.0

Authors Bret Wagner
Stefan Weidner
Stephen Tracy



Materials Management (MM)

Product

SAP ERP 6.0
Global Bike Inc.

Level

Beginner

Focus

Cross-functional integration
Materials Management

- Inventory Management
- Purchasing
- MRP
- Physical Inventory
- Valuation
- Service Master
- Invoice Verification
- Product Catalogs

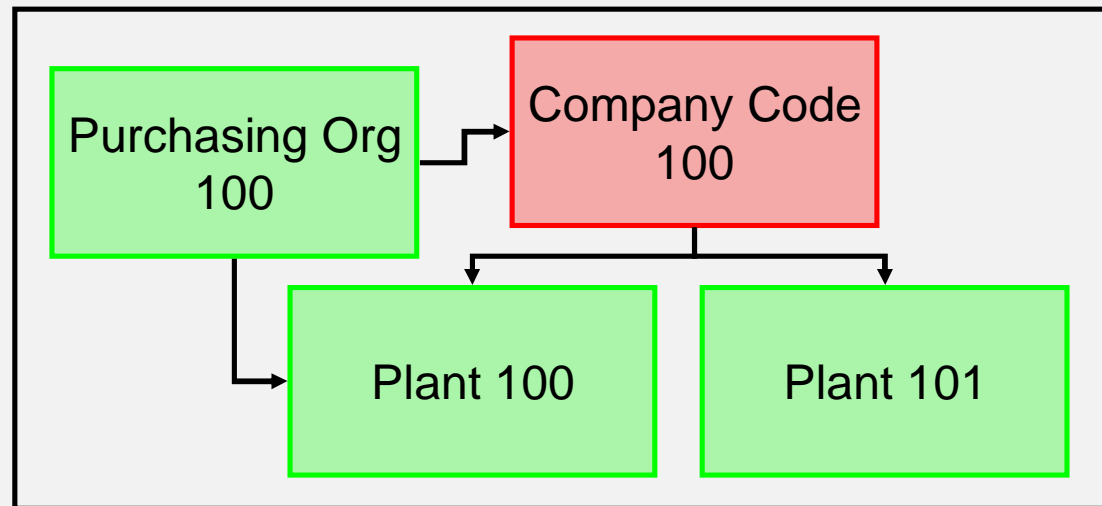
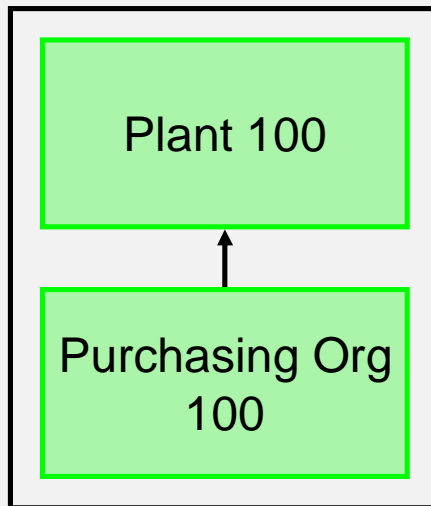
- Organization Structure
- Master Data
- Procurement Process
 - Procure-to-Pay Process

- 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

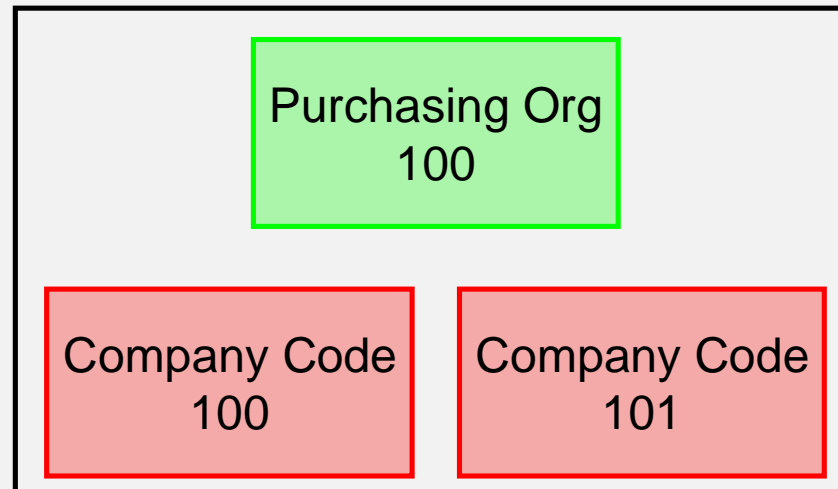
- Purchasing Organization
 - Organization unit responsible for procuring services and materials
 - Negotiates conditions of the purchase with the vendors
- Purchasing Group
 - Buyer or group of buyers who are responsible for certain purchasing activities
 - Channel of communication for vendors

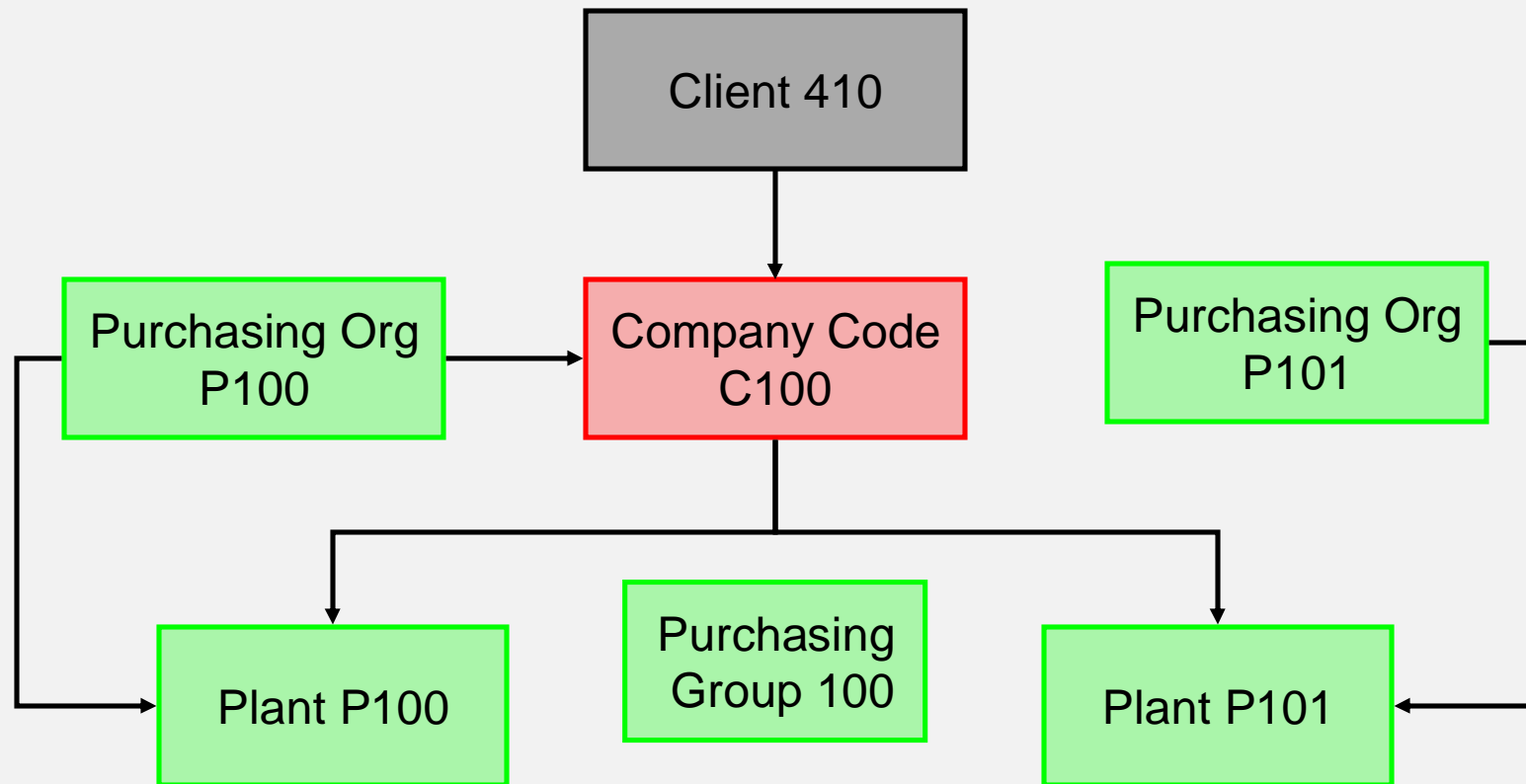
SAP ERP

Purchasing Organization / Group



Centralized vs.
Decentralized
Purchasing





SAP ERP

MM Master Data

The screenshot shows the SAP ERP MM Master Data interface for a Purchase Order. The main window displays a table of items with columns for Item, Material, Short Text, PO Quantity, and Net Price. The selected item is 10, Material KB-0012-00, Cruze Bike, with a net price of 99.69 USD. The interface includes a menu bar, a toolbar, and a status bar. The 'Pricing Elements' table is visible at the bottom, showing various pricing components like Gross Price, Net value incl. disc, NAVS Non-Deductible Tax, Net value incl. tax, and Cash Discount.

Callouts on the right side of the screenshot identify the following data sources:

- Vendor Master Data**: Points to the Vendor field (100001 Great Lakes Bike Supply).
- Material Master Data**: Points to the Material field (KB-0012-00).
- Purchasing Info Record**: Points to the Purchasing Info Record field.
- Condition Master Data**: Points to the Condition field.
- Output Master Data**: Points to the Output field.

SAP ERP

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

The screenshot shows the SAP 'Change Vendor: Address' screen for Vendor 1000001. The interface includes a menu bar (Vendor, Edit, Goto, Extras, Environment, System, Help) and a toolbar with various icons. The main content area is divided into several sections:

- CIN Details:** Vendor field contains '1000001'.
- Name:** Title field is empty; Name field contains 'Great Lakes Bike Supply'.
- Search Terms:** Search term 1/2 field contains '100'.
- Street Address:** Street/House number field is empty; Postal Code/City field contains '48858 Mount Pleasant'; Country field contains 'US USA'; Region field contains 'MI Michigan'; Time zone field contains 'EST'.
- PO Box Address:** PO Box, Postal code, and Company postal code fields are empty.
- Communication:** Language field contains 'EN English'; Telephone, Mobile Phone, and Fax fields have Extension fields next to them; E-Mail, StandardComm.Mtd, Data line, and Telebox fields are empty.
- Comments:** A large empty text area at the bottom.

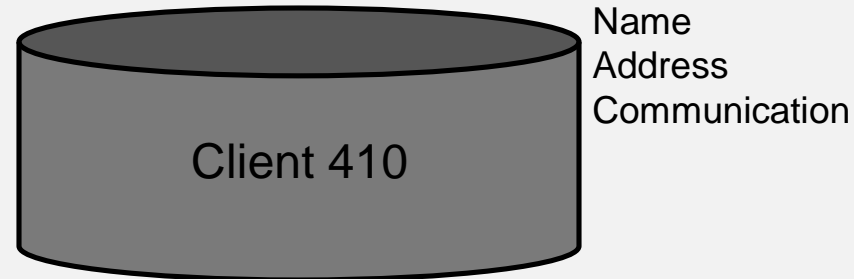
- Client Level
 - Address
 - Vendor Number
 - Preferred Communication
- Company Code Data
 - Reconciliation Account
 - Terms of Payment
 - Bank Account
- Purchase Org Data
 - Purchasing Currency
 - Salesman's Name
 - Vendor Partners

General Data

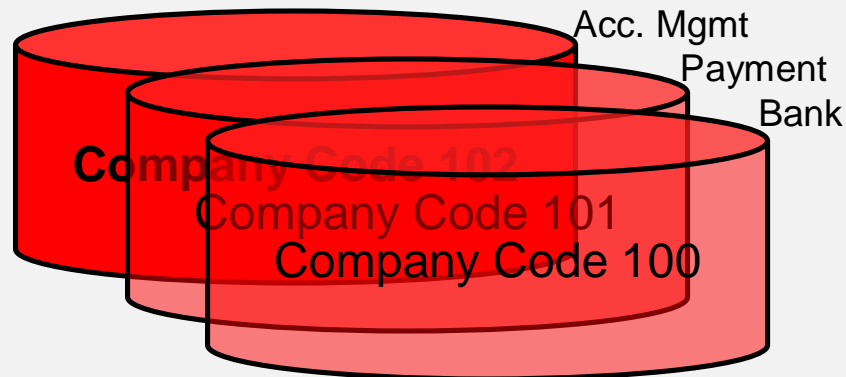
Company Code Data
Financial Accounting (FI)

Purchasing Data
Materials Mgmt (MM)

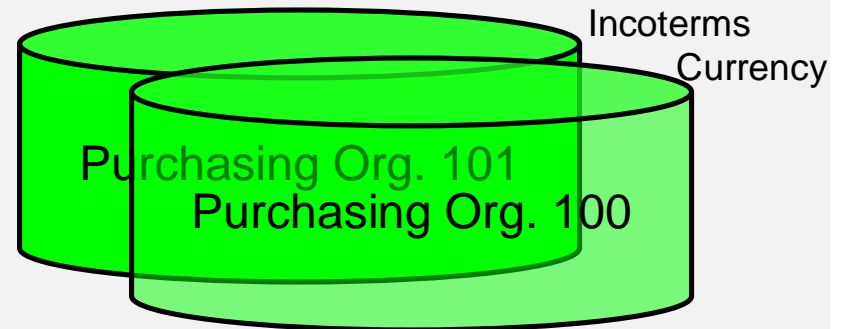
General Information relevant for the entire organization:



Company Code specific information:



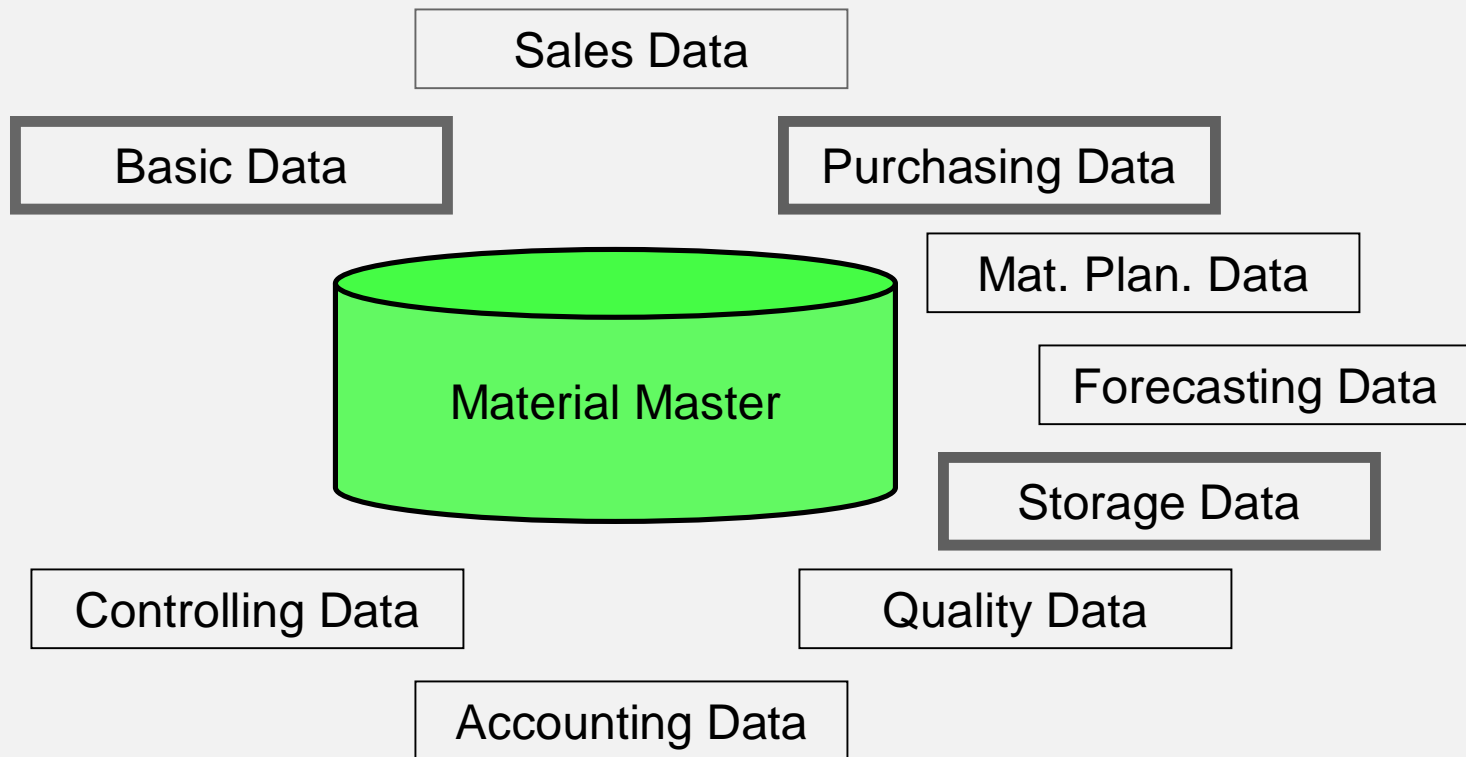
Purchasing Org. specific information:



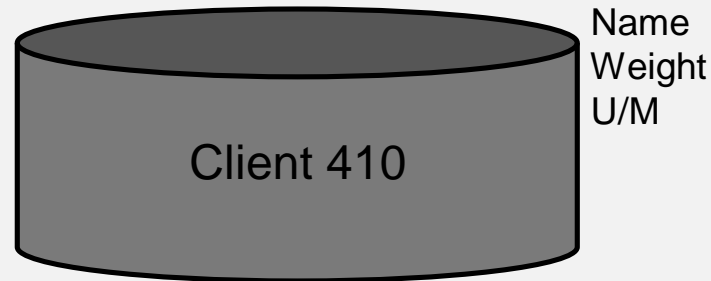
- Material Master
 - Contains all the information a company needs to manage about a material
 - It is used by most components within the SAP system
 - Sales and Distribution
 - Materials Management
 - Production
 - Plant Maintenance
 - Accounting/Controlling
 - Quality Management
 - Material master data is stored in functional segments called Views

The screenshot displays the SAP Material Master Data interface for material KB-0013-00 (Trading Goods). The material name is 'Mekena'. The screen is organized into several functional segments (Views):

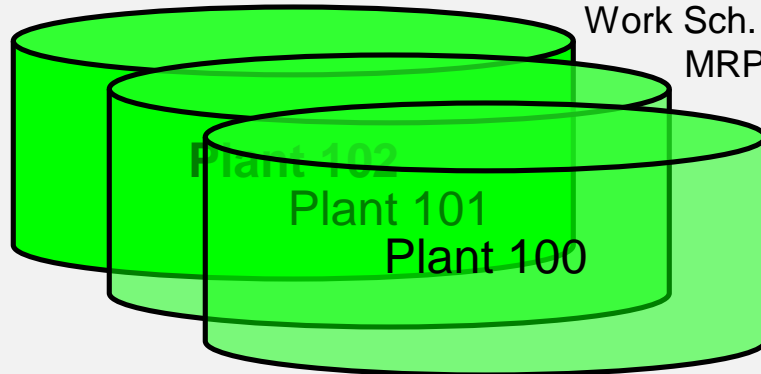
- General data:** Base Unit of Measure (ST), Material Group (02022), Division (01), and other fields.
- Material authorization group:** Authorization Group field.
- Dimensions/EANs:** Gross Weight (10), Net Weight (10), Weight unit (KG), and other fields.
- Packaging material data:** Matl Grp Pack.Matis field.
- Basic Data Texts:** Languages Maintained (0) and Basic Data Text field.



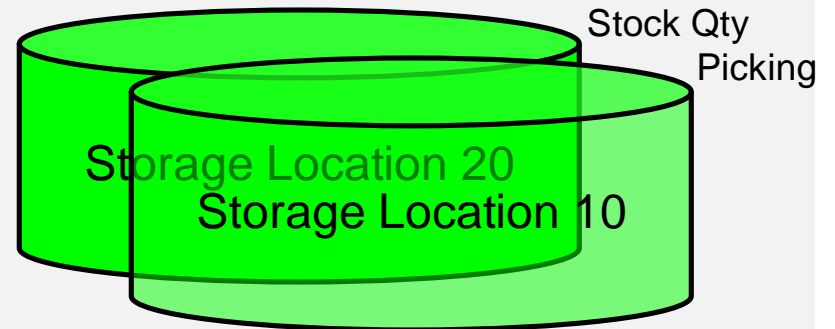
General Information relevant for the entire organization:



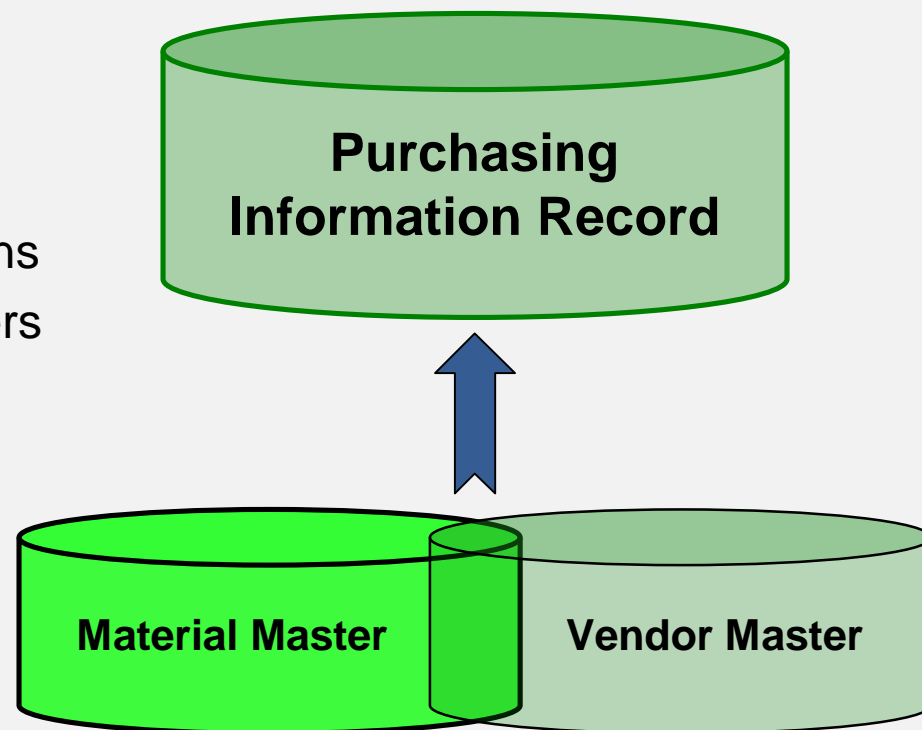
Plant specific information: Purchasing Data
Work Sch.
MRP



Storage Location specific information:



- 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



SAP ERP

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

Info Record Edit Goto Extras Environment System Help

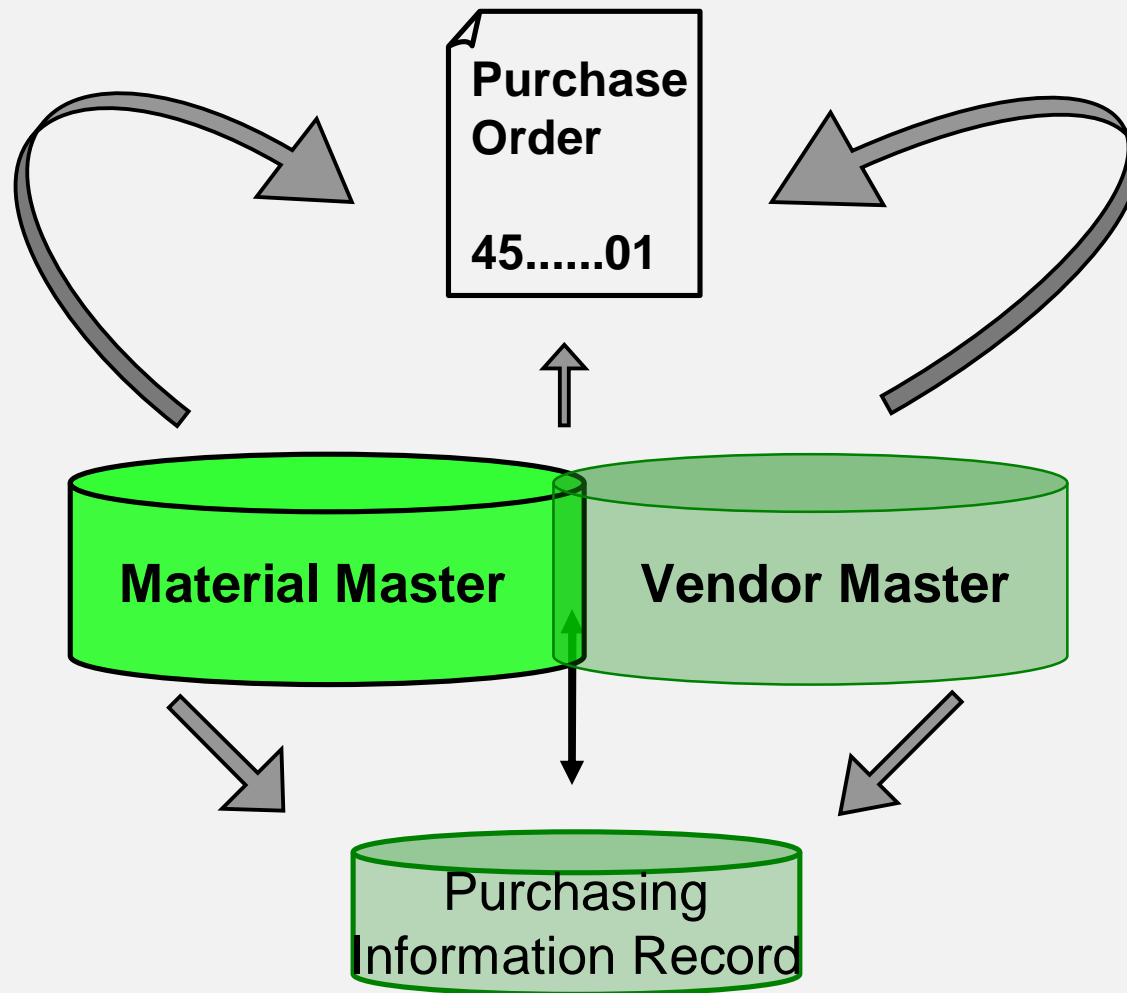
Create Info Record: Purch. Organization Data 1

General Data Conditions Texts

Info Record
 Vendor 100001 Great Lakes Bike Supply
 Material KB-0013-00 Mekena
 Material Group 02022 Kids Bikes
 Purchasing Org. 00A1 Plant 00A2 Standard

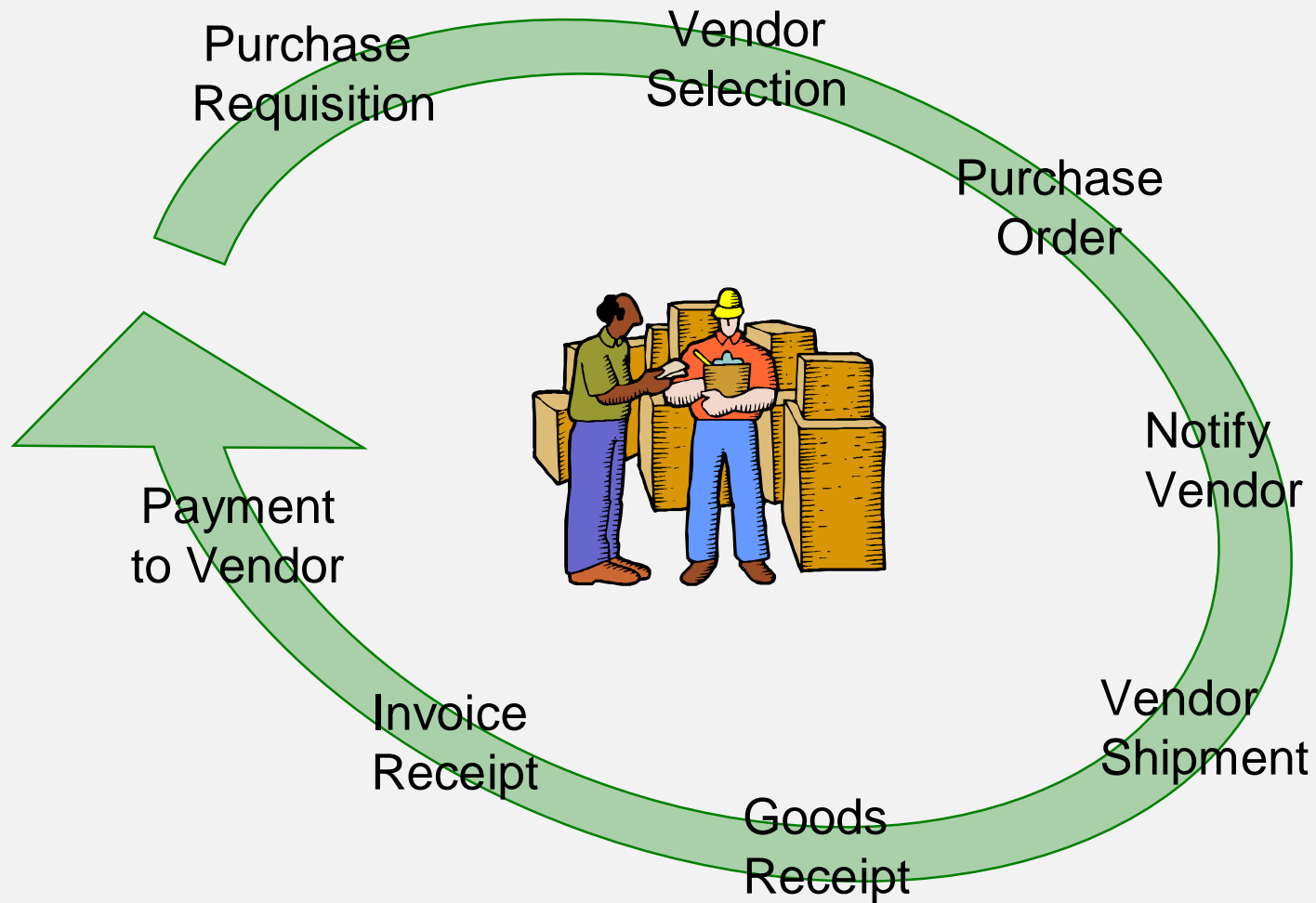
Control
 Pl. Deliv. Time 3 Days Tol. Underdl. % No MText
 Purch. Group 00A Tol. Overdl. % Ackn. Rqd
 Standard Qty 1 ST Unlimited Conf. Ctrl
 Minimum Qty ST GR-Bsd IV Tax Code
 Rem. Shelf Life D No ERS
 Shippg Instr.
 Max. Quantity ST Procedure
 Rndg Prof. UoM Group

Conditions
 Net Price 69.99 USD / 1 ST Valid to
 Effective Price 0.00 USD / 1 ST No Cash Disc.
 Qty Conv. 1 ST <-> 1 ST Cond. Grp
 Pr. Date Cat. No Control
 Incoterms



SAP ERP

Procurement Process



- 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

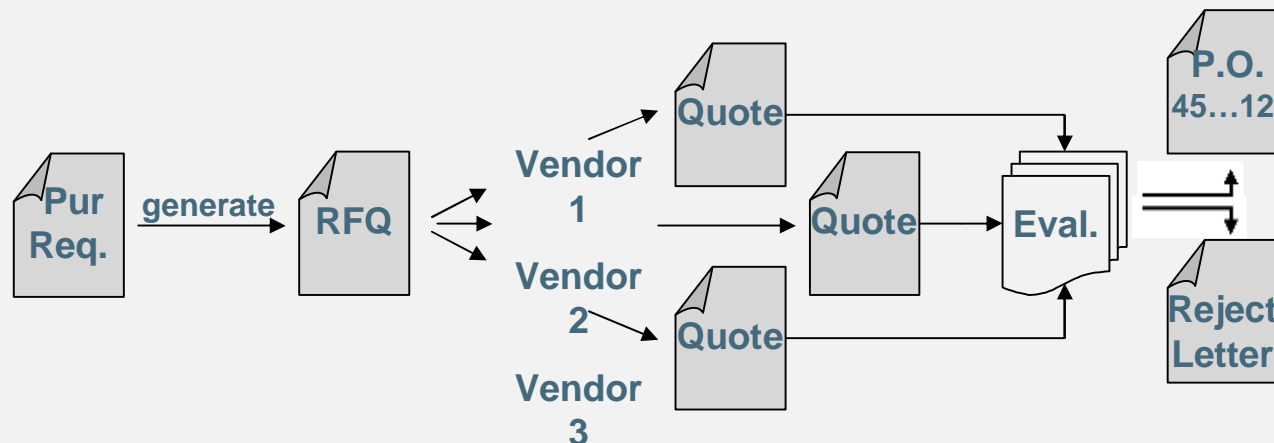
- Once the requisition has been assigned a source of supply it can be released for processing
- There are a variety of ways that a purchasing department can process a requisition to determine the appropriate Source of Supply:
 - Internal Sourcing Requirements
 - Source List
 - Outlined Agreement
 - RFQ

- 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.

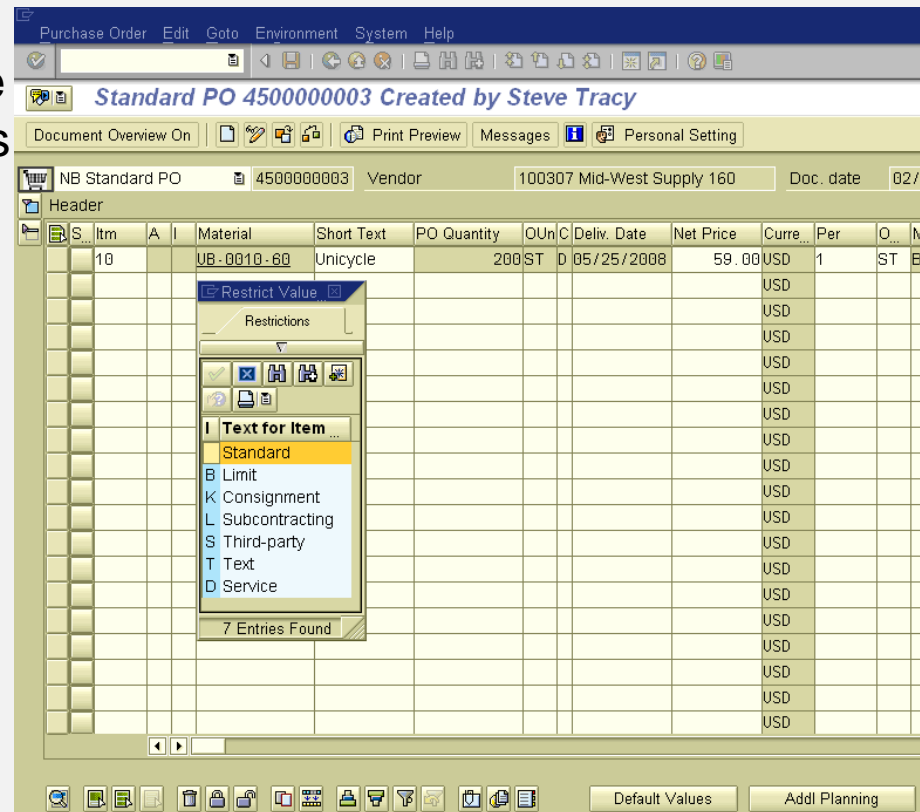
- Vendor evaluation helps purchasing evaluate vendors for sourcing while also enabling the company to monitor vendor relationships through performance scores and criteria you put in place.
 - Supports a maximum of 99 main criteria and 20 subcriteria for each main:
 - Price
 - Price Level
 - Price History
 - 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.

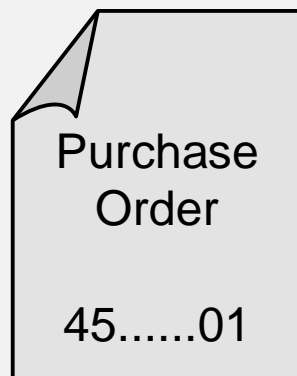
- A purchase order is a formal request to a vendor for a specific material or service under the stated conditions
- Purchase Orders can be created manually
 - Reference a Purchase Order
 - Reference a Purchase Requisition
 - Reference a RFQ/Quotation
 - Without Reference
- Purchase Orders can be create automatically

SAP ERP

Purchase Order

- 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



**Header**

Vendor	Date
Doc. Number	Currency
Terms of Payment	PO Price

Item Overview

Materials	Price/UofM
Quantities	
Delivery Date	

Line Item

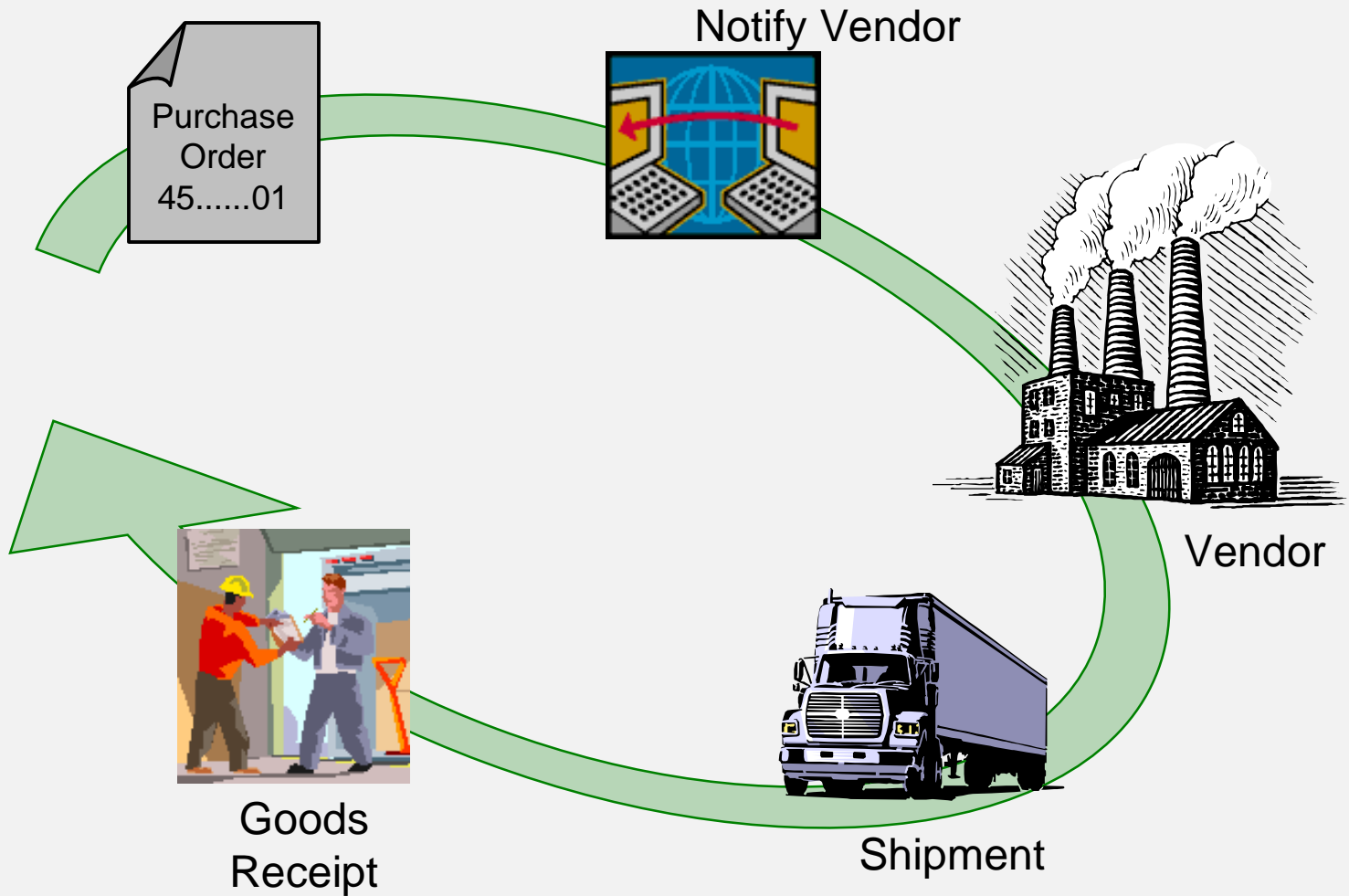
PO History	Tolerances
Line Price	
Delivery Schedule	

- 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

SAP ERP

Goods Receipt



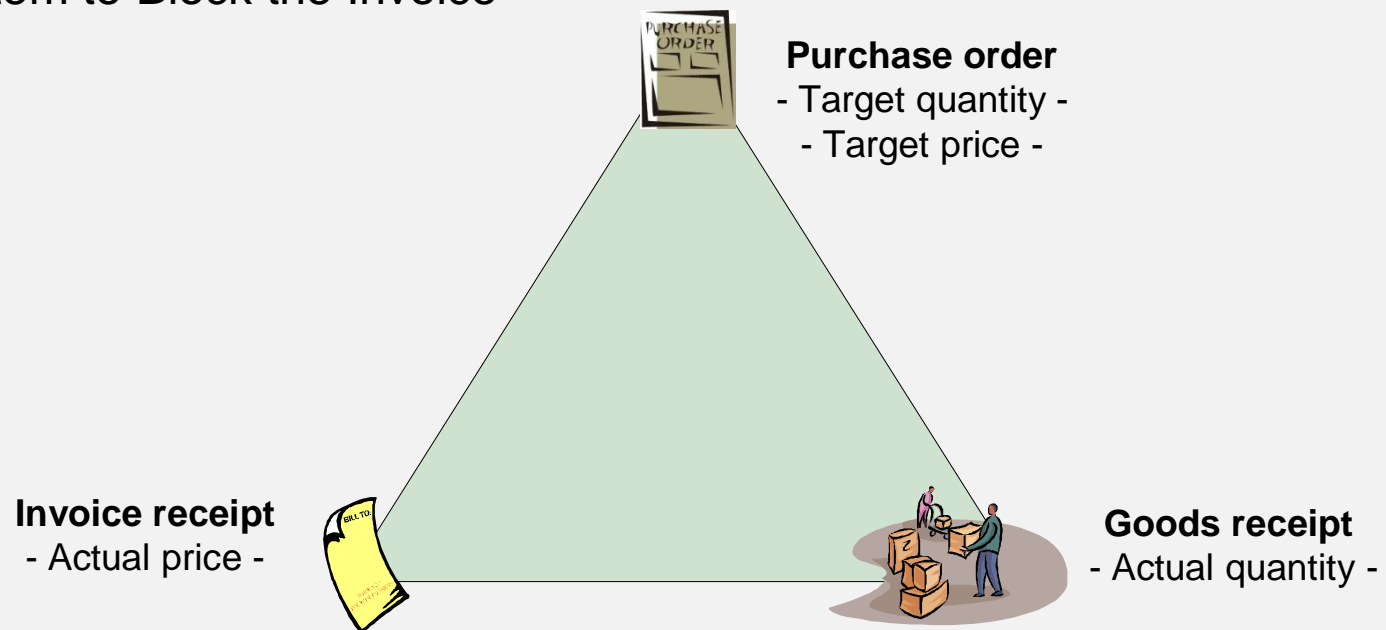
- Goods movement in which we accept goods into our system
- If materials are delivered against a Purchase Order we will reference that Order
 - Determine if we got what we ordered
 - System can purpose data for us from the PO
 - Material, quantity
 - Purchase Order History is update with the receipt
 - 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

- 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 reference 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



- When an invoice is saved it applies the liability from the Goods Receipt of our Purchase Order to a Vendor

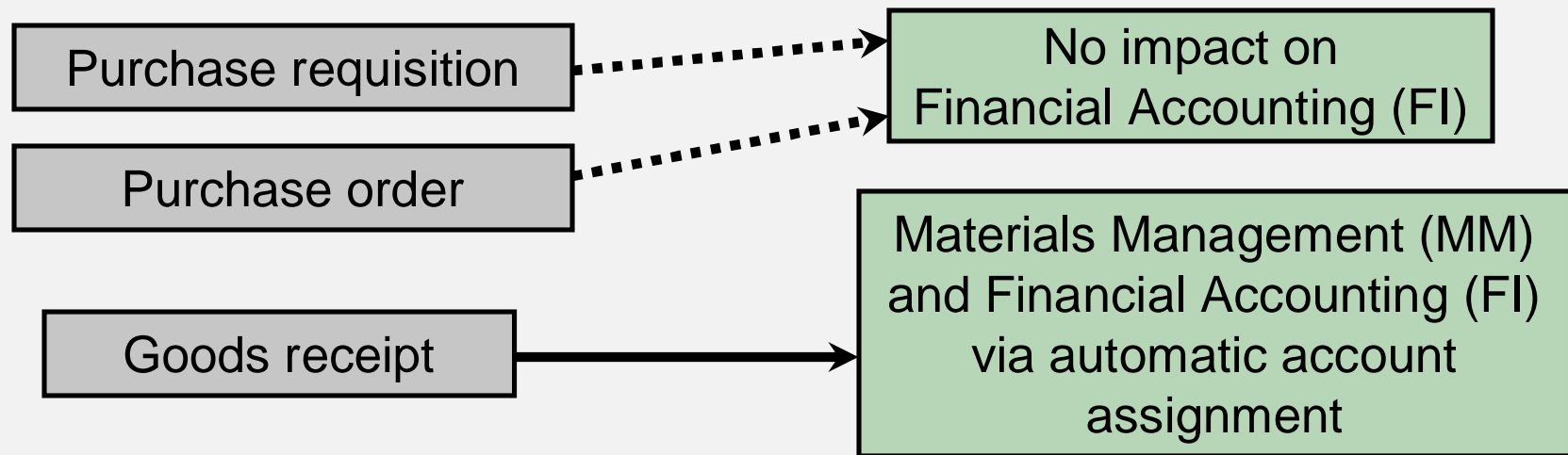
- Upon verification the:
 - Purchase Order is updated
 - Material Master is Updated (MAP)
 - Accounting Document is created

- Once the Invoice has been posted the verification process is completed and the payment process is initiated within Financial Accounting

- 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



Inventory	
Dr	Cr
\$100	

GR / IR	
Dr	Cr
	\$100

Invoice receipt



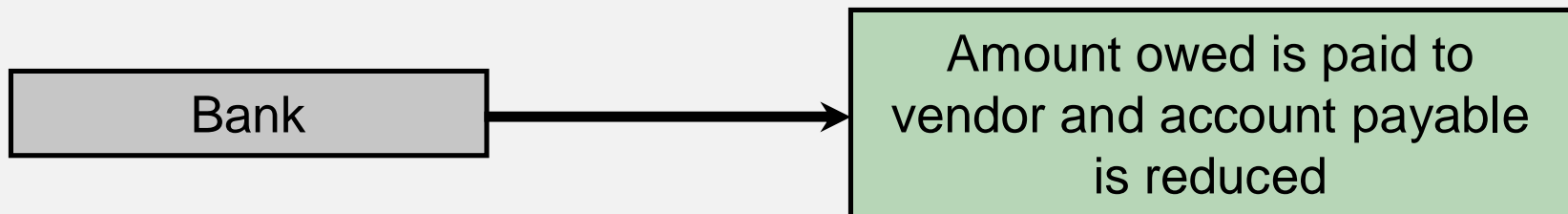
Amount owed is
assigned and transferred to
vendor account payable

GR / IR	
Dr	Cr
\$100	

Vendor A/P	
Dr	Cr
	\$100

SAP ERP

Vendor Payment



Bank	
Dr	Cr
	\$100

Vendor A/P	
Dr	Cr
\$100	

SAP ERP

FI – MM Integration Point

**Goods
Receipt**

Inventory

Dr	Cr
\$100	

**Invoice
Receipt**

GR / IR

Dr	Cr
\$100	\$100

**Payment
Program**

**AP
(Vendor)**

Dr	Cr
\$100	\$100

Bank

Dr	Cr
	\$100

SAP ERP

SAP University Alliances

Version 1.0

Authors Bret Wagner
Stefan Weidner
Stephen Tracy



Production Planning & Execution (PP)

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

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

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

SAP ERP

Material Master Record

The screenshot displays the SAP Material Master Record for material KB-0013-00 (Trading Goods) at plant 00A2 (Mekena). The main window shows various data fields categorized into General Data, MRP procedure, and Lot size data. A pop-up window titled "Change Material KB-0013-00 (MRP 1, Trading Goods)" is open, showing status information and a history table.

General Data:

- Material: KB-0013-00
- Plant: 00A2
- Base Unit of Measure: ST (items)
- Purchasing Group: 00A
- Plant-sp.matl status:

MRP procedure:

- MRP Type: PD
- Reorder Point:
- Planning cycle:

Lot size data:

- Lot size: EX
- Minimum Lot Size: 48
- Fixed lot size:
- Ordering costs:
- Assembly scrap (%):
- Rounding Profile:
- Unit of Measure Grp:

Pop-up Window: Change Material KB-0013-00 (MRP 1, Trading Goods)

Material: KB-0013-00 (Mekena)
 Industry sector 1: Retail
 Material type: HAWA (Trading Goods)
 Low-level code:
 Created by: GTRACY on 01/03/08
 Last changed by: GTRACY on 01/03/08

Status information:

No deletion flags or locks exist

Client level:

Status description	Created On	Created by
Changed by		
Purchasing	01/03/2008	GTRACY
Basic data	01/03/2008	GTRACY
Storage	01/03/2008	GTRACY

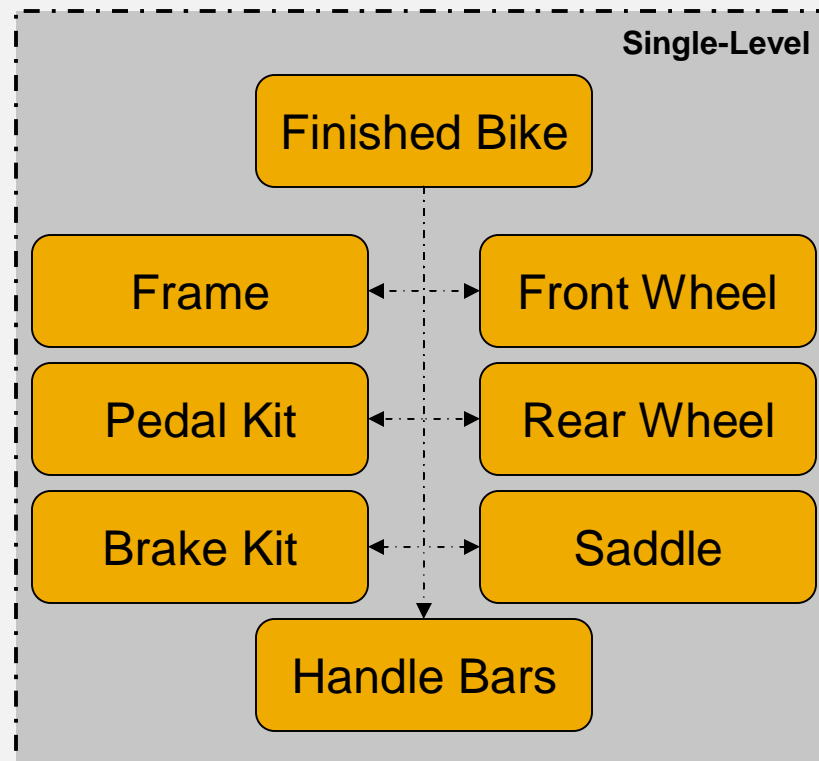
- List of components that make up a product or assembly

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

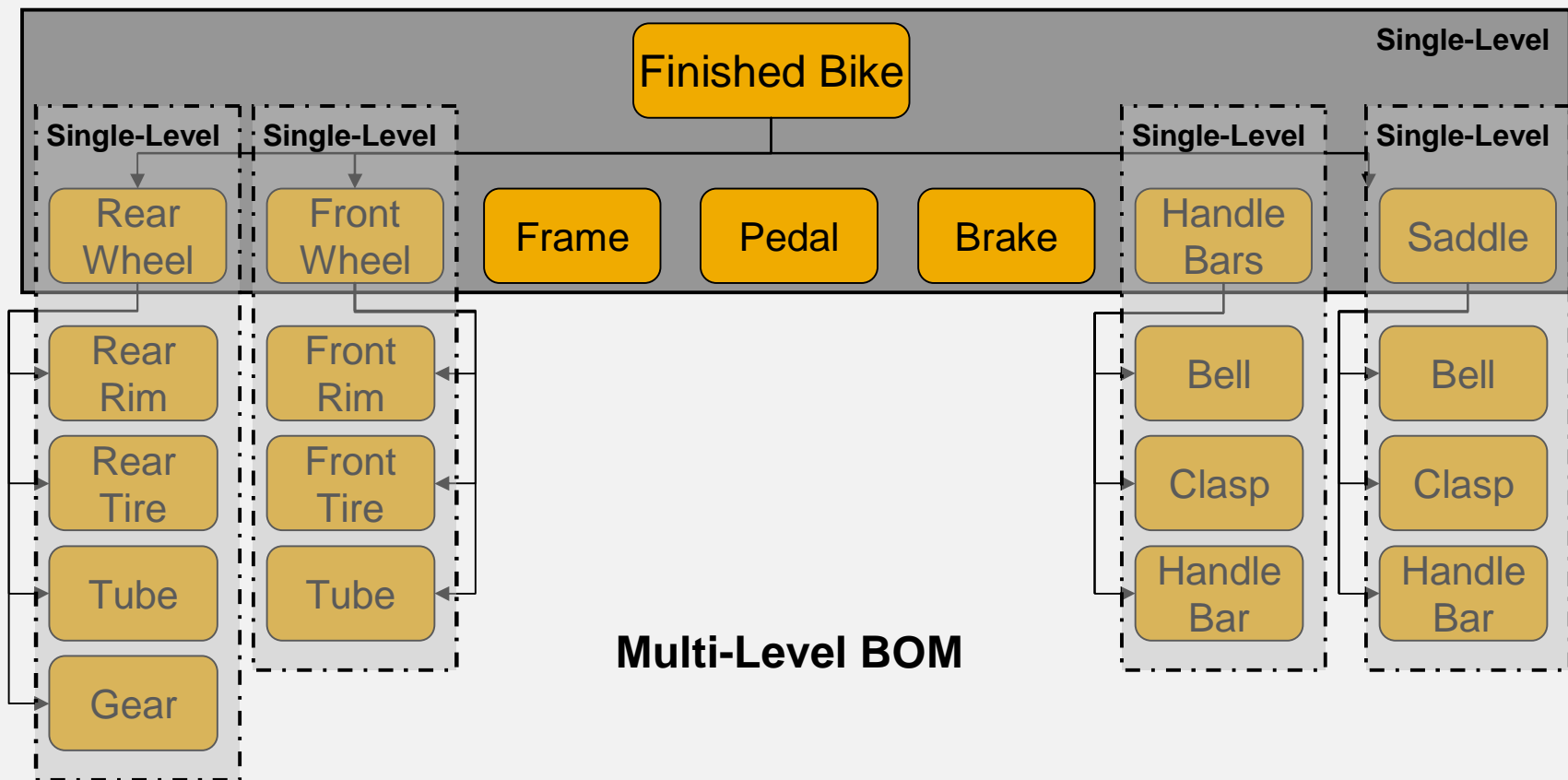
- Saddle
 - Post
 - Seat
 - Clip

- Handle Bar
 - Bell
 - Clasp
 - Handle

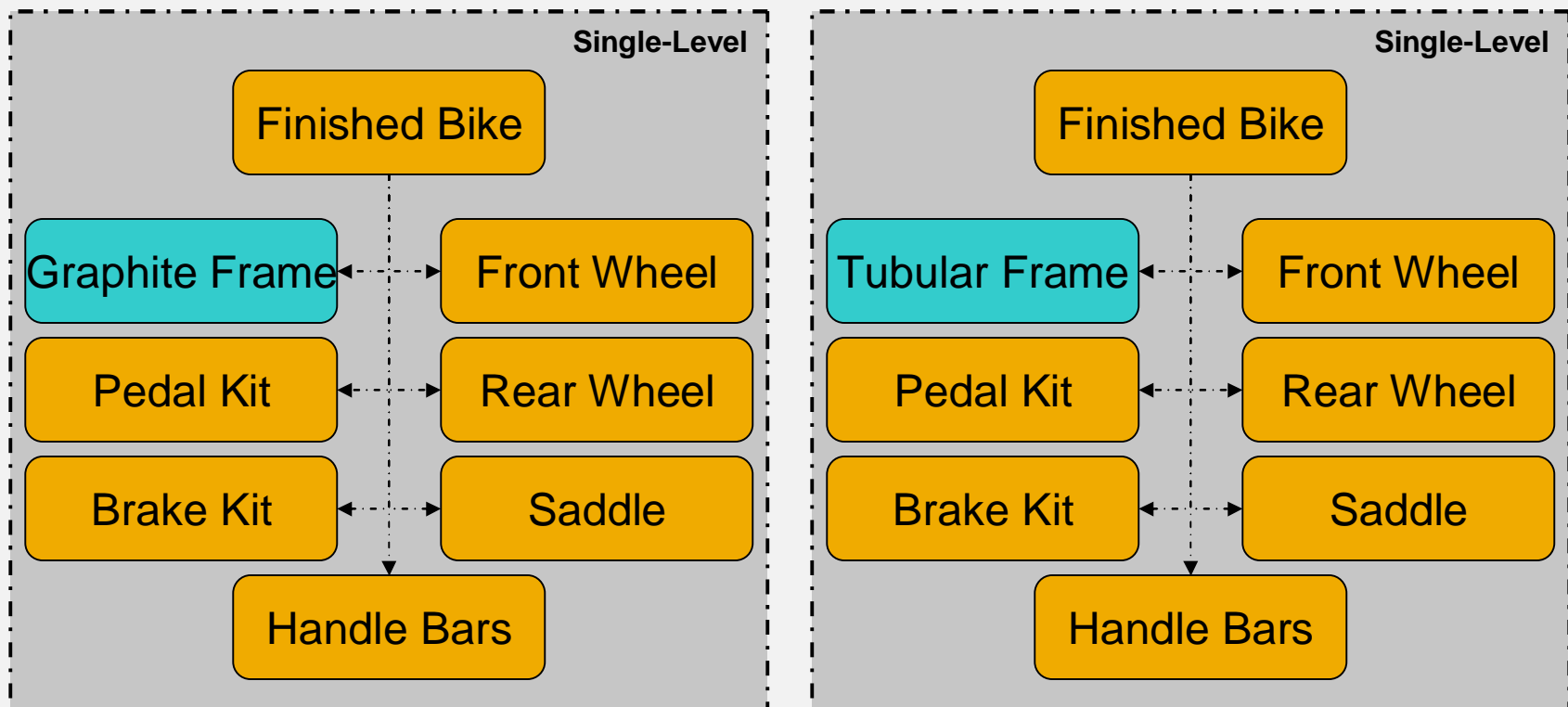
- Single-Level



- Single-Level vs. Multi-Level

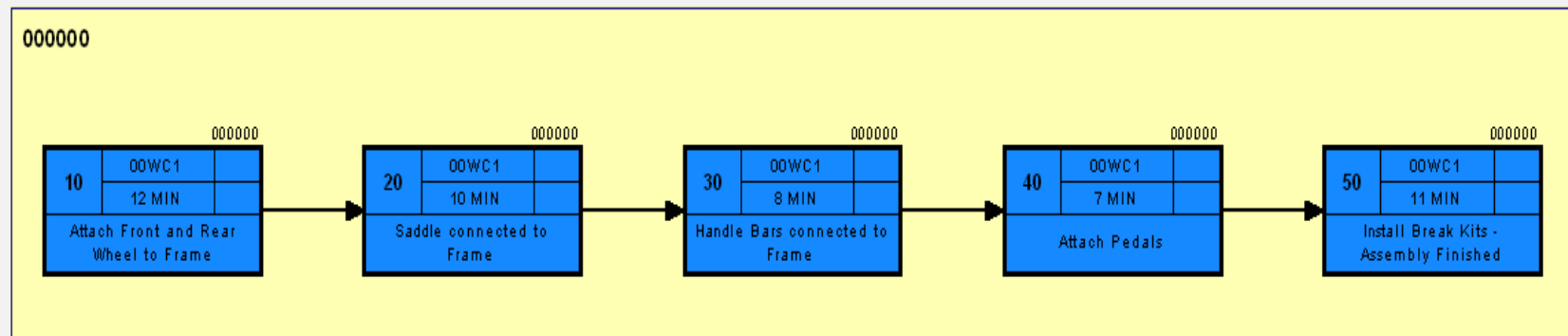


- Variant Bill of Material (BOM)
 - Several products with a large proportion of identical parts.



- 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



- 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

10	00WC1	
	12 MIN	
Attach Front and Rear Wheel to Frame		

SAP ERP

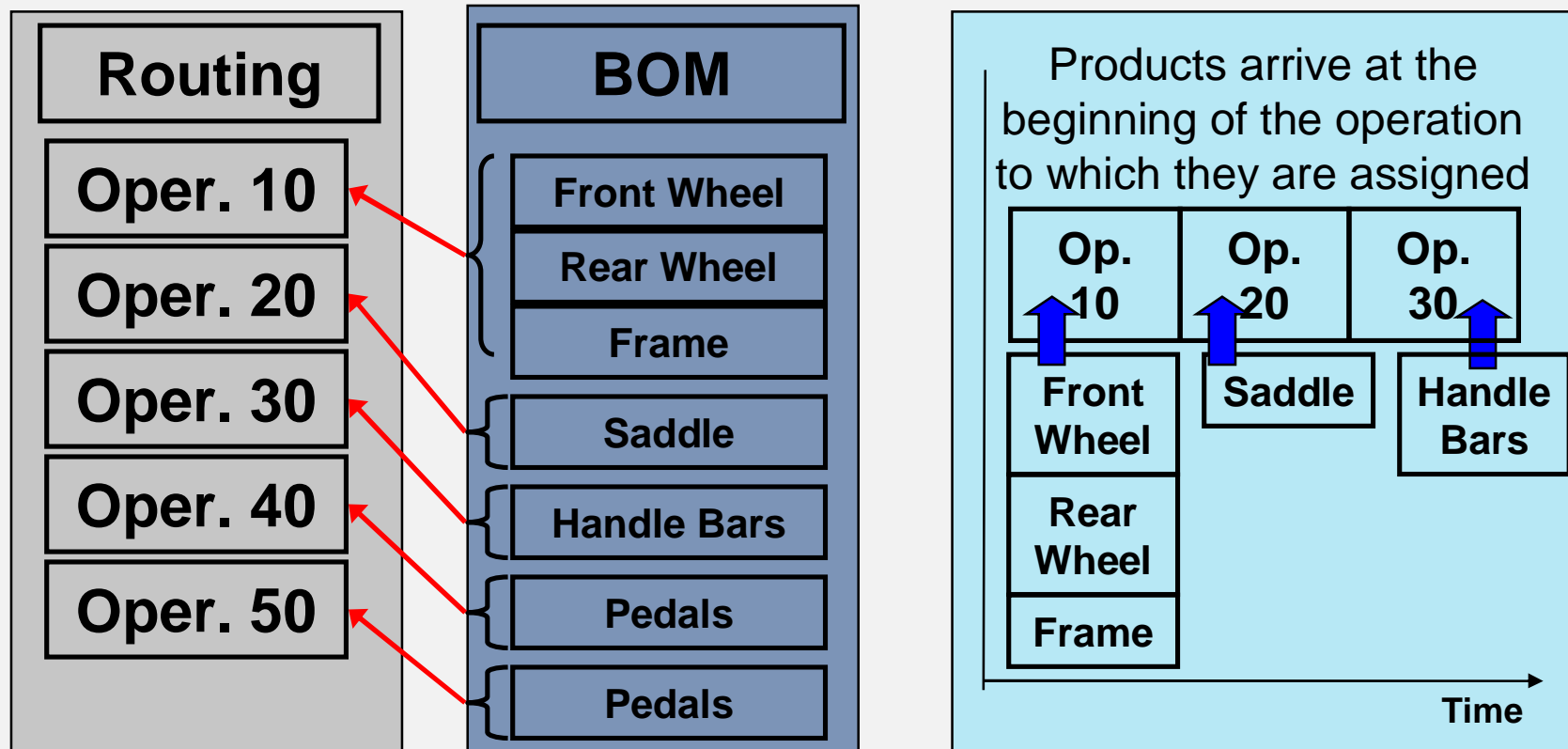
Routings

- Routing for Finished Bike

The diagram shows a routing table with several columns. Labels in boxes point to specific columns: 'Operation' points to the 'Ope...' column; 'Work Center' points to the 'Work cen...' column; 'Plant' points to the 'Plnt' column; 'Control Key' points to the 'Con...' column; 'Description' points to the 'Description' column; 'Time and Unit of Measure' points to the 'Unit...' column; and 'Activity Type' points to the 'Activity...' column.

Ope...	SOp	Work cen...	Plnt	Con...	Standard ...	Description	Base Quantity	Unit...	Setup	Unit	Activity...
0010		00WC1	00A1	ASSY		Attach Front and Rear Wheel to Frame	1	ST	3	MIN	LABOR
0020		00WC1	00A1	ASSY		Saddle connected to Frame	1	ST	4	MIN	LABOR
0030		00WC1	00A1	ASSY		Handle Bars connected to Frame	1	ST	3	MIN	LABOR
0040		00WC1	00A1	ASSY		Attach Pedals	1	ST	3	MIN	LABOR
0050		00WC1	00A1	ASSY		Install Break Kits - Assembly Finished	1	ST	2	MIN	LABOR
0000			00A1				1	ST			

Material Master – Finished Bike

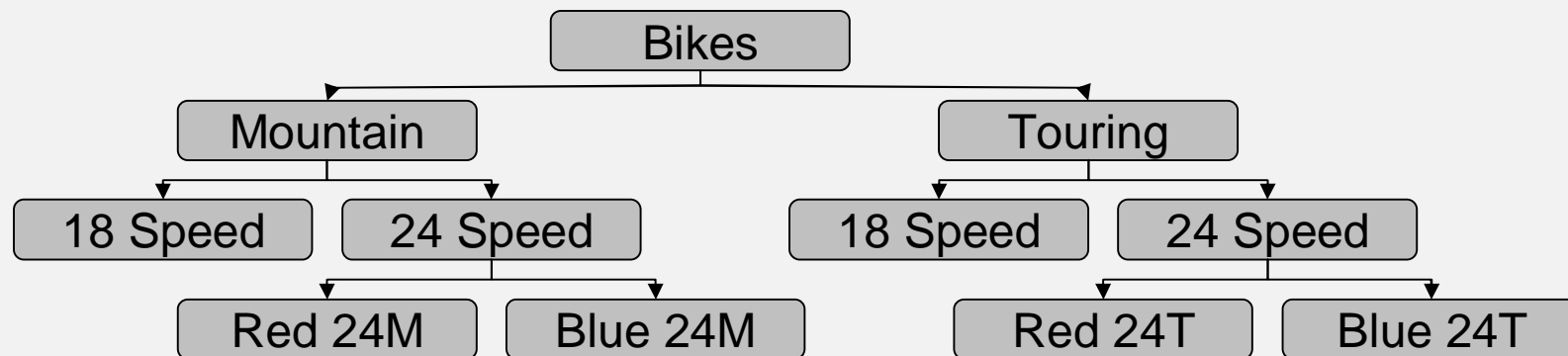


Component assignment in routing

- 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

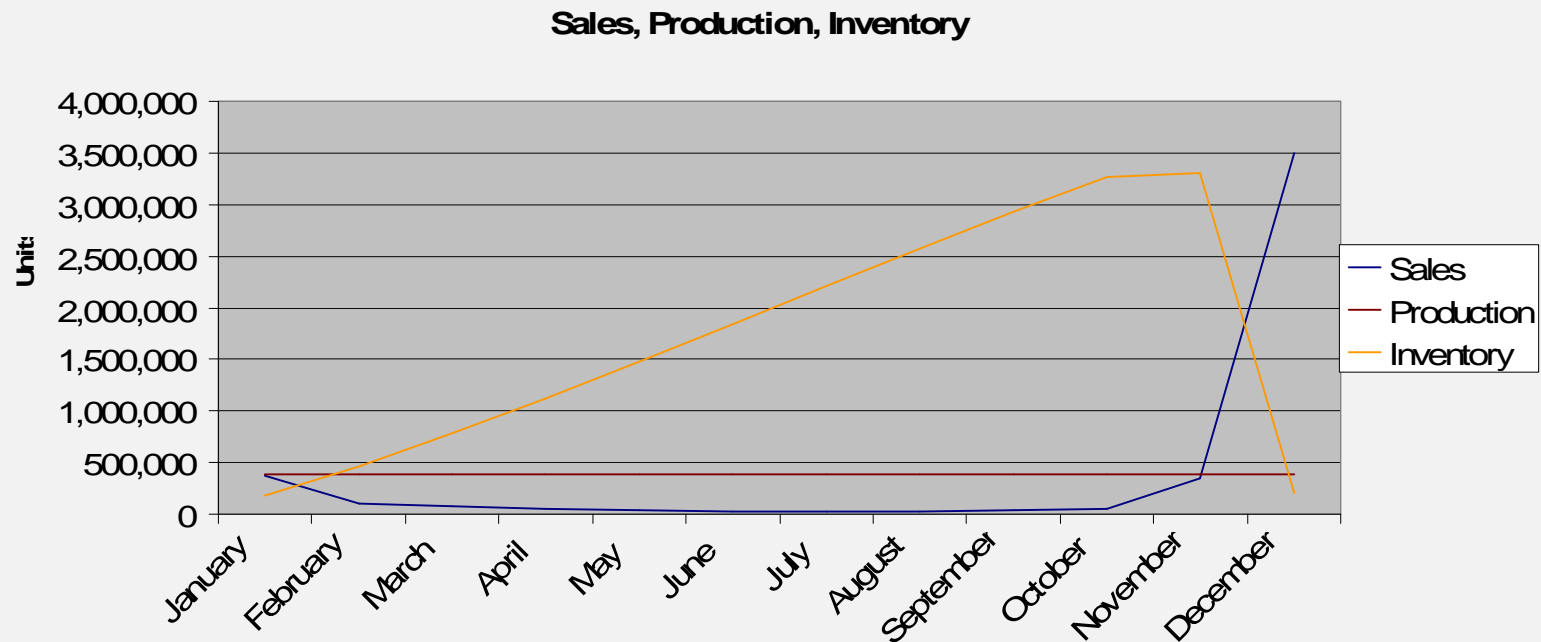
- Work centers capture and use the following Resource Related data
 - Basic Data
 - Person Responsible, Location of Work Center
 - Scheduling Information
 - Queues and Move Times (interoperation), Formula Keys
 - Costing Data
 - Cost Center, Activity Types
 - Personnel Data
 - People, Positions, Qualifications
 - 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



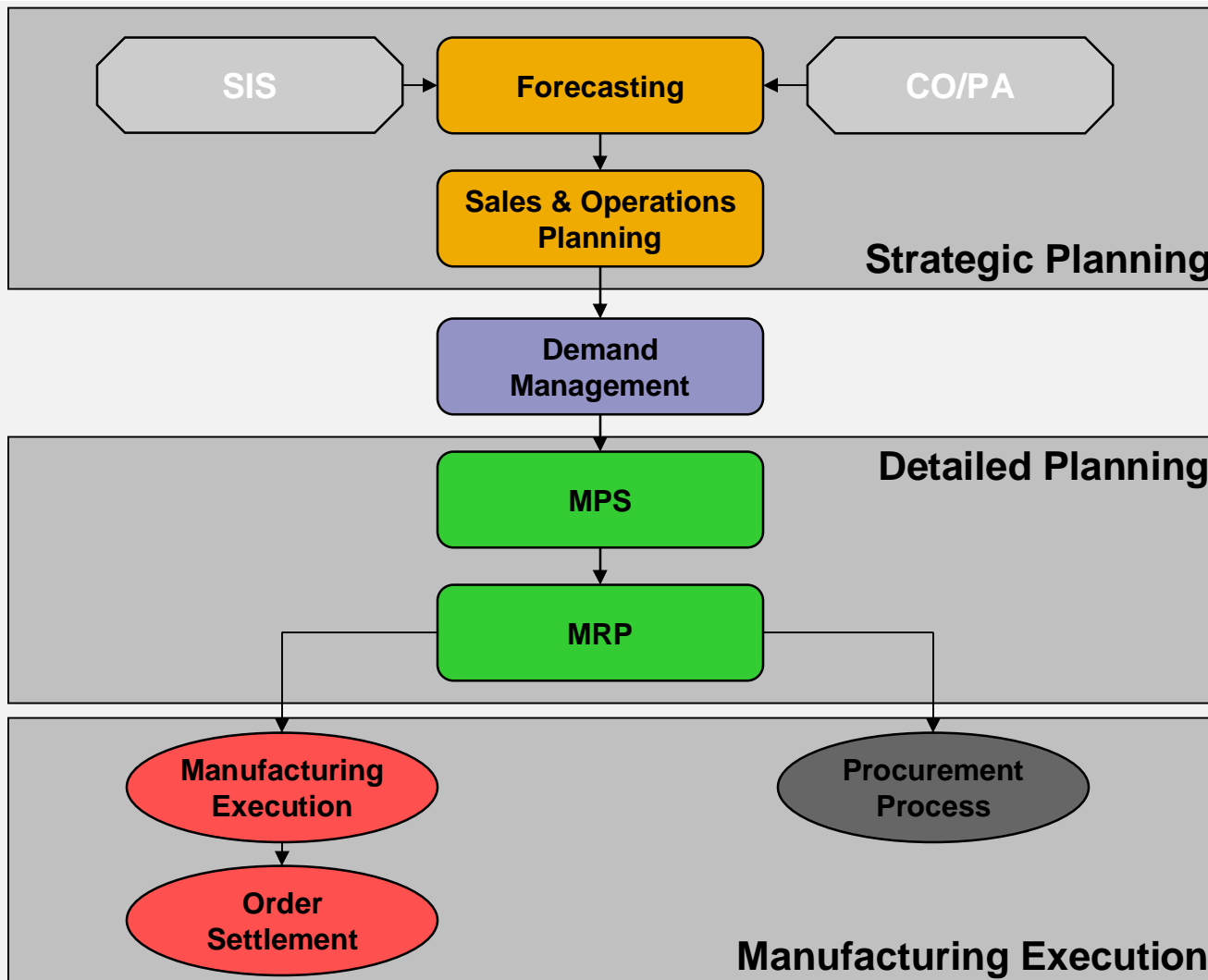
SAP ERP**Material Planning**

- SOP provides a method for Sales Planning, Production Planning, Feasibility



SAP ERP

Production Planning & Execution

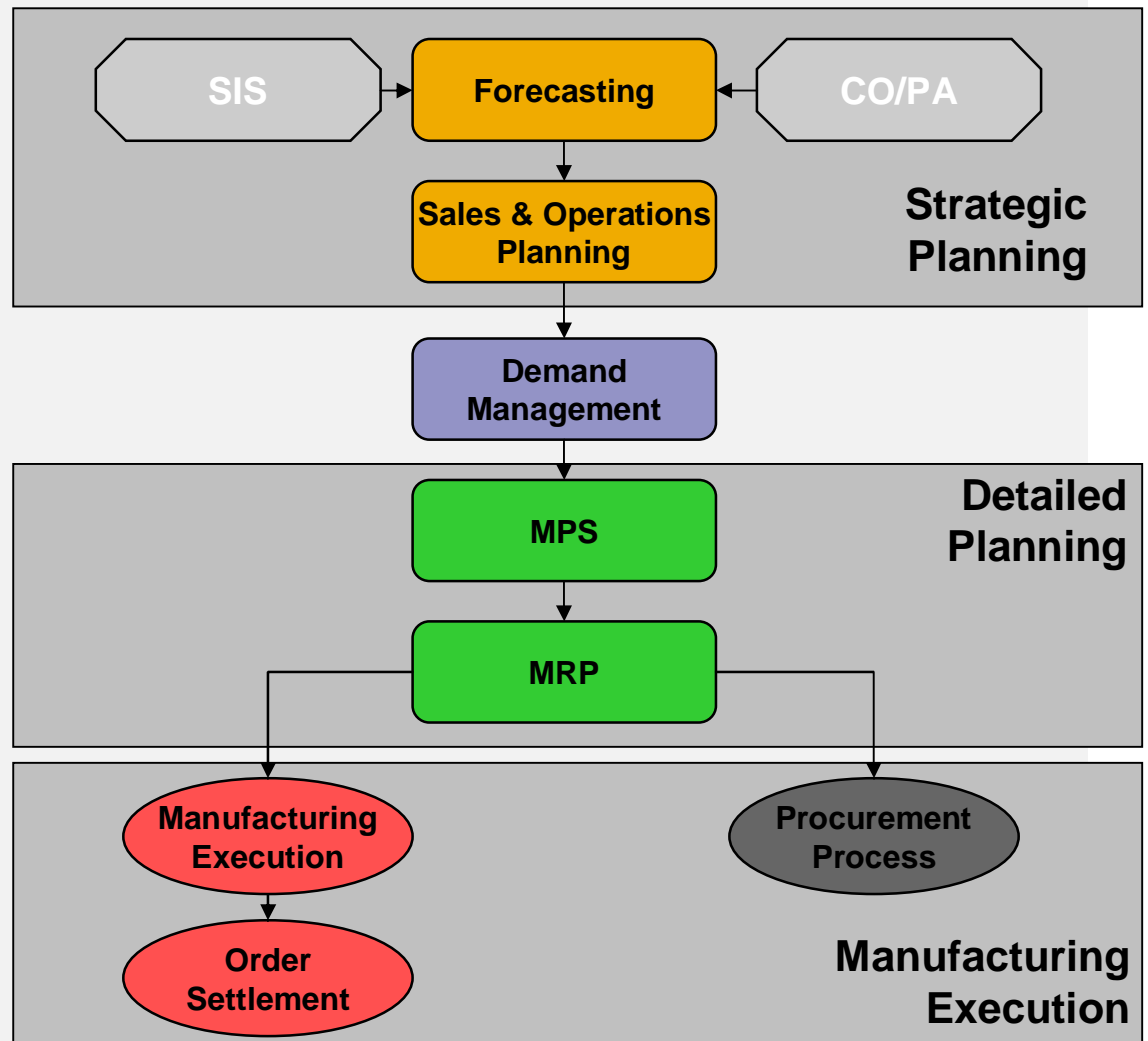


SAP ERP

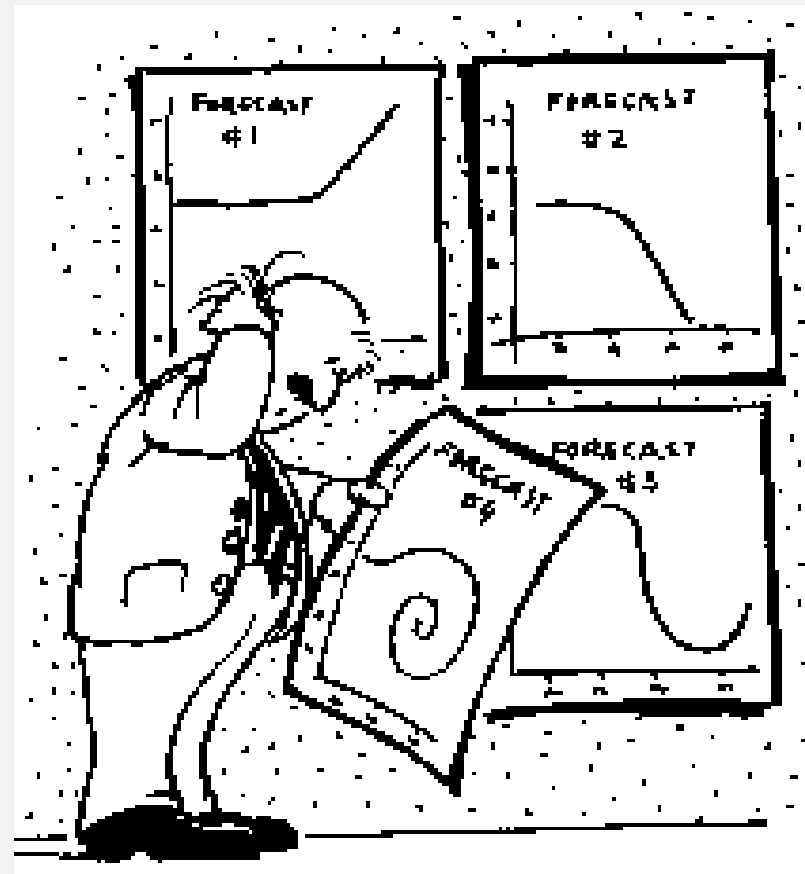
Production Planning & Execution

- 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

Forecast: Parameters for Automatic Model Selection

Exponential smoothing, first-order with test for

Trend

Alpha factor	0.20
Beta factor	0.20

Season

Alpha factor	0.20
Gamma factor	0.20
Periods per season	12

Trend and season

Seasonal model and test for trend

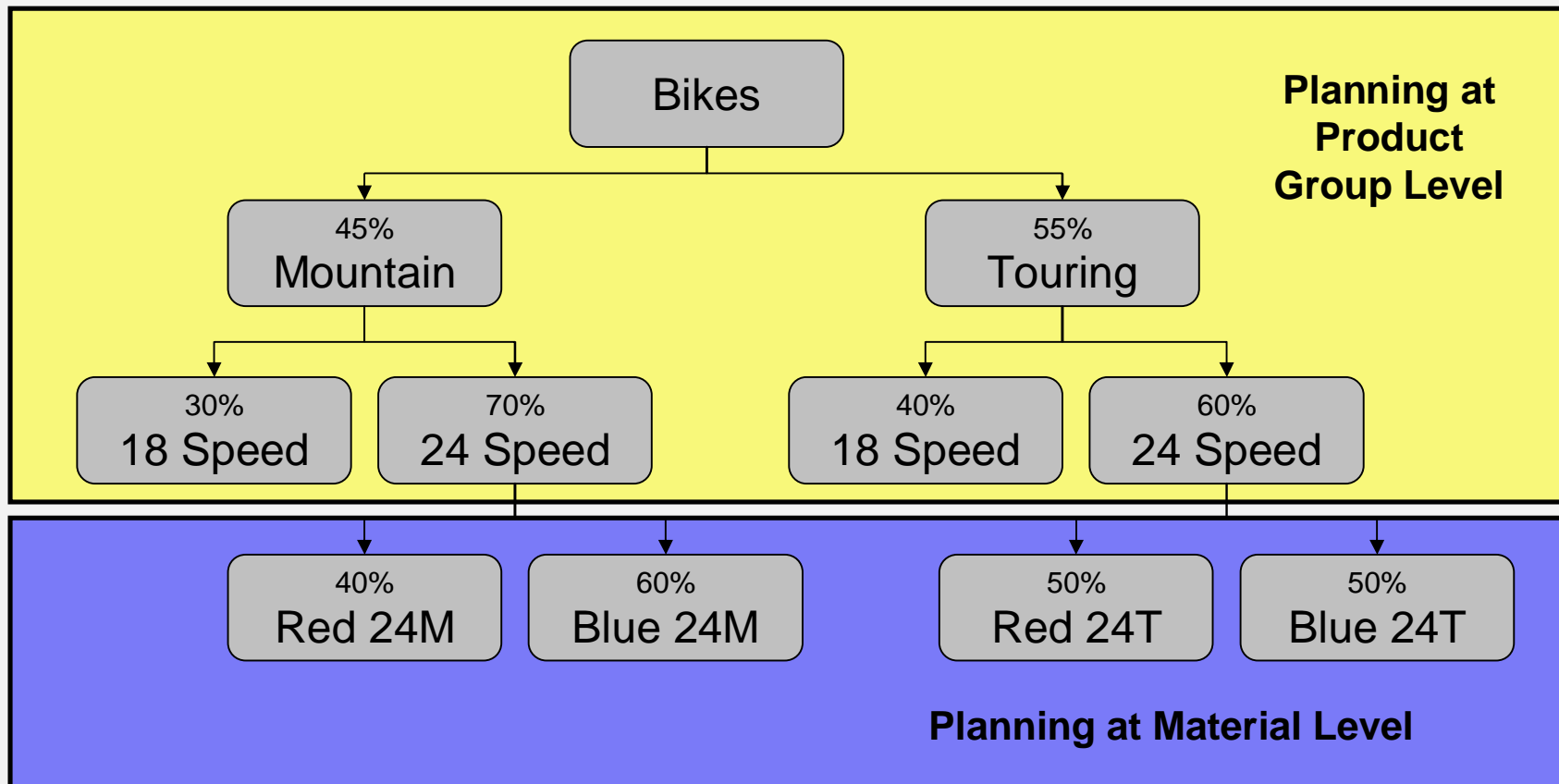
Trend model and test for season

Alpha factor	0.20
Beta factor	0.20
Gamma factor	0.20
Periods per season	12

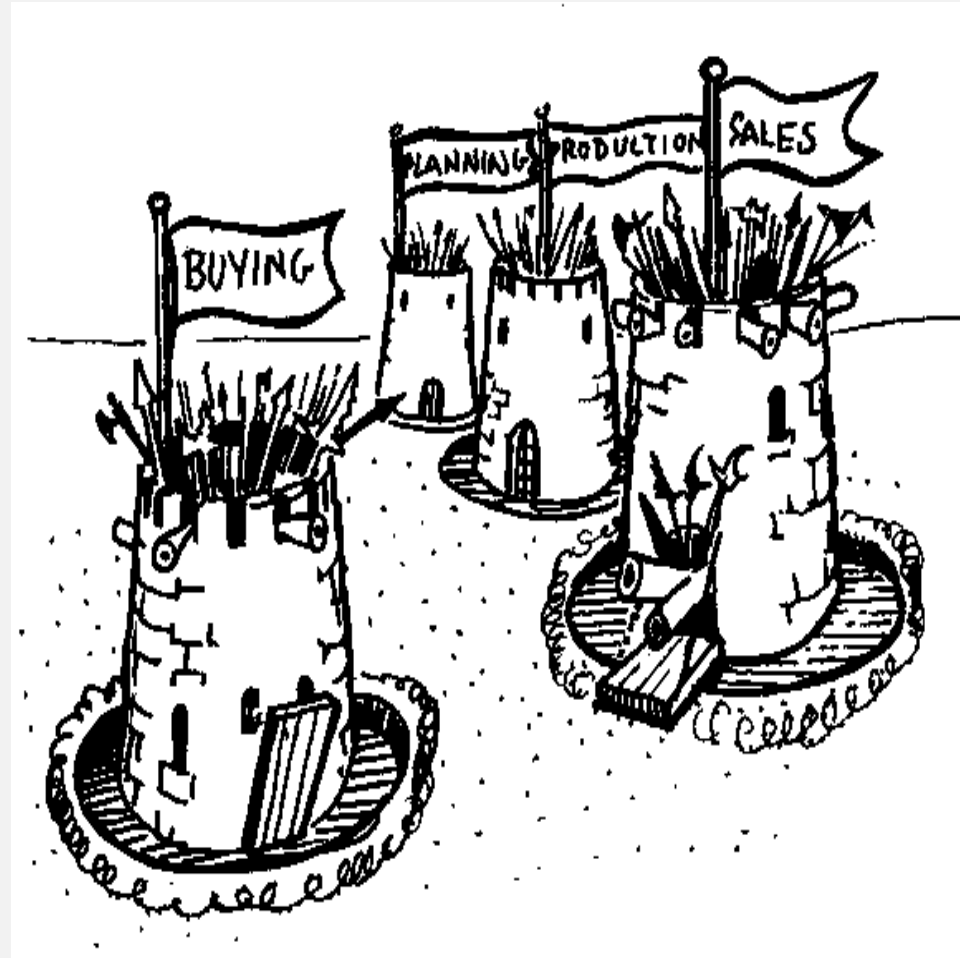
Forecast model sel. using procedure 2

Periods per season	12
--------------------	----

Forecasting Historical... X



- Information Origination
 - Sales
 - Marketing
 - Manufacturing
 - Accounting
 - Human Resources
 - Purchasing
- Intra-firm Collaboration
 - Institutional Common Sense



SAP ERP

Sales and Operations Planning (SOP)

- 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

Change Rough-Cut Plan

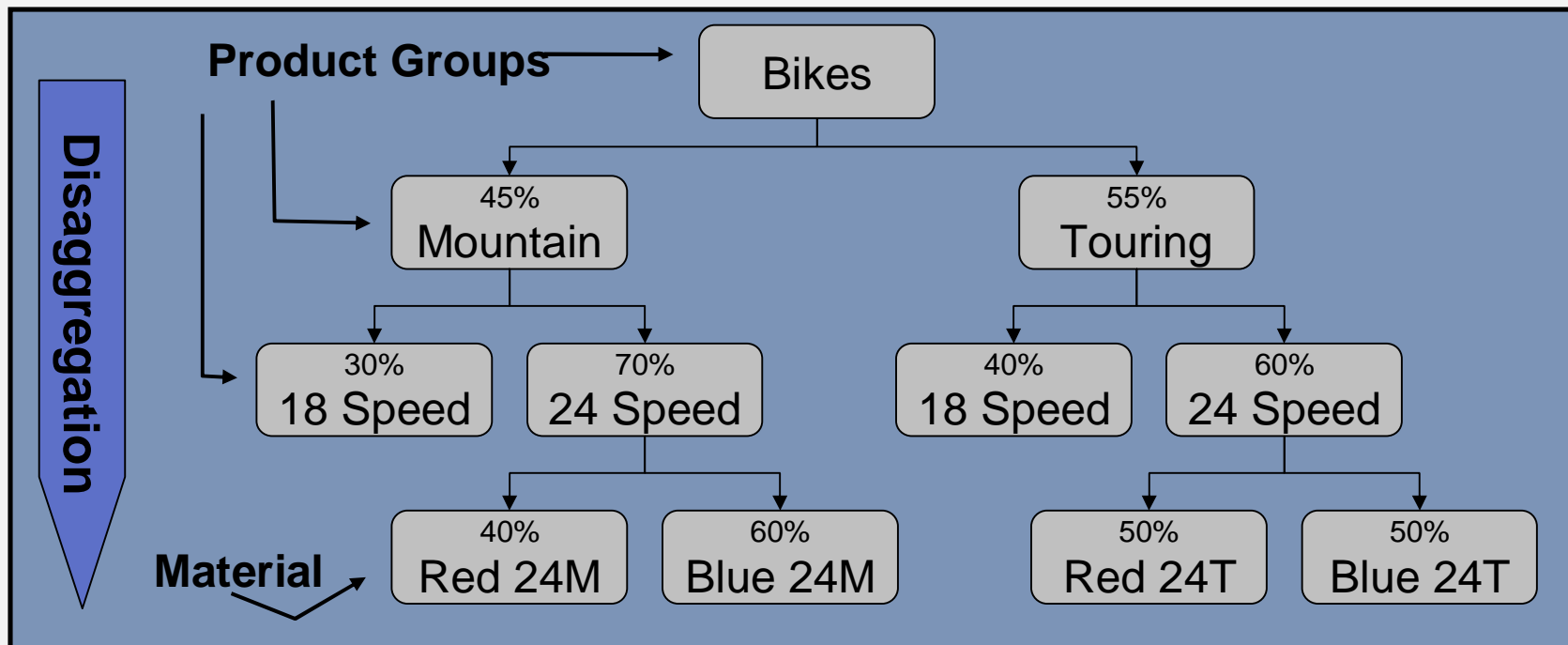
Characteristic

Product group: BIKEGRP159 Ridge Front & Terrain Stormer Prod Grp
 Plant: 58A1
 Version: A00 Active version Active

SOP: plan individual product group

Planning table	Un	M 02/2008	M 03/2008	M 04/2008	M 05/2008	M 06/2008	M 07/2008	M 08/2008	M 09/2008	M 10/2008	M 11/2008	M 12/2008	M 01/2009
Sales	EA	130	124	124	137	109	117	136	154	135	129	156	169
Production	EA	152	121	124	138	105	117	139	157	131	128	158	171
Stock level	EA	22	19	19	20	16	16	19	22	18	17	20	22
Target stock level	EA												
Days' supply	***	4	4	4	4	4	4	4	4	4	3	3	4
Target days' supply	***	5	5	5	5	5	5	5	5	5	5	5	5

- 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



Forecast



**Planned
Independent
Requirements**

**Customer
Independent
Requirements**

Sales

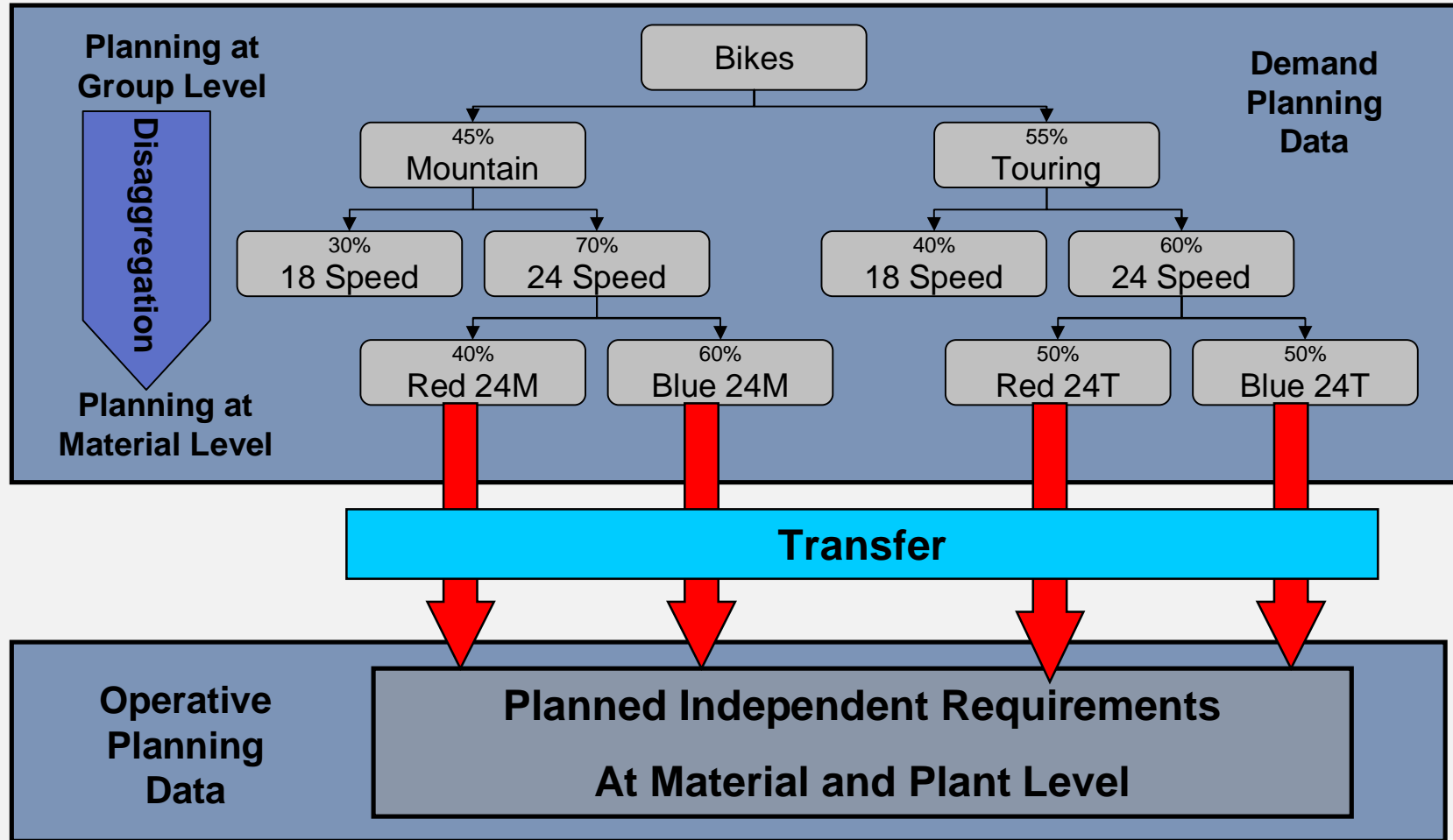


**Demand
Program**

MPS / MRP

SAP ERP

Transfer from High Level to Detailed Planning



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

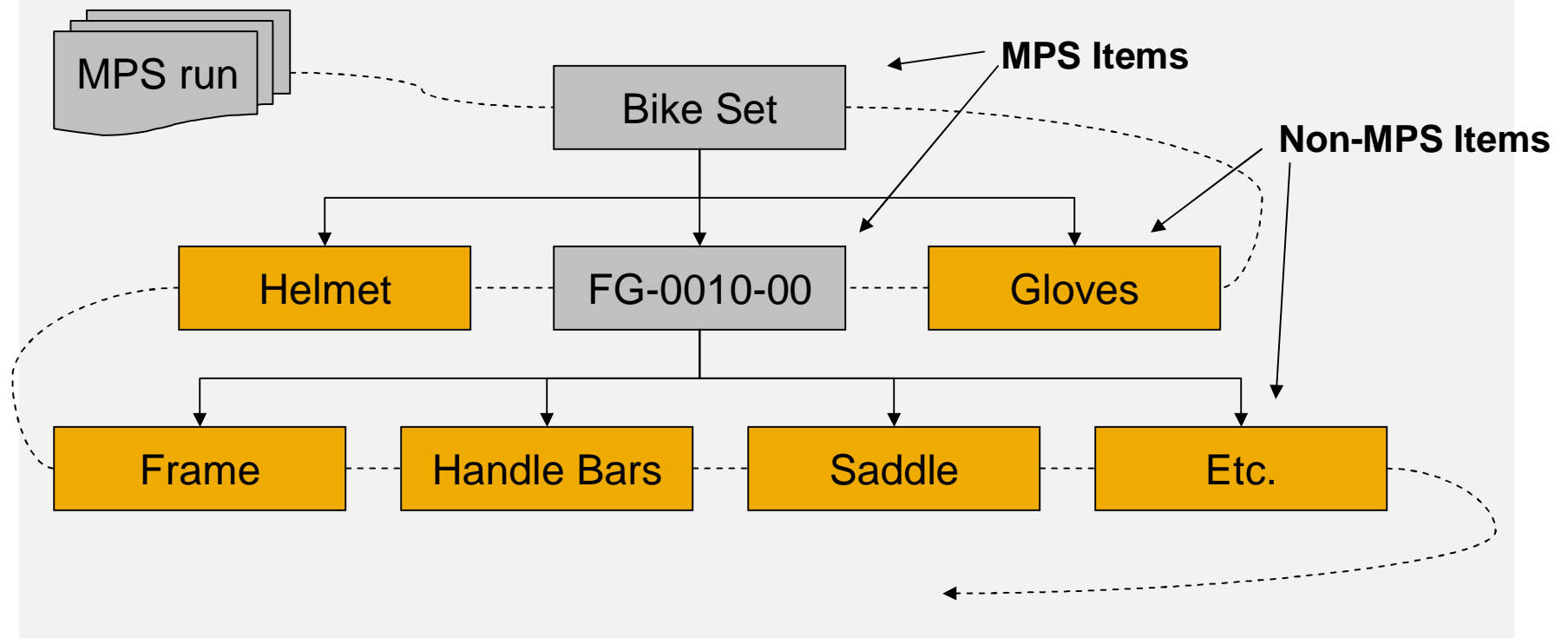
- Wide range of strategies

- 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 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 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

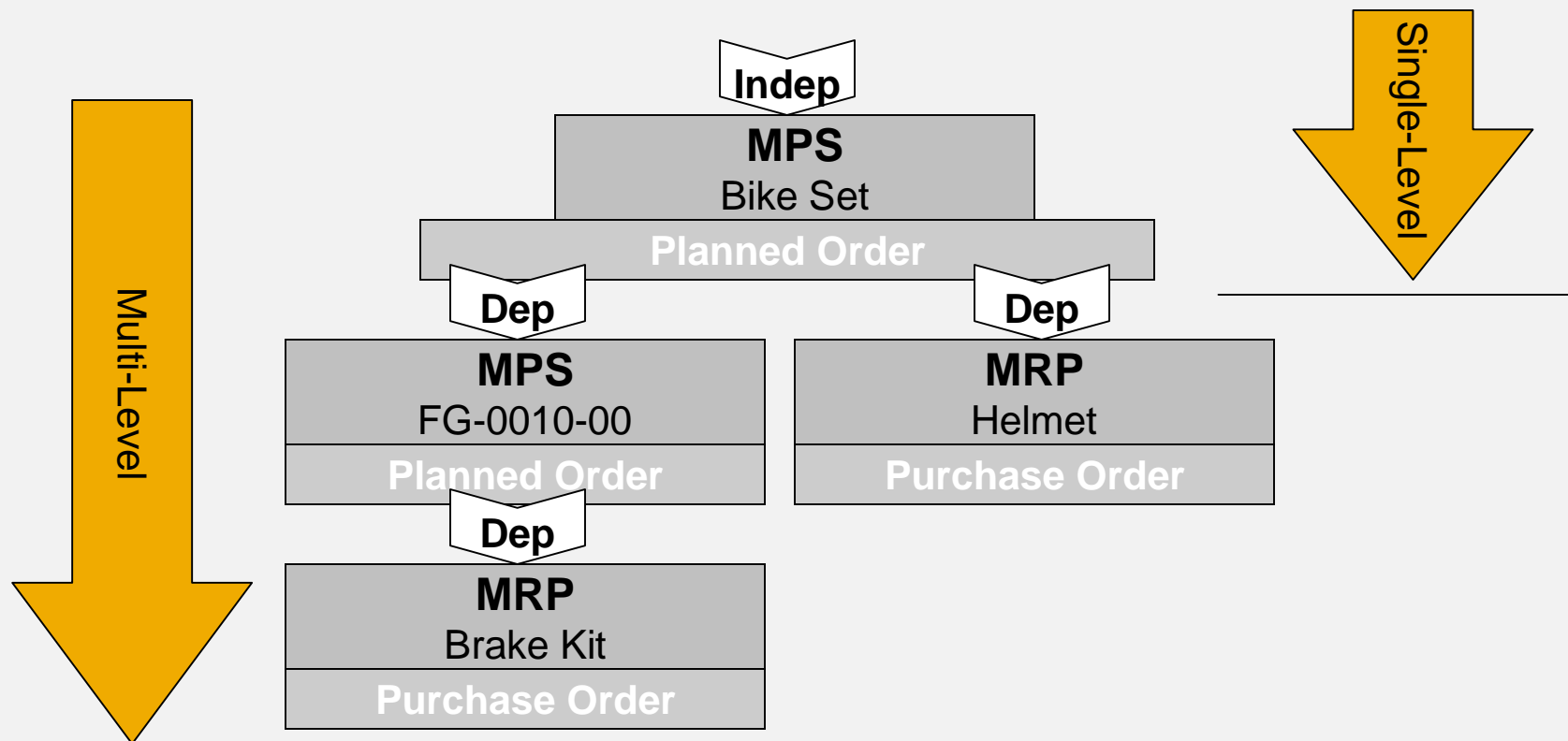


- In MRP, the system calculates the net requirements while considering available warehouse stock and scheduled receipts from purchasing and production
- During MRP, all levels of the bill of material are planned
- The output of MRP is a detailed production and/or purchasing plan
- Detailed planning level
 - Primary Functions
 - Monitor inventory stocks
 - Determine material needs
 - Quantity
 - Timing
 - Generate purchase or production orders

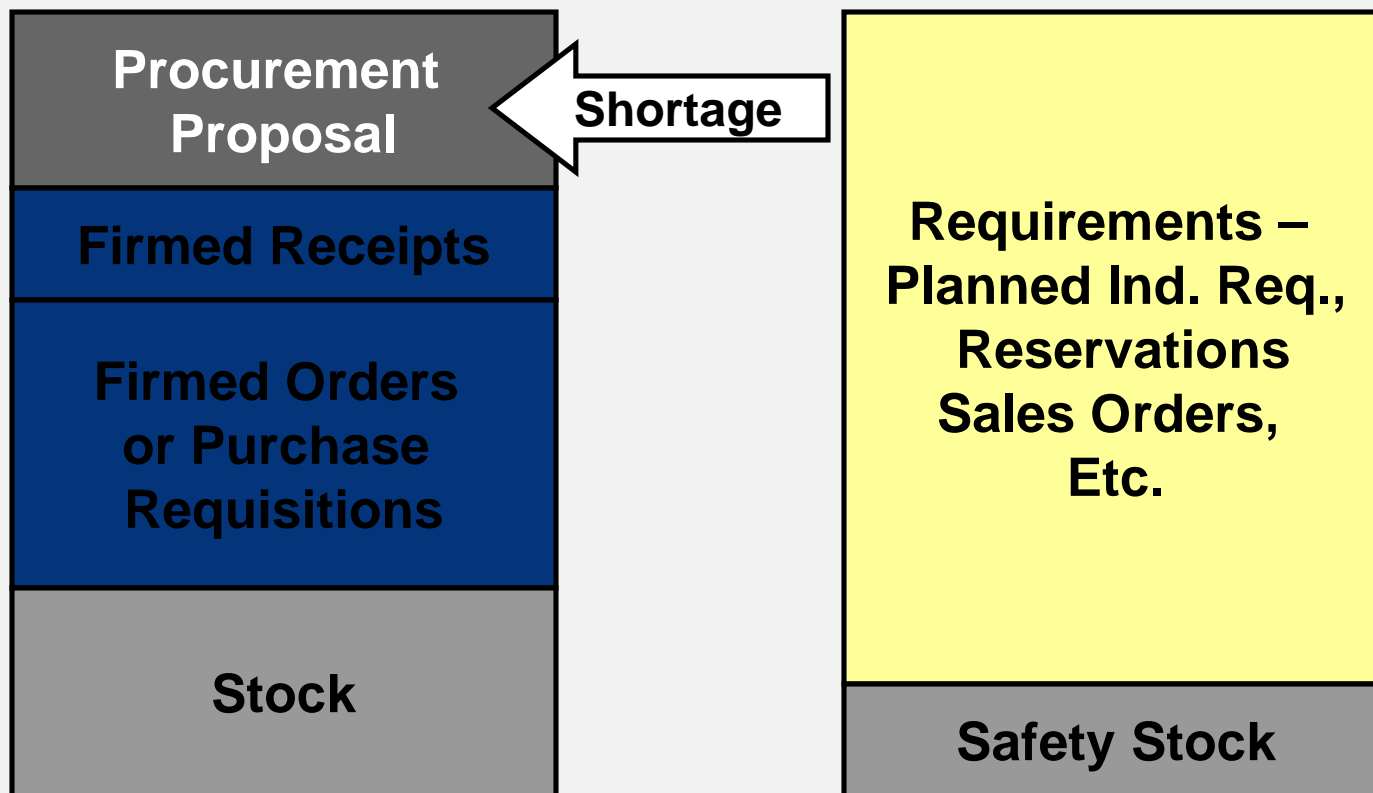
SAP ERP

Demand-Independent vs. Dependent

- Independent Demand – Original source of the demand.
- Dependent Demand – Source of demand resides at another level.



- 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



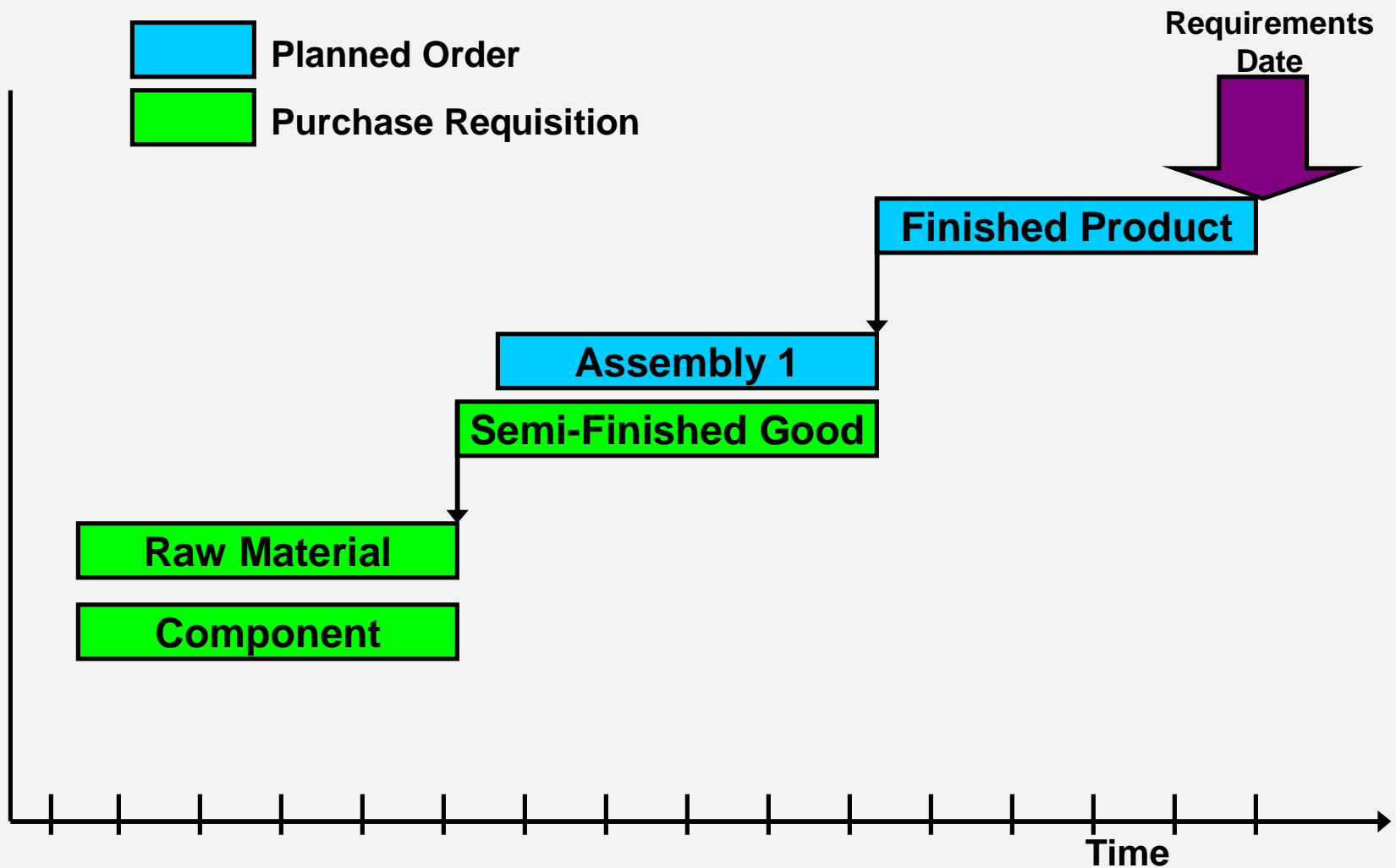
- **Static**
 - Based on fixed values in the Material Master
- **Periodic**
 - Groups net requirements together from multiple periods
- **Optimum**
 - Calculates the optimum lot size for a several periods of net requirements

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

- Internal Procurement
 - Planned Order
 - Production Order
 - Process Order

SAP ERP

Multi-Level Scheduling

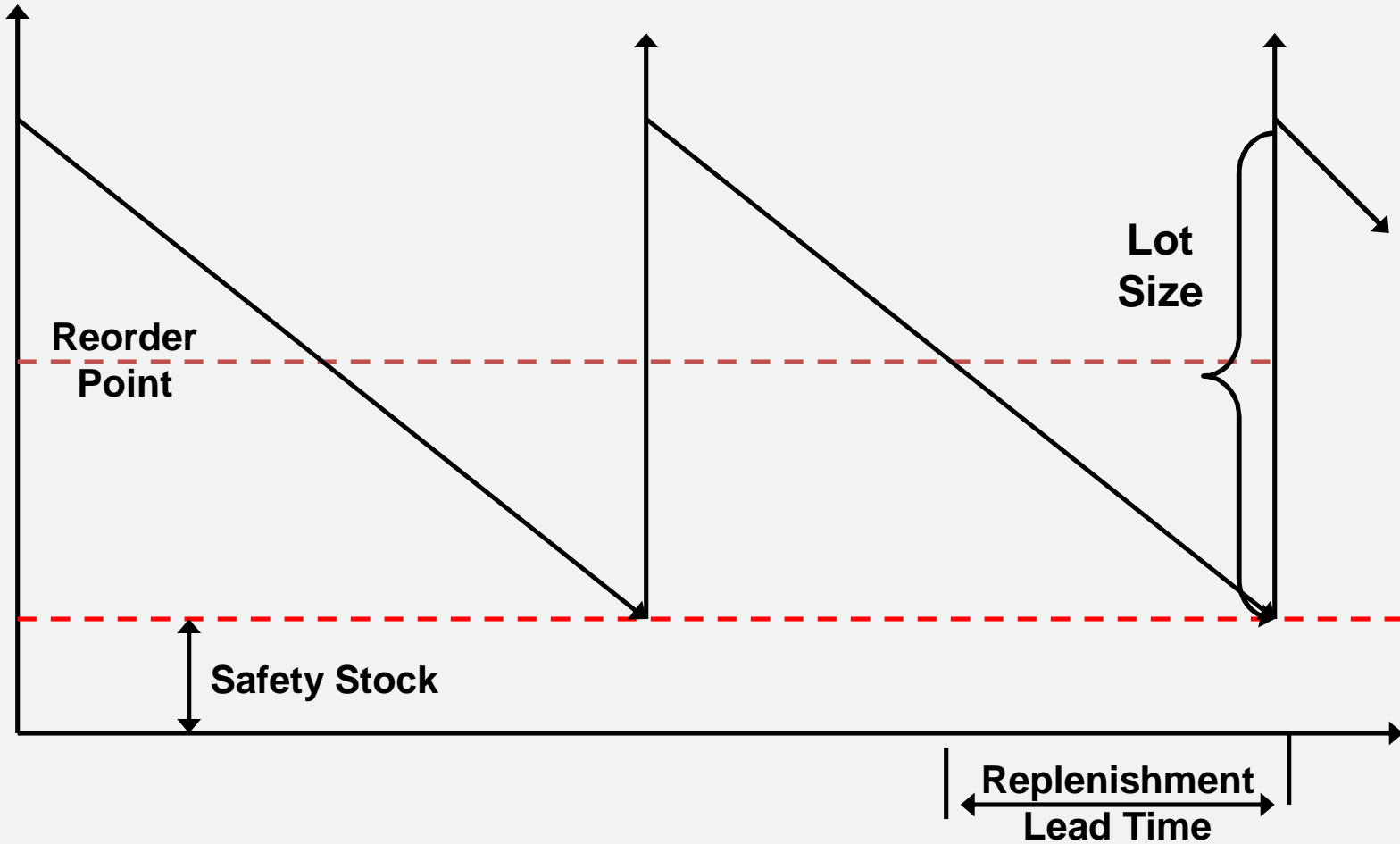


- Whether or not a material is planned using MRP or Consumption Based is determined by the MRP Type on the MRP1 screen of the Material Master

MRP**PD – MRP****VSD – Seasonal MRP****Consumption Based****VB – Reorder-Point****VV – Forecast Based****RP – Replenishment**

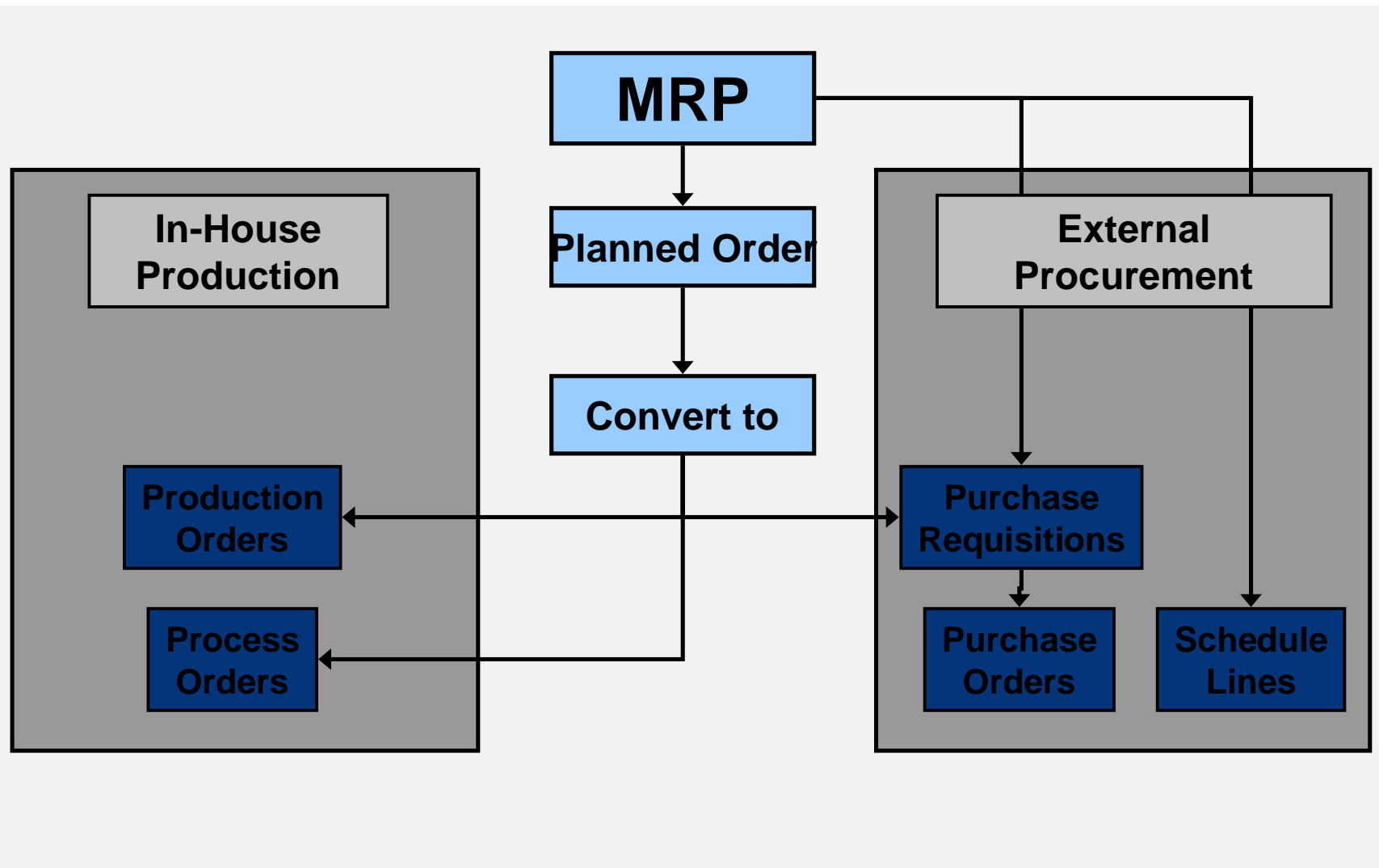
SAP ERP

Consumption-Based

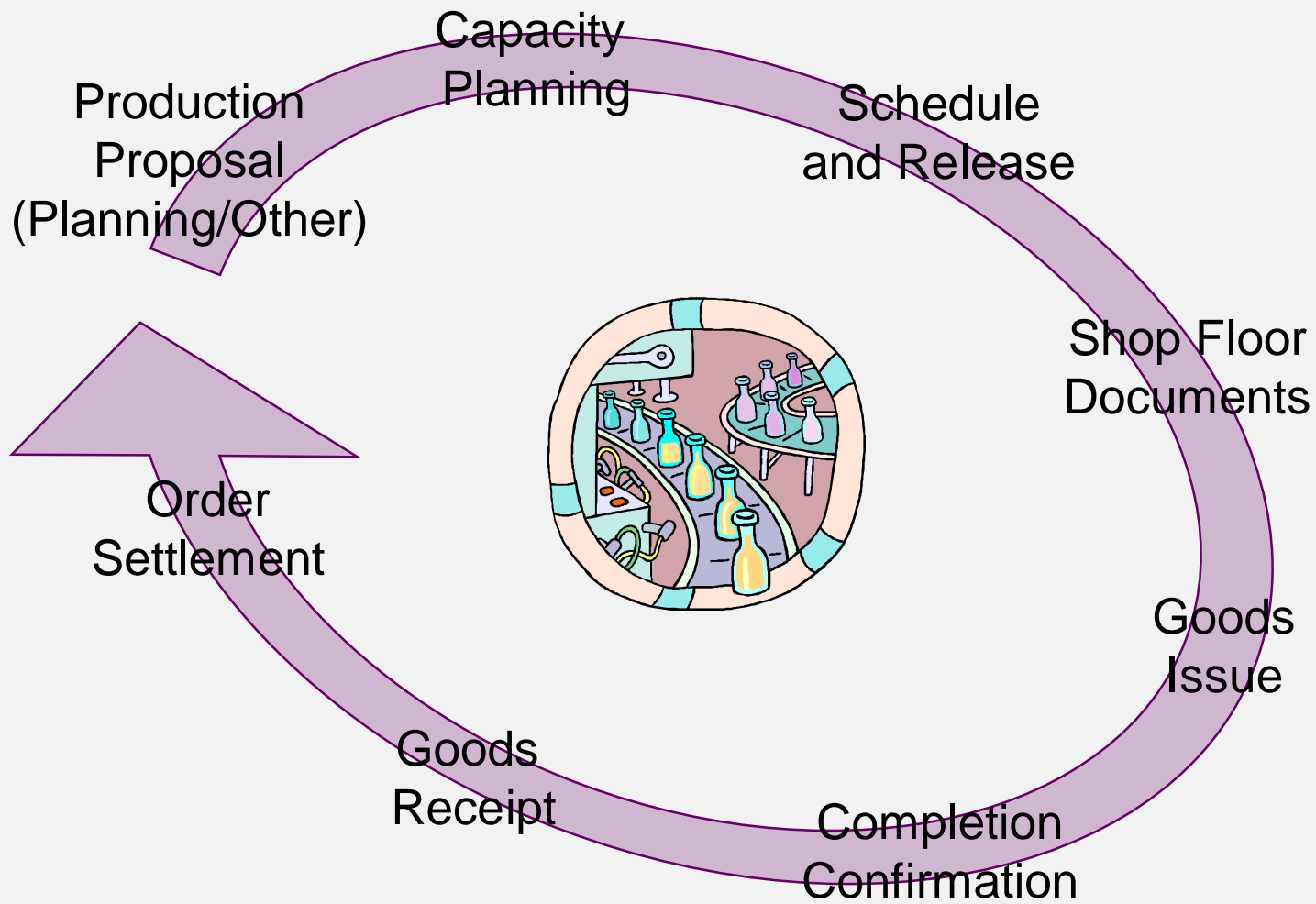


SAP ERP

Output of MRP



- **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

SAP ERP

Production Order

The screenshot shows the SAP Production Order Create: Header screen. The interface includes a menu bar (Order, Functions, Edit, Goto, Header, Environment, System, Help) and a toolbar. The main area displays order details and various tabs for configuration.

Annotations:

- What:** Points to the Order number field.
- Quantity:** Points to the Total Qty field.
- How:** Points to the Material field.
- BOM:** Points to the Material field.
- Time Line:** Points to the Dates table.

Order Details:

- Order: %000000000001
- Material: EG-0011-60
- Status: RE MACM SETC
- Type: PP01
- Pint: 60A1

Quantities:

Total Qty	93	EA	Scrap portion		0.00	%
Delivered	0		ExpectYieldVar	0		

Dates:

	BasicDates		Scheduled		Confirmed
Finish	04/01/2008	00:00	03/30/2008	17:00	
Start	03/22/2008	00:00	03/23/2008	14:01	
Release			03/22/2008		02/25/2008

Scheduling:

- Type: 2 Backwards
- Reduction: No reduction carried out
- Note: No scheduling note
- Priority: []

Floats:

- Scheduling margin: 160
- Float bef. prod: 1 Workdays
- Float after pro.: 1 Workdays
- Release period: 1 Workdays

- 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

- 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

- 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

SAP ERP

Confirmations

Confirmation Edit Goto User settings Environment System Help

Confirmation Edit Goto User settings Environment System Help

Enter time ticket for production order

Goods movements Actual data

Confirmation 003

Order 1000080 Material EPEN125 Executive Pen

Oper./activity 0020 Sequence 0 Place Cartridge in Barrel

Sub-operation

Capacity cat.

Split

Work center WC125 Plant P125 Assembly Line

Confirm.type Partial confirmation Clear open reservations

Quantities

	To confirm	Unit
Yield	100	EA
Scrap		
Rework		
Reason for Var.		

Activities

Personnel

Personnel no. 12 Time ID Ben Grimm

Dates

	To confirm		Already confirmed		Planned for conf.	
	Date	Time	Date	Time	Date	Time
Execution start	11/04/2005	09:00:00	00:00:00		11/08/2005	10:20:19
Execut. Finish	11/04/2005	13:00:00	00:00:00		11/08/2005	12:33:59
Forecast finish		00:00:00	00:00:00			

Supplement

Text

SAPLCORU_S python OVR

- 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

- 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

- 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

Material	Prod. Order	Price Diff.
80	100	20

**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

SAP ERP

Order Settlement

Report Edit Goto View Extras Settings System Help

Orders: Actual/Plan/Variance

On/off Column

Orders: Actual/Plan/Variance Date: 11/07/2005 06:17:49 Page: 2 / 2

Order/Group 1000075 000001000075
 Fiscal year 2005
 Period 1 - 11

Cost elements	Actual	Plan	Var. (abs.)	Var. (%)
720100 Raw Mat. Consp / Exp	75,900	75,900		
800100 Labor	122,800	122,800		
* Costs	198,700	198,700		
731100 Prod Ord Settle Exp	8,300		8,300	
* Settled costs	8,300		8,300	
731100 Prod Ord Settle Exp	207,000-	207,000-		
* Deliveries to stock	207,000-	207,000-		
** Balance		8,300-	8,300	100.00-

SAP ERP

Order Status

Order Functions Edit Goto Header Environment System Help

Production order Display: Header

Material Capacity

Order: 1000002 Type: PP01
 Material: FG-0011-60 Ridge Front 60 Plnt: 60A1
 Status: REL CNF DLV PRC GMPS MACM SETC

General Assignment Goods receipt Control data Dates/qtys Master data Long text

Quantities

Total Qty	91	EA	Scrap portion	0	0.00 %
Delivered	91		ExpectYieldVar	0	

Dates

	BasicDates		Scheduled		Confirmed	
Finish	03/06/2008	00:00	03/04/2008	17:00	02/25/2008	
Start	02/25/2008	00:00	02/26/2008	15:26	02/25/2008	14:47
Release			02/25/2008		02/25/2008	

Scheduling

Type: 2 Backwards
 Reduction: No reduction carried out
 Note: No scheduling note
 Priority: []

Floats

Scheduling margin	160
Float bef. prod	1 Workdays
Float after pro.	1 Workdays
Release period	1 Workdays

System status

Stat Text

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

Active Status

The End