



MONASH University

Information Technology

Real-Time Enterprise Systems

Lecture 4

ERP in Sales & Marketing and CRM

Unit Outline

Week	W/C	Topic	Deadline:
1	25/07	Introduction to FIT3138; Introduction to Enterprise Systems	
2	01/08	Systems Integration - Role of ERP in Business Functions and Processes	Assignment 1 handed out
3	08/08	The Development of ERP Systems	
4	15/08	ERP in Sales and Marketing & CRM	
5	22/08	ERP in Production and Supply Chain Management	
6	29/08	Accounting in ERP Systems	
7	05/09	Process Modelling & Improvement	Assignment 1 due Assignment 2 handed out
8	12/09	ERP Implementation – Risk Management	
9	19/09	ERP Implementation – Data and System Integration and Configuration	
Mid-semester Break (26 Sep – 30 Sep 2022)			
10	03/10	ERP Implementation Issues: Managing Change	
11	10/10	Technologies supporting real-time enterprise	
12	17/10	Exam Review	Assignment 2 due

Objectives

Explain why unintegrated Marketing and Sales information systems lead to company-wide inefficiency, higher costs, lost profits, and customer dissatisfaction

Discuss sales and distribution in the SAP ERP system, and explain how integrated data sharing increases company-wide efficiency

Describe how SAP ERP processes a standard sales order

Describe the benefits of customer relationship management (CRM) software

Case: Fitter Snacker (FS) Company

Ref: Monk & Wagner)

Manufactures and sells two types of nutritious snack bars:

- NRG-A: “advanced energy”
- NRG-B: “body building proteins”

FS's Marketing and Sales (M/S) information systems

- Not well integrated with company's other information systems
- Company-wide use of transaction data is inefficient

Has organized its sales force into two divisions:

- Wholesale Division
- Direct Sales Division
- The two sales divisions differ in terms of quantities of orders and pricing terms

Branding:

- Sells snack bars under the Fitter Snacker brand name
- Packages the bars in store-brand wrappers for some chain stores

Problems with Fitter Snacker's Sales Process

- Many of Fitter Snacker's sales orders have problems, such as:
 - Incorrect pricing
 - Excessive calls to the customer for information
 - Delays in processing orders
 - Missed delivery dates

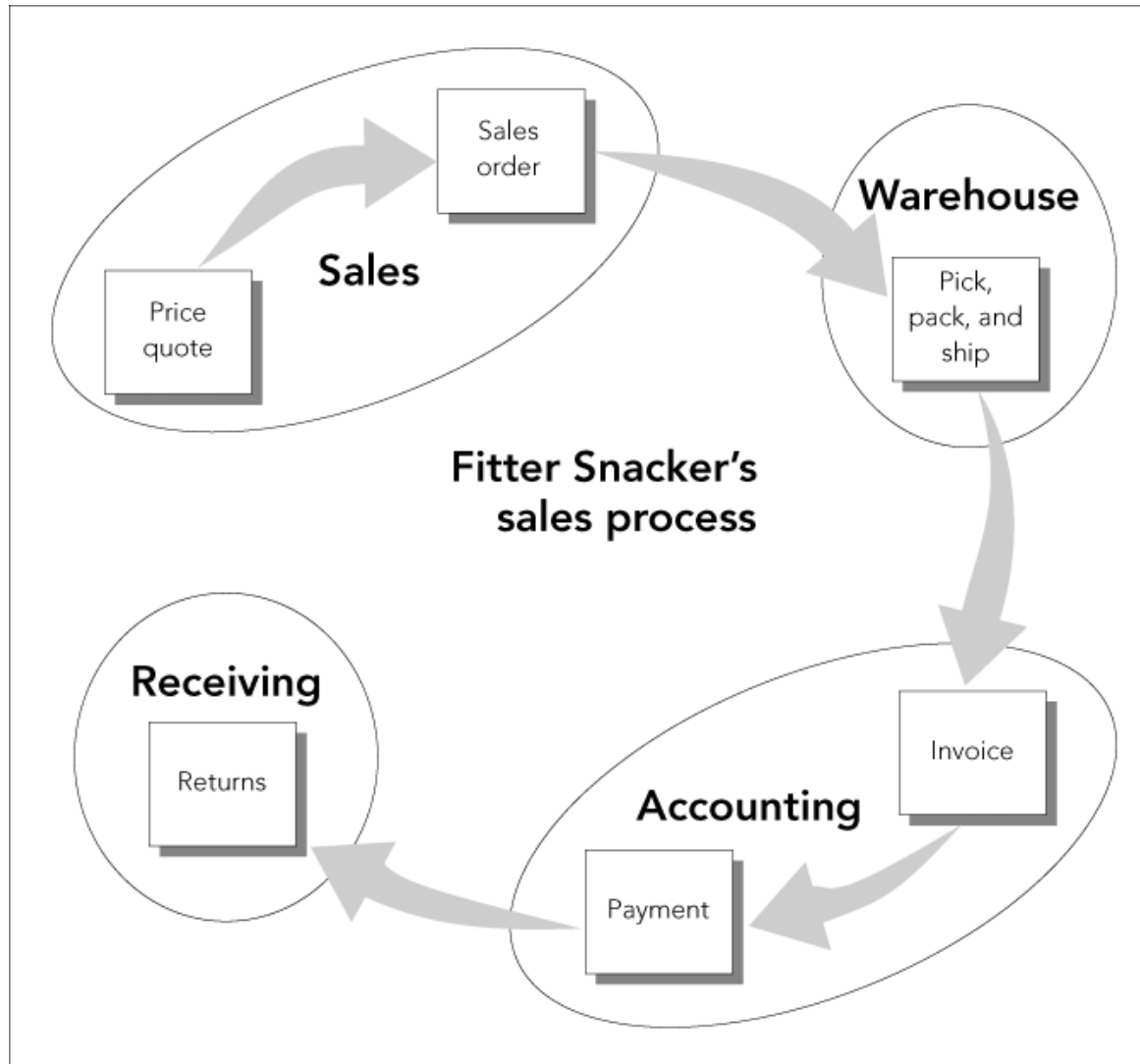


Problems with Fitter Snacker's Sales Process (cont'd.)

- Reasons for problems:
 - FS has separate information systems throughout the company for three functional areas:
 - Sales order system
 - Warehouse system
 - Accounting system
 - High number of transactions that are handled manually
 - Information stored in the three systems is not available in real time



The Sales Process



Sales Quotations and Orders

- Giving a customer a price quotation and then taking the customer's order at FS
 - Sales call: salesperson either telephones the customer or visits in person
 - At the end of sales call, salesperson prepares a handwritten quotation on a form that generates two copies
 - Original sheet goes to the customer
 - Middle copy is first faxed and then mailed to the sales office
 - Salesperson keeps the bottom copy for his or her records



Sales Quotations and Orders (cont'd.)

- Giving a customer a price quotation and then taking the customer's order at FS (cont'd.)
 - Quotation form has a 1800 number that the customer can call to place an order
- Problems can occur with this process
- Inefficiencies in the rest of the ordering process
 - Determining the delivery date
 - Checking customer's credit status
 - Entering customer's order into the current order entry system



Order Filling

- Packing lists and shipping labels
 - Printed twice a day
 - Hand-carried to the warehouse
 - At warehouse, hand-sorted into small orders and large orders
- Warehouse
 - Small-order packing area
 - Large-order packing area
- FS uses a PC database program to manage inventory levels in the warehouse



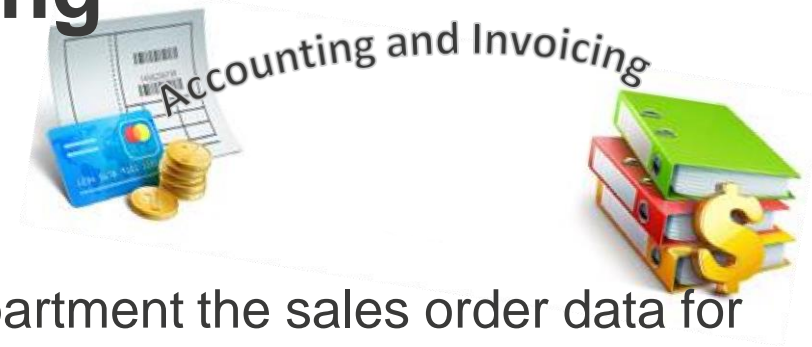
Order Filling (cont'd.)

- FS keeps inventory levels fairly low, and inventory levels change rapidly during the day
 - Picker might go to the shelves to pick an order and discover that there are not enough of the desired type of snack bars to fill the order
 - To determine what to do in this situation, order picker might have conversations with warehouse supervisor, production supervisor, and sales clerks

**Sorry
Temporarily
SOLD OUT**



Accounting and Invoicing



- Invoicing the customer is problematic
- Sales clerks send to the Accounting department the sales order data for customer invoices
- Accounting department loads the data into PC-based accounting program
- Clerks manually make adjustments for partial shipments and any other changes
- Sometimes, order corrections are delayed and don't catch up to the invoicing process
 - Results in late or inaccurate invoices



Payment and Returns

- Problems with procedure for processing payments
 - If any errors have occurred in the sales process, customer will receive an incorrect invoice
 - Many customers don't return a copy of the invoice with their payment; errors can result
- FS's returns processing is flawed
 - Many customers do not call for the RMA number, or fail to include it with their returned material
 - Makes it more difficult for Accounting department to credit the appropriate account
 - Poor penmanship on the returned material sheet can create problems for Accounting
- If a customer's account has not been properly credited, customer may receive a dunning letter in error

SAP ERP in Sales and Distribution Process

- How Fitter Snacker's sales order process would work with an SAP ERP system in place
- How the ERP system would make FS's sales order process more accurate and efficient
 - ERP allows business processes to cut across functional area lines
 - ERP systems can minimize data entry errors and provide accurate information in real time to all users
 - ERP systems can track all transactions (such as invoices, packing lists, RMA numbers, and payments) involved in the sales order

Taking an Order in SAP ERP

- Organisational structures
 - SAP ERP system allows the user to define various ways to group customers and salespeople
- Master data maintained in the central database and available to all SAP ERP modules
- A unique number is assigned by the company to each customer in the database
- SAP ERP system determines whether data entered is valid
- Search screen for customers

Item	Material	Order Quantity	Un	Description	S	Customer Material Number	BCo	DGP	H	Bm	D	Post date	Pst	Batch	Crty	Anno
1												0 04.11.2014				
2												0 04.11.2014				

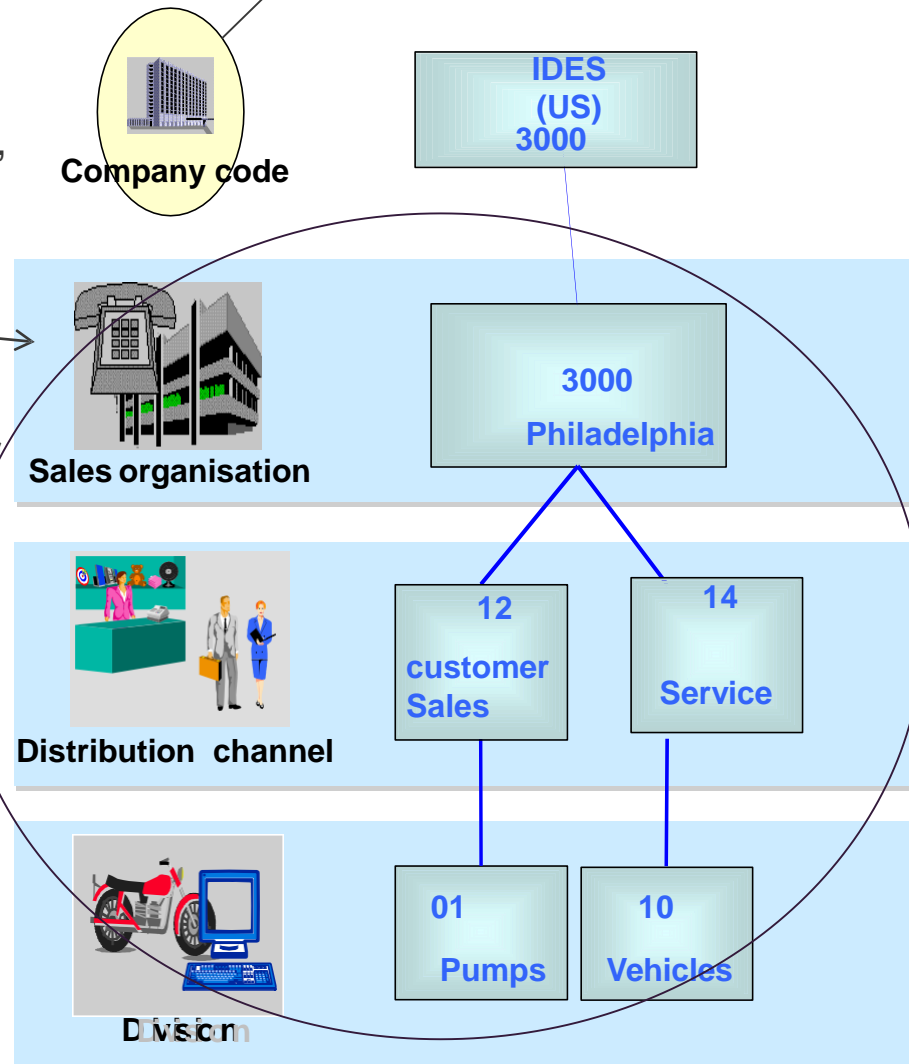
SAP – SD Organisational Structure

- Client
 - An independent environment in the system
- Company Code
 - Smallest org unit for which you can maintain a legal set of books
 - Can have more than one sales organisation
- Credit Control Area
 - An organisational entity which grants and monitors a credit limit for customers.
 - It can include one or more company codes
- Sales Organisation
 - An organisational unit responsible for the sale of certain products or services.
 - The responsibility of a sales organisation may include legal liability for products and customer claims
 - A sales organisation is uniquely assigned to a company code.
- Distribution Channel
 - The way in which products or services reach the customer
 - Typical examples of distribution channels are wholesale, retail, or direct sales

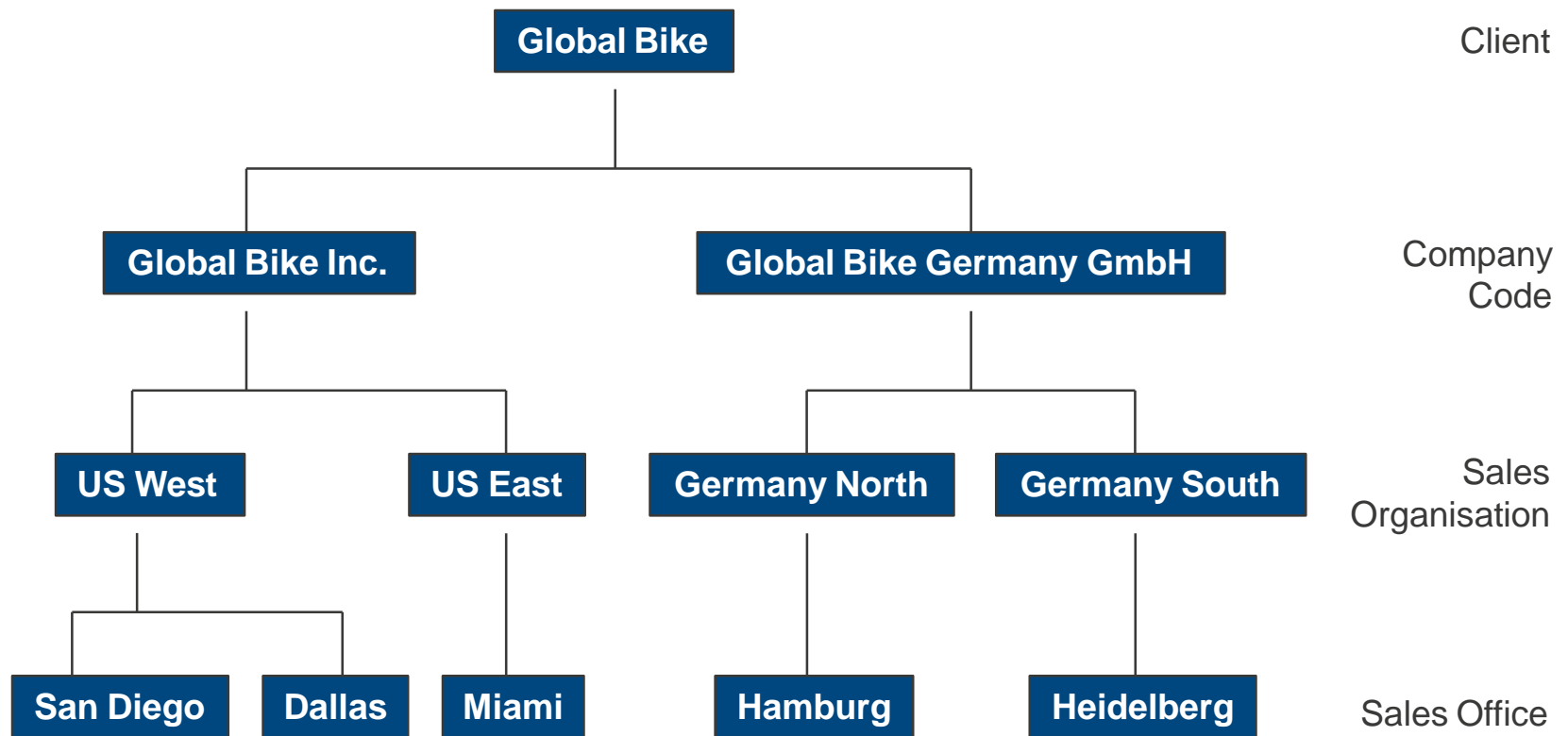
SD Organisational Structure

Company code: Legal entity and independent accounting unit
At company code level you create:
balance sheets required by law
profit and loss statement

- Division
 - A way of grouping materials, products, or services
- Sales Area
 - Combination of Sales Organisation, Distribution Channel and Division
 - Determines conditions (i.e. pricing) for sales activities
- Plant (eg: Delivering Plant)
 - Plant from which the goods should be delivered to the customer
- Other SD organisation units:
 - Shipping Point
 - Loading Point
 - Sales Office
 - Sales Group
 - Sales Person



An example: GBI Structure for Sales & Distribution



SD Master Data

Create Standard Order: Overview

Standard Order Netvalue 15,000.00 USD

Sold-To Party Philly Bikes / 3999 West Chester Pike / Philadelphia PA 19073

Ship-To Party Philly Bikes / 3999 West Chester Pike / Philadelphia PA 19073

PQ Number PO date

Customer Master

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

Req. deliv.date Deliver.Plant

☐ Complete div. Total Weight

Delivery block Volume

Billing block Pricing date

Payment card Exp.date

Card Verif.Code

Payment terms Pay immediately w/o Incoterms Miami

Order reason

Material Master

Sales Condition

All items

Item	Material	Order Quantity	Un	S	Description	ItCa	DGIP	HL	Item	D	First date	Plant	Batch	CnTy	Amount	Crcv	Net price	per	U...	Net value	
	<input type="text" value="0 DXT1000"/>		<input type="text" value="EA"/>	<input type="checkbox"/>	Deluxe Touring Bike (black)	TAN				D	04/26/2010	<input type="text" value="MI00"/>					USD	3,000.00	1	EA	
				<input type="checkbox"/>						D	04/26/2010										
				<input type="checkbox"/>						D	04/26/2010										
				<input type="checkbox"/>						D	04/26/2010										
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				<input type="checkbox"/>						D	04/26/2010										
				<input type="checkbox"/>						D	04/26/2010										

Data entry fields in Order Entry Screen

Data entry field	Explanation
Sold-To Party	Identification number assigned to customer
PO Number	The number assigned by the customer to the sales transaction; this is different from the sales order number assigned by the seller (using SAP ERP) to the sales transaction. In a paper process, the purchase order number is usually a sequential number preprinted on the purchase order form
Req. deliv. date	The delivery date for the order requested by the customer; the SAP ERP system will evaluate the ability to meet this date and suggest alternatives, if necessary
Material	The identification number assigned in the SAP ERP system to the item requested by the customer
Order Quantity	The number of units of the material the customer is requesting

Customer Master Data

- Customer Master
 - Contains all of the information necessary for processing orders, deliveries, invoices and customer payment
 - Every customer MUST have a master record
- Created by Sales Area
 - Sales Organisation
 - Distribution Channel
 - Division
- The customer master information is divided into 3 areas:
 - General Data
 - Company Code Data
 - Sales Area Data

Display Customer: General Data

Other Customer Company Code Data Sales Area Data

Customer: 3000 Philly Bikes Philadelphia

Address Control Data Payment Transactions Marketing Export Data

Preview

Name

Title: Company

Name: Philly Bikes

Search Terms

Search term 1/2: 000

Street Address

Street/House number: 3999 West Chester Pike

Postal Code/City: 19073 Philadelphia

Country: US USA Region: PA Pennsylvania

Time zone: EST Tax Jurisdiction: PA0000000

Transportation zone: 0000000001 Region East

PO Box Address

PO Box:

Postal code:

Company postal code:

Communication

Language: EN English

Telephone: Extension:

Mobile Phone: Extension:

Fax: Extension:

E-Mail:

StandardComm.Mtd:

Data line:

Telebox:

Comments:

Material Master Data

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

Display Material DXTR1000 (Finished Product)

Additional Data Org. Levels

Basic data 1 Basic data 2 Sales: sales org. 1 Sales: sales org. 2 Sale...

Material: DXTR1000 Deluxe Touring Bike (black)

General data

Base Unit of Measure	EA	each	Material Group	BIKES
Old material number			Ext. Matl Group	
Division	BI		Lab/Office	
Product allocation			Prod.hierarchy	
X-plant matl status			Valid from	
<input type="checkbox"/> Assign effect. vals			GenItemCatGroup	NORM Standard item

Material authorization group

Authorization Group:

Dimensions/EANs

Gross Weight	8,510	Weight unit	6
Net Weight	8,510		
Volume	0.000	Volume unit	
Size/dimensions			
EAN/UPC		EAN Category	

Packaging material data

Matl Grp Pack.Matls:

Basic Data Texts

Languages Maintained: 0 Basic Data Text Language:

Condition Master Data (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

Sales Document Item 10 Item category TAN Standard Item
Material DXTR1000 Deluxe Touring Bike (black)

Sales A Sales B Shipping Billing Document Conditions Account assignment Sc

Qty 5 EA Net 15,000.00 USD
Tax 0.00

N...	CnTy	Name	Amount	Crcy	per	U...	Condition value	Curr.
PR00		Price	3,000.00	USD		1 EA	15,000.00	USD
		Gross Value	3,000.00	USD		1 EA	15,000.00	USD
		Discount Amount	0.00	USD		1 EA	0.00	USD
		Rebate Basis	3,000.00	USD		1 EA	15,000.00	USD
		Net Value for Item	3,000.00	USD		1 EA	15,000.00	USD
		Net Value 2	3,000.00	USD		1 EA	15,000.00	USD
		Total	3,000.00	USD		1 EA	15,000.00	USD
SKT0		Cash Discount	0.000	%			0.00	USD
VPRS		Internal price	1,400.00	USD		1 EA	7,000.00	USD
		Standard - USA /With	1,600.00	USD		1 EA	8,000.00	USD

Sales Document Item 10 Item category TAN Standard Item
Material PRTR1000 Professional Touring Bike (black)

Sales A Sales B Shipping Billing Document Conditions Account assignment Sc

Qty 5 EA Net 16,000.00 USD
Tax 0.00

N...	CnTy	Name	Amount	Crcy	per	U...	Condition value	Curr.
PR00		Price	3,200.00	USD		1 EA	16,000.00	USD
		Gross Value	3,200.00	USD		1 EA	16,000.00	USD
		Discount Amount	0.00	USD		1 EA	0.00	USD
		Rebate Basis	3,200.00	USD		1 EA	16,000.00	USD
		Net Value for Item	3,200.00	USD		1 EA	16,000.00	USD
		Net Value 2	3,200.00	USD		1 EA	16,000.00	USD
		Total	3,200.00	USD		1 EA	16,000.00	USD
SKT0		Cash Discount	0.000	%			0.00	USD
VPRS		Internal price	1,500.00	USD		1 EA	7,500.00	USD
		Standard - USA /With	1,700.00	USD		1 EA	8,500.00	USD

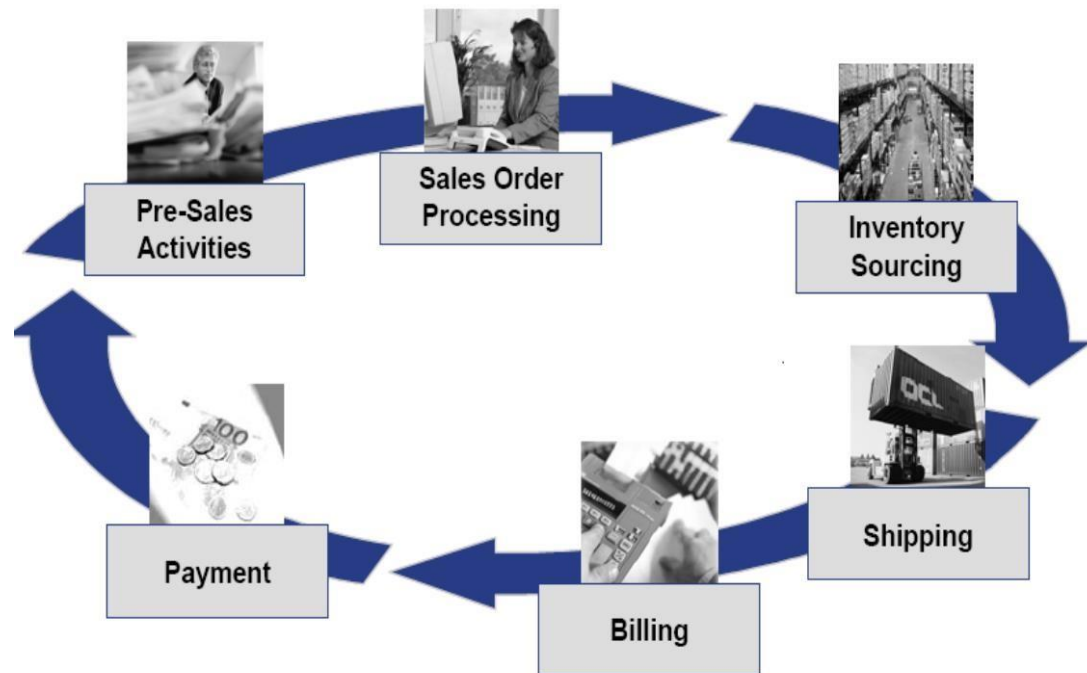
Condition Master:

Discount Pricing in SAP ERP

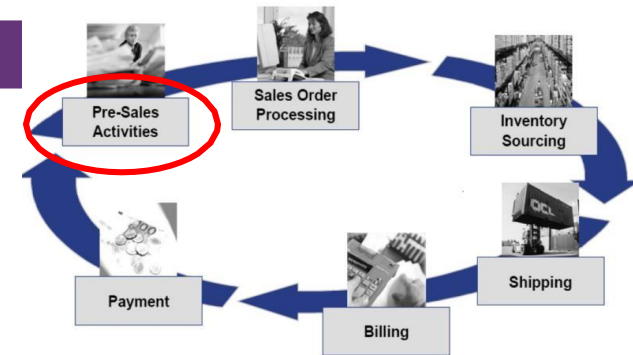
- When a company installs an ERP system, it can configure it for a number of pricing strategies
- Various kinds of discounts can be allowed
- As a safeguard, system can enforce limits on the size of discounts
- **Condition technique**
 - Control mechanism developed by SAP to accommodate various ways that companies offer price discounts

Sales and Distribution in ERP

- SAP ERP Sales and Distribution module treats the sales order process as a cycle of events:
 - Pre-sales activities
 - Sales order processing
 - Inventory sourcing
 - Shipping (Delivery)
 - Billing
 - Payment



Pre-Sales Activities



- 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.



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

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

Description Partner Texts Sales summary

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

Statistics measures						
Value in T						
Document category	Min	Max	Totals	Average	Open	Number
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	

Inquiry

- 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.

Company
The Bike Zone
2105 N Lewis Ave
Portland OR 97227

Inquiry

Number/Date
10000002 / 04/21/2010
Reference no./Date
000 /04/21/2010
Delivery date
Day 04/21/2010
Cust. no.
1301
Validity period
04/21/2010 bis 05/21/2010

We deliver according to the following conditions:

Currency USD

Terms of payment Payable immediately without deduction

Terms of delivery FOB San Diego

Weights (gross/net) - Volume - Mark

Gross weight 57,170 G Net weight 57,170 G

Please see our promotional offer enclosed. Delivery as long as stocks last.

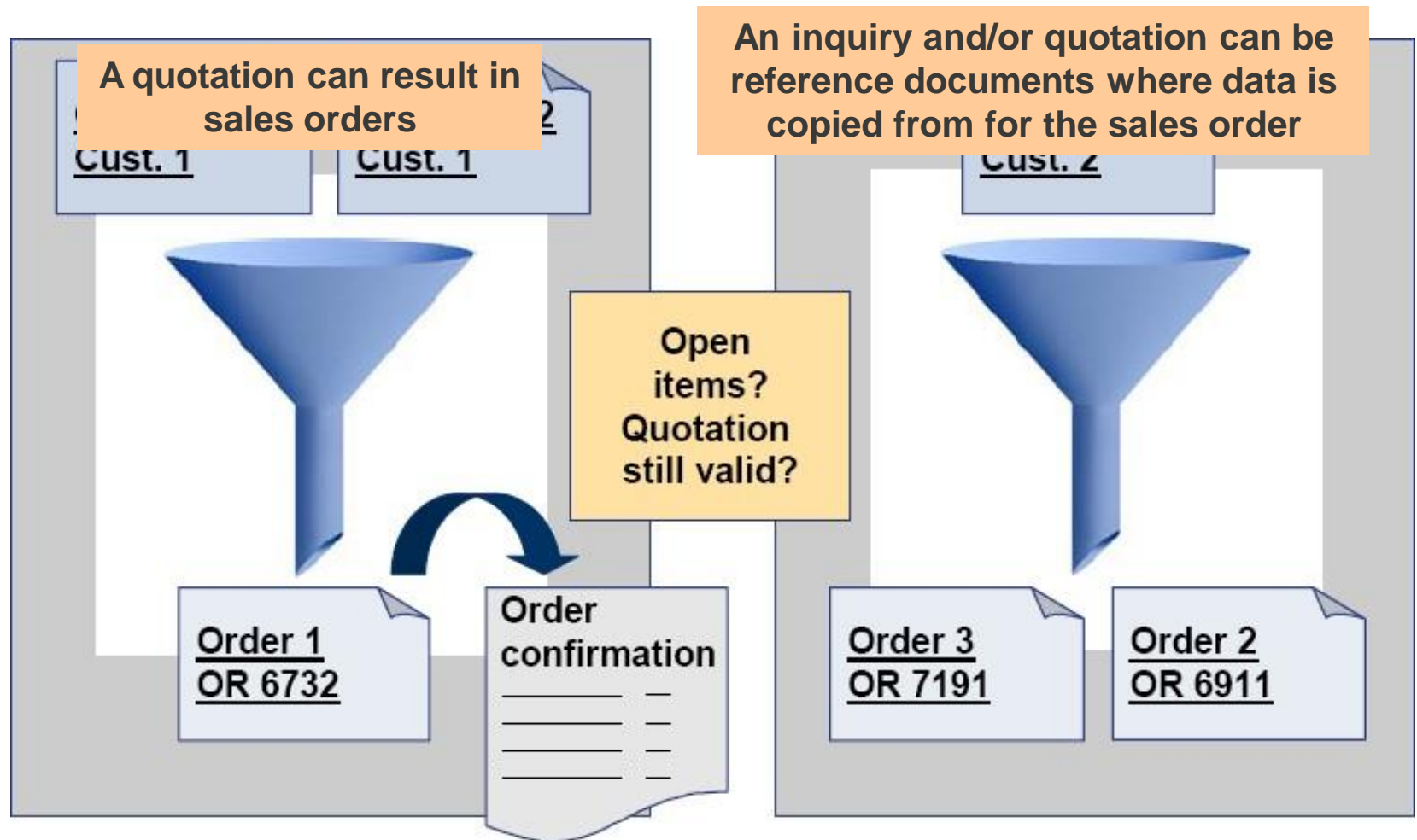
Item	Material	Qty	Description	Price	Price unit	Value
000010	DXTR1000	5 EA	Deluxe Touring Bike (black)	3,000.00	USD 1 EA	15,000.00
000020	PRTR1000	2 EA	Professional Touring Bike (black)	3,200.00	USD 1 EA	6,400.00
Final amount						21,400.00

Quotation

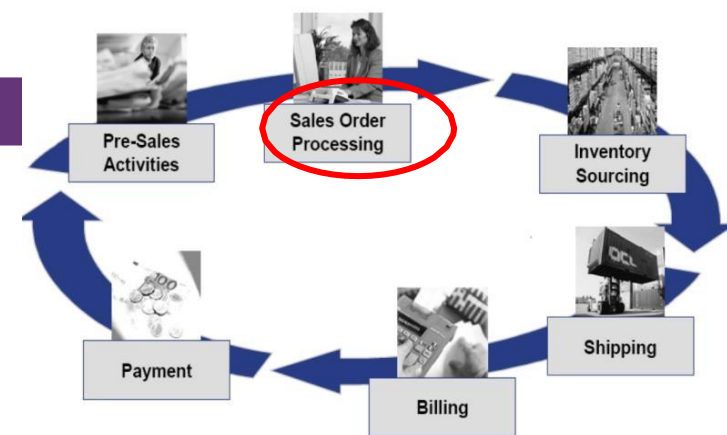
- The quotation presents the customer with a legally binding offer to deliver specific products or a selection of a certain amount of products in a specified timeframe at a pre-defined price.

Company		Quotation		
The Bike Zone		Number/Date		
2105 N Lewis Ave		20000000 / 04/21/2010		
Portland OR 97227		Reference no./Date		
		000 / 04/21/2010		
		Delivery date		
		Day 04/21/2010		
		Cust. no.		
		1301		
		Validity period		
		04/21/2010 bis 05/21/2010		
We deliver according to the following conditions:				
Terms of payment Payable immediately without deduction				
Currency USD				
Terms of delivery FOB San Diego				
Weights (gross/net) - Volume - Mark				
Gross weight 57,170 G Net weight 57,170 G				
Please see our promotional offer enclosed. Delivery as long as stocks last.				
Item	Material	Description	Price Price unit	Value
000010	DXTR1000	Deluxe Touring Bike (black)		
	5 EA	3,000.00 USD	1 EA	15,000.00
	Material	50.00- USD	1 EA	250.00-
	% Discount from N	5.000- %		737.50-
	Net Value for Ite	2,802.50 USD	1 EA	14,012.50
000020	PRTR1000	Professional Touring Bike (black)		
	2 EA	3,200.00 USD	1 EA	6,400.00
	% Discount from N	5.000- %		320.00-
	Net Value for Ite	3,040.00 USD	1 EA	6,080.00
Final amount				20,092.50

Creating a Sales order



Sales Order Processing



- Sales order processing: series of activities that must take place to record a sales order
- Sales order can start from a quotation or inquiry generated in the pre-sales step or just a call-in from customers
- Information collected from the customer to support the quotation is immediately included in sales order
- Critical steps in sales order processing:
 - Recording the items to be purchased
 - Determining the selling price
 - Recording the order quantities



Sales Order Processing (cont'd.)

- Users can define various pricing alternatives in the SAP ERP system
- SAP ERP system checks the Accounts Receivable tables in the SAP ERP database to confirm the customer's available credit
- If customer has sufficient credit available
 - Order is completed
- If customer does not have sufficient credit available
 - SAP ERP system prompts sales personnel to take one of the possible appropriate actions

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(s)**
 - Information about the specific product: Ex: material and quantity, cost of an individual line
 - **Schedule Line(s)**
 - Uniquely belongs to a Line Item, contains delivery quantities and dates for partial deliveries

Standard Order	15	Net value	20,092.50	USD
Sold-To Party	1301	The Bike Zone / 2105 N Lewis Ave / Portland OR 97227		
Ship-To Party	1301	The Bike Zone / 2105 N Lewis Ave / Portland OR 97227		
PO Number	000	PO date	04/21/2010	

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

Req. deliv.date	D	05/21/2010	Deliver.Plant	
<input type="checkbox"/> Complete delv.			Total Weight	57,170.6
Delivery block			Volume	0.000
Billing block			Pricing date	04/21/2010
Payment card			Exp.date	
Card Verif.Code				
Payment terms	0001	Pay immediately w/o	Incoterms	FOB San Diego
Order reason				

All items						
Item	Material	Order Quantity	Un	S	Description	Customer Material
10	DXTR1000		5	EA	<input type="checkbox"/> Deluxe Touring Bike (black)	
20	PRTR1000		2	EA	<input type="checkbox"/> Professional Touring Bike (black)	

Sales Document Item	10	Item category	TAN	Standard Item
Material	DXTR1000			Deluxe Touring Bike (black)

Sales A		Sales B	Shipping	Billing Document	Conditions	Account assignment	Schedule lines	Pa
---------	--	---------	----------	------------------	------------	--------------------	----------------	----

<input type="checkbox"/> Fixed date and qty		Order Quantity	5	EA
Delivery time		Delivered qty	5	

Quantities/Dates					
P. Delivery Date	Order quantity	Rounded qty	Confirmed Qty	Sa... Delivery block	Delivered qty
D 04/21/2010	5	5	5	EA	5

Sales Order

- 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

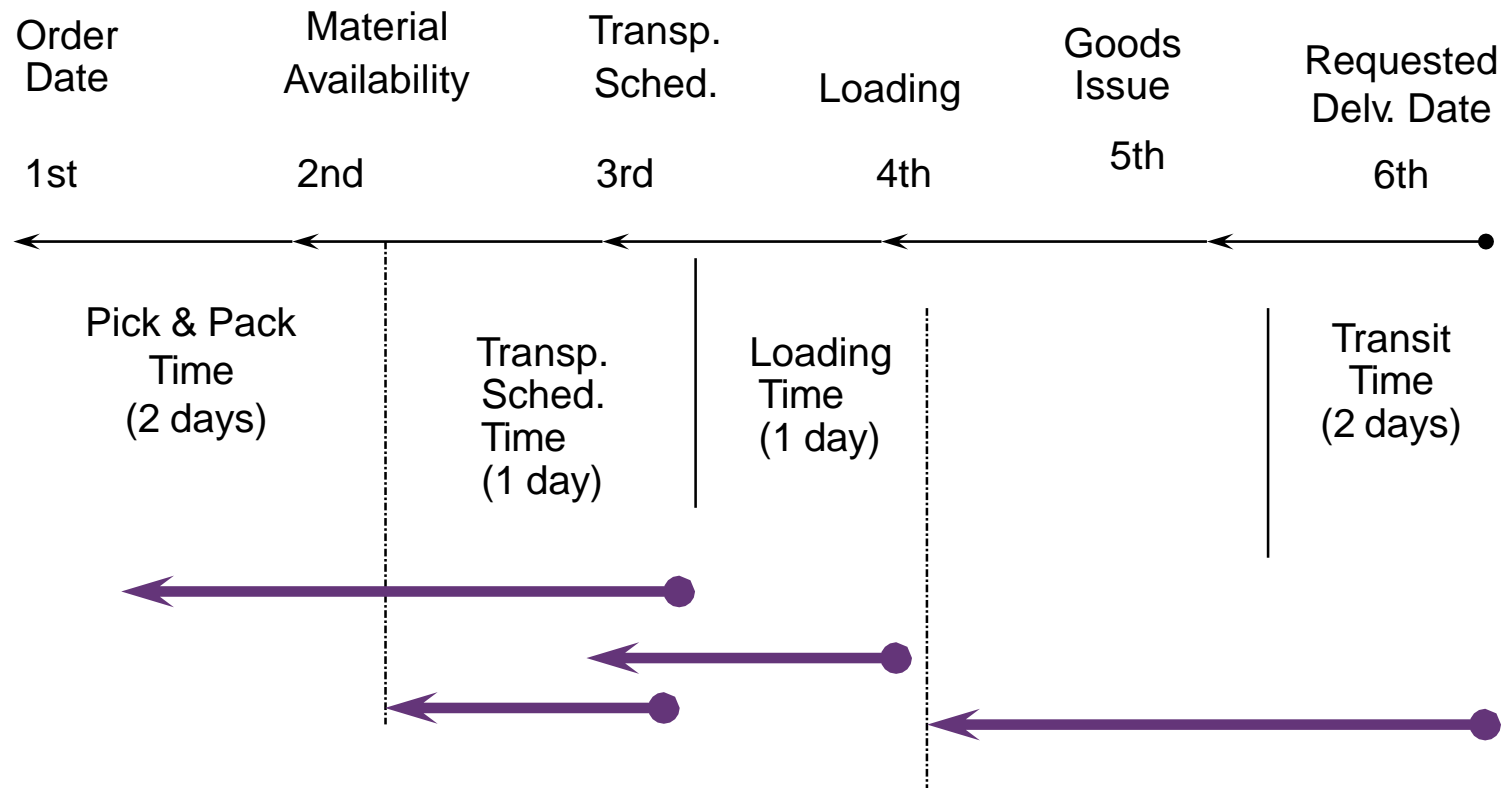


Delivery Scheduling

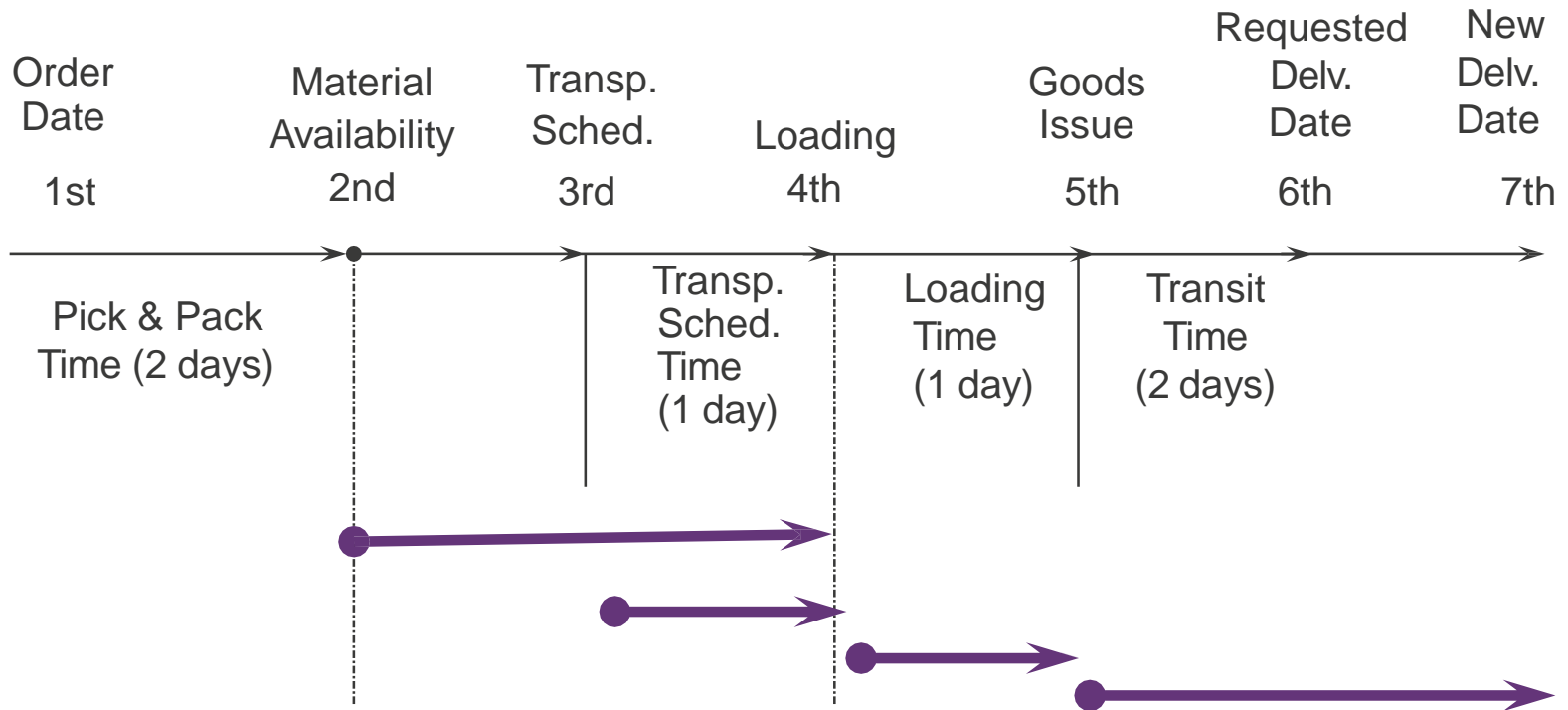
- When an order is created you must enter a requested delivery date for the order or each line item.
- The system will then determine a delivery timeline, this will be used when determining our material availability, or ATP (Availability to Promise) date.
- The system will determine this date using forward and backward scheduling rules you have defined.



Backward Scheduling



Forward Scheduling



Shipping & Route Determination

- 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 is used to define the transit time of the material that we used in scheduling.



Pricing

- 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 calculated automatically



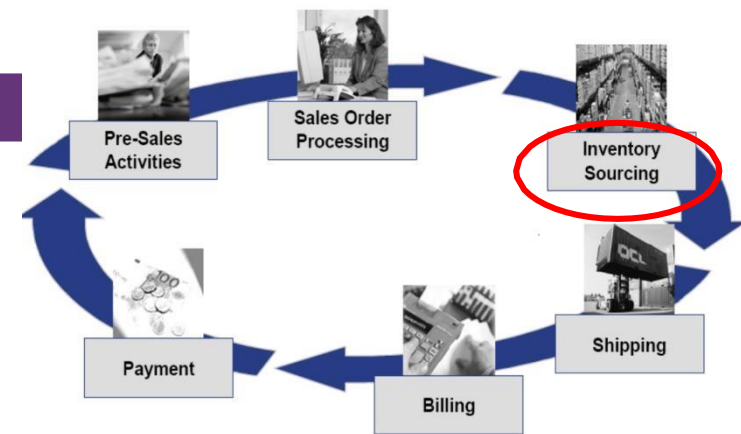
Credit Check

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



Inventory Sourcing

- Available-to-Promise (ATP) check
 - SAP ERP system checks company's inventory records and production planning records to see whether:
 - Requested material is available
 - Requested material can be delivered on the date the customer desires
 - Includes expected shipping time
- System can recommend an increase in planned production if a shortfall is expected



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

Availability Overview

Icons: Stock Stock Totals records Totals records Scope of check

Material: Deluxe Touring Bike (black)

Plant: Avail. check: Check.rule:
☐ With reqmts qrys

Base Unit:

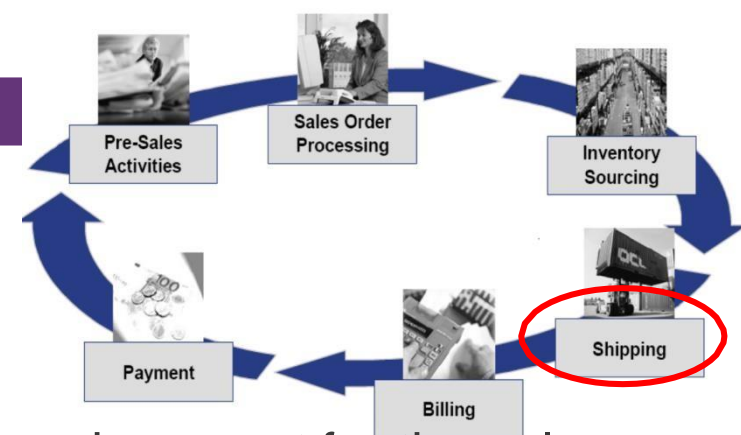
Totals display

Receipts: Issues: Confirmed issues:

ATP situation

Date	MRP e...	MRP element data	Rec./reqd qty
04/23/2010	Stock		75
04/23/2010	SLocSt	F600	75

Delivery (Shipping)



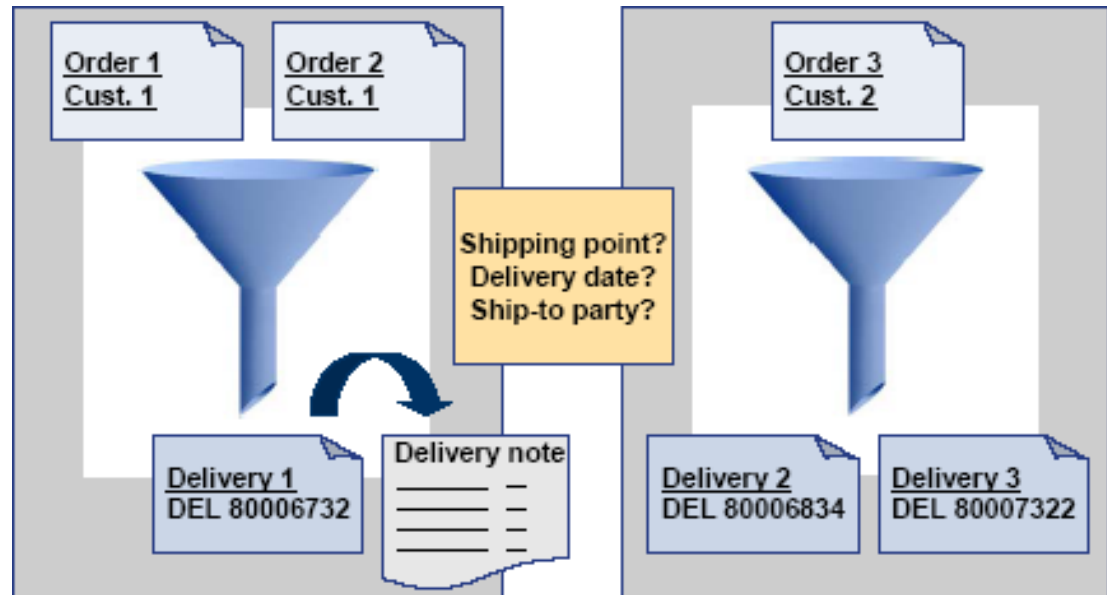
- The shipping process begins when the delivery document for the sales order is created. This document controls, supports, and monitors numerous sub-processes for shipping processing:
 - Picking
 - Packing
 - Post Goods Issue
- Integrate with the Material Management (MM) and Finance (FI) modules
- Delivery process allows deliveries to be created so that the warehouse and shipping activities are carried out efficiently
- Once the system has created documents for picking, packing and shipping, documents are transferred to Materials Management module



Creating an outbound delivery

You can create an outbound delivery in a shipping point for orders that are due for delivery

Relevant data from the order is copied to the outbound delivery document

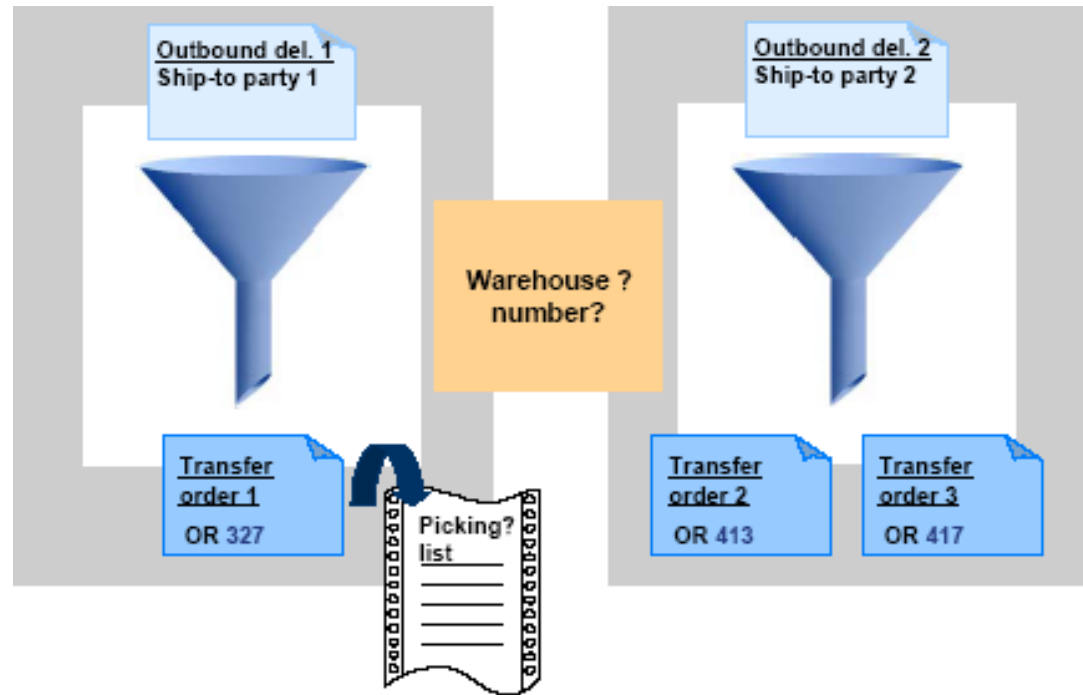


You can create one or several outbound deliveries from the order.

You can also combine items from several orders into one outbound delivery. However the orders must all have the same characteristics: such as shipping point etc

Sales process – Picking

- You create a transfer order for an outbound delivery (generated for a warehouse number).
- During the process, only the deliveries that are necessary for picking are taken into account. The system copies the relevant data from the delivery document.
- To optimize picking, picking lists with materials from different outbound deliveries can be created.
- This helps relieve the work for the picker,
- You can sort the list according to storage bin and material and also calculate the quantities per material.



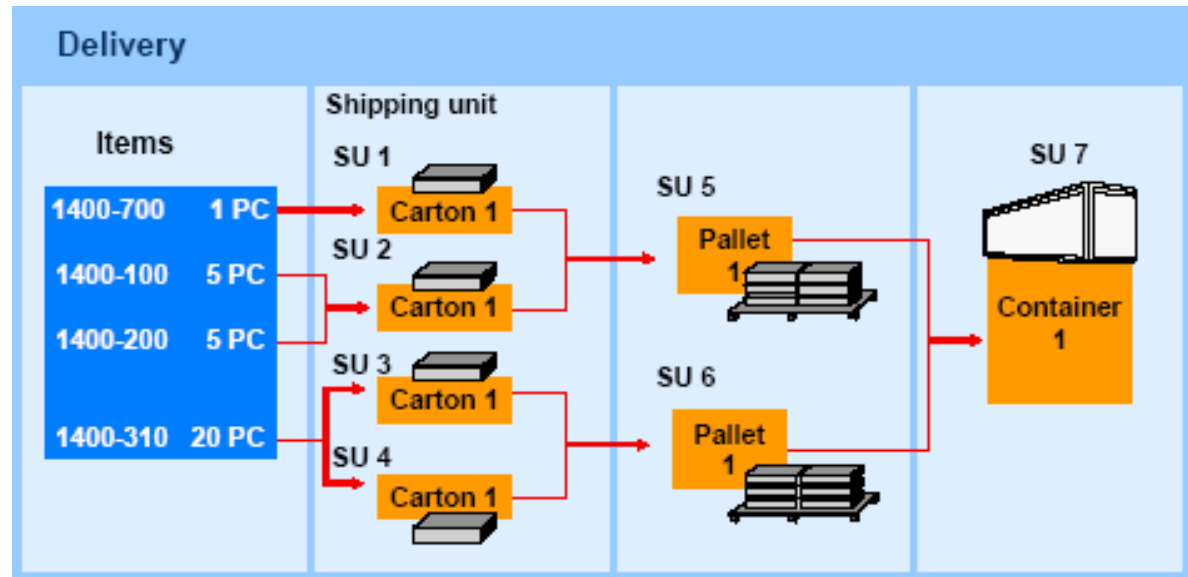
Sales process – Packing

When packing, you can combine delivery items and pack them in different shipping units.

You can select the items that are to be packed in the delivery and assign them to shipping units.

A shipping unit can also be packed into another shipping unit.

In the example, shipping units SU 1 and SU 2 are being packed in SU 5.



Goods issue

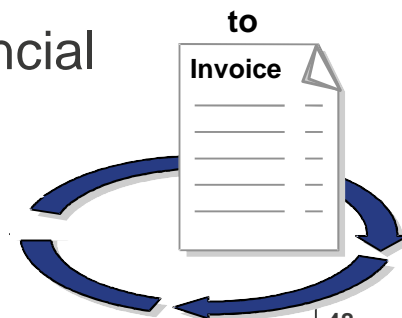
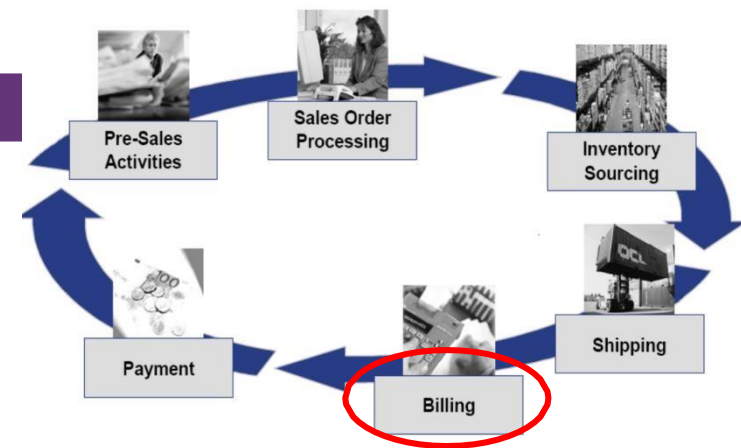
- Event that indicates the legal change in ownership of the products
- Reduces inventory and enters Cost of Goods Sold
- Automatically updates the General Ledger (G/L) accounts
- Ends the shipping process and updates the status of the shipping documents

The screenshot shows the SAP 'Post Goods Issue' (3) transaction. The 'Outbound deliv.' field contains '80072673' and the 'Document Date' is '16.05.2013'. The 'Ship-to party' is '2025070' and the customer address is 'Customer 1 / 12 Address / Wien 1234'. The 'Picking' tab is active. The 'Pick Date/Time' is '16.05.2013 15:0...' and the 'Warehouse No.' is '100'. The 'OvrllPickStatus' is 'A' (Not yet picked) and the 'OverallWMStatus' is 'No WM trnsf ord reqd'. The 'All Items' table below shows a single item with material '10599999', quantity '20', and unit 'PCS'. The 'Picked Qty' is also '20'. Red circles with numbers 1, 2, and 3 highlight the 'Post Goods Issue' button, the 'Picked Qty' field, and the 'Post Goods Issue' button respectively.

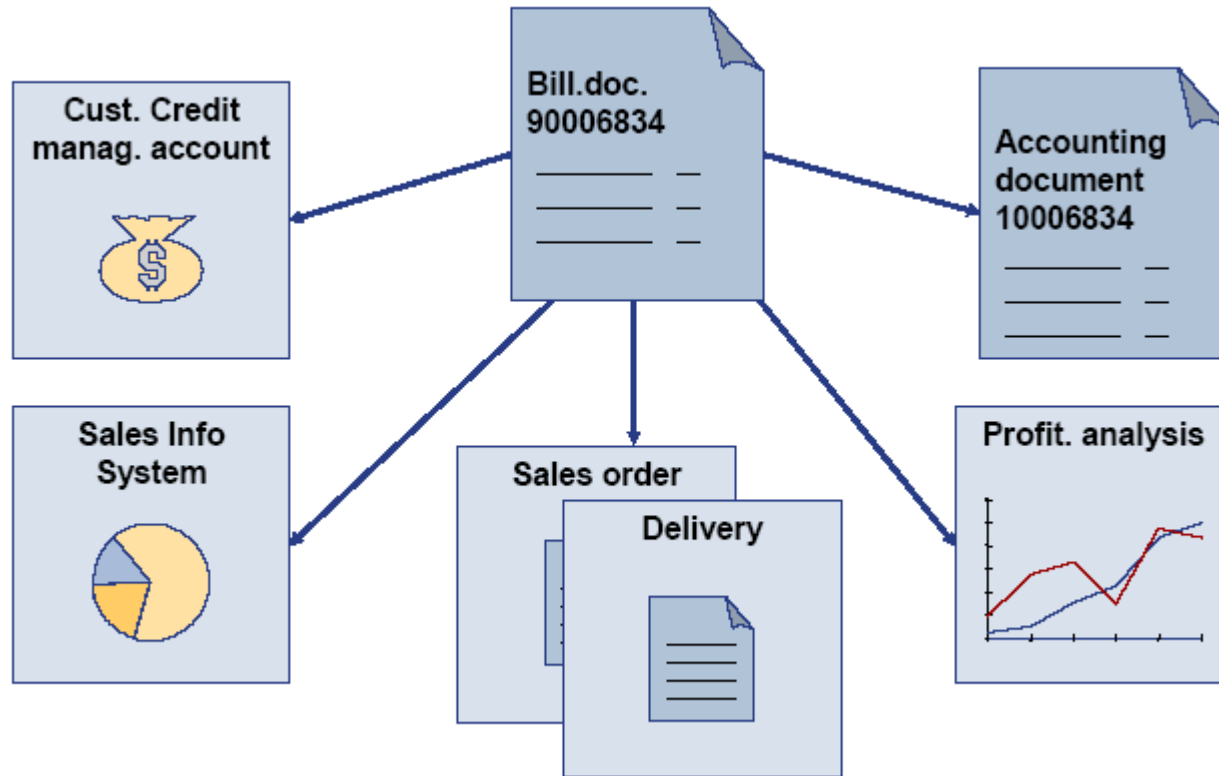
Item	Material	P...	S...	Deliv. Qty	U.	Picked Qty	U.	Batch
10	10599999	0001	0001	20	PCS	20	PCS	

Billing

- The billing document is created by copying data from:
 - The sales order (Order-based billing), and/or
 - The delivery document (Delivery-based billing)
- The billing process is used to generate customer invoice which can be mailed, faxed, or transmitted electronically to the customer
- 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.
- At this point that the sales process is passed over to Financial Accounting to await payment.



Effects of a Billing Document

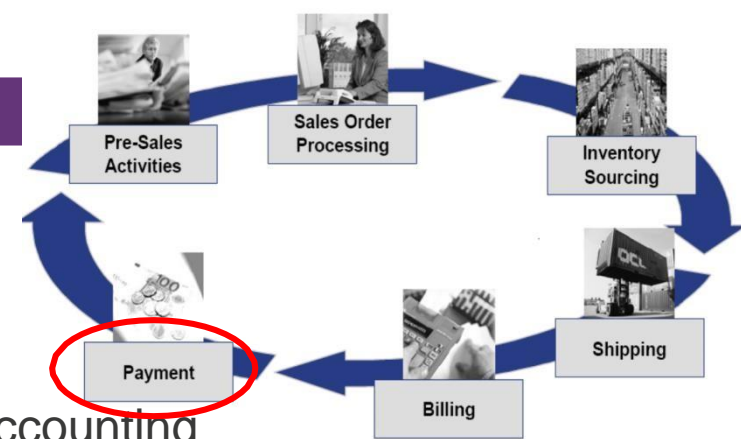


When you save the billing document, the system automatically generates all the required documents for accounting.

In accounting, the system carries out a debit posting on the customer receivables account and a credit posting on the revenue account.

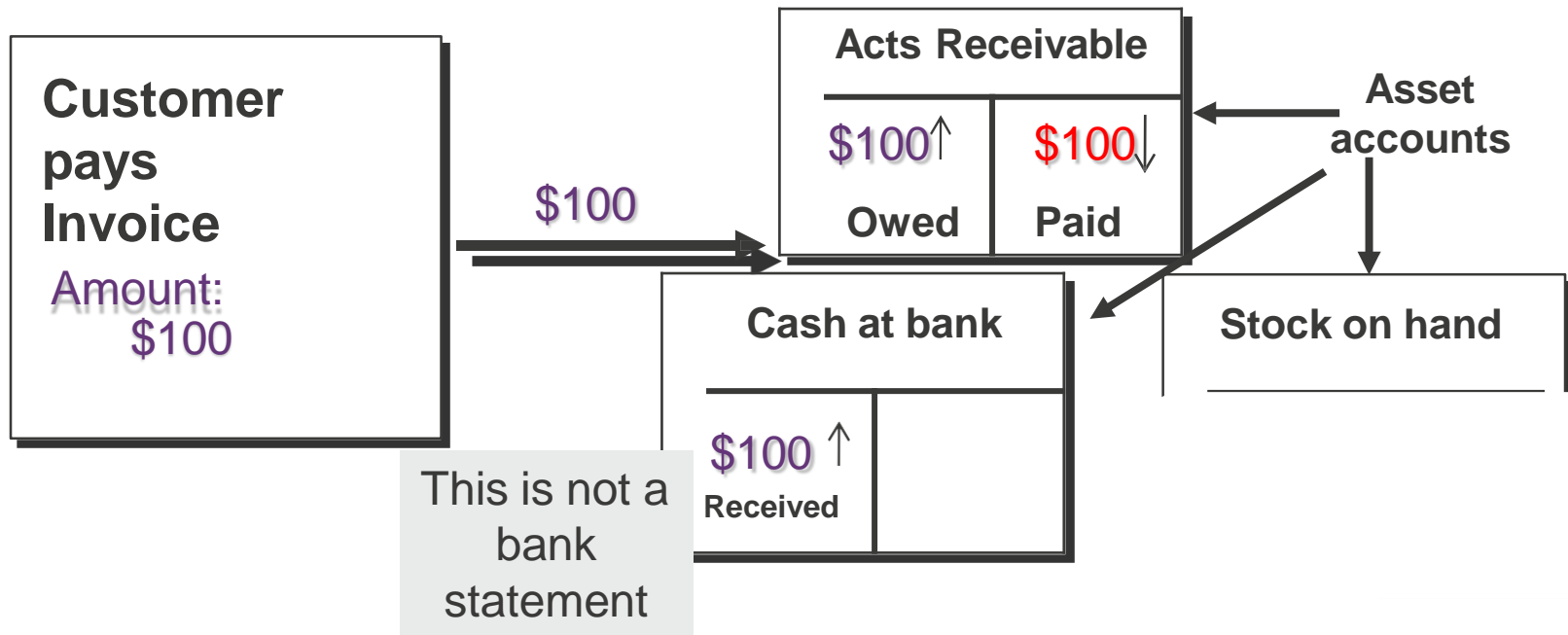
Payment (Receipt)

- 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.
 - _ Debits cash (Bank Account) and credits (reduces) customer's account (Accounts Receivable)
- Timely recording of this transaction has an effect on the timeliness and accuracy of any subsequent credit checks for the customer



Sales & Distribution – Interfacing to Finance

General Ledger Accounts affected by the payment



When saving the invoice, the system automatically generates an accounting document, which updates the corresponding general ledger accounts using account numbers from GL chart of accounts

Document Flow

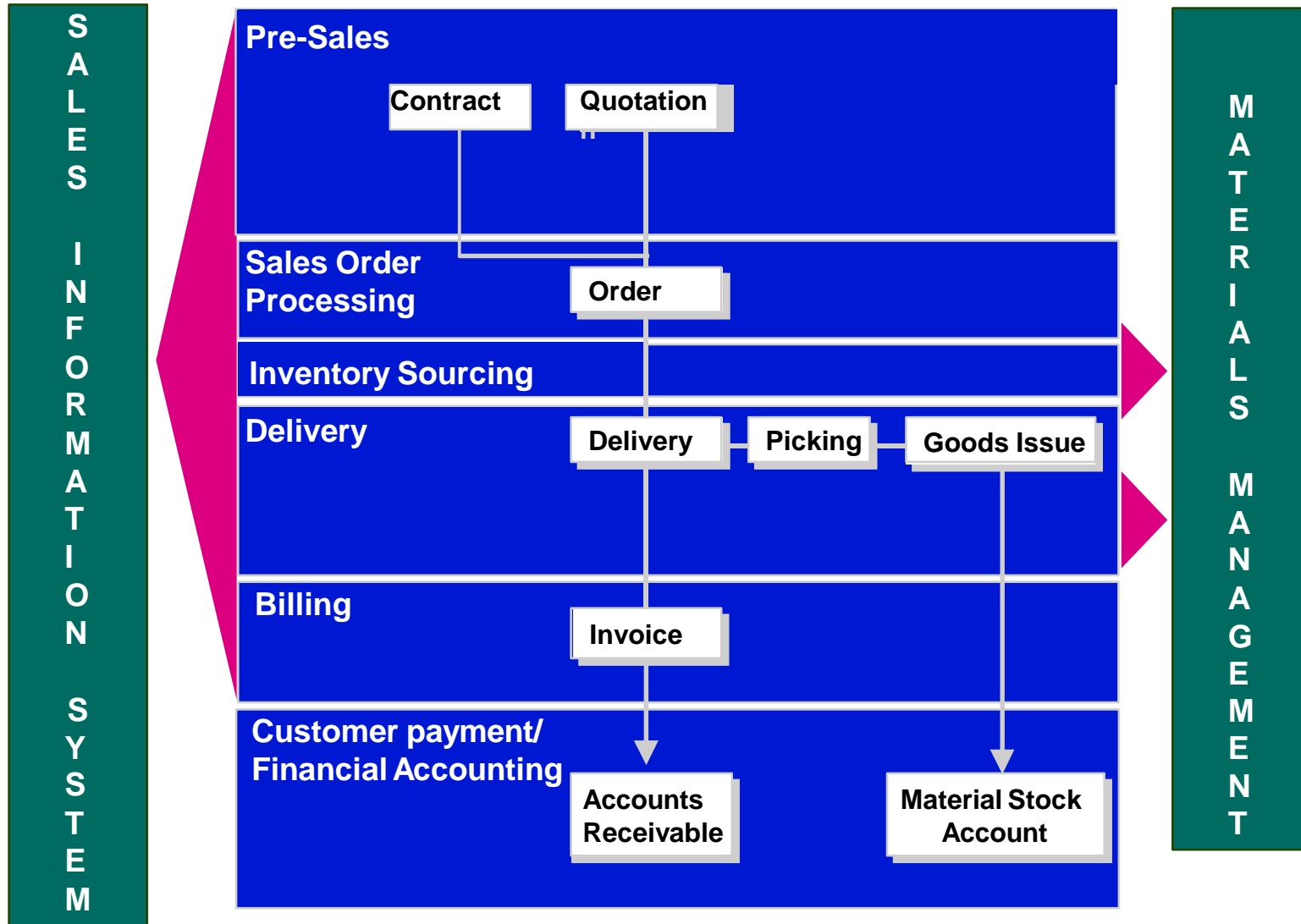
- When a sales order is saved, SAP ERP system assigns a document number to the sales order transaction
- SAP ERP system keeps track of the document numbers for the Sales Order
 - Employees can track status of an order while it is in process or research it after shipping
- **Document flow** in SAP ERP: linked set of document numbers related to an order

Document Flow

- The document flow and order status feature allows you to find the status of an order at any point in time. 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						
Status overview Display document Service documents						
Business partner 0000001301 The Bike Zone Material DXTR1000 Deluxe Touring Bike (black)						
Document	Quantity	Unit	Ref. value	Currency	On	Status
▼ Inquiry 0010000002 / 10	5	EA	15,000.00	USD	04/21/2010	Completed
▼ Quotation 0020000000 / 10	5	EA	14,012.50	USD	04/21/2010	Completed
▼ Standard Order 0000000015 / 10	5	EA	14,012.50	USD	04/21/2010	Completed
▼ Outbound Delivery 0080000001 / 10	5	EA			04/21/2010	Completed
• Picking request 20100421 / 10	5	EA			04/21/2010	Completed
• GD goods issue:delv 4900000011 / 1	5	EA	7,000.00	USD	04/21/2010	complete
▼ Invoice 0090000001 / 10	5	EA	14,012.50	USD	04/21/2010	Completed
• Accounting document 0090000002	5	EA			04/21/2010	Cleared

Sales & Distribution – End to End Processes



Customer Relationship Management

- **Customer relationship management (CRM) software** can help companies streamline their interactions with customers
- Examples of tools that provide CRM functionality within the SAP ERP system
 - Contact management tool
 - To make sure that information about sales contacts is available throughout the organisation
 - Sales activity manager
 - Supports a strategic and organized approach to sales activity planning and can help make sure that follow-up activities are accomplished

Video : [What is CRM ?](#)

SAP's CRM Software

- SAP ERP system processes business transactions and provides much of the raw data for CRM
- SAP's Business Warehouse: system for reporting and analysis of transactional data
- Advanced Planner and Optimizer (APO): system that supports efficient planning of the supply chain
- SAP's view of CRM is to provide a set of tools to manage the three basic task areas, or jobs:
 - Marketing, sales, and service



Core CRM Activities

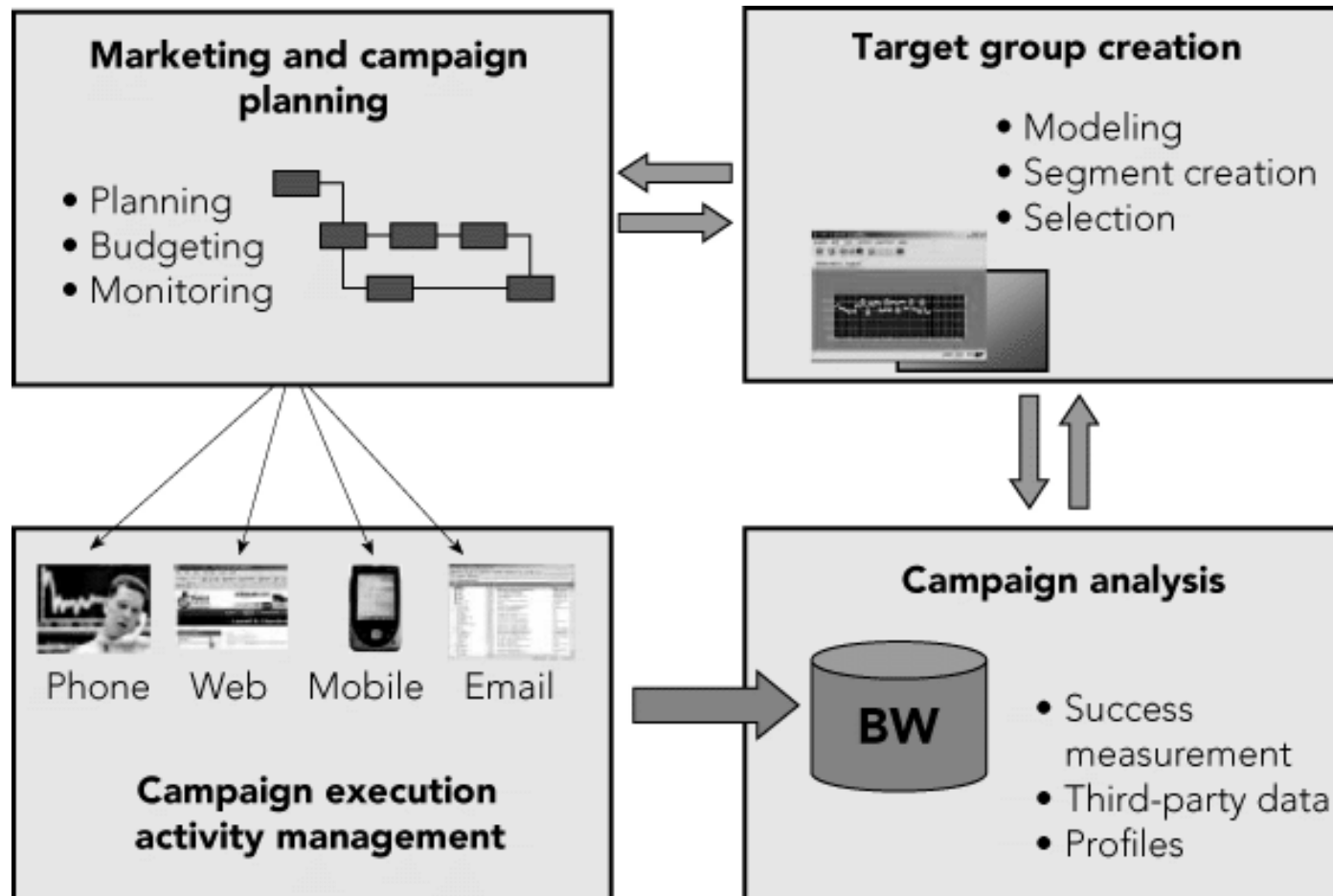


- Campaign Management
- Trade Promotion Management
- Lead Management
- Marketing Analytics

- Sale Planning & Forecasting
- Accounts & Contacts Management
- Opportunity Management
- Sales Contract Management
- Sales Analytics

- Sales & Marketing for Service
- Service Contract Management
- Warrant & Claim Management
- Parts, Logistics & Finance
- Service Analytics

SAP's CRM Software (cont'd.)



The Benefits of CRM

- Lower costs
- Higher revenue
- Improved strategy and performance measurement



Summary

- An unintegrated information systems are at the root of an inefficient and costly sales order process.
- An ERP system such as SAP ERP treats a sale as a sequence of related functions
 - Including: taking orders, setting prices, checking product availability, checking the customer's credit line, arranging for delivery, billing the customer, and collecting payment
 - In SAP ERP, all these transactions, or documents, are electronically linked

Summary (cont'd.)

- Installing an ERP system means making various configuration decisions
 - Configuration decisions reflect management's view of how transactions should be recorded and later used for decision making.
- ERP system's central database contains:
 - Tables of master data: relatively permanent data about customers, suppliers, material, and inventory
 - Transaction data tables: store relatively temporary data such as sales orders and invoices

Summary (cont'd.)

- Customer relationship management (CRM) systems
 - Build on the organisational value that ERP provides
 - Specifically increase the flexibility of the company's common database regarding customer service
 - Various kinds of CRM software are available
 - Can be installed in-house or on-demand

End of Lecture 4



References:

- Ellen Monk, Bret Wagner (2013). Concepts in Enterprise Resource Planning (4e) Course Technology, Cengage Learning. Chapter 3
- 2017 SAP SE / SAP UCC. Introduction to S/4HANA using Global Bike – Sales and Distribution