

# Chapter 0

Organizations, Processes and Information Systems

# Outline

---

- Business Processes and IT
- Global competition, Information revolution, knowledge worker
- Key business processes
- Functional organizational structure
- Paper based processes
- Processes using functional systems
- Processes using enterprise systems
- A framework for understanding processes and IT
- Role of ES in organizations
- Functional impact of processes

# Global competition

---

- **Design, manufacturing, materials, assembly, service, etc.**
  - Examples: Nike, apple, P&G
  - In different parts of the world
  - Why?
- **Increased competition**
  - Global markets vs. local
  - Pressures to be more efficient and effective

# Information revolution

---

- Increased use of ICT to create, deliver and use information
  - data, documents, voice, video
  - Global enterprise needs to share information quickly
    - Design, forecasts, material availability, etc.
    - Monitoring
- Is ICT the cause or result of globalization?

# Knowledge worker

---

- Increasing dependence on information to do their work
- Create, acquire, process, synthesize, disseminate, analyze and use information
- Who are knowledge workers
  - Sales executive, production managers, product manager, financial analyst
- Use structured and unstructured information

# Knowledge worker

---

- Knowledge work is **non-routine, non repetitive**      không thng xuyên, không lپ i lپ li
  - Understand data and impact of work on others and impact of others' work; **big picture**
- Task workers: **routine, structured tasks**
  - Customer service representatives, accounting clerks, insurance claims processor
  - Very **narrowly focused**

|

# Knowledge worker

---

- Key skills

- Strategic thinking: big picture, process view
- Information literacy: find and use needed information
- Communication and collaboration: project teams

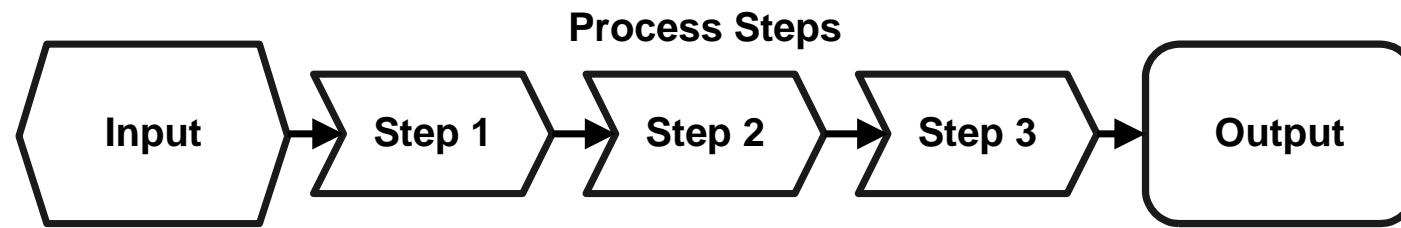
# Business processes

---

- Sequence of tasks or activities that take a set of inputs and convert them into desired outputs
- Key processes
  - Procurement
  - Fulfillment
  - Production

# Figure 1: A generic process

QUÁ TRÌNH CHUNG



# Business process - example

---

- Make skateboards
  - What are some parts of a skateboard
- Buy parts
  - What are some steps in the buying process
  - Who performs these steps
- Sell skateboards
  - What are some steps in the selling process
  - Who performs these steps

# Procurement Process

QUÁ TRÌNH MUA SẮM



# Fulfillment Process

QUÁ TRÌNH VN N, THC HIN N

---



# Functional structure

---

- Common functions
- Typical tasks in functional areas
- Review steps in procurement
  - Who does what where?
  - Characterize processes - who is responsible for the process?
- Why functional structure?

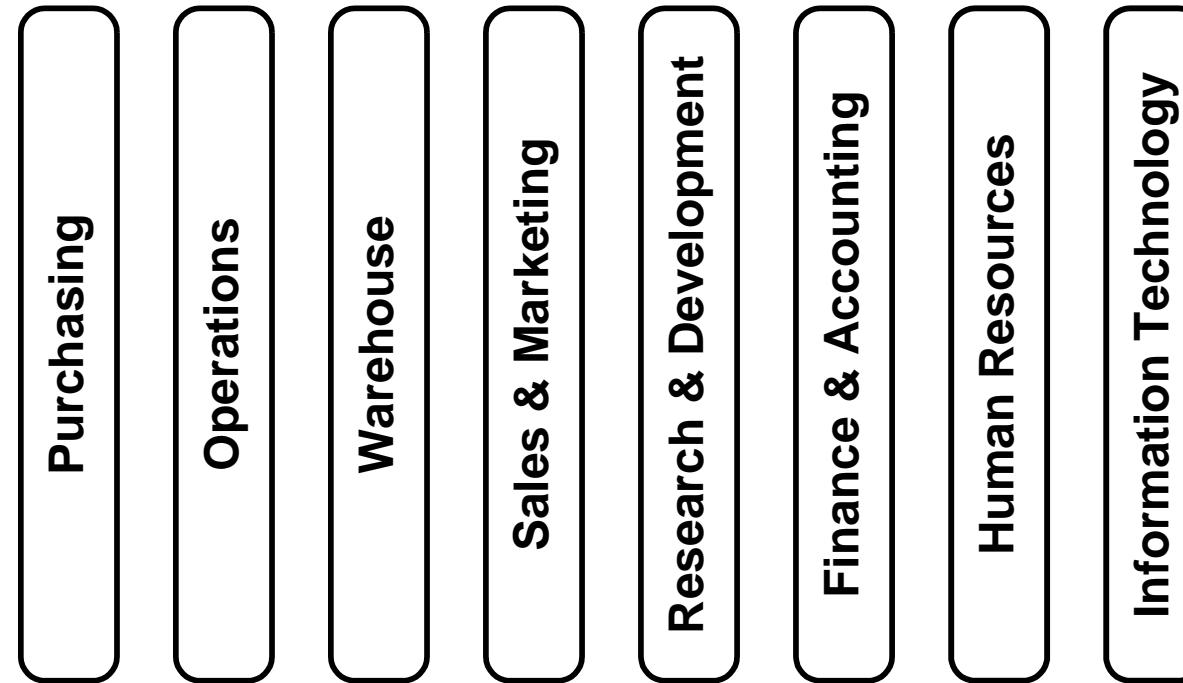
3 structures:

functional structure organization: arrange all staffs has same skills--> arrange performance.

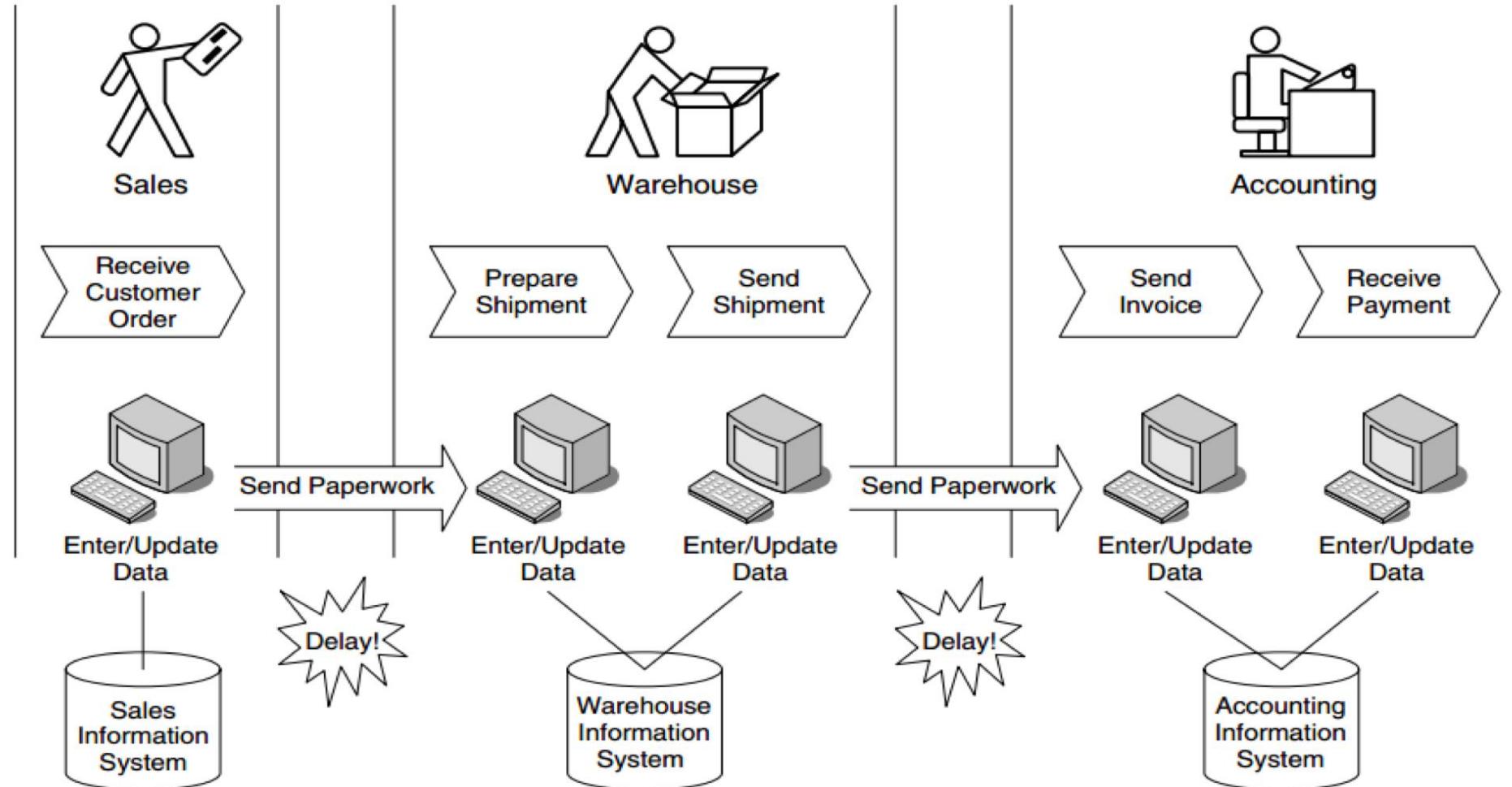
project-based structured:

# Functional organizational

---



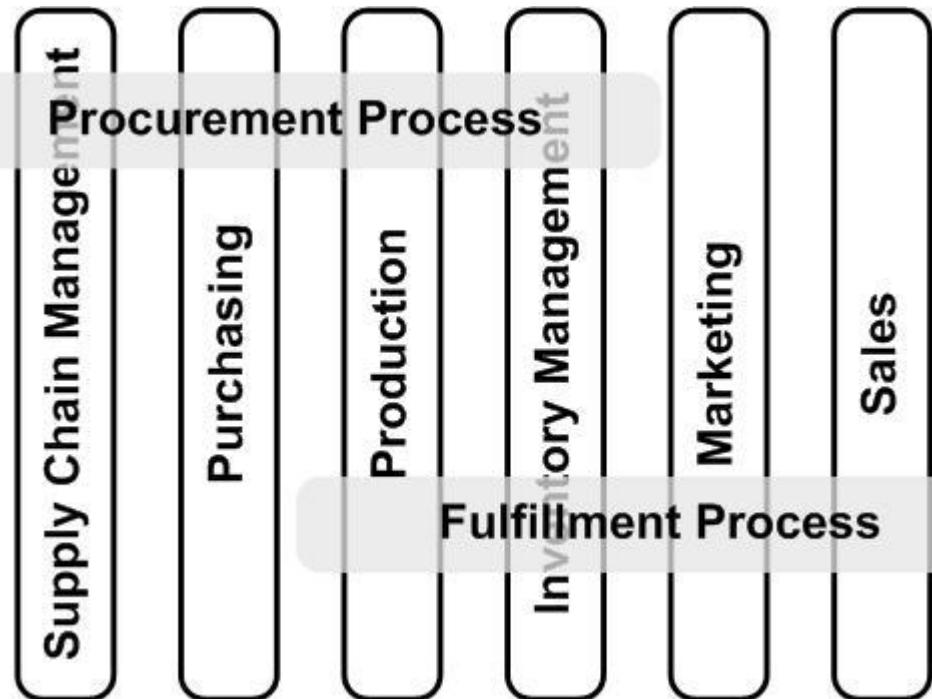
# Functional organizational



**Figure 1.6** A process supported by functional information systems

# Functions vs. processes

---

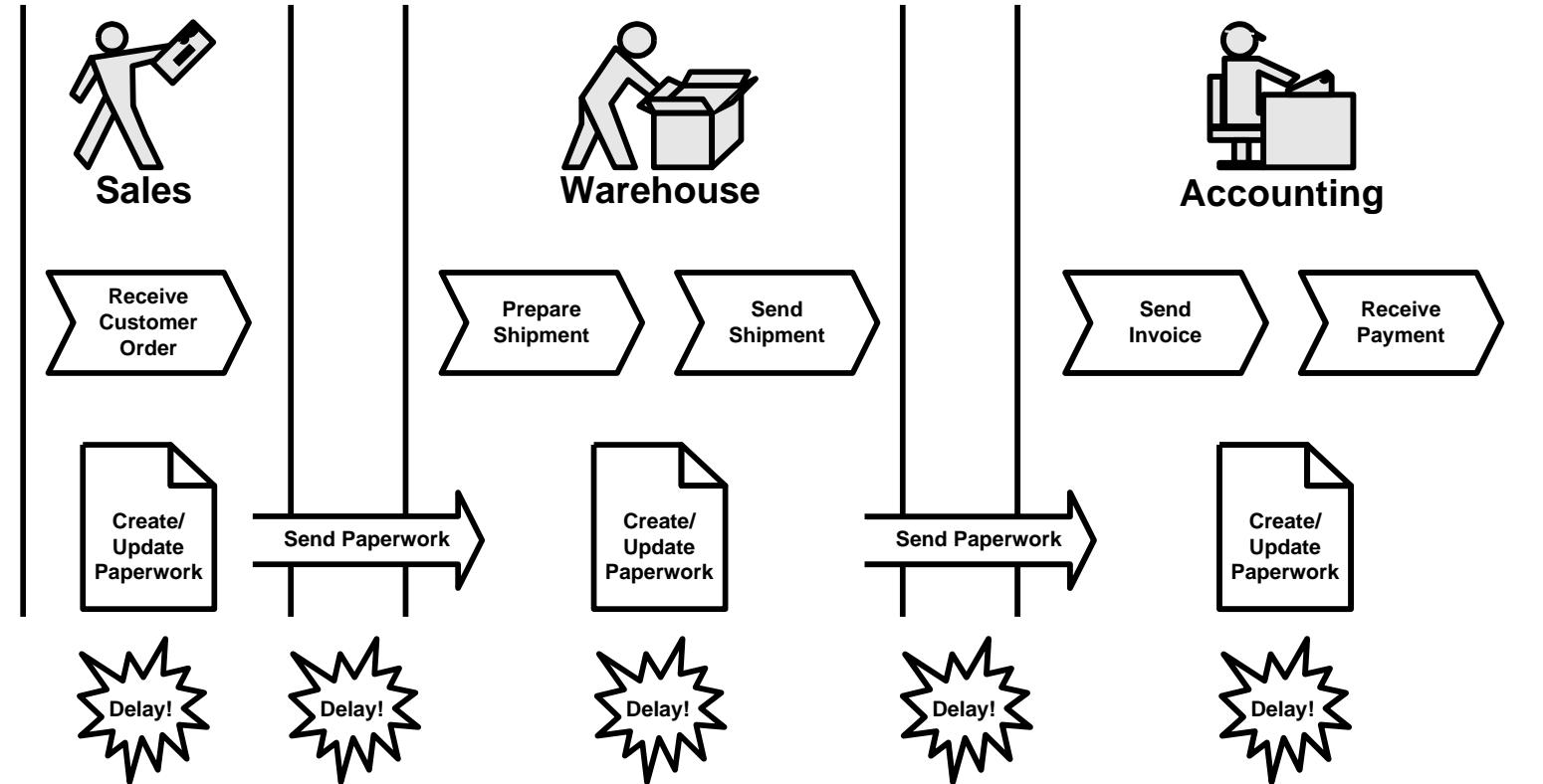


# The Silo effect

---

- Communication and collaboration between functions
  - What must be communicated?
  - What information must be exchanged?
  - How is this coordinated
- Paper based processes
- Processes supported by functional systems
- Processes supported by enterprise systems

# Paper-based process



# Consequences of delays

---

- Delays
  - Increased lead times
  - Increased cycle times
- Excess inventory
  - “just in case”
- Lack of visibility across the process
  - Status: “where is my order”
  - How is the process doing
- Why accept these delays?

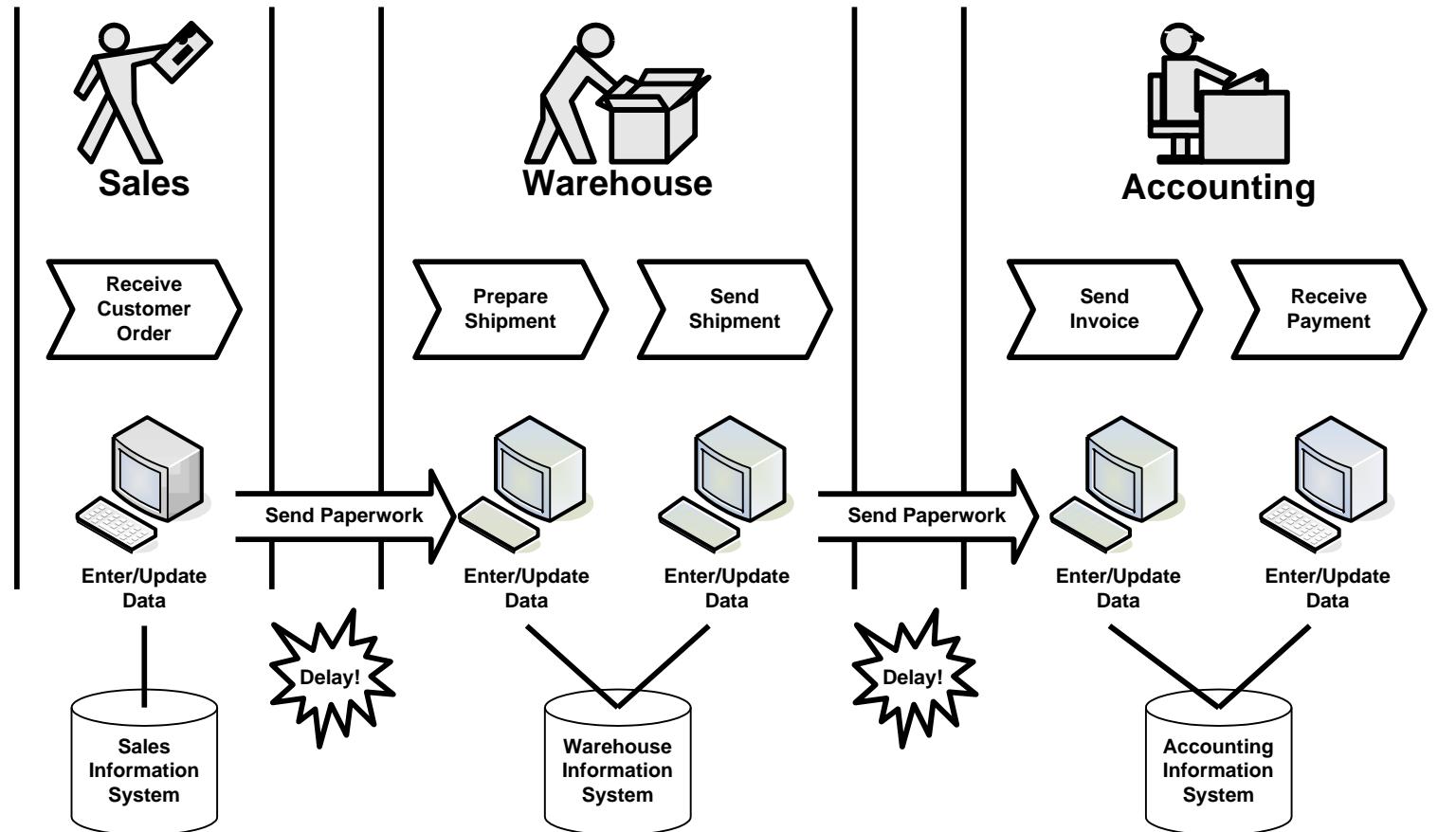
# Delays are no longer acceptable

---

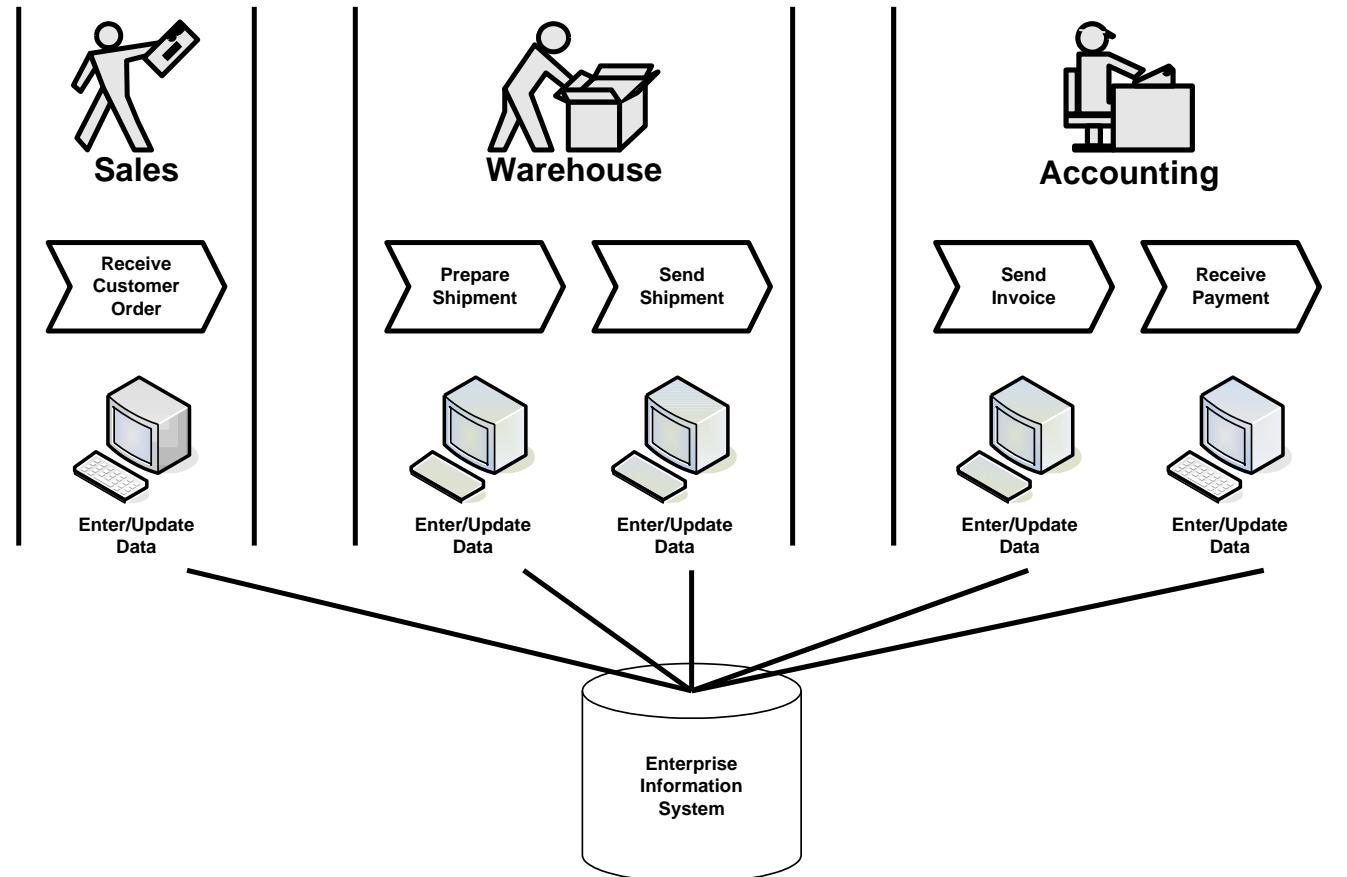
- Why?
  - Globalization
  - Increased competition
  - Pressure to do better
- Reliance on technology!

# Process using functional systems

dùng khc phc tình trng delay in traditional procurement



# Processes using Enterprise Systems



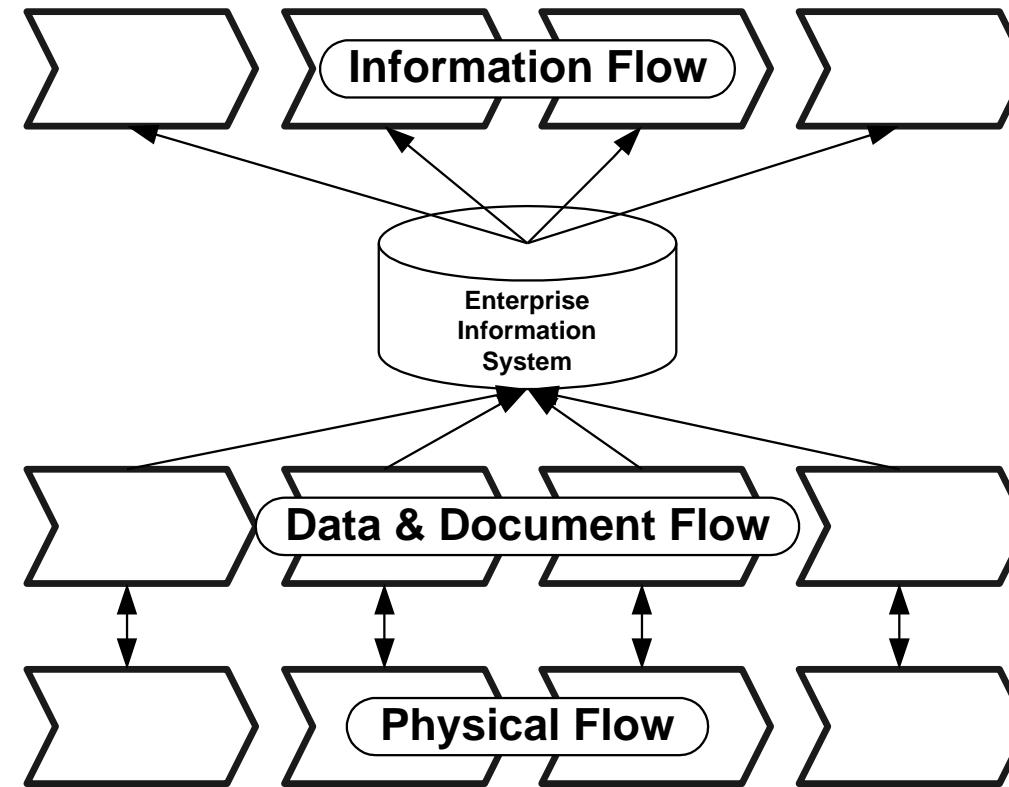
# Is this for MIS/IT majors?

---

- Not just for IT majors!
- Recall skills of a knowledge worker.....
  - Strategic thinking / big picture
    - How processes work
    - How does my work impact the process
    - How will my failures impact the process
    - How does others' work impact my work
    - What must I do well to ensure that the process is successful
  - Communication and collaboration
    - Project teams!

# Framework: Key process flows

---



# Role of ES in organizations

---

- Execute the process
  - Inform, provide data, help complete steps
  - automation
  - Embedded in the process
  - Examples in procurement and fulfillment

# Role of ES in organizations

---

- Capture and store process data
  - Automatic capture
  - Entered from outside the system
  - Examples in procurement and fulfillment

# Role of ES in organizations

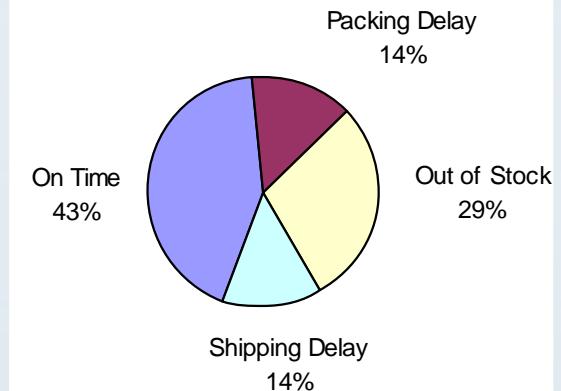
---

- Monitor performance
  - Instance level information (status)
  - Process level information (aggregate)
  - Examples in procurement and fulfillment

## Fulfillment Execution

## Q1 Order Summary

	January	February	March
Total Orders	7	11	15
Total Late Orders	4	3	6
On Time Order %	43%	73%	60%
Average Order Time (Days)	2.86	2.12	2.94

Delay Causes  
January 08

## Order Details: January

Order Number	Customer Name	Order Date	Ship Date	Order Value	Order-to-Ship (days)	Reason for Delay
123456	World Wide Skateboard Distributors	01/04/08	01/06/08	\$ 300.18	1	On Time
123457	Extreme Skateboard Sports, Inc.	01/06/08	01/08/08	\$ 245.65	2	On Time
123458	"Waldo" Autry	01/08/08	01/11/08	\$ 123.43	4	Out of Stock
123459	West Michigan Sporting Goods, Inc.	01/10/08	01/12/08	\$ 342.53	2	On Time
123460	Flying Acrobats, Inc	01/12/08	01/20/08	\$ 556.43	5	Packing Delay
123461	MI Sporting Company	01/14/08	01/16/08	\$ 234.22	3	Out of Stock
123462	Saginaw Dawgs	01/16/08	01/18/08	\$ 653.45	3	Shipping Delay

# Financial impact

---

- Key financial statements
  - Balance sheet
  - Income statement
  - Statement of cash flows

# Introduction to BISs

Curriculum: Business Information Systems Course



# What is an Enterprise

---

- Organization
  - Examples ?
  - What are Goals and objectives, Vision and Mission
- Enterprise
  - Examples ?
- Classification of Enterprises
  - Criteria ?
  - Examples ?

# Organization Structure of an Enterprise

---

- Functional Organizational Structure
  - Departments ?
- Cross functional structure
  - Examples ?
- Silo Effect problem

# Enterprise Resources

---

- Human
  - Operators
  - Managers
- Assets
- Business Processes
- Relationships
  - Customers
  - Vendors
  - Partners

# Business Processes

---

- Business process
  - Departments & Employees
  - Tasks
  - Triggers
  - Outcomes
  - Data
- Integrated Business Processes
  - Order-to-Cash
  - Procure-to-Pay
  - Manufacturing

# Enterprise Resources Planning

---

- Strategy activities
  - Examples ?
- Planning activities
  - Examples ?
- Why ?

# Information System

---

- Data, Information and Knowledge
- The importance of Information
- Information System = Management Information System
- **Business Information System**
  - Examples ?

# **Business Information Systems** based on IT

---

- WHY ?
- ERP Systems
- Other kinds of BIS

# UEL - Business Information Systems Course

---

- Course information
- Course description
- Course Objectives
- Learning Outcomes
- Course Assignments
- Lecturer

# Introduction to SAP

Curriculum: Introduction to ERP using Global Bike



# Teaching material - Information

---



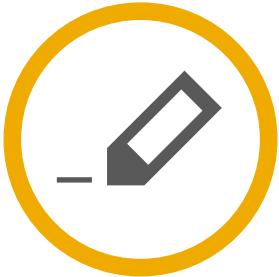
## Teaching material - Version

---

- 3.1 (July 2017)
- Software used
  - SAP ERP 6.08
- Model
  - Global Bike
- Prerequisites
  - No Prerequisites needed

# Module Information

---



## Authors

---

- Stefan Weidner
- Babett Koch
- Chris Bernhardt



## Target Audience

---

- Beginner



## Learning Objectives

---

You are able to

- describe the company SAP SE as well as its area of business.
- explain the underlying architecture concepts of the SAP Business Suite.
- list the most common SAP ERP modules.
- explain the three basic concept which are used to represent data within the SAP Business Suite.
- emphasize the importance of documents within the SAP Business Suite

# Agenda

---

- Introduction to SAP
- SAP Architecture
- SAP ERP Core Applications
- Concepts
  - Organizational Units
  - Master Data
  - Transaction Data
- Documents



# Who is SAP?

---

- SAP SE
  - Founded in Walldorf, Germany in 1972
  - World's Largest Business Software Company
  - World's Third-largest Independent Software Provider
  
- Company Statistics
  - Over 65,000 employees in more than 75 countries
  - 232,000+ customers in more than 180 countries
  - 200,000+ installations
  - 2,500+ Business Partners

Source: SAP SE website

# SAP Portfolio Strength

---

- World-wide usage
- Designed to satisfy the information needs for all business sizes (small local to large all international)
  - Multi-lingual
  - Multi-currency
  - Multi-balance (parallel G/L Accounting)
- Designed to satisfy the information needs for all industries, e.g.
  - Automotive
  - Banking
  - Retail
  - Public Sector
  - Higher Education and Research etc.

# SAP Enterprise Resource Planning (SAP ERP)

---

- Enables a company to support and optimize its business processes
- Ties together disparate business functions (integrated business solution) such as
  - Finance (Financial Accounting, Managerial Accounting, Treasury, ...)
  - Logistics (Sales, Procurement, Production, Fulfillment, ...)
  - Human Resources etc.
- Helps the organization run smoothly
- Real-time environment
- Scalable and flexible

# Agenda

---

- Introduction to SAP
- SAP Architecture
- SAP ERP Core Applications
- Concepts
  - Organizational Units
  - Master Data
  - Transaction Data/
- Documents



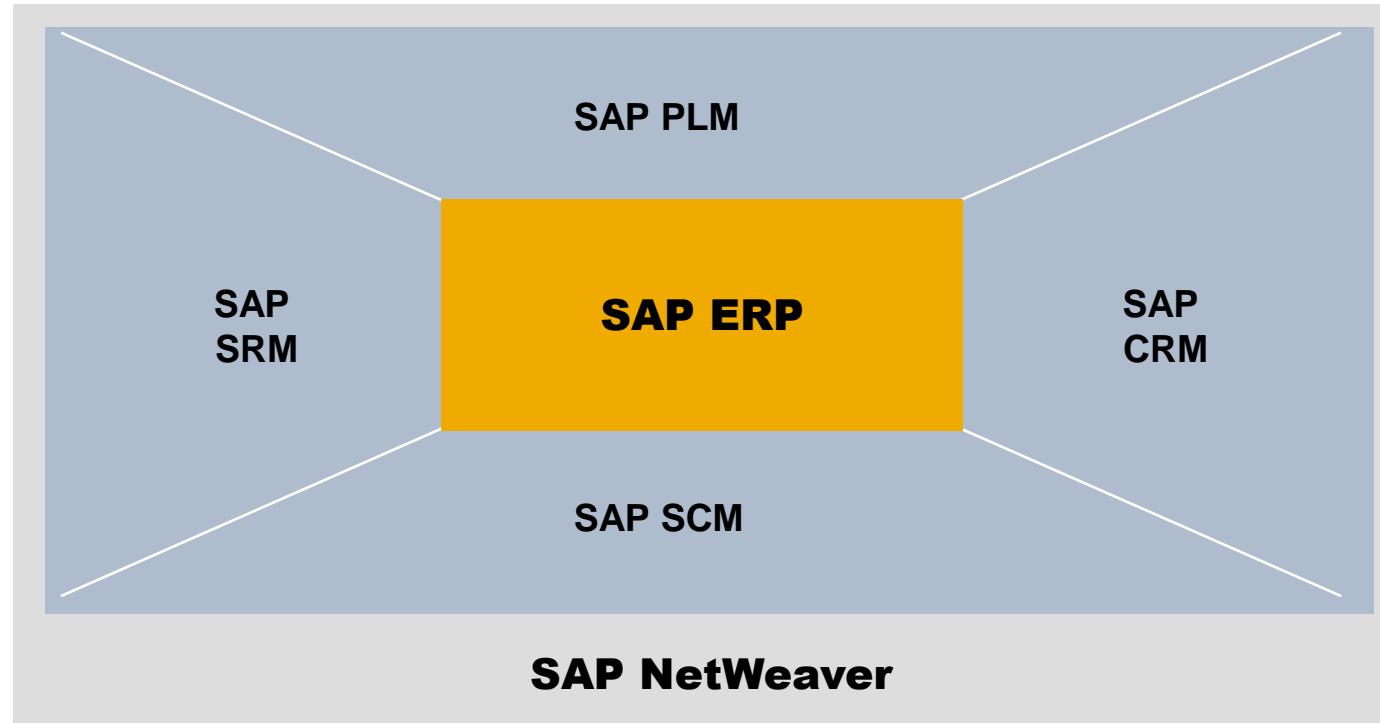
# SAP Architecture

---

- 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
  - User Interface
    - Graphical User Interface or Web Interface
  - Application Server
    - One or more, help distribute work load
  - Database Server
    - One single data repository

# SAP Business Suite

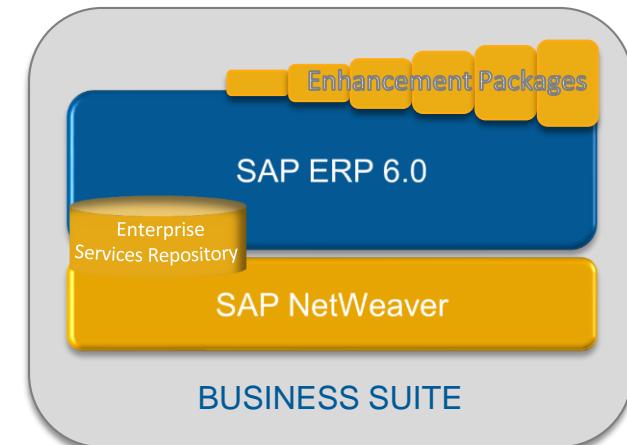
---



# SAP Enhancement Packages

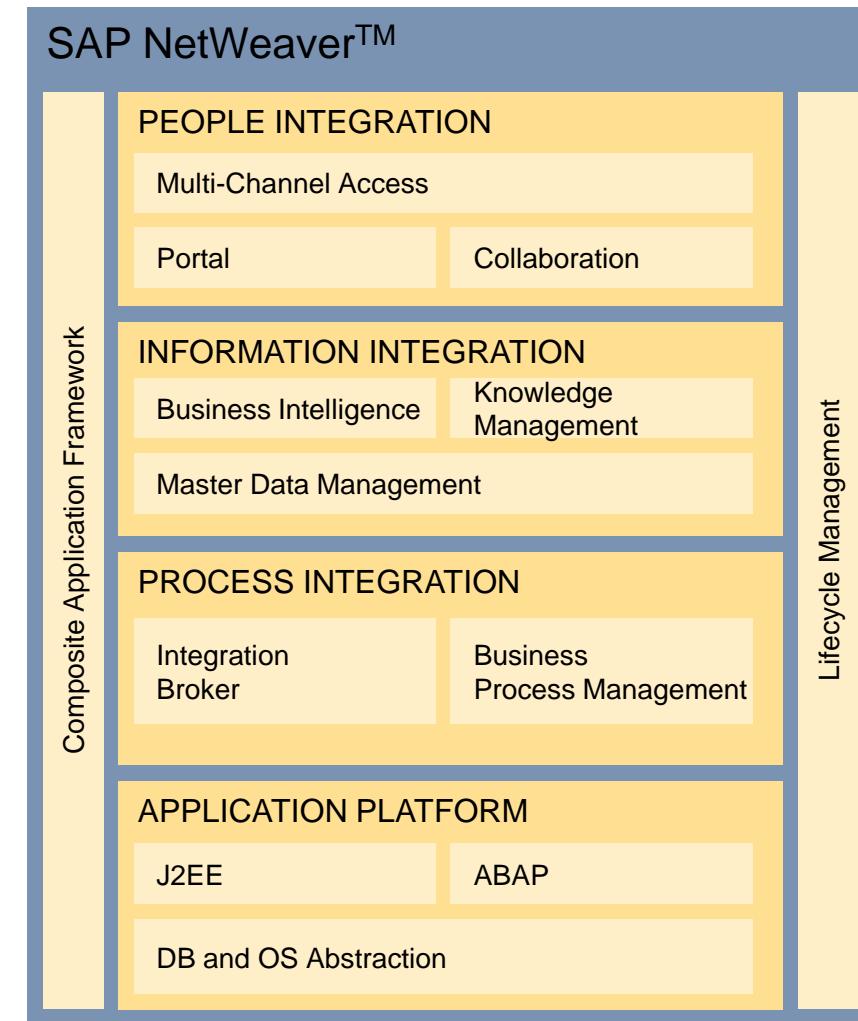
---

- Optionally installed and activated Software Innovations for SAP ERP 6.0
- Software Innovations are
  - UI simplifications
  - Functional Enhancements
  - Enterprise Services
    - SAP Enhancement Packages are built on different Enhancement Packages
    - Are no Support Packages



# SAP Net Weaver

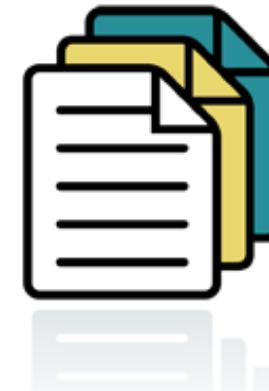
- Integration Layers of SAP NetWeaver® are:
  - People Integration
  - Information Integration
  - Process Integration
  - Application Platform



# Agenda

---

- Introduction to SAP
- SAP Architecture
- SAP ERP Core Applications
- Concepts
  - Organizational Units
  - Master Data
  - Transaction Data
- Documents



# SAP ERP Business Modules

---

- Collections of logically related transactions within identifiable business functions
  - MM (“Buy”)
  - PP (“Make”)
  - SD (“Sell”)
  - FI and CO (“Track”)
  - HCM (“People”)
  - WM (“Store”)
  - EAM (“Maintain”)
  - CS (“Service”)

# SAP ERP Core Applications

---

- Logistics
  - Sales & Distribution
  - Materials Management
  - Production Planning
  - Plant Maintenance
  - Quality Management
- Human Capital Management
  - Personnel Management
  - Benefits
  - Payroll
- Finance
  - Financial Accounting
  - Managerial Accounting
  - Asset Management
  - Treasury

# Agenda

---

- Introduction to SAP
- SAP Architecture
- SAP ERP Core Applications
- Concepts
  - Organizational Units
  - Master Data
  - Transaction Data
- Documents



# Data Types in ERP Systems

---

?	?	?
...	...	...

# Data Types in ERP Systems

distinct 3 types of data

NHNG D LIU V DOANH NGHIP	NHNG D LIU HIM THAY I	XUT HIN KHI CÓ TRANSACTION
Organizational Data	Master Data	Transaction Data
Company Code	Person	Purchase Order
Plant	Material	Invoice
Storage Location	Customer	Quotation
Distribution Channel	Vendor    SUPPLIER	Sales Order
Purchase Organization	Condition	Transportation Order
...	...	...

CLIENT TRONG ERP LÀ ENTERPRISE  
(GBI : US ,GER)  
GM COMPANY CODE (CTY CON): GM  
CÁC PLANT (KHO, PHẦN PHI, CSVC,  
DISTRIBUTOR)

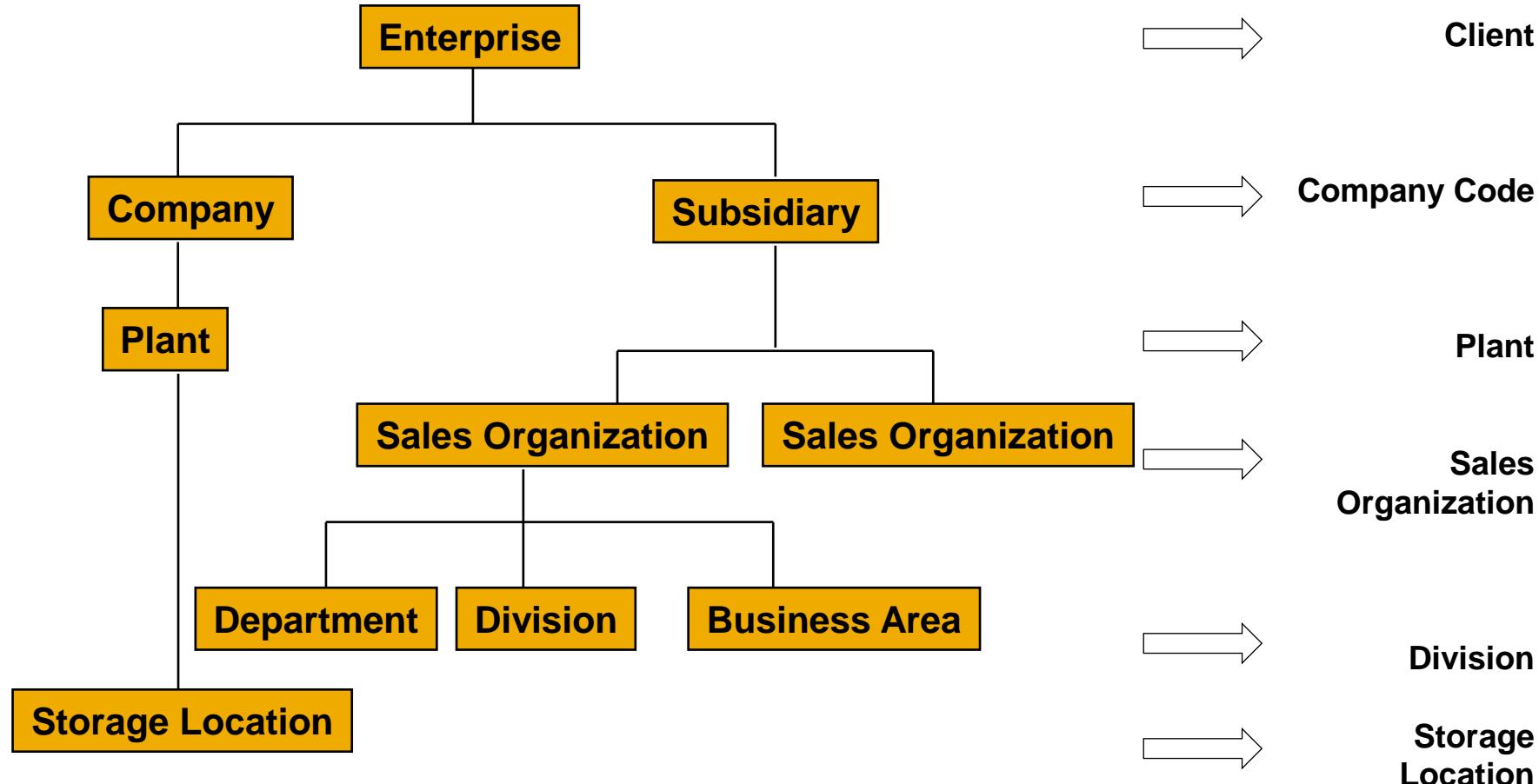
# Organizational Data

---

- Define the enterprise structure by means of legal or respectively business usage
- Task is to adopt some functions inside of an enterprise and execute them
- Juridical entities, plants, storage locations, sales organizations, profit center
- Examples:
  - Client
    - Highest organizational unit
    - Represents the enterprise which consists out of several parts
  - Company Code
    - Represents judicial entities in an enterprise
    - Central organizational unit in external accounting
  - Sales organization
    - An organizational unit that executes the sale and distribution of products and offers services

# Organizational Unit

## SAP Terminology:



# Master Data

- Long term data that represent data sets mostly

- Examples:

- Sales and Distribution:

- Customer Master
    - Material Master
    - Condition Master

Display Material DXTR1000 (Finished Product)

Additional Data    Org. Levels

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

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

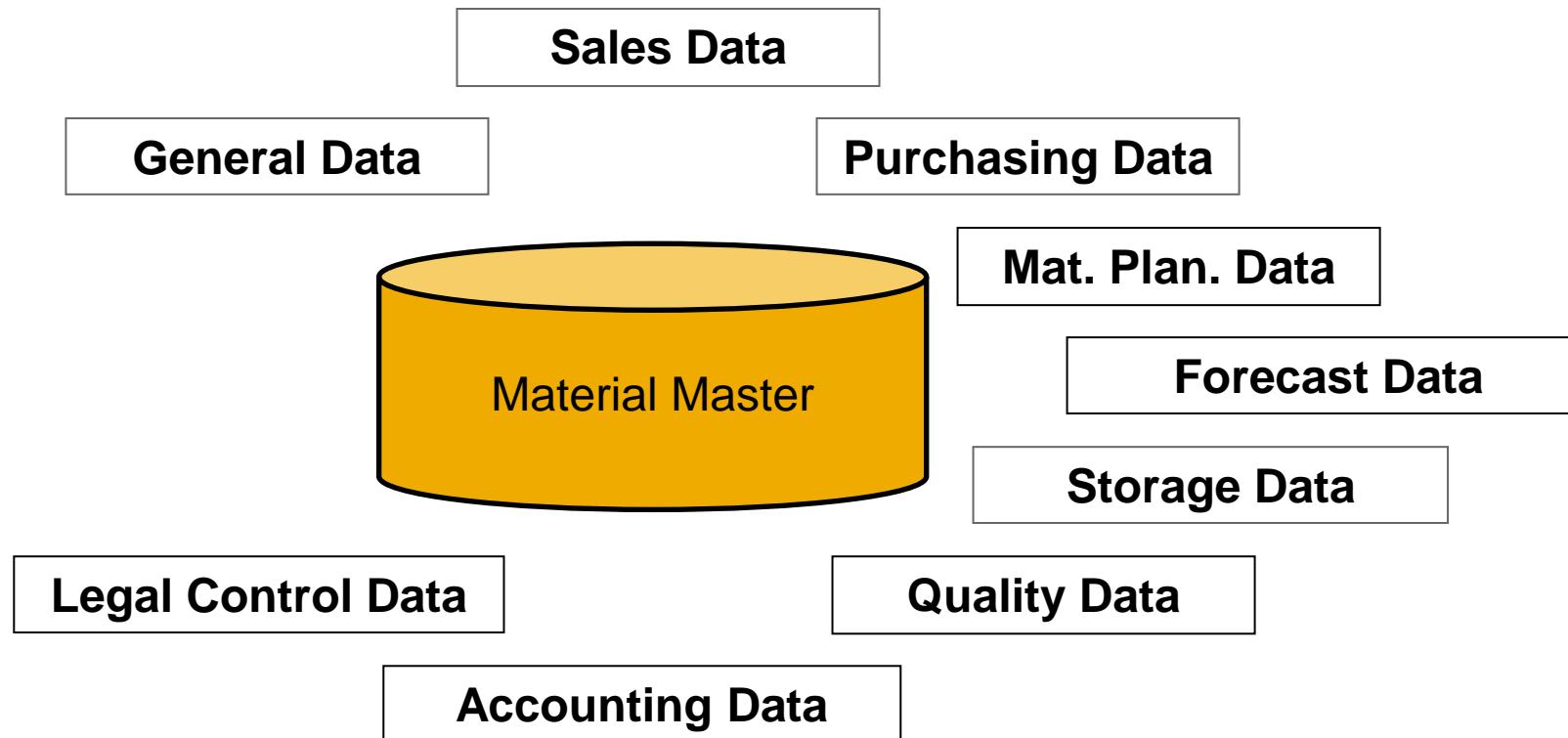
Packaging material data

Matl Grp Pack.Matls
---------------------

Basic Data Texts

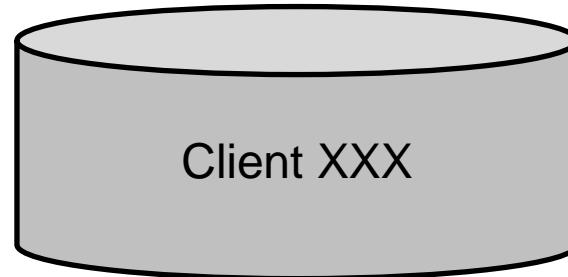
Languages Maintained	0	Basic Data Text	Language:
----------------------	---	-----------------	-----------

# Example: Material Master - Views



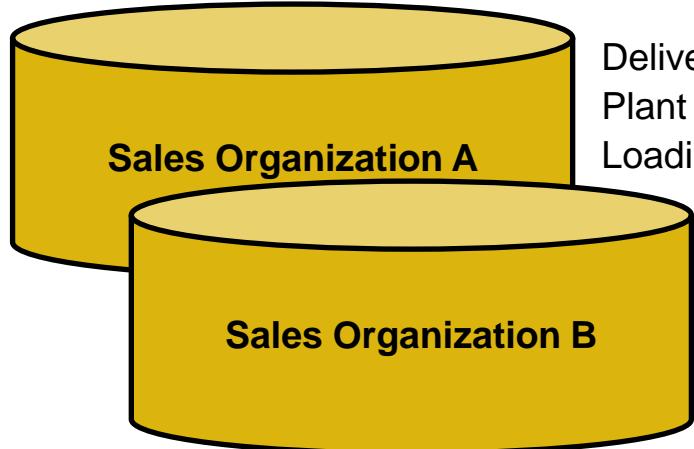
# Example: Material Master

**General Data apply for the whole company:**



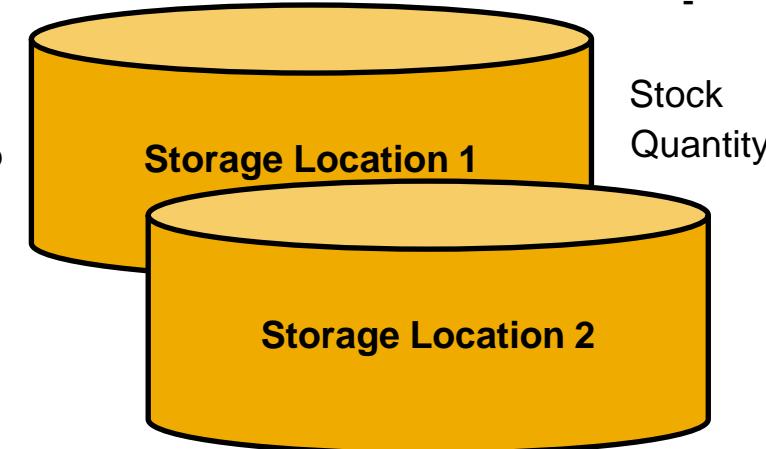
Name  
Weight  
Unit of Measure

**Distribution Specific Information:**



Delivering  
Plant  
Loading Group

**Storage Location Specific Information:**



Stock  
Quantity

# Transaction Data

- Process related data that is short-lived and dedicated to certain master data
- Master data of a vendor can be assigned to transaction data that concern the sales volume development
- Include:
  - Organizational level
  - Master data
  - Situational data
- Example: customer order
  - Organizational level : client, company code, sales organization
  - Master data: customer master, material master
  - Situational data: date, time, person, amount

**Create Standard Order: Overview**

Standard Order	Net value	15,000.00	USD
Sold-To Party	3100	Philly Bikes / 3999 West Chester Pike / Philadelphia PA 19073	
Ship-To Party	3100	Philly Bikes / 3999 West Chester Pike / Philadelphia PA 19073	
PO Number	100	PO date	05/12/2014

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

Req. deliv.date	D 05/15/2014	Deliver.Plant	
<input type="checkbox"/> Complete delv.		Total Weight	42,550 G
Delivery block		Volume	0.000
Billing block		Pricing date	05/22/2014
Payment card		Exp.date	
Card Verif.Code			
Payment terms	0001 Pay immediately w/... Incoterms	FOB	Miami
Order reason			

**All items**

Item	Material	Order Quantity	Un	S	Description	Customer Material Numb	ItCa	TAN
	10DXTR1100	5EA			Deluxe Touring Bike (black)			

# Agenda

---

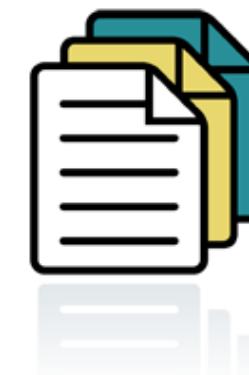
- Introduction to SAP
- SAP Architecture
- SAP ERP Core Applications
- Concepts
  - Organizational Units
  - Master Data
  - Transaction Data
- Documents



# Documents

---

- Data sets that are generated if a business transaction was executed
- Is a record of the business transaction
- Includes all relevant predefined information from the master data and organizational entities
- Example:
  - Sales Document
  - Purchasing Document
  - Material Document
  - Accounting Document



# Document Flow

- The document flow as well as the order status allow the setting of the status at any point in time
- SAP revises the status at every time a change in a document takes place

Document Flow								
		Status overview	Display document	Service documents				
Business partner		0000025000	The Bike Zone					
Material		DXTR1100 Deluxe Touring Bike (black)						
Document		Quantity	Unit	Ref. value	Currency	On		
Inquiry 0010000000 / 10		5 EA		15,000.00	EUR	11/28/2013		
Quotation 0020000000 / 10		5 EA		14,012.50	EUR	11/28/2013		
Standard Order 0000000001 / 10	→	5 EA		14,012.50	EUR	11/28/2013		
Outbound Delivery 0080000000 / 10		5 EA				11/29/2013		
Picking request 20131129 / 10		5 EA				11/29/2013		
GD goods issue:delvy 4900002144 / 1		5 EA		7,000.00	EUR	11/29/2013		
Invoice 0090000000 / 10		5 EA		14,012.50	EUR	11/29/2013		
Accounting document 0090000000		5 EA				11/29/2013		
						Cleared		

# Navigation

Curriculum: Introduction to ERP using Global Bike



# Teaching material - Information

---



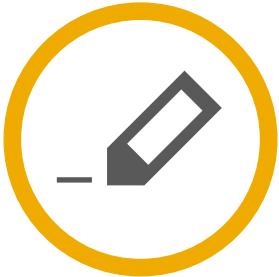
## Teaching material - Version

---

- 3.1 (July 2017)
- Software used
  - SAP ERP 6.08
- Model
  - Global Bike
- Prerequisites
  - No Prerequisites needed

# Module Information

---



## Authors

---

- Stefan Weidner



## Target Audience

---

- Beginner



## Learning Objectives

---

You are able to

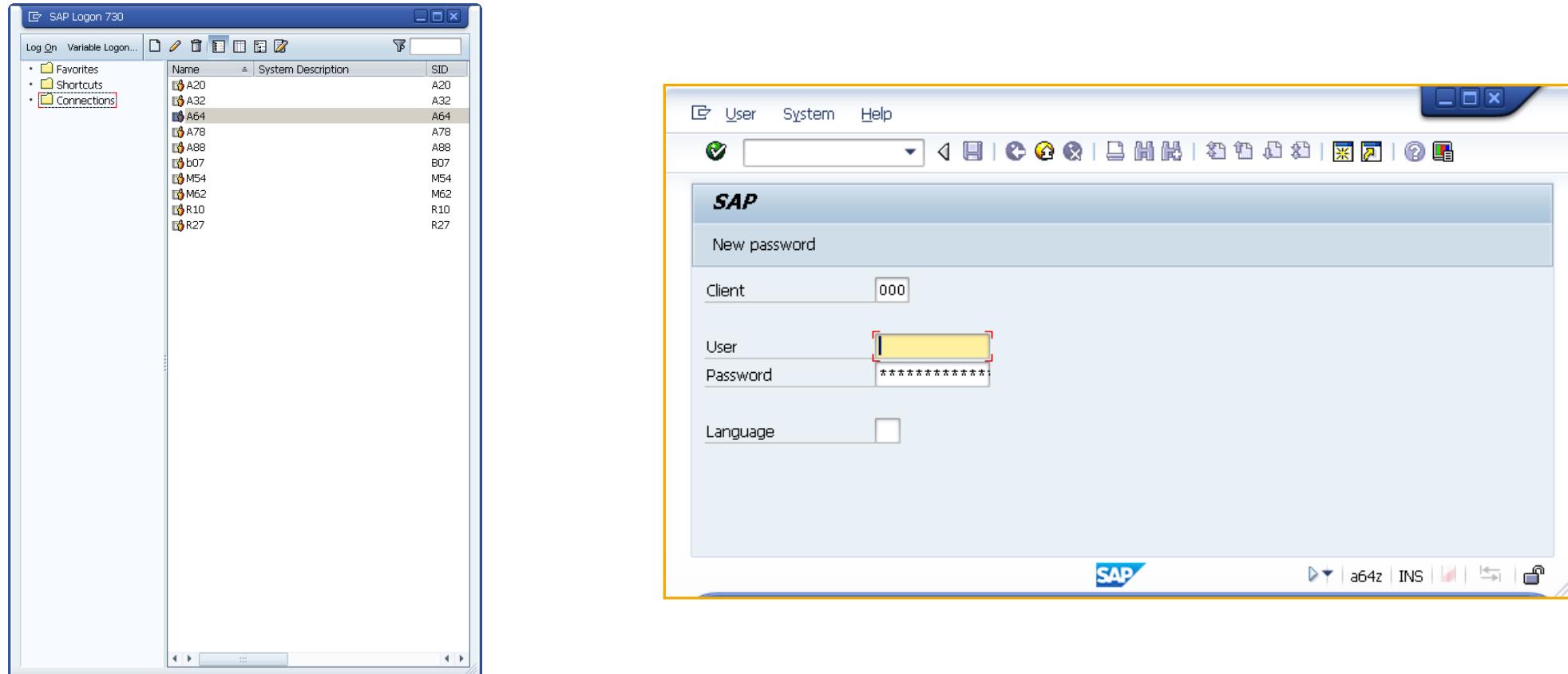
- navigate through the SAP ERP system.
- to use the different help features of the SAP ERP.
- personalize the settings of your user as well as the SAP ERP user interface.

# Agenda

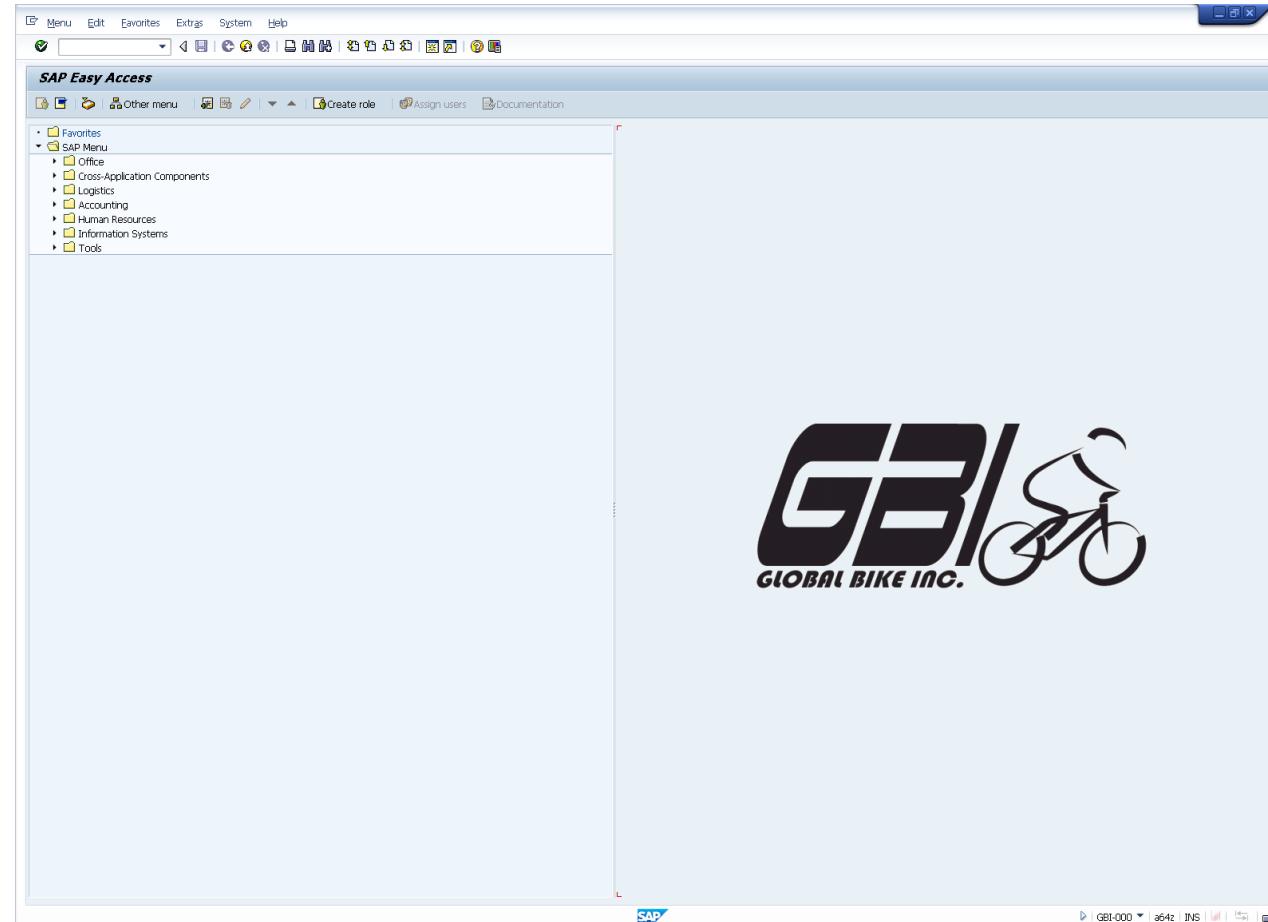
---

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

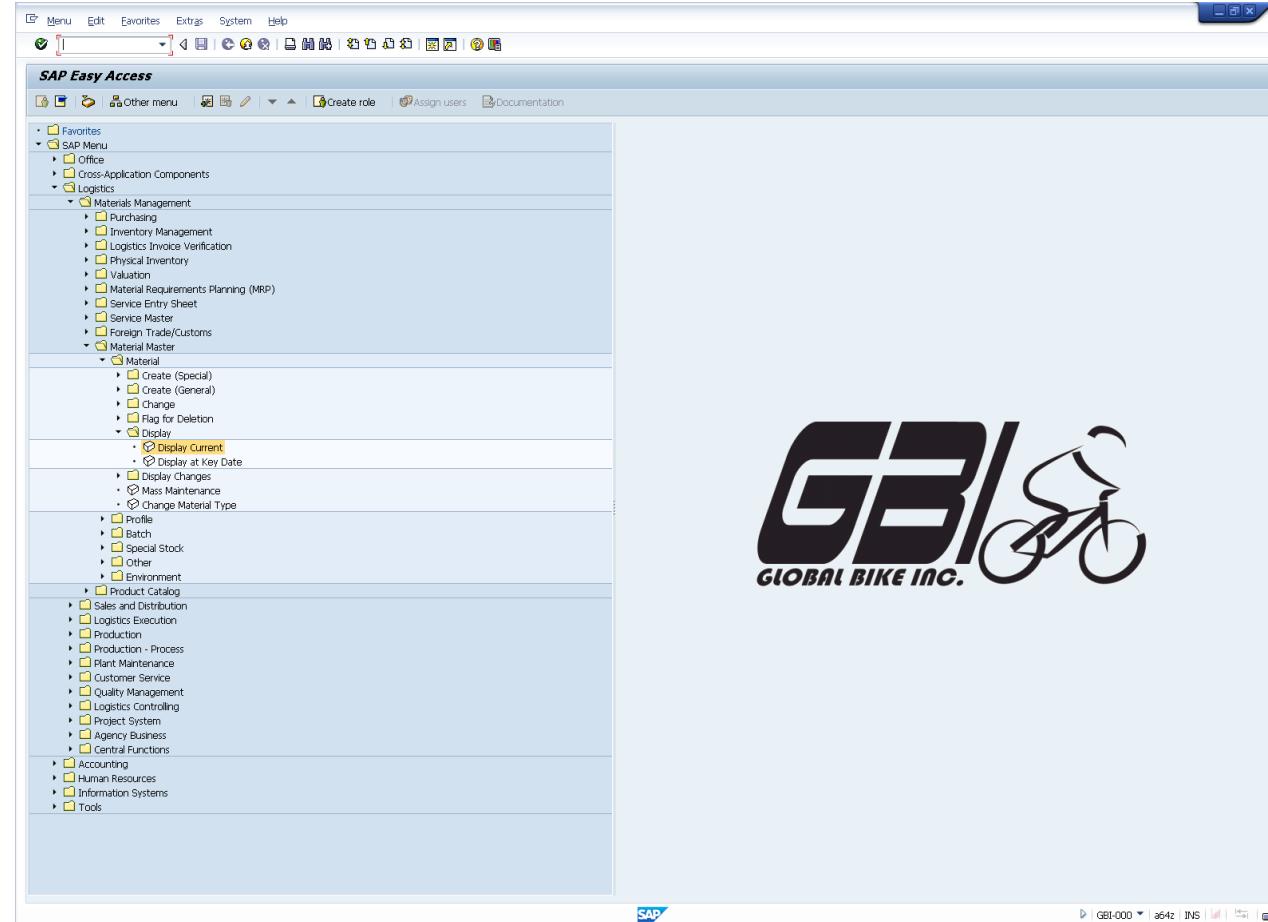
# Log on to an SAP system



# SAP Easy Access Menu



# SAP Easy Access Menu (cont.)



# New Design

The screenshot shows the SAP Fiori New Design interface for a Sales document. The title bar reads "Display Standard Order 2: Overview". The main content area is divided into three sections:

- Header data**: Displays basic order information: Standard Order (2), Net value (15.000,00 USD), Sold-To Party (300 Philly Bikes / 3999 West Chester Pike / Philadelphia PA 19073), Ship-To Party (300 Philly Bikes / 3999 West Chester Pike / Philadelphia PA 19073), and PO Number (00) with PO date (08.03.2010).
- Position overview**: Shows delivery details: Req. deliv.date (11.03.2010), Deliver.Plant (42.550), Total Weight (6), Volume (0,000), and Pricing date (08.03.2010).
- Position details**: A grid table showing the order items: Item (10DXTR1000), Material (TAN), Order Quantity (5 EA), Description (Deluxe Touring Bike (black)), Customer Material Numbr (MI00), ItCa (00), DGIP (11.03.2010), HL Itm (MI00), First date (00 11.03.2010), Plnt (MI00), and Batch (1).

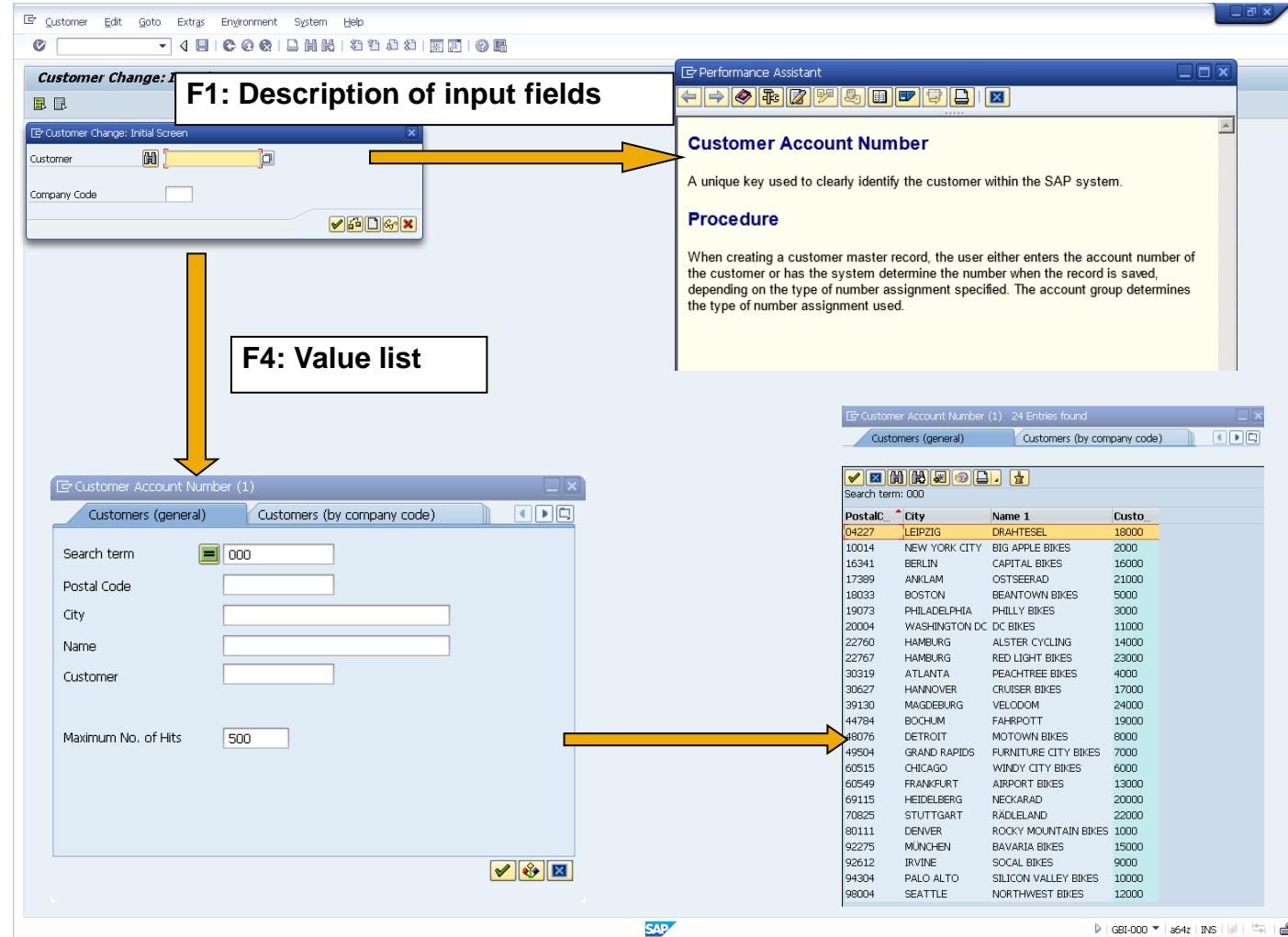
At the bottom, there are SAP navigation icons and status information: A64 (1) 300, a64z, INS.

# Agenda

---

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

# Help Functions



# SAP Help Portal

The screenshot shows the SAP Help Portal homepage. At the top, there's a navigation bar with the SAP logo, the text "Help Portal", and links for "Glossary", "Legacy Mapping", and a search bar. Below the navigation is a horizontal menu with four main categories: "SAP Business Suite", "SAP NetWeaver", "Application Lifecycle Mgmt", and "Additional Information". Under each category, there are sub-links: "SAP for Industries", "Analytics", "SAP Best Practices", "SAP Business One", "SAP In-Memory Computing", and "On-Demand Solutions". The main content area features a large banner with a blue-toned image of a winding road at night, overlaid with the text "Welcome to SAP Help Portal" and "The central place for SAP documentation". Below the banner are three sections: "What Is SAP Help Portal?", "Frequently Used", and "Can't Follow a Navigation Path?". The "What Is SAP Help Portal?" section contains a paragraph about the portal's purpose. The "Frequently Used" section lists links to various SAP products. The "Can't Follow a Navigation Path?" section includes a cartoon mouse icon and a link to "Find Navigation Path".

**What Is SAP Help Portal?**

SAP Help Portal bundles access to SAP product documentation and also related information, such as SAP Notes, product availability information, as well as community content. Browse SAP Help Portal to get up-to-date information about your product.

**Frequently Used**

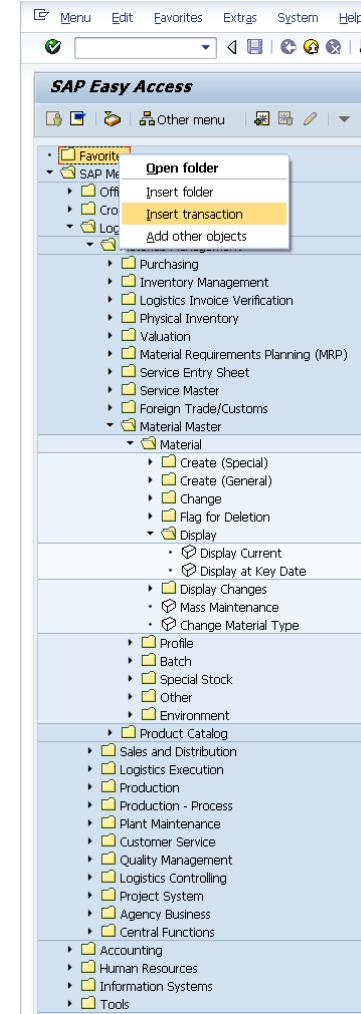
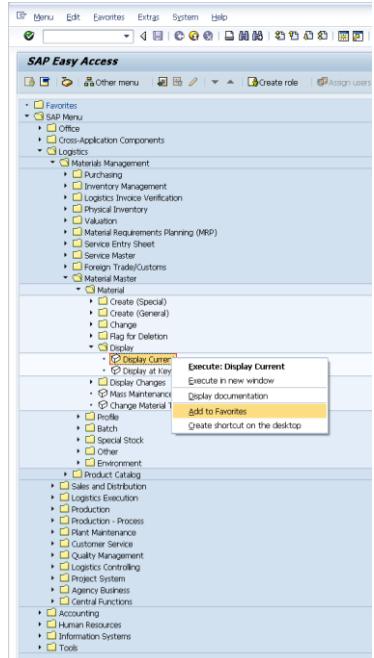
[SAP Enhancement Package 6 for SAP ERP 6.0](#)  
[ERP Central Components](#)  
[SAP R/3 and SAP R/3 Enterprise](#)  
[Analytics - All Products](#)  
[SAP NetWeaver 7.0 including Enhancement Package 2](#)  
[SAP HANA Appliance](#)

**Can't Follow a Navigation Path?**

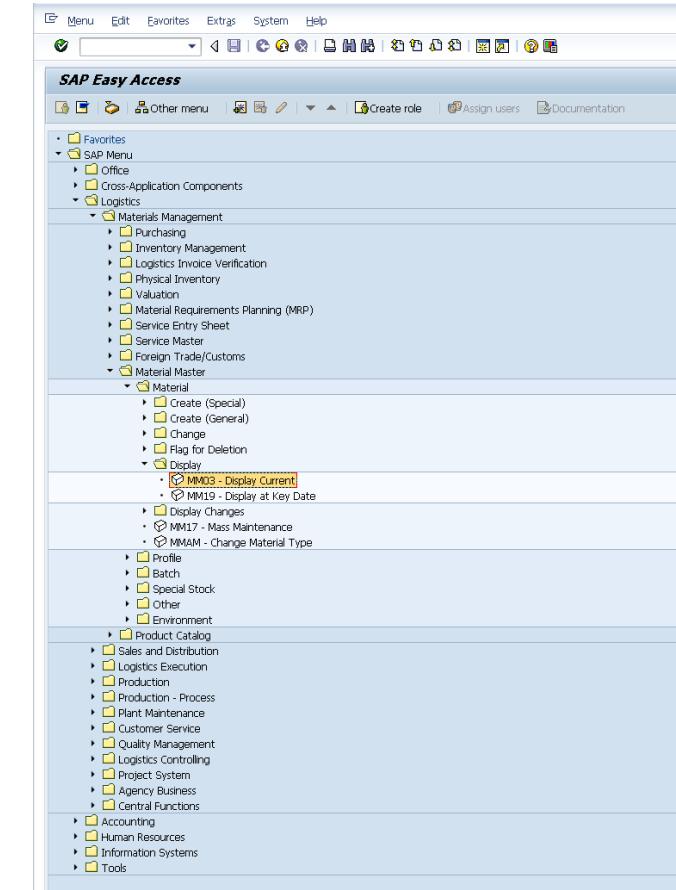
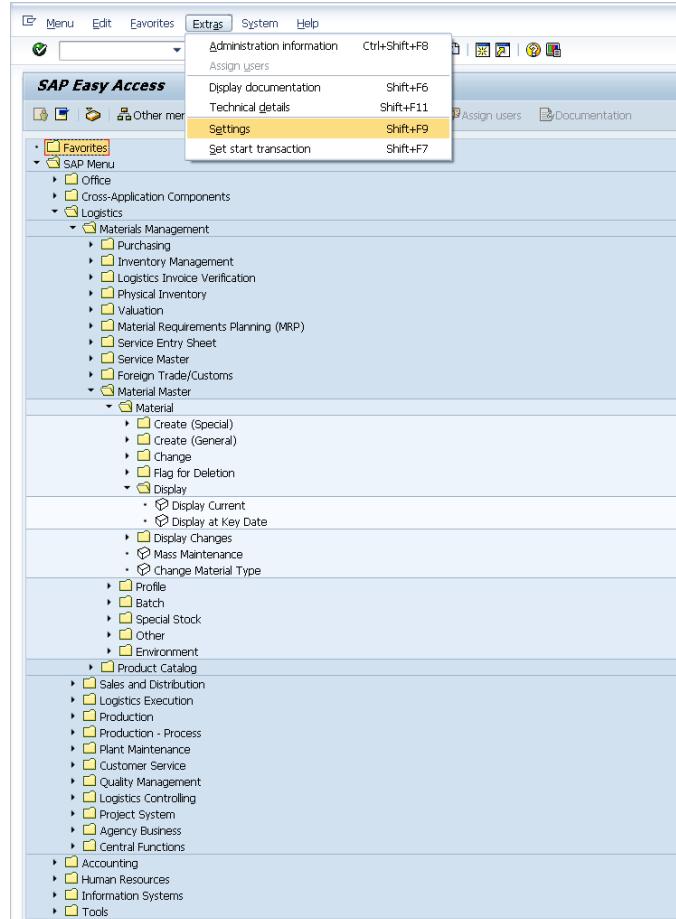
Since the navigation structure of SAP Help Portal has changed, you may be finding it difficult to follow a navigation path in the documentation. Help is at hand.

[Find Navigation Path](#)

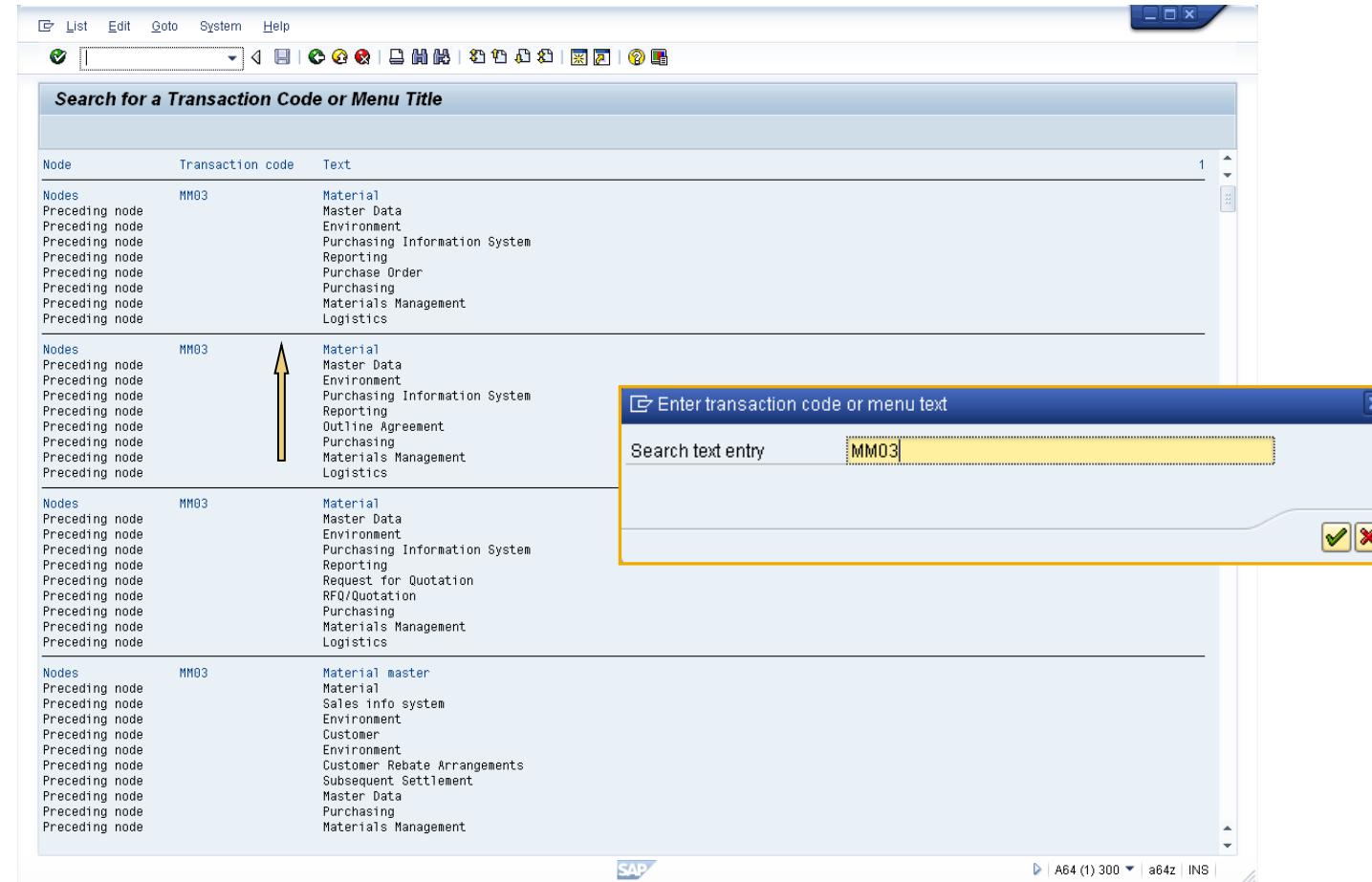
# Favorites



# Transaction Codes



# Transaction SEARCH\_SAP\_MENU

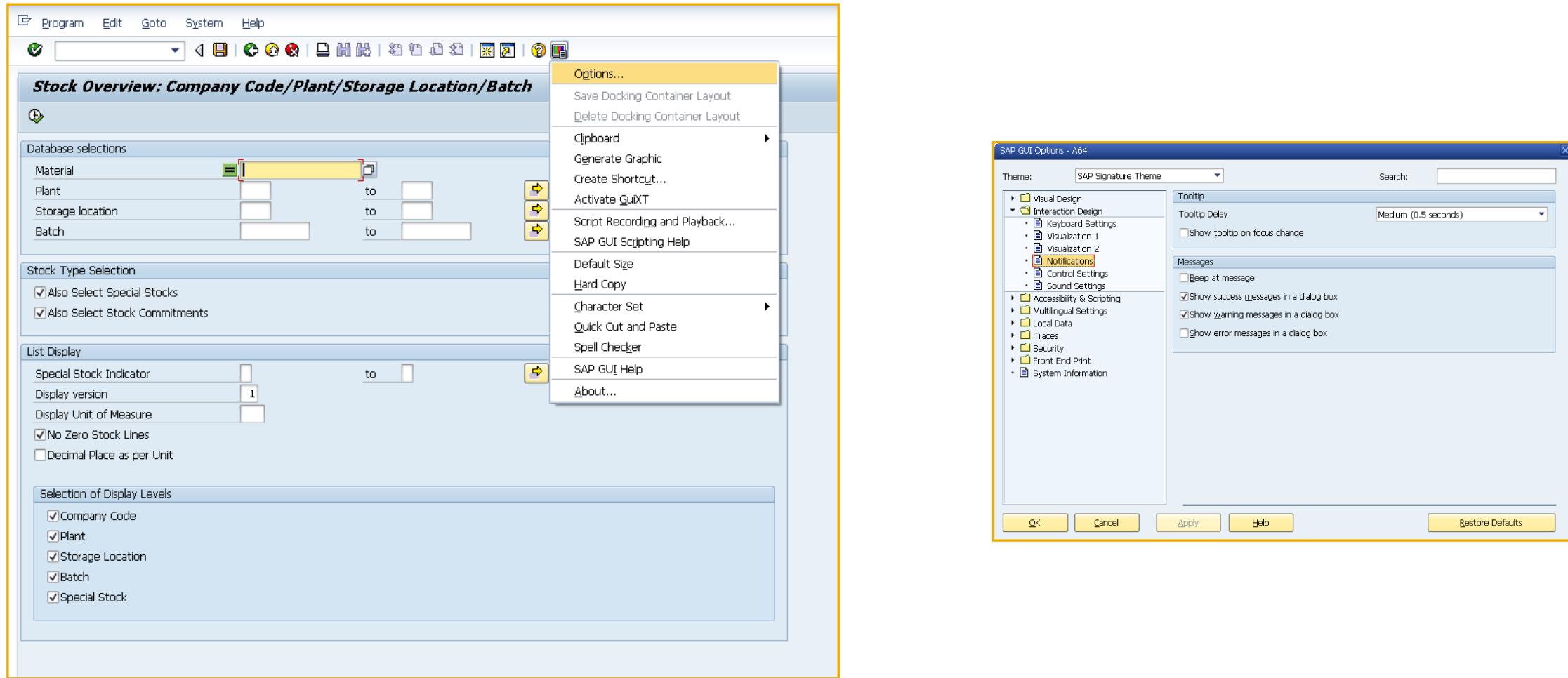


# Agenda

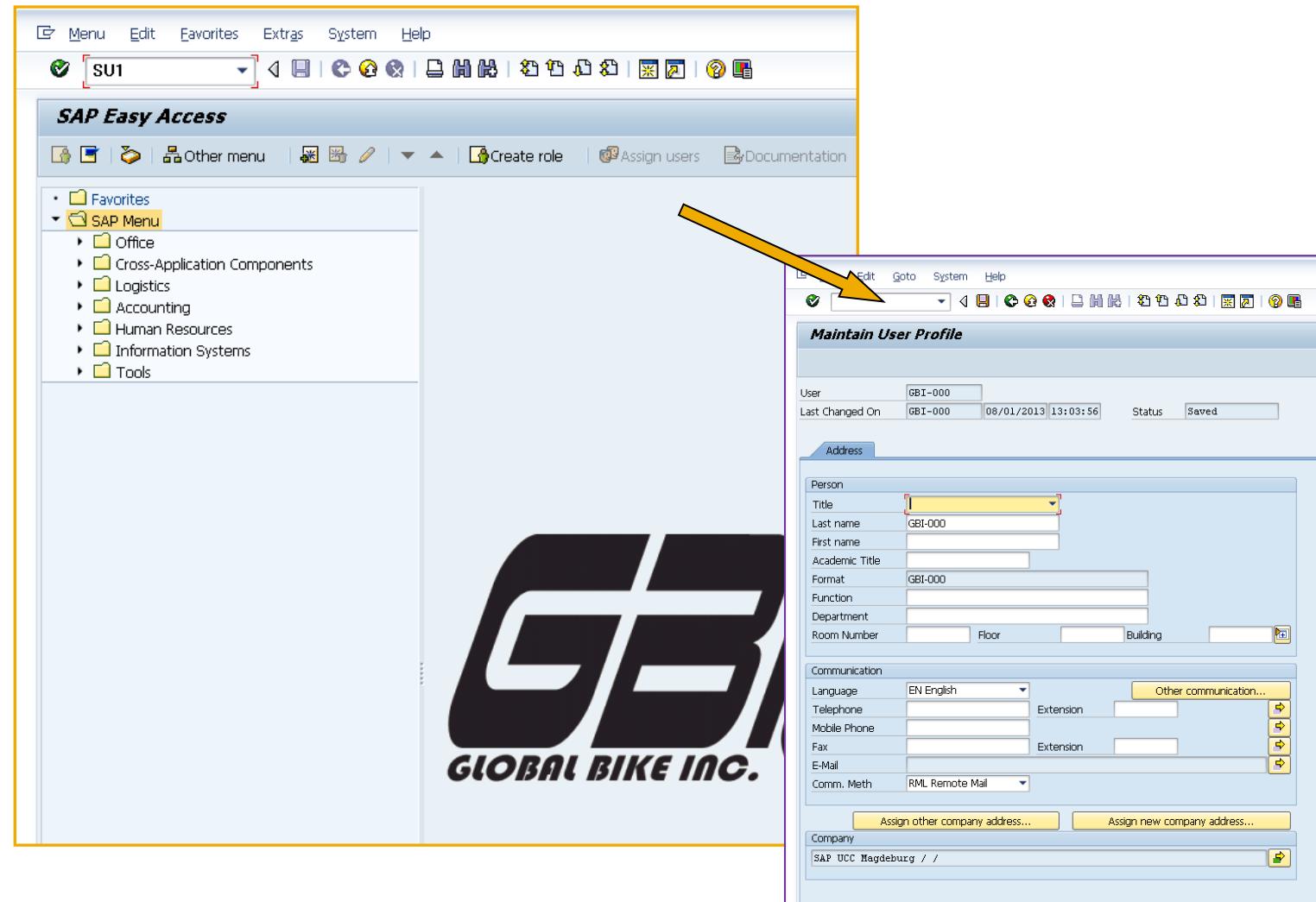
---

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

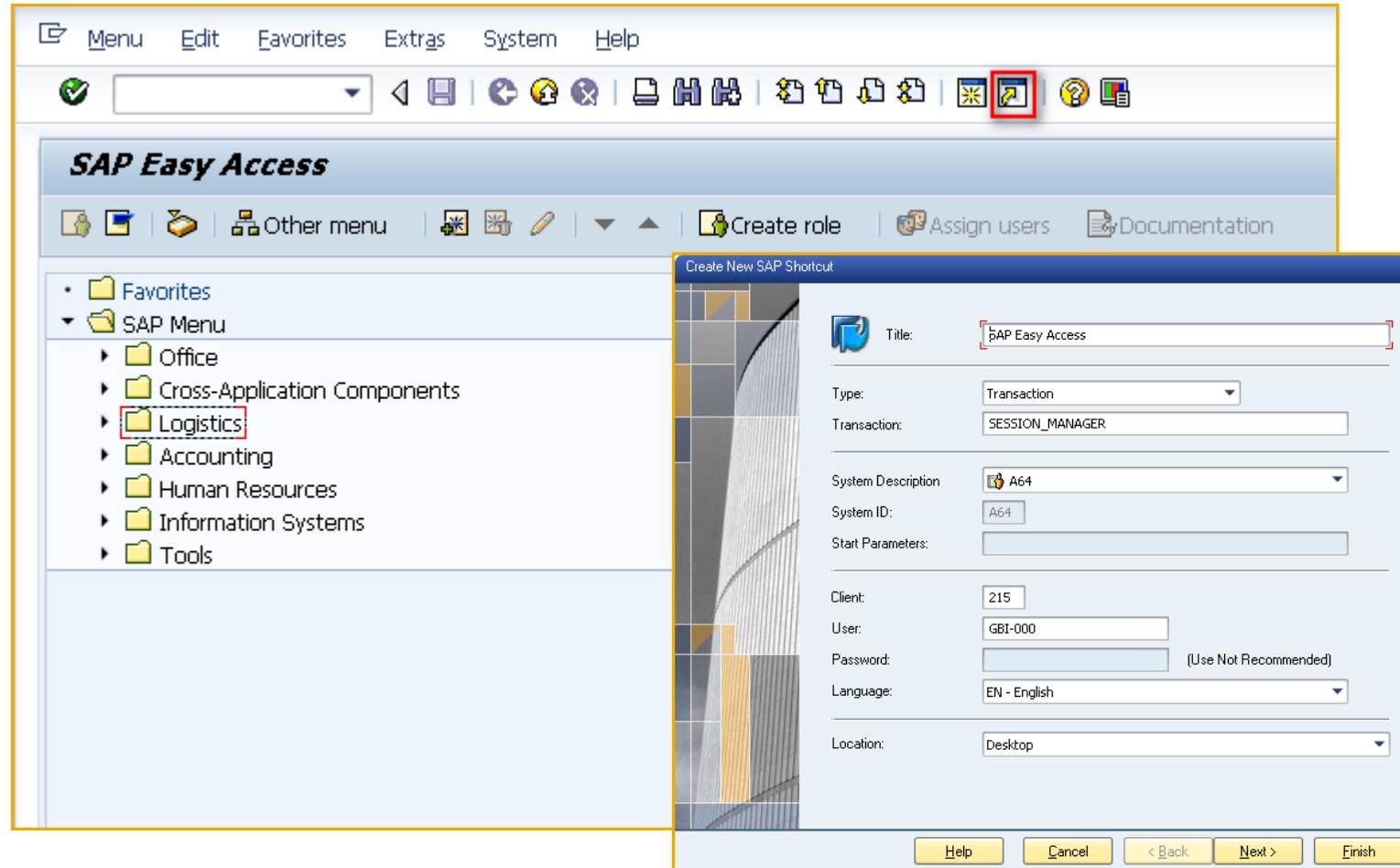
# User Profile Settings (local PC)



# User Profile Settings (SAP system)



# Desktop Shortcut



# Summary

---

You are now able to:

- name the window elements,
- navigate in a SAP system,
- apply personal system settings,
- effectively use help.

# Global Bike

Curriculum: Introduction to ERP using Global Bike



# Teaching material - Information

---



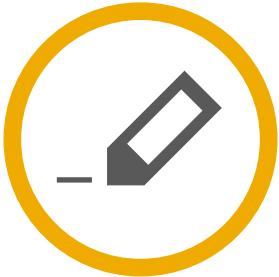
## Teaching material - Version

---

- 3.1 (July 2017)
- Software used
  - SAP ERP 6.08
- Model
  - Global Bike
- Prerequisites
  - No Prerequisites needed

# Module Information

---



## Authors

---

- Simha Magal
- Stefan Weidner
- Jeff Word



## Target Audience

---

- Beginner

# Module Information

---



## Learning Objectives

---

You are able to

- describe the story of the Global Bike Group.
- draft the organizational structure of the Global Bike Group.
- describe the essential characteristics of the products and business partners of the Global Bike Group.
- name the business processes of the Global Bike Group.

# Agenda

---

- Global Bike Group
- Organizational Structure
- Products
- Business Partners
- Business Processes

# Global Bike Group

---

- Background:
  - Global concern using full ERP capabilities
  - Consists of two companies located in the US and in Germany
  
- History:
  - **John Davis** won numerous mountain bike championships in the US
  - In 1990, started his own mountain bike company (Frankenstein Bikes)
  - **Peter Schwarz** grew up on road bikes in the Black Forest, Germany
  - As a student, he engineered ultra-light composite frames
  - In 1993, started his own bike frame company (Heidelberg Composites)
  - Both met in 2000
  - In 2001, merged to form Global Bike Inc.

# Global Bike Group

---

- Strategy:

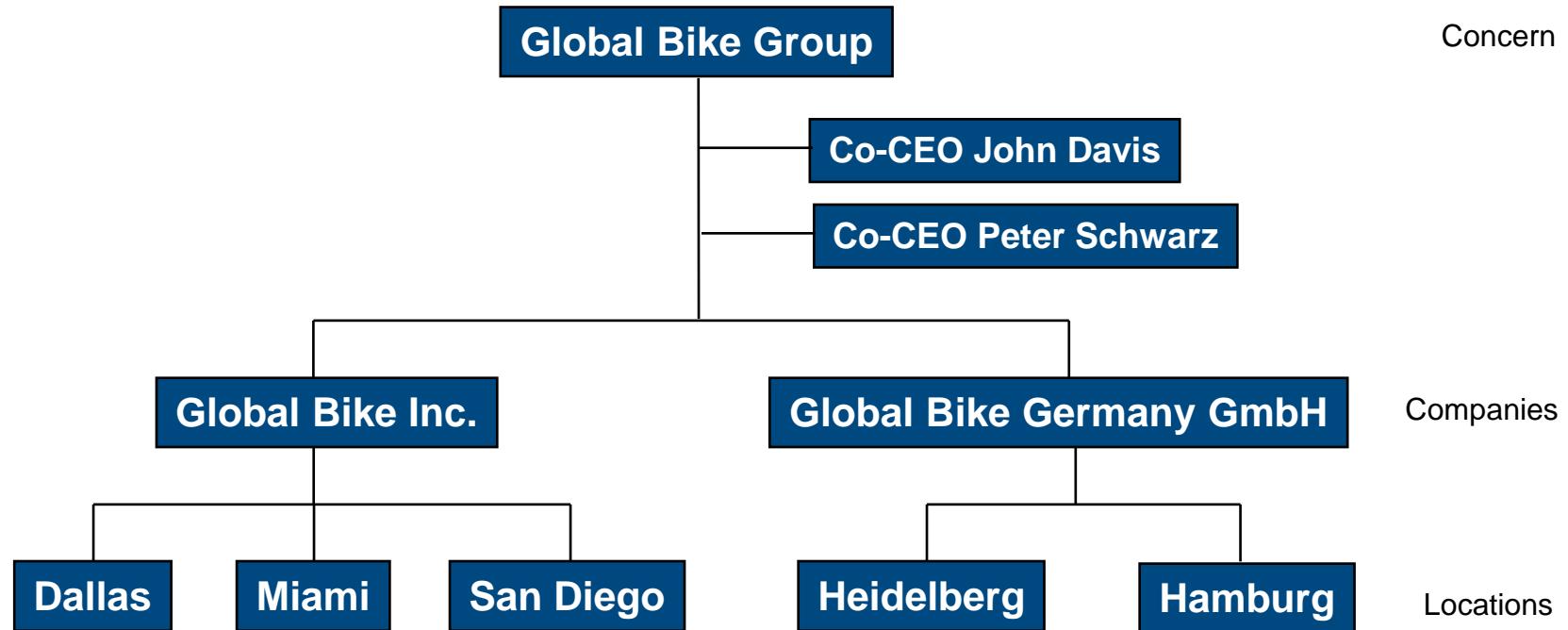
- John and Peter are Co-CEOs
- John is responsible for (in terms of reporting)
  - Sales, Marketing, Service and Support, IT, Finance, and Human Resources
  - sells products and brings in money
- Peter is responsible for
  - Research, Design, Procurement, and Manufacturing Groups
  - builds products and spends money
- World-class bicycle company serving both the professional and “prosumer” in touring and off-road racing.
- Focus on:
  - Quality
  - Toughness
  - Performance

# Agenda

---

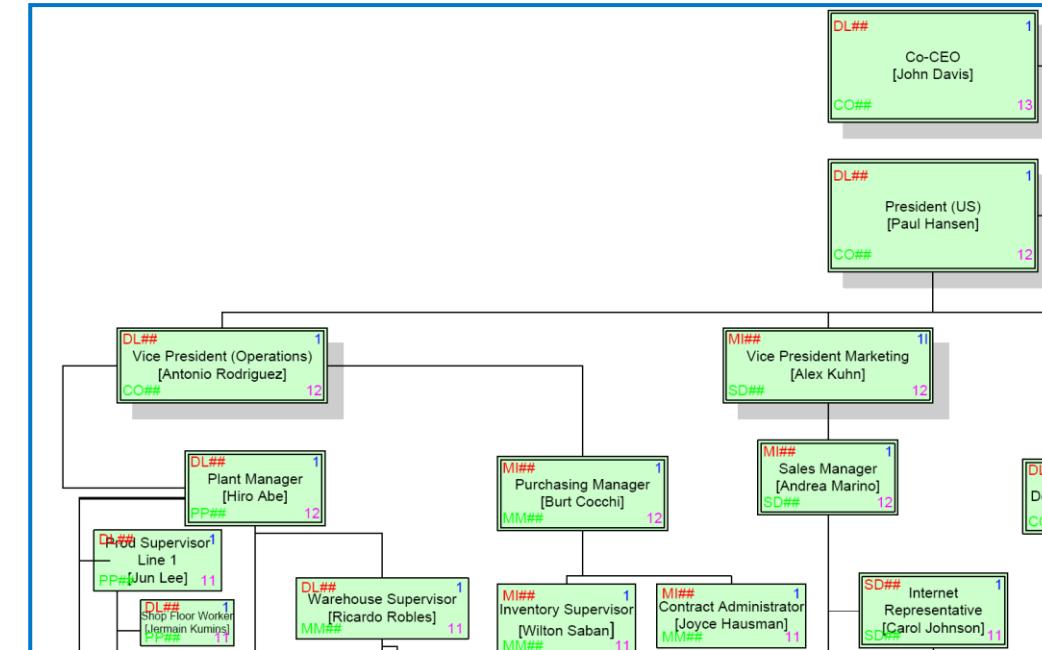
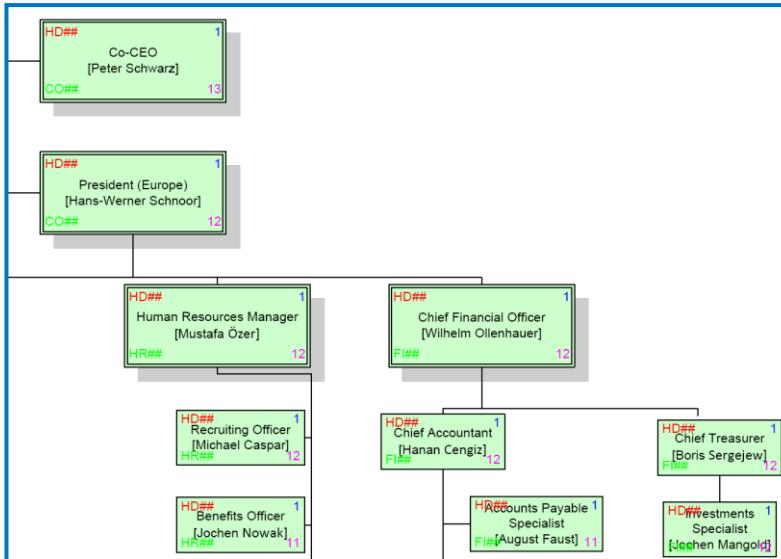
- Global Bike Group
- Organizational Structure
- Products
- Business Partners
- Business Processes

# Organizational Structure (Overview)



# Organizational Structure (Human Resources)

## ■ Employees (US and Germany)



# Agenda

---

- Global Bike Group
- Organizational Structure
- Products
- Business Partners
- Business Processes

# Products

- Trading Goods
  - Accessories
    - Safety Gear
    - Other

AIR PUMP	EN	PUMP1000
ELBOW PADS	EN	EPAD1000
FIRST AID KIT	EN	FAID1000
KNEE PADS	EN	KPAD1000
OFF ROAD HELMET	EN	OHMT1000
REPAIR KIT	EN	RKIT1000
ROAD HELMET	EN	RHMT1000
T-SHIRT	EN	SHRT1000
WATER BOTTLE	EN	BOTL1000
WATER BOTTLE CAGE	EN	CAGE1000

- Raw Materials

BRAKE KIT	EN	BRKT1000
CARBON COMPOSITE WHEEL	EN	CCWH1000
CHAIN	EN	CHAN1000
DERAILLEUR GEAR ASSEMBLY	EN	DGAM1000
HEX NUT 5 MM	EN	HXNT1000
LOCK WASHER 5 MM	EN	LWSH1000
MEN'S OFF ROAD FRAME	EN	OFFR1000
OFF ROAD ALUMINUM WHEEL	EN	ORWH1000
OFF ROAD HANDLE BAR	EN	ORHB1000
OFF ROAD SEAT KIT	EN	OFSK1000
OFF ROAD TIRE	EN	ORTR1000
OFF ROAD TUBE	EN	ORTB1000
PACKAGING	EN	PCKG1000
PEDAL ASSEMBLY	EN	PEDL1000
SOCKET HEAD BOLT 5X20MM	EN	BOLT1000
TOURING ALUMINUM WHEEL	EN	TRWH1000
TOURING FRAME-BLACK	EN	TRFR1000
TOURING FRAME-RED	EN	TRFR3000
TOURING FRAME-SILVER	EN	TRFR2000
TOURING HANDLE BAR	EN	TRHB1000
TOURING SEAT KIT	EN	TRSK1000
TOURING TIRE	EN	TRTR1000
TOURING TUBE	EN	TRTB1000
WARRANTY DOCUMENT	EN	WDOC1000
WOMEN'S OFF ROAD FRAME	EN	OFFR2000

# Products

---

## ▪ Semi-Finished Goods

CARBON COMPOSITE WHEEL ASSEMBLY	EN	CCWA1000
OFF ROAD ALUMINUM WHEEL ASSEMBLY	EN	ALWA1000
TOURING ALUMINUM WHEEL ASSEMBLY	EN	ALWA2000

## ▪ Finished Goods

- Touring Bikes (Deluxe, Professional) in three colors
- Off-Road Bikes (Men, Women)

DELUXE TOURING BIKE (BLACK)	EN	DXTR1000
DELUXE TOURING BIKE (RED)	EN	DXTR3000
DELUXE TOURING BIKE (SILVER)	EN	DXTR2000
MEN'S OFF ROAD BIKE	EN	ORMN1000
PROFESSIONAL TOURING BIKE (BLACK)	EN	PRTR1000
PROFESSIONAL TOURING BIKE (RED)	EN	PRTR3000
PROFESSIONAL TOURING BIKE (SILVER)	EN	PRTR2000
WOMEN'S OFF ROAD BIKE	EN	ORWN1000

# Agenda

---

- Global Bike Group
- Organizational Structure
- Products
- Business Partners
- Business Processes

# Business Partners

## ■ Customers (US and Germany)

10014	NEW YORK CITY	BIG APPLE BIKES	2000	US00
18033	BOSTON	BEANTOWN BIKES	5000	US00
19073	PHILADELPHIA	PHILLY BIKES	3000	US00
20004	WASHINGTON DC	DC BIKES	11000	US00
30319	ATLANTA	PEACHTREE BIKES	4000	US00
32804	ORLANDO	THE BIKE ZONE	25011	US00
48076	DETROIT	MOTOWN BIKES	8000	US00
49504	GRAND RAPIDS	FURNITURE CITY BIKES	7000	US00
60515	CHICAGO	WINDY CITY BIKES	6000	US00
80111	DENVER	ROCKY MOUNTAIN BIKES	1000	US00
92612	IRVINE	SOCAL BIKES	9000	US00
94304	PALO ALTO	SILICON VALLEY BIKES	10000	US00
98004	SEATTLE	NORTHWEST BIKES	12000	US00

04227	LEIPZIG	DRAHTESEL	18000	DE00
16341	BERLIN	CAPITAL BIKES	16000	DE00
17389	ANKLAM	OSTSEERAD	21000	DE00
22760	HAMBURG	ALSTER CYCLING	14000	DE00
22767	HAMBURG	RED LIGHT BIKES	23000	DE00
30627	HANNOVER	CRUISER BIKES	17000	DE00
39130	MAGDEBURG	VELODOM	24000	DE00
44784	BOCHUM	FAHRPOTT	19000	DE00
60549	FRANKFURT	AIRPORT BIKES	13000	DE00
69115	HEIDELBERG	NECKARAD	20000	DE00
70825	STUTTGART	RÄDLELAND	22000	DE00
92275	MÜNCHEN	BAVARIA BIKES	15000	DE00

# Vendors (US and Germany)

## ■ Vendors (US and Germany)

ATLANTA	000	OLYMPIC PROTECTIVE GEAR	101000	US00
CARLSBAD	000	REDWOOD KITS	112000	US00
CINCINNATI	000	BOOMTOWN TIRE & WHEEL	102000	US00
EDISON	000	LIGHTBULB ACCESSORY KITS	104000	US00
GRAND RAPIDS	000	RAPIDS NUTS N BOLTS	108000	US00
HOUSTON	000	SPACE BIKE COMPOSITES	105000	US00
IRVING	000	DALLAS BIKE BASICS	103000	US00
LACROSSE	000	NIGHT RIDER ALUMINUM PROD	106000	US00
MCLEAN	000	SPY GEAR	107000	US00
MIAMI	000	FUN N THE SUN SEATS N BAR	110000	US00
PORLAND	000	GREEN BLAZERS SEATS	109000	US00
SCOTTSDALE	000	SUNNY SIDE UP TIRE	111000	US00

AUGSBURG	000	LOHSE SCHRAUBE	118000	DE00
BIELEFELD	000	PYRAMID BIKING	114000	DE00
BRAUNSCHWEIG	000	BURGMEISTER ZUBEHÖR OHG	113000	DE00
DRESDEN	000	SACHSEN STAHL AG	123000	DE00
ERFURT	000	ABS BRAKES GMBH	115000	DE00
HEILBRONN	000	THICK SPOKE	119000	DE00
KARLSRUHE	000	GUMMI SCHULTZE	117000	DE00
KÖLN	000	COLOGNE BIKE SUPPLIES	122000	DE00
MANNHEIM	000	FLAT TIRE AND MORE	116000	DE00
MÜNCHEN	000	RUN & FUN	124000	DE00
SANDKRUG	000	SHELL GEAR	121000	DE00
WÜRZBURG	000	MAIN CARBON	120000	DE00

# Agenda

---

- Global Bike Group
- Organizational Structure
- Products
- Business Partners
- Business Processes

# Business Processes

---

- Sell – Fulfillment
- Buy – Procurement
- Make – Production
- Track – Financial Accounting
- Track – Controlling
- People – Human Capital Management
- Store – Inventory and Warehouse Management
- Maintain – Enterprise Asset Management
- Service – Customer Service
- Project – Project Management

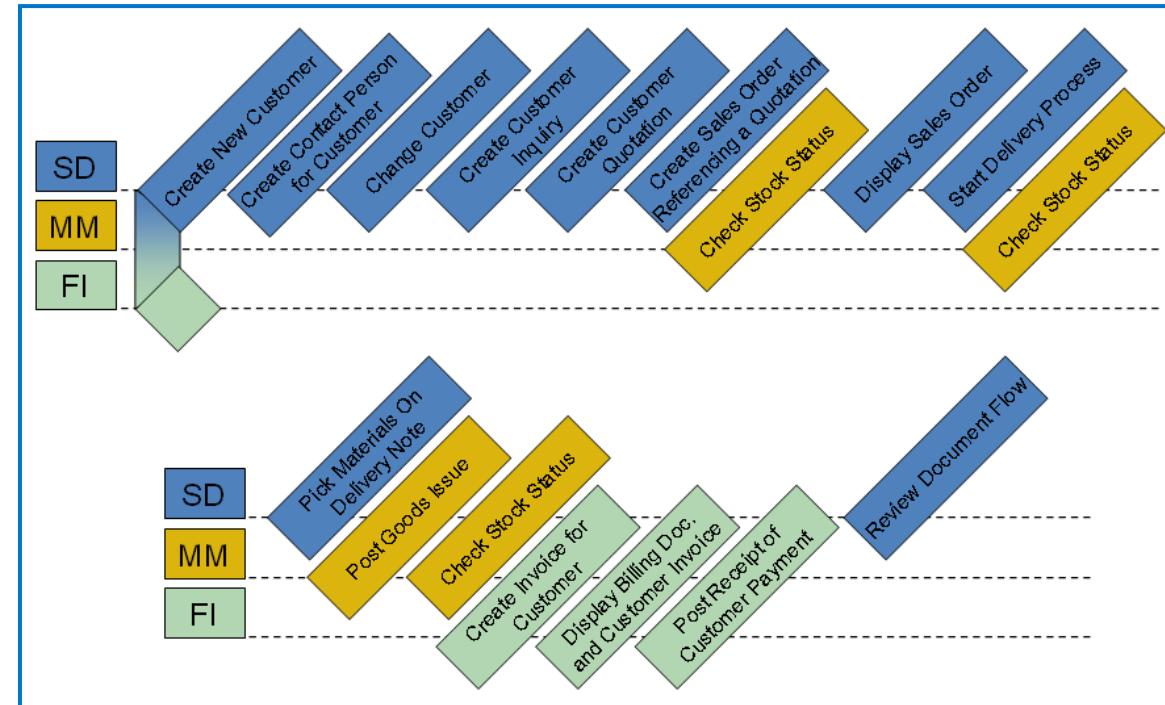
# Cross-functional Integration

---



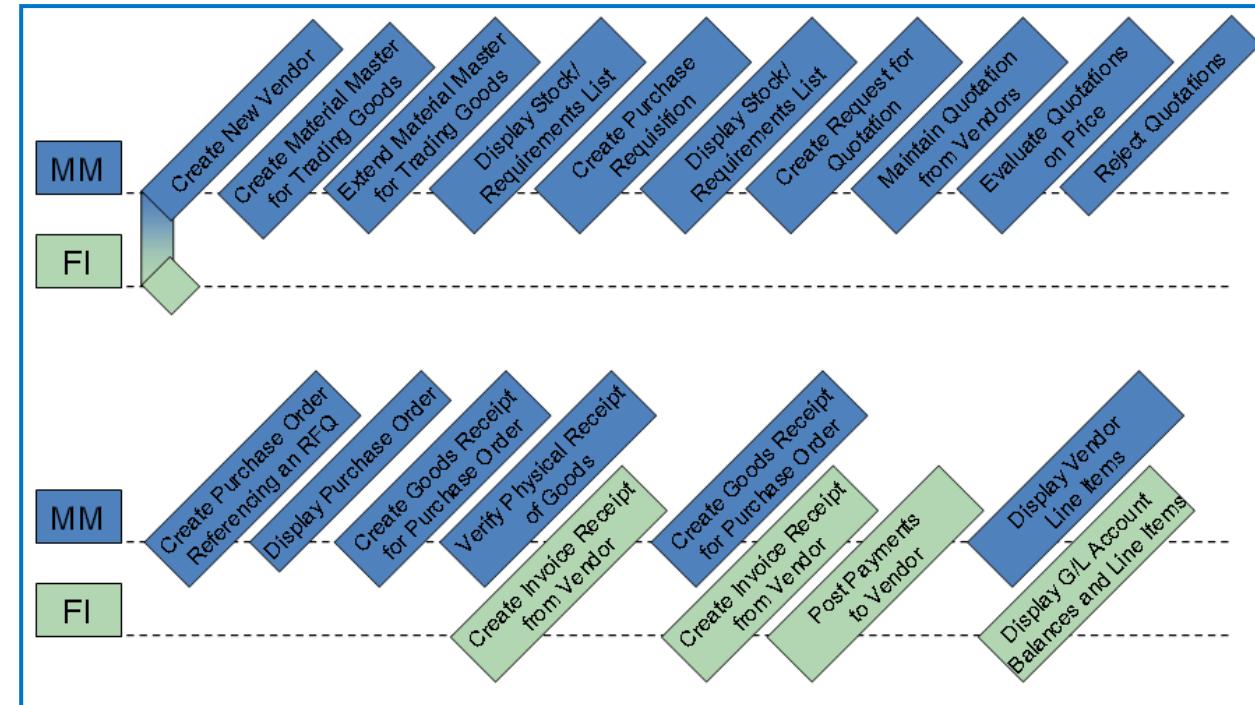
# Process Integration (example)

- Order-to-Cash Process
  - Sales and Distribution (SD)
  - Materials Management (MM)
  - Financial Accounting (FI)



# Process Integration (example)

- Procure-to-Cash Process
  - Materials Management (MM)
  - Financial Accounting (FI)



# Sales and Distribution (SD)

Curriculum: Introduction to ERP using Global Bike



# Teaching material - Information

---



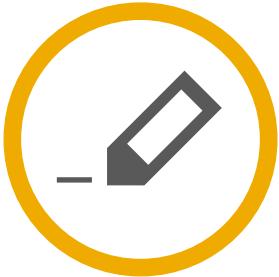
## Teaching material - Version

---

- 3.1 (July 2017)
- Software used
  - SAP ERP 6.08
- Model
  - Global Bike
- Prerequisites
  - No Prerequisites needed

# Module Information

---



## Authors

---

- Bret Wagner
- Stefan Weidner



## Target Audience

---

- Beginner



## Learning Objectives

---

You are able to

- name some functionalities of the SD module.
- define the central organizational structures of the SD module.
- summarize the master data which is most important for the SD module.
- explain a standard sales process.

# Functionality

---

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

# Agenda

---

- SD Organizational Structure
- SD Master Data
- SD Processes
  - Order-to-Cash Process

# SD Organizational Structure

---

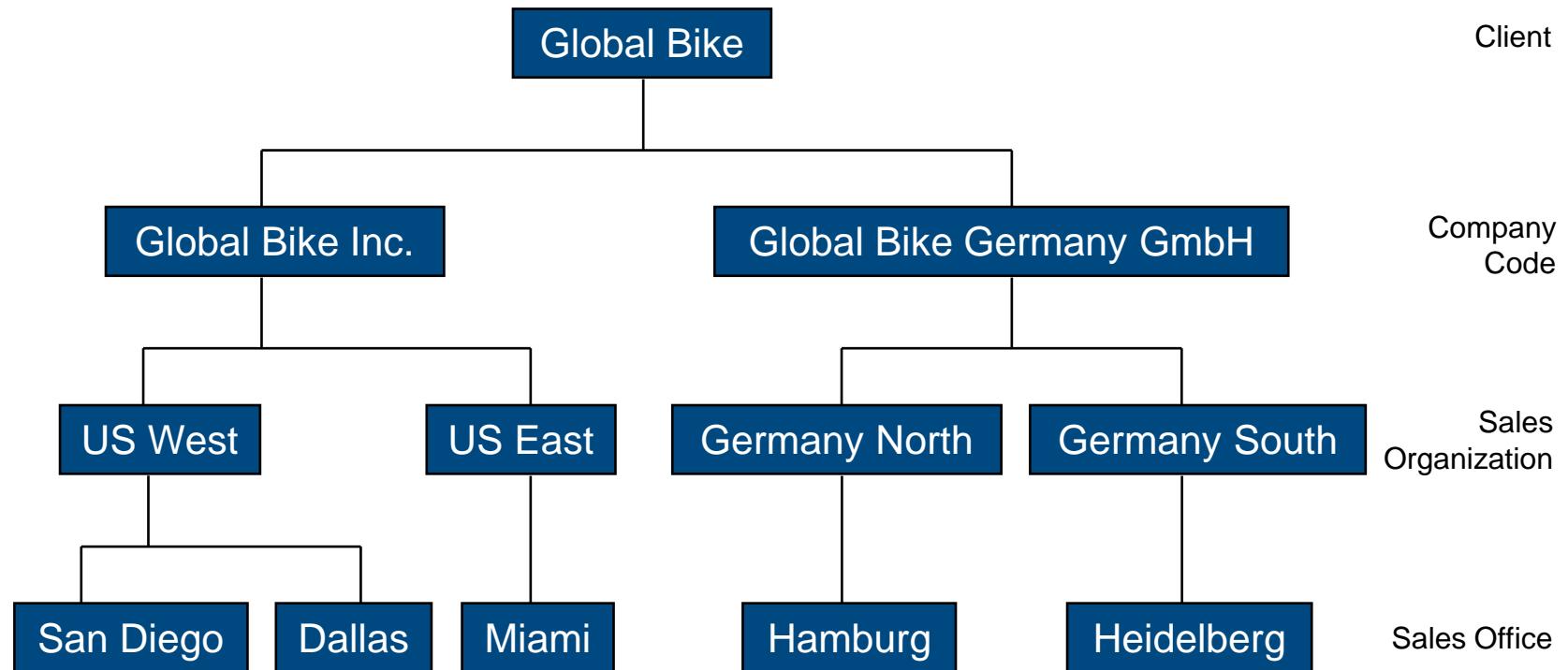
- Client
  - An independent environment in the system
- Company Code
  - Smallest org unit for which you can maintain a legal set of books
- Credit Control Area
  - An organizational entity which grants and monitors a credit limit for customers.
  - It can include one or more company codes
- Sales Organization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

# SD Organizational Structure

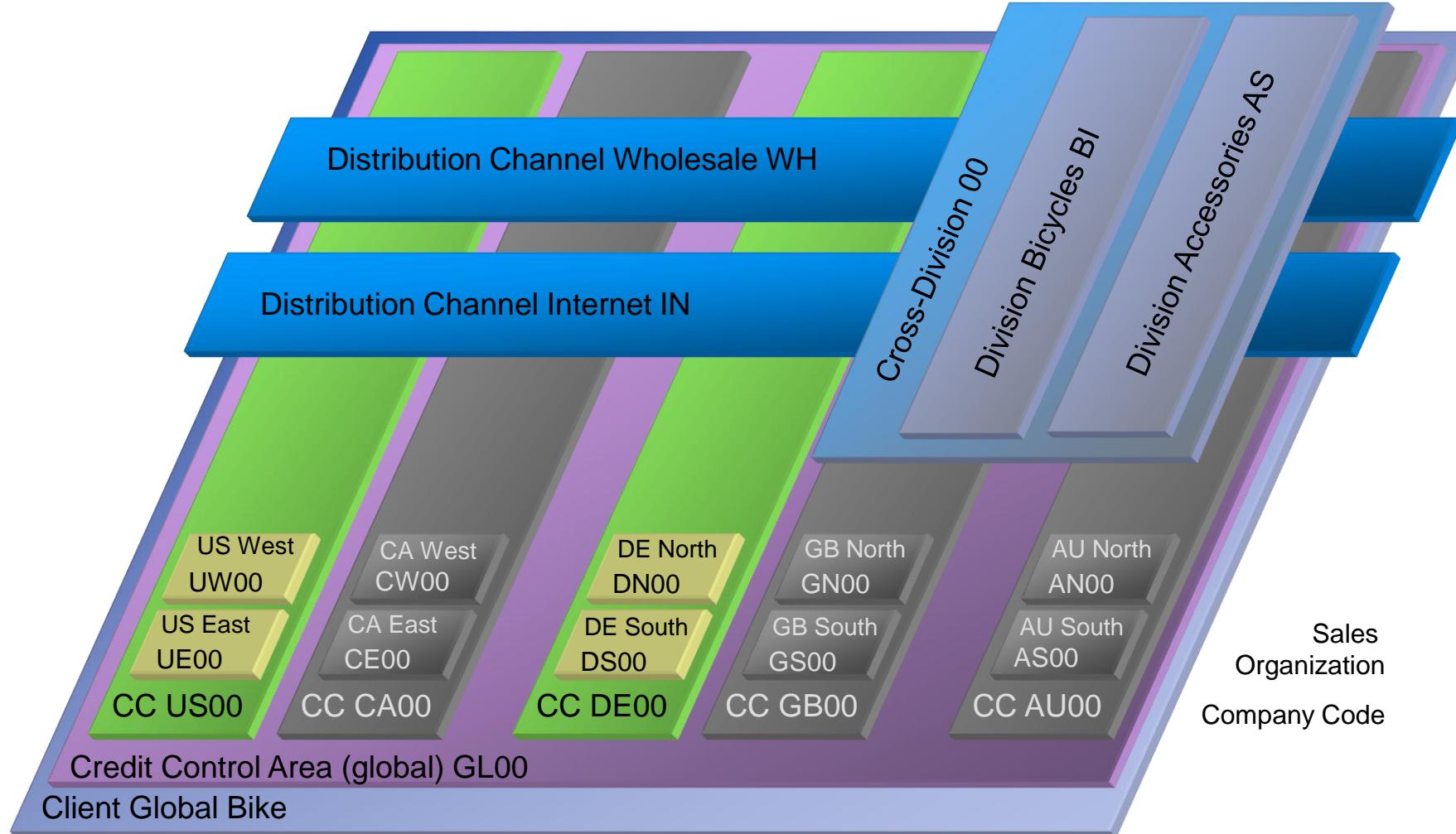
---

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

# Global Bike Structure for Sales and Distribution



# Global Bike Enterprise Structure in SAP ERP (Sales)



# Agenda

---

- SD Organizational Structure
- SD Master Data
- SD Processes
  - Order-to-Cash Process

# SD Master Data

Customer Master

Material Master

## Sales Condition

# Customer Master Data

## ■ Customer Master

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

## ■ Created by Sales Area

- Sales Organization
- Distribution Channel
- Division

**Display Customer: General Data**

Customer 3000 Philly Bikes Philadelphia

Address Control Data Payment Transactions Marketing Export Data

Name  
Title Company  
Name Philly Bikes

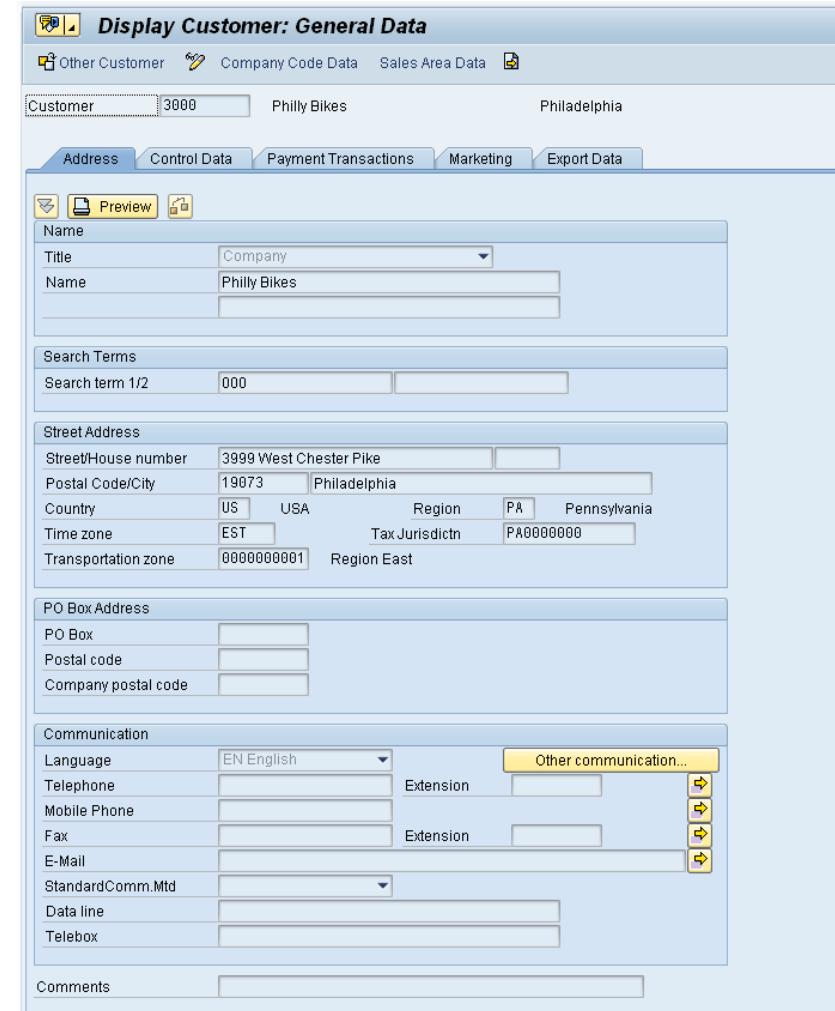
Search Terms  
Search term 1/2 000

Street Address  
Street/House number 3999 West Chester Pike  
Postal Code/City 19073 Philadelphia  
Country US USA Region PA Pennsylvania  
Time zone EST Tax Jurisdictn PA00000000  
Transportation zone 0000000001 Region East

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  
Telebox

Comments



# Customer Master Data

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

Display Customer: General 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 Jurisdctn: PA00000000  
Transportation zone: 0000000001 Region East

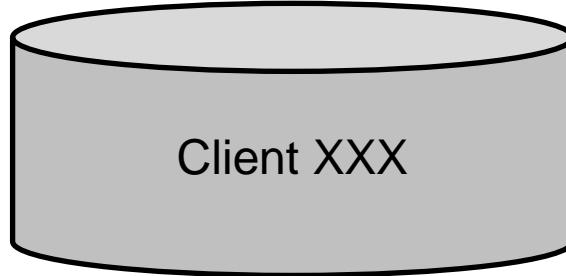
PO Box Address  
PO Box:   
Postal code:   
Company postal code:

Communication  
Language: EN English Other communication...  
Telephone:  Extension:   
Mobile Phone:   
Fax:  Extension:   
E-Mail:   
StandardComm.Mtd:   
Data line:   
Telebox:

Comments:

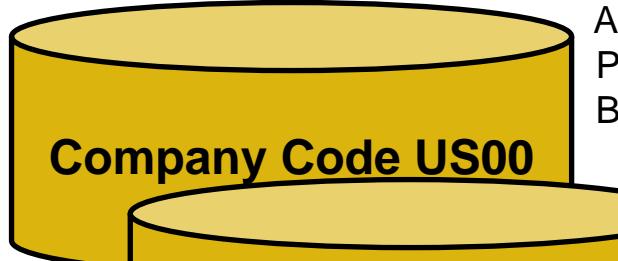
# Customer Master

**General Information** relevant for the entire organization:

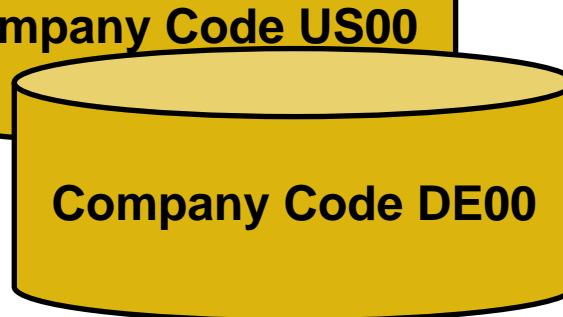


Name  
Address  
Communication

**Company Code specific information:**



Acc. Mgmt  
Payment  
Bank



**Sales Area specific information:**



Sales Office Currency

# 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			

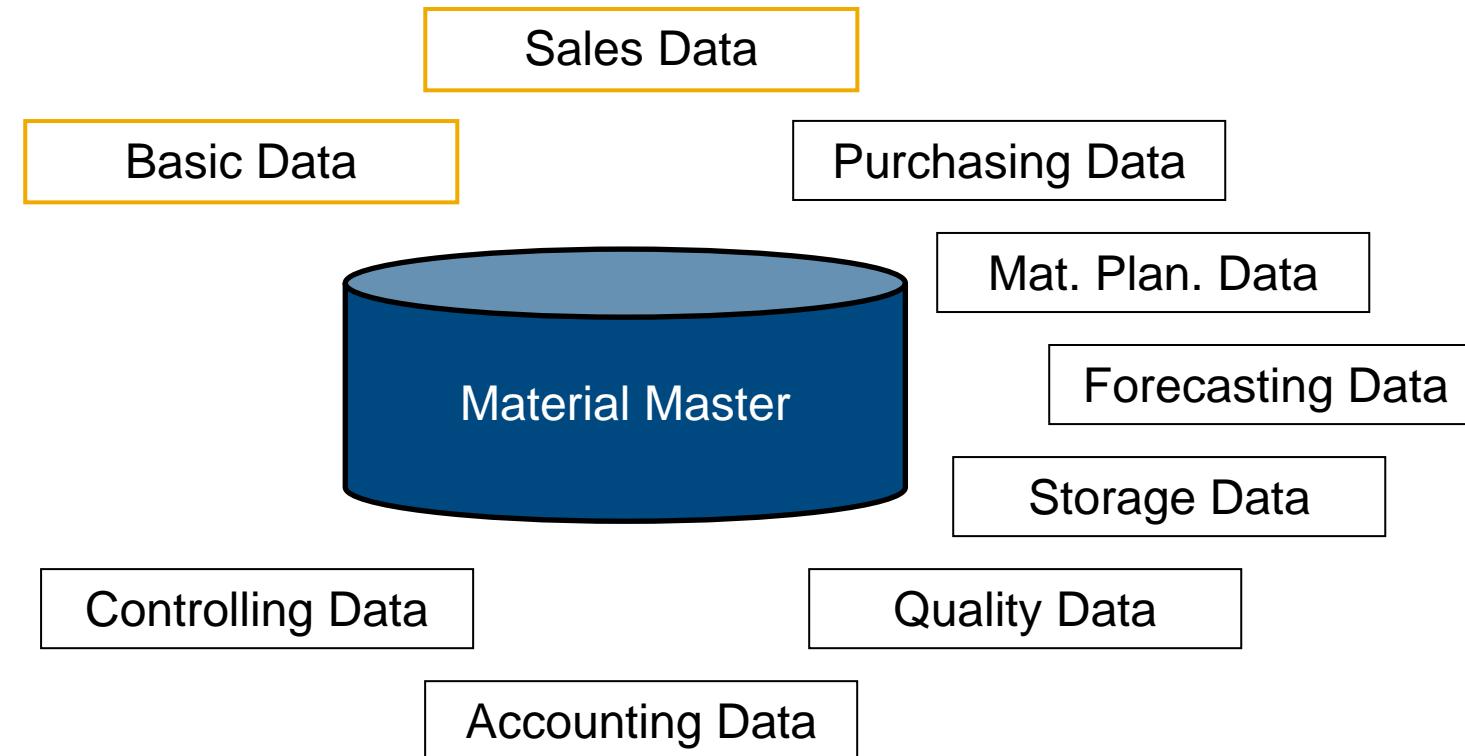
Packaging material data

Matl Grp Pack.Mats
--------------------

Basic Data Texts

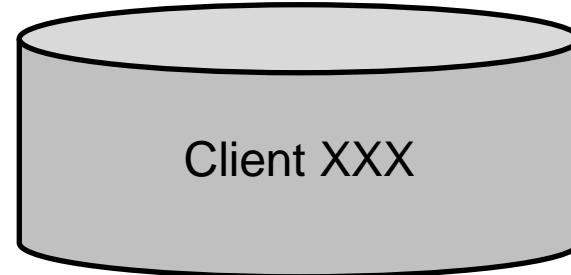
Languages Maintained: 0	Basic Data Text	Language:
-------------------------	-----------------	-----------

# Material Master Views



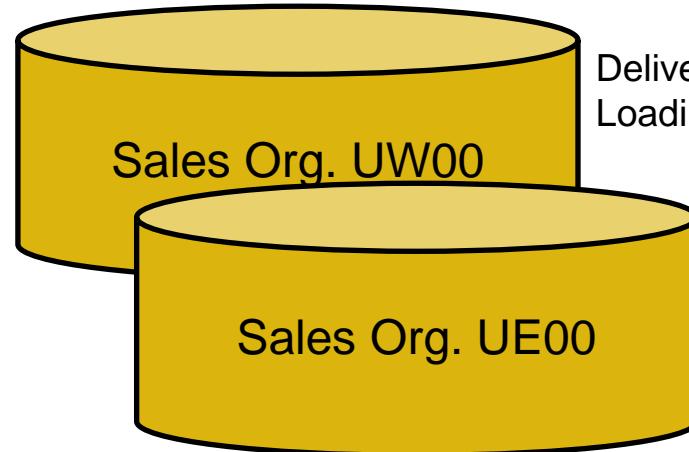
# Material Master

General Information relevant for the entire organization:



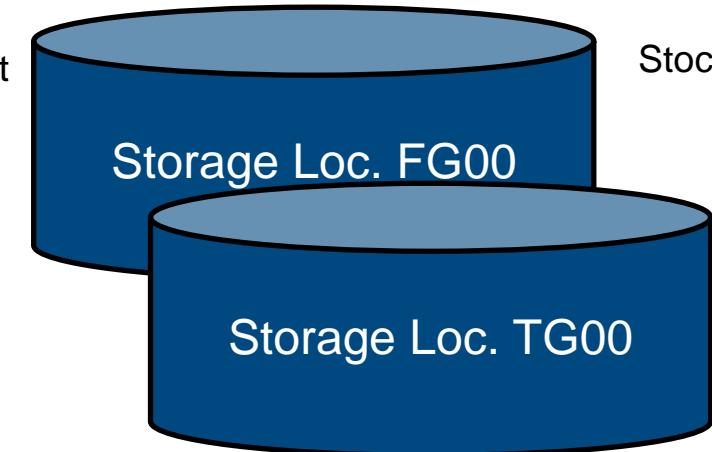
Name  
Weight  
Unit of Measure

Sales specific information:



Delivering Plant  
Loading Grp

Storage Location specific information:



Stock Qty

# 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

The image displays two separate SAP Fiori application screens, each showing a sales document item configuration and a detailed pricing elements table.

**Screenshot 1 (Top):** Sales Document Item 10, Material DXTR1000 (Deluxe Touring Bike (black)).

N... CrnTy 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

**Screenshot 2 (Bottom):** Sales Document Item 10, Material PRTR1000 (Professional Touring Bike (black)).

N... CrnTy 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

# Output

- 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

**Change Standard Order 1: Output**

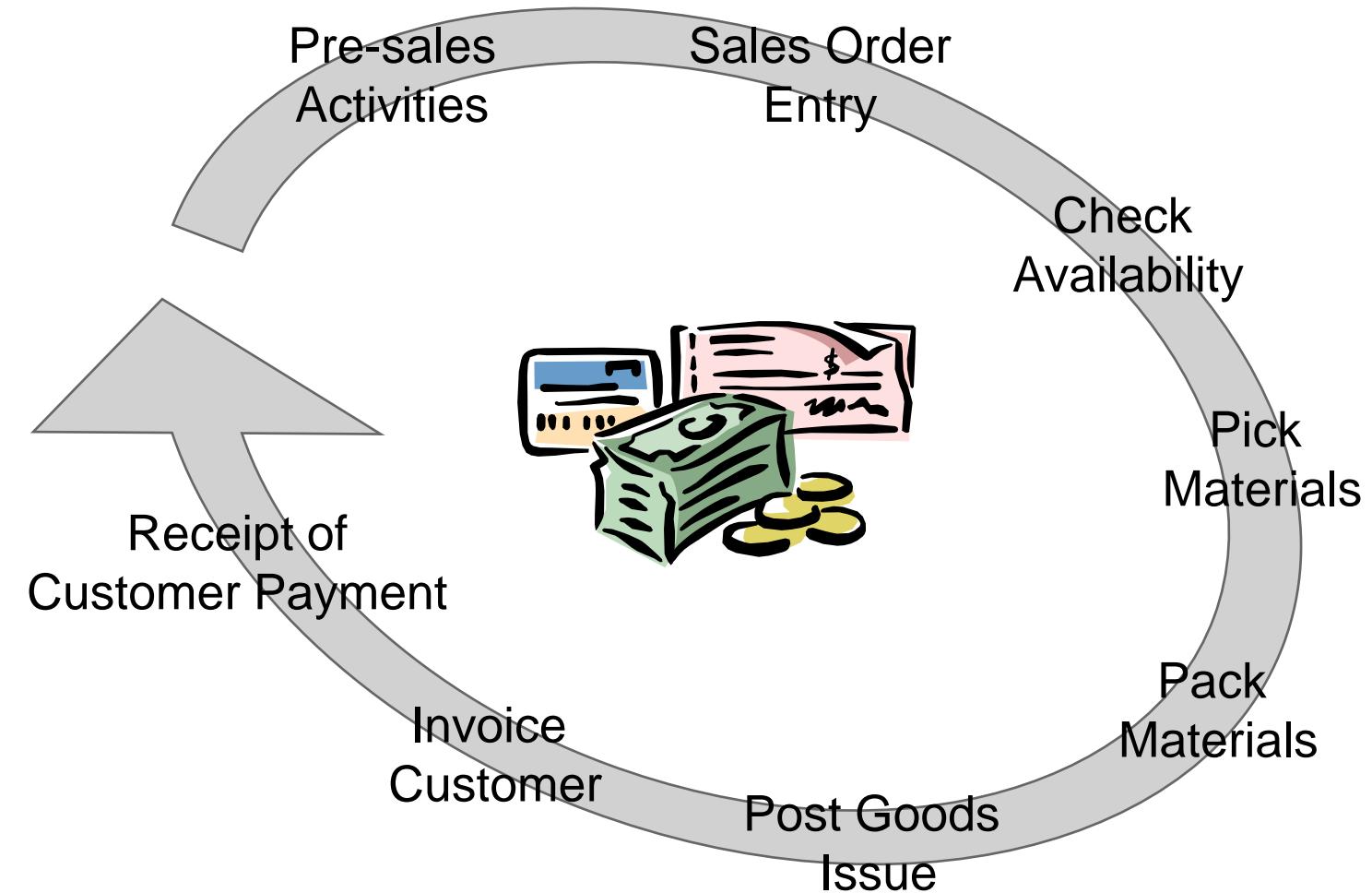
Sold-to party	3000	Philly Bikes
Output type	BA00	
<b>Printing information</b>		
Logical destination	LOCL	
Number of messages	<input type="checkbox"/>	<input checked="" type="checkbox"/> Print immediately
Spool request name	<input type="checkbox"/>	
Suffix 1	<input type="checkbox"/>	
Suffix 2	<input type="checkbox"/>	
SAP cover page	Do Not Print	
Recipient	WEIDNER	
Department	<input type="checkbox"/>	
Cover Page Text	Access Type for Print Parameter and Proposal	
Authorization	<input type="checkbox"/>	
Storage Mode	1 Print only	
<b>Format</b>		
Form	<input type="checkbox"/>	

# Agenda

---

- SD Organizational Structure
- SD Master Data
- SD Processes
  - Order-to-Cash Process

# Sales Order Process



# Pre-Sales Activities (CRM Light)

---

- 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

The screenshot displays the SAP CRM Light interface. At the top left, there's a 'Sales activity' card showing a Sales Call from 10/04/2006 at 09:45 to 10/04/2006 at 10:22, with a comment 'Status HOT'. To the right is a 'Contact persons' card for company 162 (SAP, America // Newton Square PA) and contact person Eva Romero, with employee respons. 21 (Grayson / 150 Forest Ave / US / 5). Below these are 'Follow-up actions' like 'Create standard order' and buttons for 'Start', 'Link objects', and 'Link objects'. A navigation bar at the bottom includes 'Description', 'Partner', 'Texts', and 'Sales summary'. The main area features a 'Statistics measures' table and a 'Last SD documents' table. The 'Statistics measures' table shows one row for 'Sales activities (CAS)' with values: Min 0, Max 0, Totals 0, Average 0, Open 0, Number 0. The 'Last SD documents' table lists six sales documents with details like date, net value, and status (e.g., Open, Completed, Being processed).

Document category	Min	Max	Totals	Average	Open	Number
Sales activities (CAS)	0	0	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
0000000146 ▶	10/03/06	1,452.25 USD	Open
0000000145 ▶	09/25/06	1.09 USD	Open
0000000140 ▶	03/15/06	49,750.00 USD	Completed
0000000133 ▶	09/14/05	18,000.00 USD	Open
0000000132 ▶	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.

Inquiry					
Company	The Bike Zone				
	2105 N Lewis Ave				
	Portland OR 97227				
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: 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	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.

Quotation					
Company The Bike Zone 2105 N Lewis Ave Portland OR 97227					Number/Date 20000000 / 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: 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	Qty	Price	Price unit
000010 DXTR1000	5 EA	Deluxe Touring Bike (black)			Value
		Material	3,000.00	USD	1 EA 15,000.00
		% Discount from N	50.00-	USD	1 EA 250.00-
		Net Value for Ite	5.000-	%	737.50-
000020 PRTR1000	2 EA	Professional Touring Bike (black)	2,802.50	USD	1 EA 14,012.50
		Material	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

# Sales Order

---

- 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

# 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

This screenshot shows the SAP Sales Order header screen. It includes fields for Standard Order (15), 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), Net value (20,092.50 USD), and PO date (04/21/2010). Below these are tabs for Sales, Item overview, Item detail, Ordering party, Procurement, Shipping, and Reason for rejection. Under Sales, there are fields for Req. deliv.date (05/21/2010), Deliver.Plant (empty), Total Weight (57,170 G), Complete div. (unchecked), Delivery block (empty), Volume (0.000), Billing block (empty), Pricing date (04/21/2010), Payment card (empty), Exp.date (empty), Card Verif.Code (empty), Payment terms (0001 - Pay immediately w/o Incoterms), FOB (San Diego), and Order reason (empty). A table below lists All items with two entries: 10 DXTR1000 (5 EA) and 20 PRTR1000 (2 EA). The table columns are Item, Material, Order Quantity, Unit, Description, and Customer Material N.

This screenshot shows the SAP Sales Order line item screen. It displays a Sales Document Item (10) and Material (DXTR1000 - Deluxe Touring Bike (black)). Below this are tabs for Sales A, Sales B, Shipping, Billing Document, Conditions, Account assignment, Schedule lines, and Pa. Under Sales A, there are fields for Fixed date and qty (checkbox checked), Order Quantity (5 EA), Delivery time (empty), and Delivered qty (5). A table at the bottom titled 'Quantities/Dates' shows one row with Delivery Date (04/21/2018), Order quantity (5), Rounded qty (5), Confirmed Qty (5 EA), Delivery block (empty), and Delivered qty (5).

# Sales Order

---

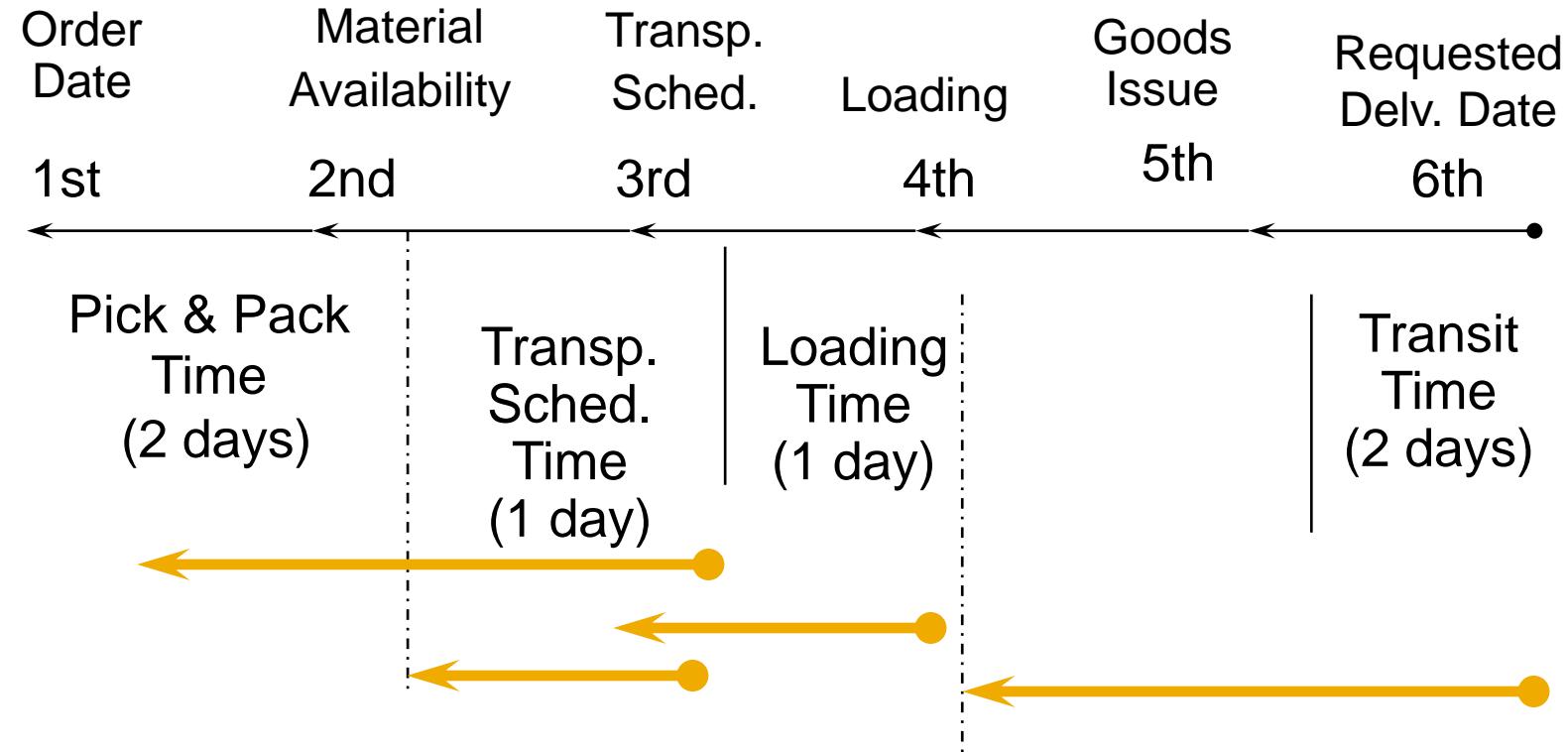
- The sales order contains all of the information needed to process your customers request, the following information is determined for each sales order:
  - Delivering Schedule
  - Shipping point and route determination
  - Availability Check
  - Transfer of requirements to MRP
  - Pricing
  - Credit limit check

# Delivery Scheduling

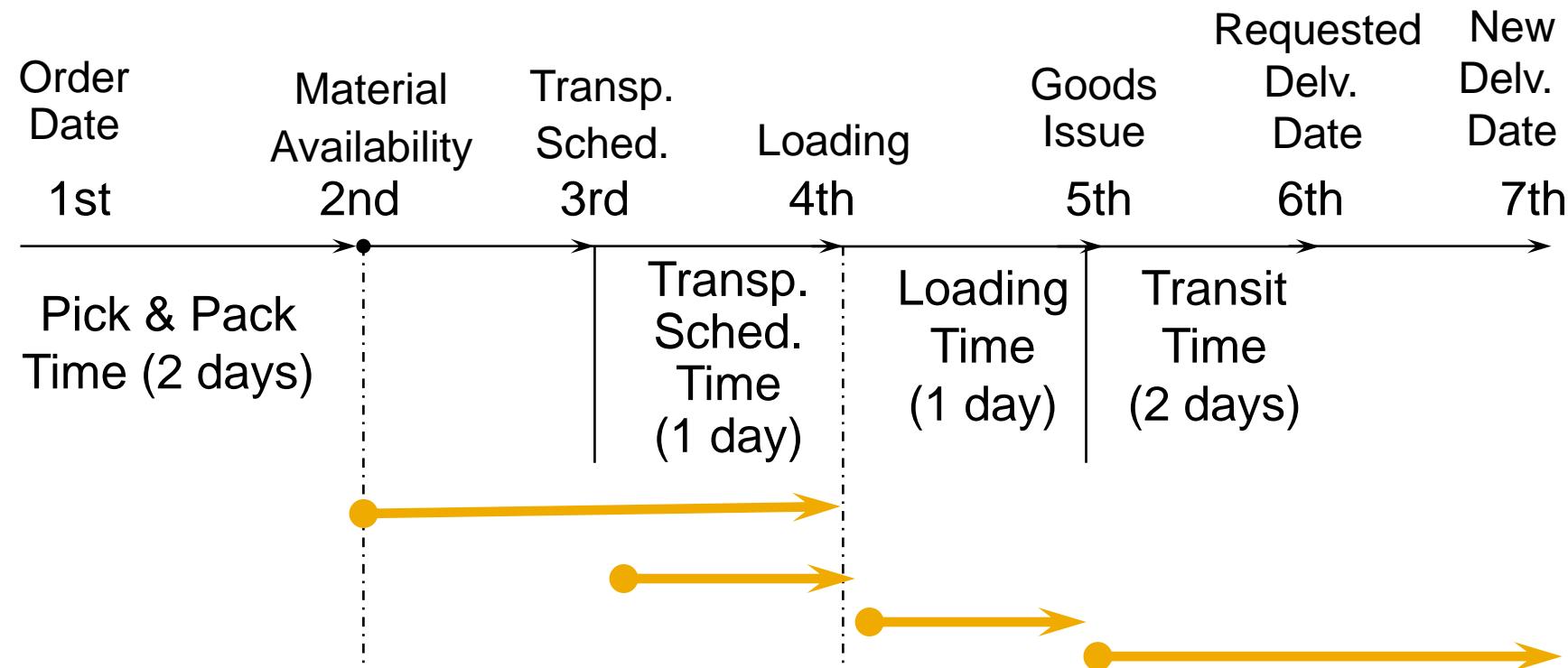
---

- 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



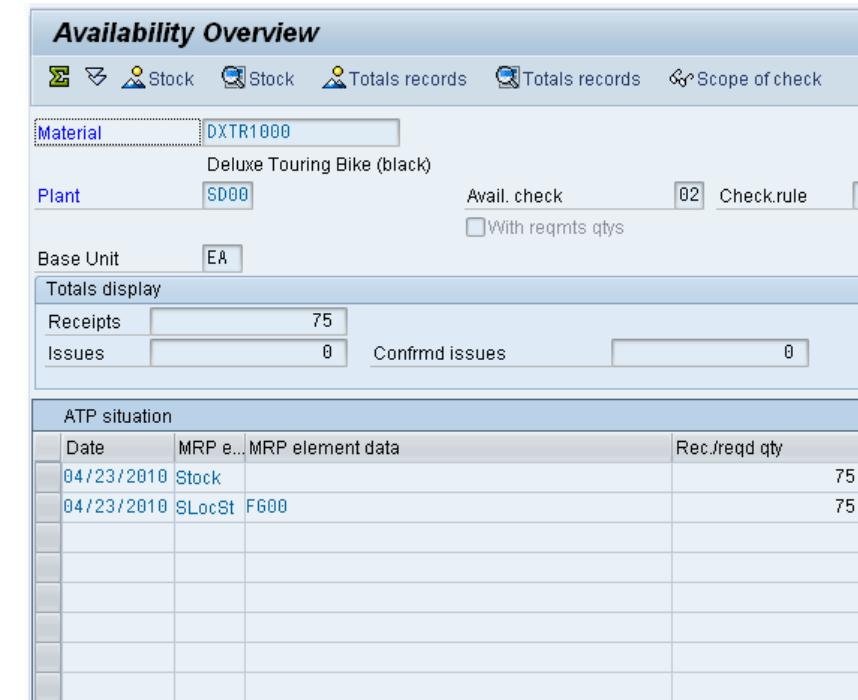
# Shipping & Route Determination

---

- 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.

# 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



# 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 set-up so we can't manually enter

# Credit Check

---

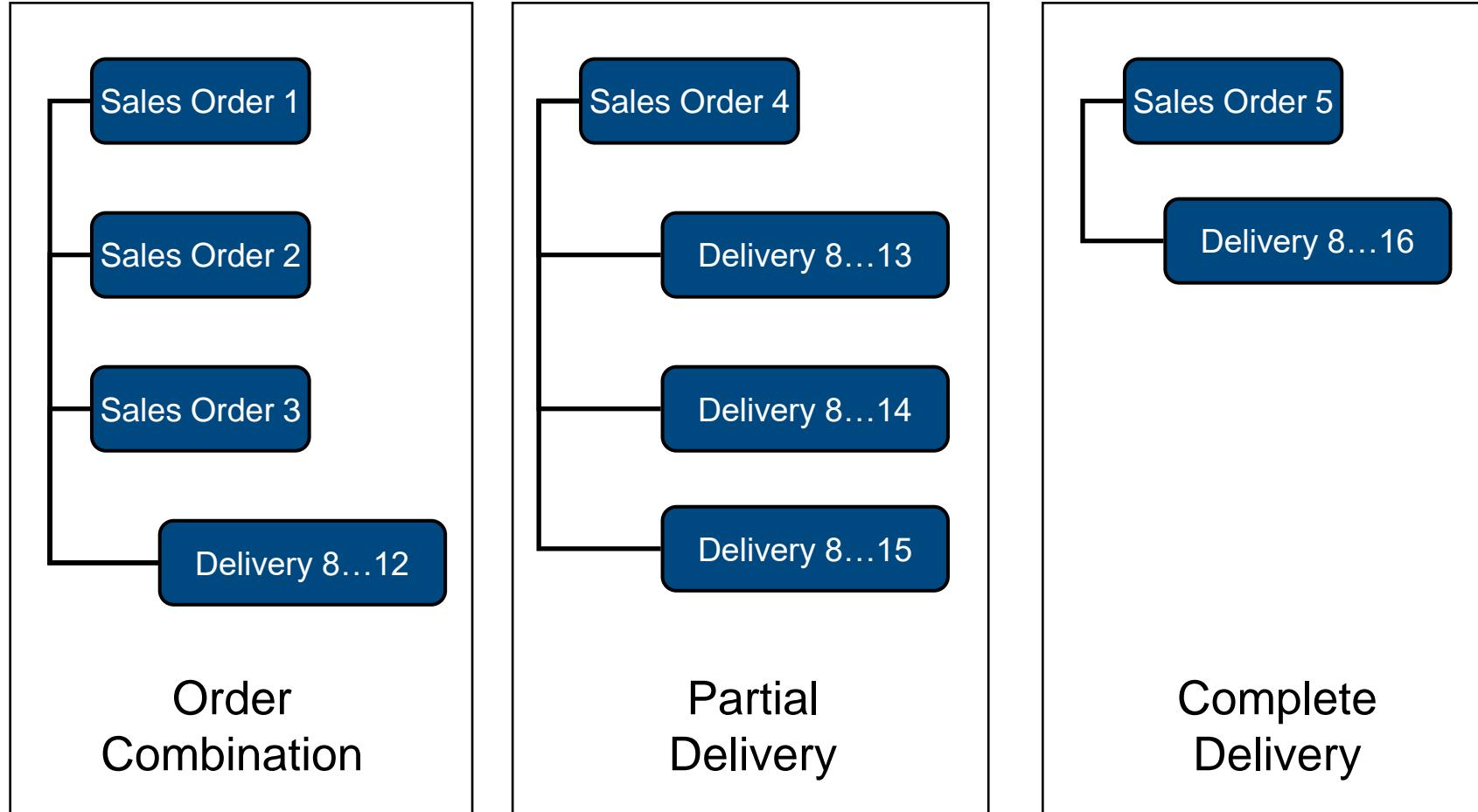
- Allows your company to manage its credit exposure and risk for each customer by specifying credit limits.
- During the sales order process the system will alert the sales rep about the customers credit situation that arises, if necessary the system can be configured to block orders and deliveries.

# Shipping & Transportation

---

- 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

# Shipping



# Delivery Creation

---

- Checks order and materials to determine if a delivery is possible — delivery block (hold), completeness
- Confirms availability
- Confirms export/foreign trade requirements
- Determines total weight & volume

# Delivery Creation

---

- Generates packing proposal
- Calculates weight and volume
- Checks scheduling
- Considers partial deliveries
- Updates route assignment
- Assigns picking location
- Updates sales order
- Determines batches
- Quality check (if needed)
- Updates sales order

# Delivery Document

---

- The Delivery Document initiates the delivery process and is the control mechanism for this process
  - Picking
  - Packing
  - Loading
  - Posting Goods Issue
- Changes to delivery are allowable - products, quantities

# Picking

---

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

# Loading and Packing

---

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

# 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

# Billing

---

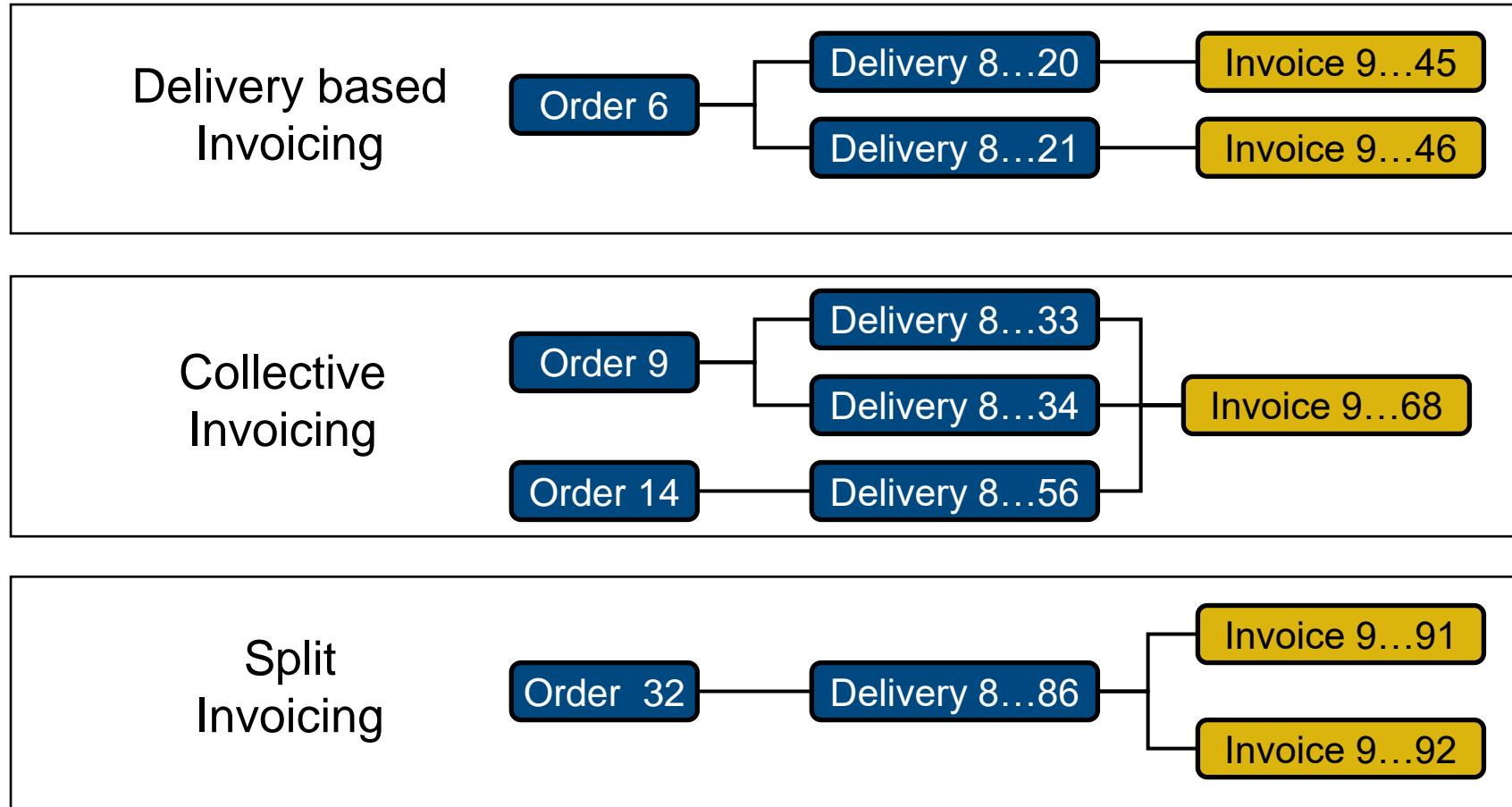
- The billing document is created by coping data from the sales order and/or delivery document.
  - Order-based billing
  - Delivery-based billing
- The billing process is used to generate the customer invoice.
- It will update the customer's credit status.

# Billing Documents

---

- The billing document will automatically create a debit posting to your customer sub-ledger account and credit your revenue account.
- It is at this point that the sales process is passed over to Financial Accounting to await payment.

# Billing Methods



# Payment

---

- 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.

# 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									
		Status overview	Display document	Service documents	[Color Bar]				
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 Order Process Debugging

---

- “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

# Sales Order Process Debugging

- Document Flow 
- Gives Order Process Status
- List of Sales Orders (VA05)
  - Tool to Find Order
  - Need student's user id/data set number

Document Flow							
		Status overview	Display document	Service documents		H	
		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:dely 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

# Materials Management (MM)

Curriculum: Introduction to ERP using Global Bike



# Teaching material - Information

---



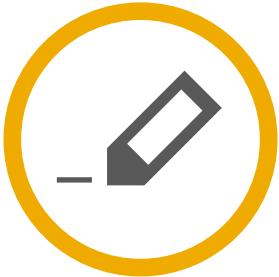
## Teaching material - Version

---

- 3.1 (July 2017)
- Software used
  - SAP ERP 6.08
- Model
  - Global Bike
- Prerequisites
  - No Prerequisites needed

# Module Information

---



## Authors

---

- Bret Wagner
- Stefan Weidner



## Target Audience

---

- Beginner



## Learning Objectives

---

You are able to

- name some functionalities of the MM module.
- define the central organizational structures of the MM module.
- summarize the master data which is most important for the MM module.
- explain a standard purchasing process.

# Functionality

---

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

# Agenda

---

- MM Organizational Structure
- MM Master Data
- MM Processes
  - Procure-to-Pay Process

# MM Organizational Structure (Materials Mgmt.)

---

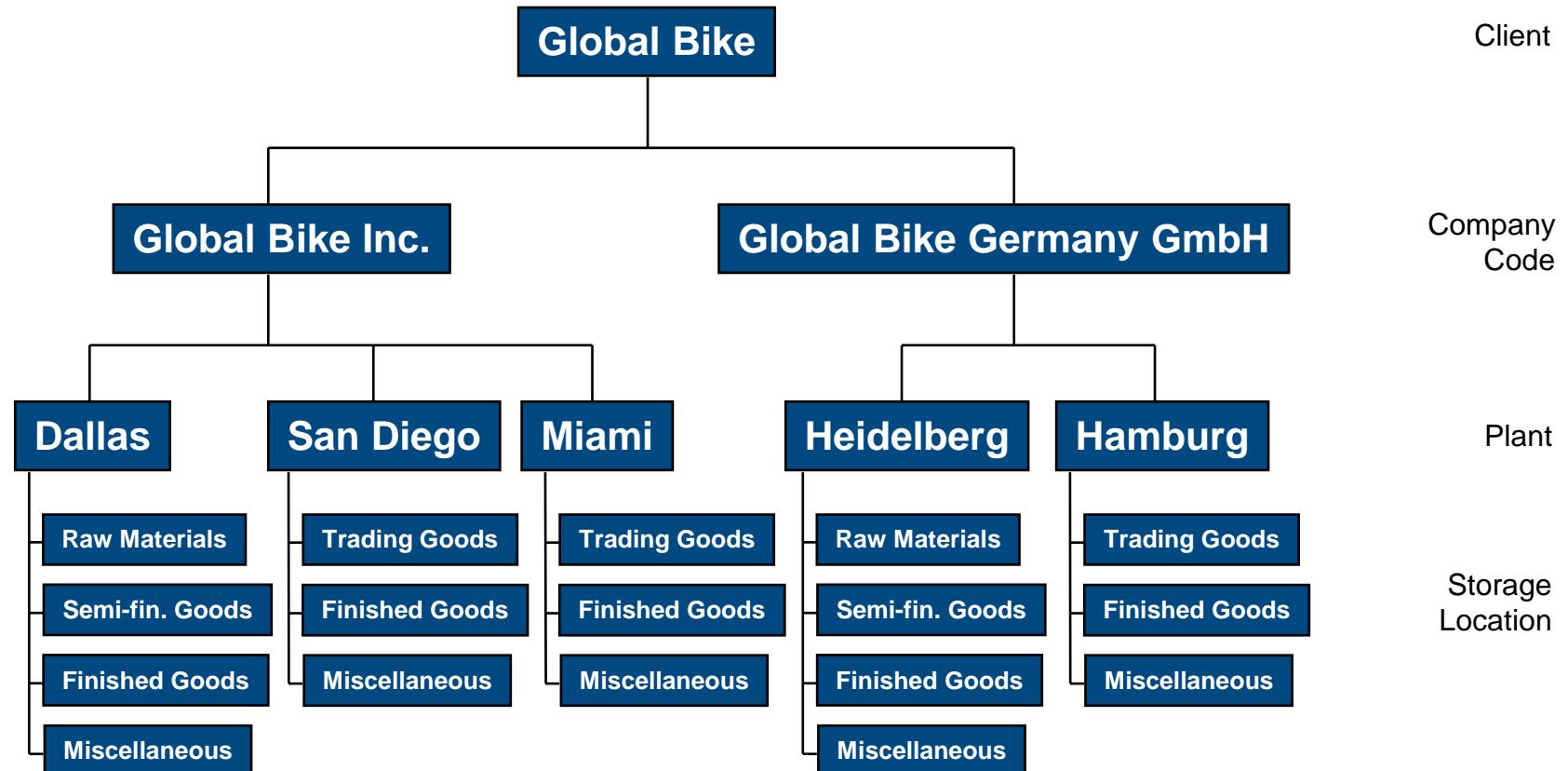
- Client
  - An independent environment in the system
- Company Code
  - Smallest org unit for which you can maintain a legal set of books
- Plant
  - Operating area or branch within a company
    - Manufacturing, distribution, purchasing or maintenance facility
- Storage Location
  - An organizational unit allowing differentiation between the various stocks of a material in a plant

# MM Organizational Structure (Purchasing)

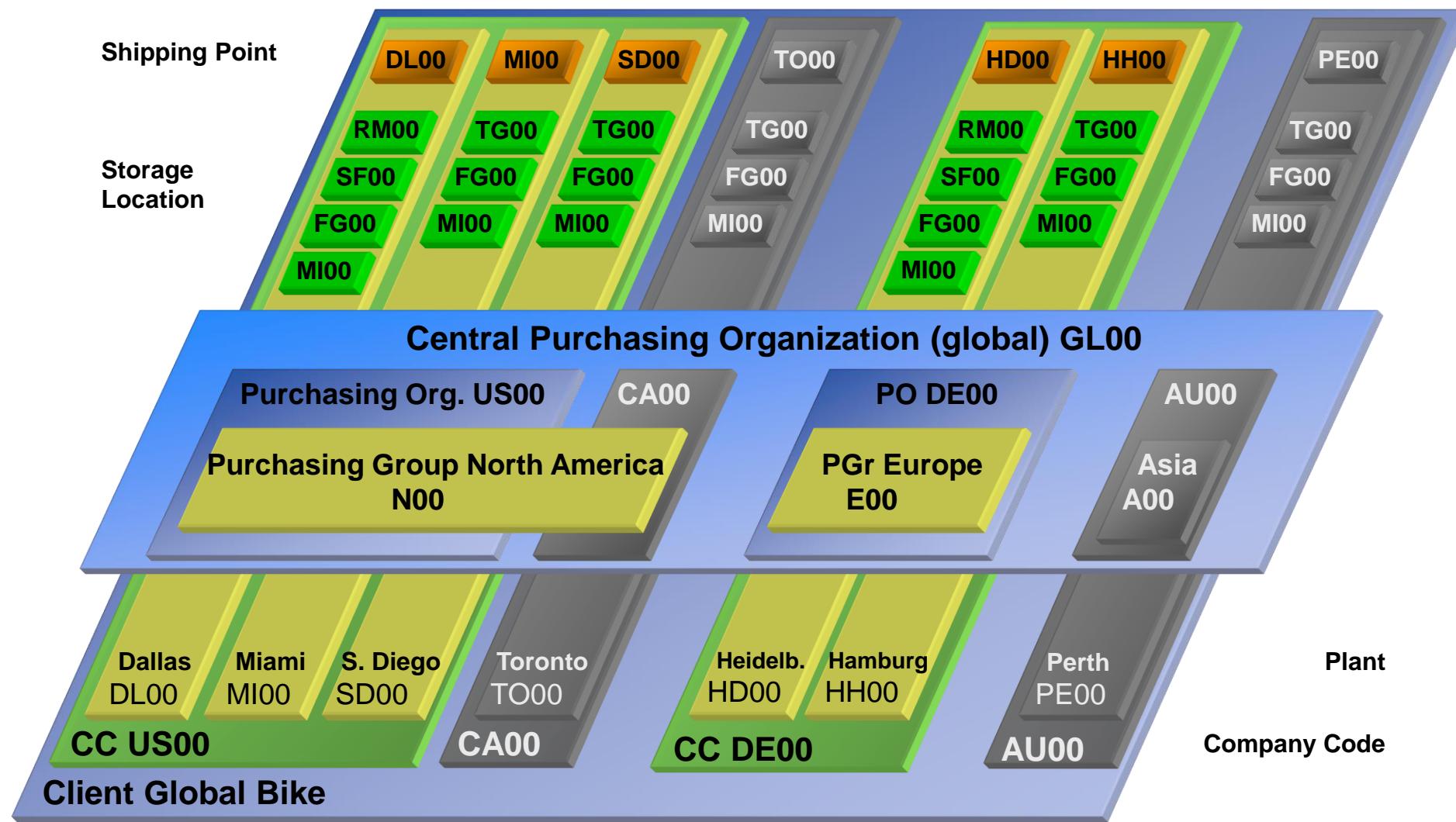
---

- Purchasing Organization
  - The buying activity for a plant takes place at the purchasing organization
  - Organization unit responsible for procuring services and materials
  - Negotiates conditions of the purchase with the vendors
  
- Purchasing Group
  - Key that represents the buyer or group of buyers who are responsible for certain purchasing activities
  - Channel of communication for vendors

# Global Bike Structure for Materials Management



# Global Bike Enterprise Structure in SAP ERP (Logistics)

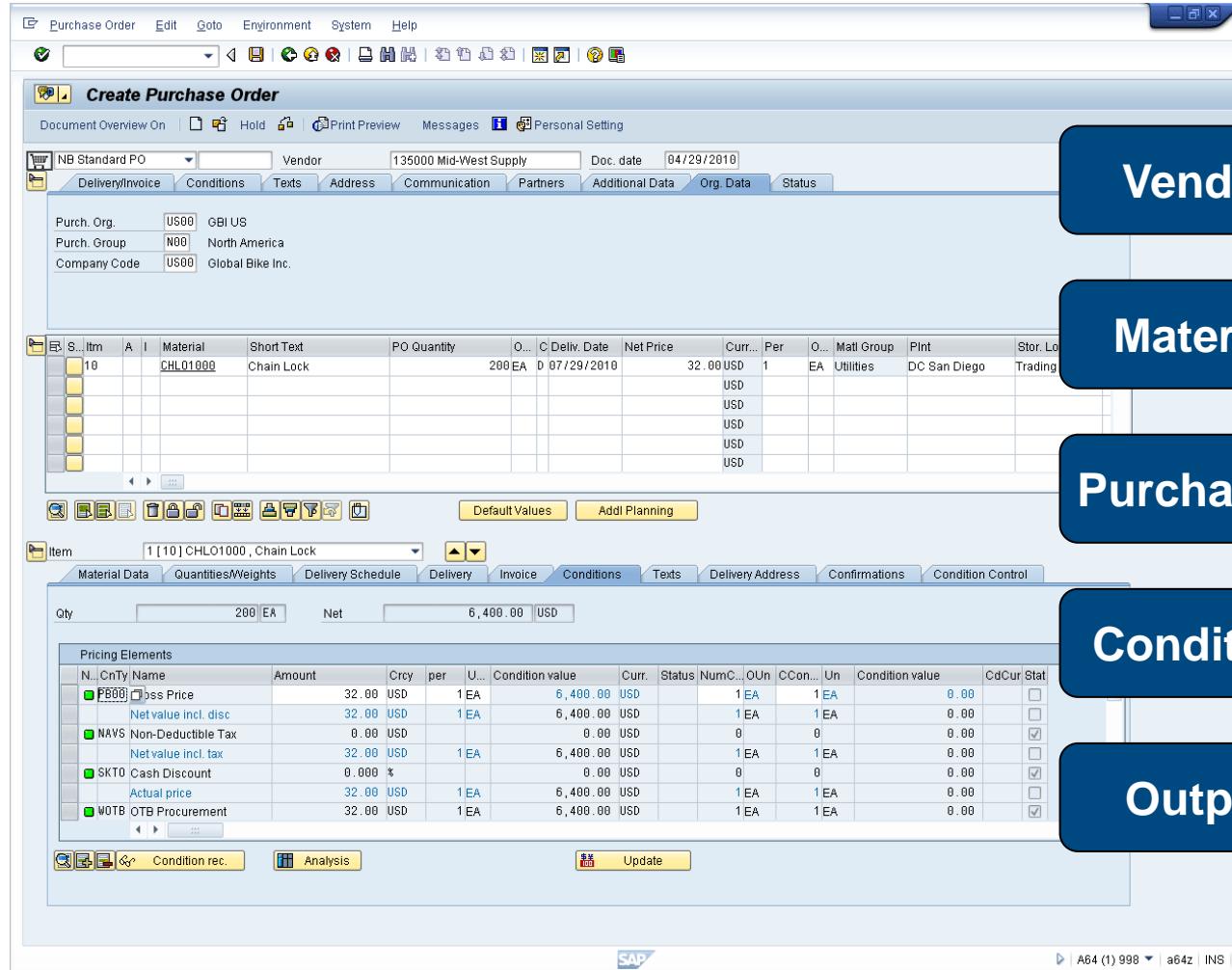


# Agenda

---

- MM Organizational Structure
- MM Master Data
- MM Processes
  - Procure-to-Pay Process

# MM Master Data



Vendor Master Data

Material Master Data

Purchasing Info Record

Condition Master Data

Output Master Data

# Vendor Master Data

## ■ Vendor Master

- Contains all the necessary information needed to business with an external supplier
- Used and maintained primarily by the Purchasing and Accounting Departments
- Every vendor MUST have a master record

**Create Vendor: Address**

Vendor INTERNAL

Preview

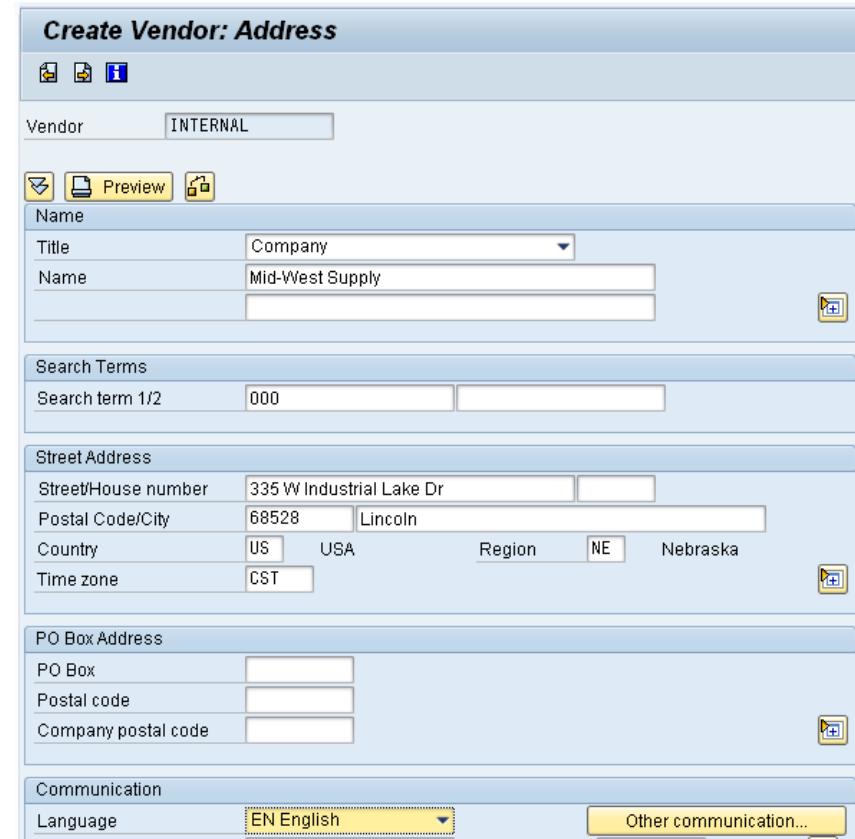
Name  
Title Company  
Name Mid-West Supply

Search Terms  
Search term 1/2 000

Street Address  
Street/House number 335 W Industrial Lake Dr  
Postal Code/City 68528 Lincoln  
Country US USA Region NE Nebraska  
Time zone CST

PO Box Address  
PO Box  
Postal code  
Company postal code

Communication  
Language EN English Other communication...



# Vendor Master Views

---

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

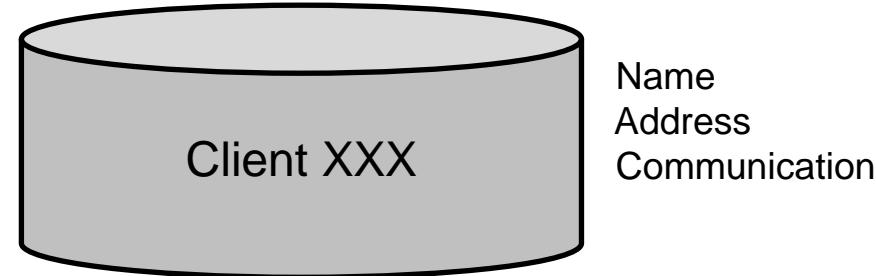
General Data

Company Code Data  
Financial Accounting (FI)

Purchasing Data  
Materials Mgmt (MM)

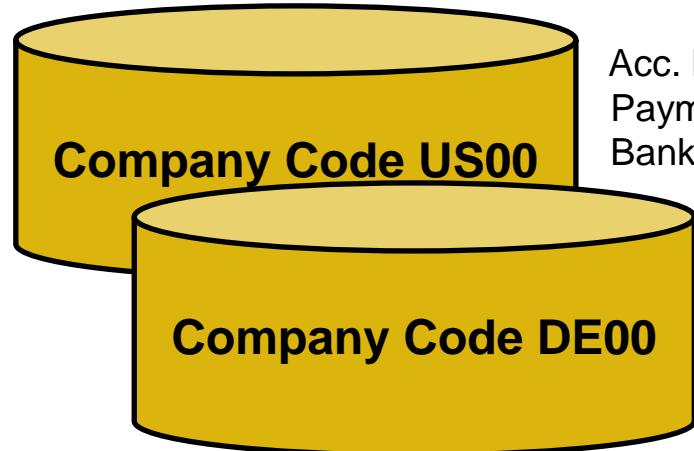
# Vendor Master

**General Information** relevant for the entire organization:



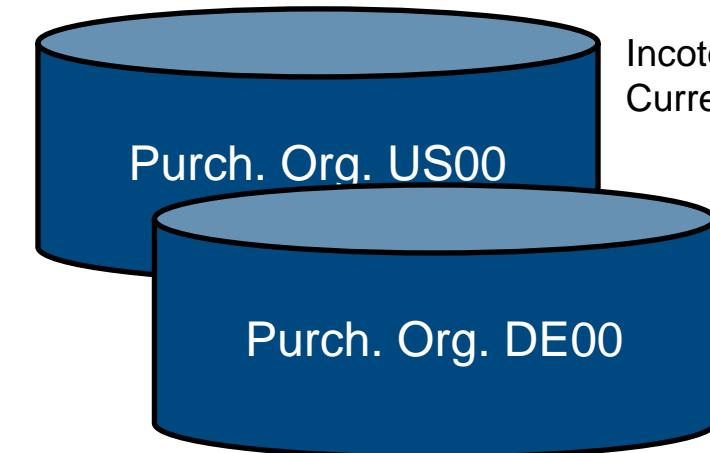
Name  
Address  
Communication

**Company Code specific information:**



Acc. Mgmt  
Payment  
Bank

**Purch. Organization specific information:**



Incoterms  
Currency

# 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)    H

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	<input type="checkbox"/>	Valid from		
<input type="checkbox"/> Assign effect. vals		GenItemCatGroup NORM Standard item		

Material authorization group

Authorization Group
---------------------

Dimensions/EANs

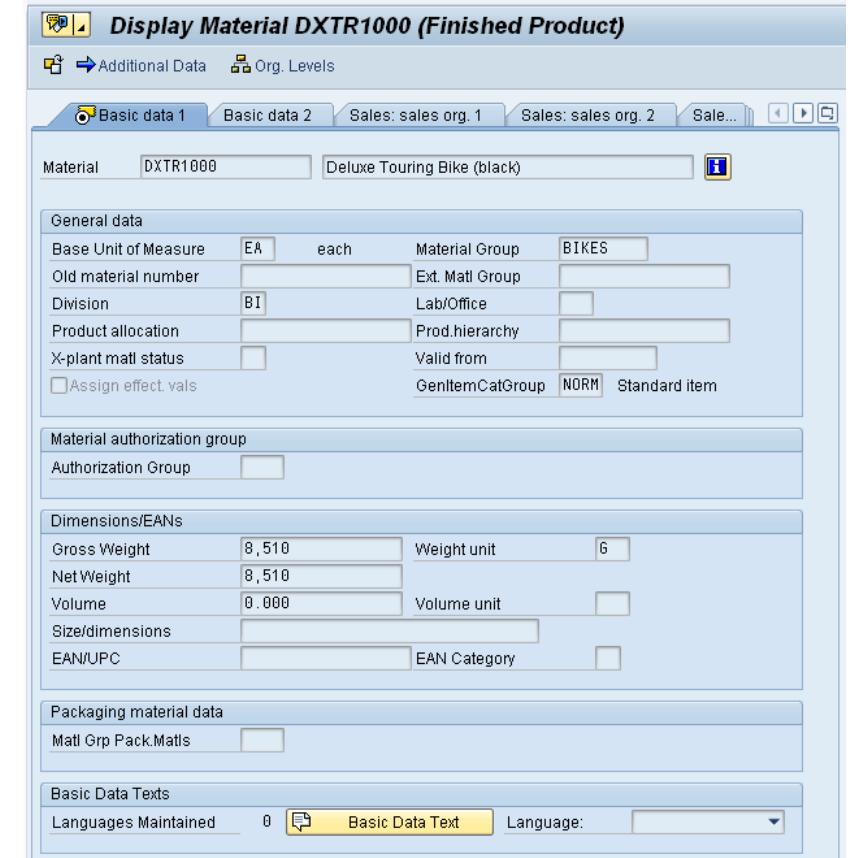
Gross Weight	8,510	Weight unit	6
Net Weight	8,510		
Volume	0.000	Volume unit	
Size/dimensions			
EAN/UPC			
EAN Category			

Packaging material data

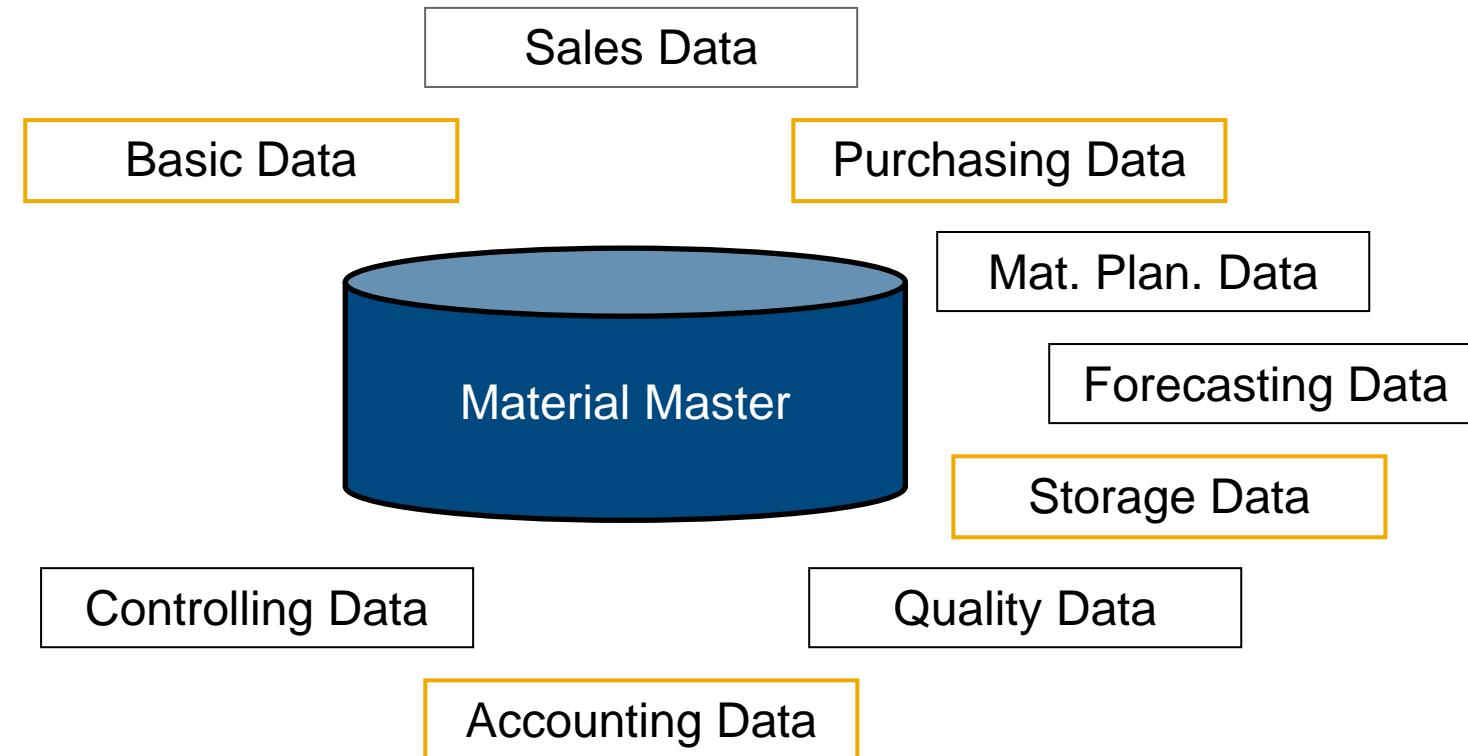
Matl Grp Pack.Matl
--------------------

Basic Data Texts

Languages Maintained: 0	Basic Data Text	Language:
-------------------------	-----------------	-----------



# Material Master Views



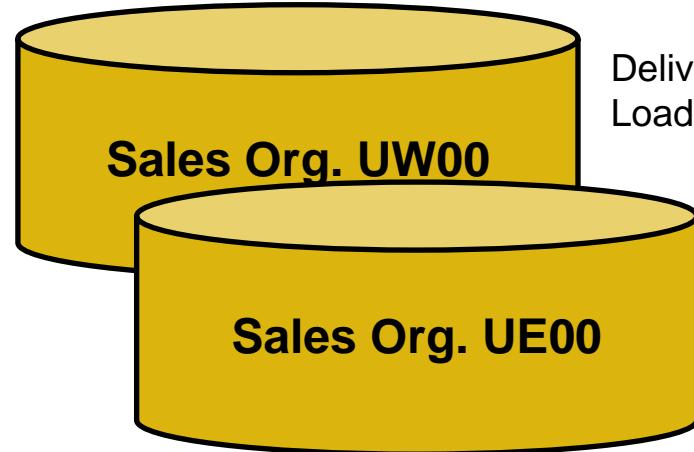
# Material Master

**General Information** relevant for the entire organization:



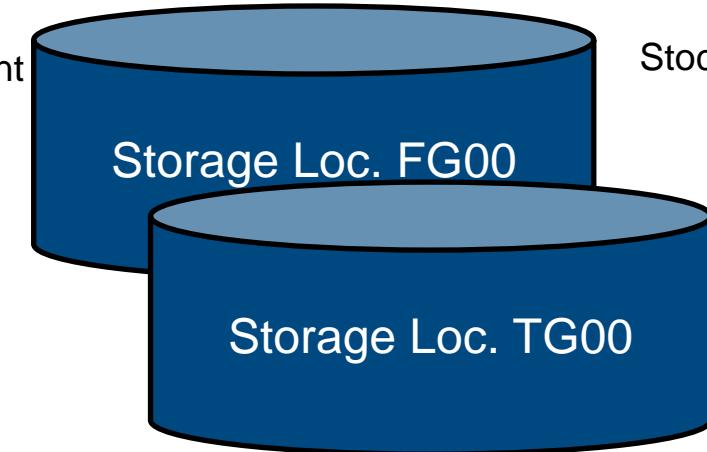
Name  
Weight  
Unit of Measure

**Sales specific information:**



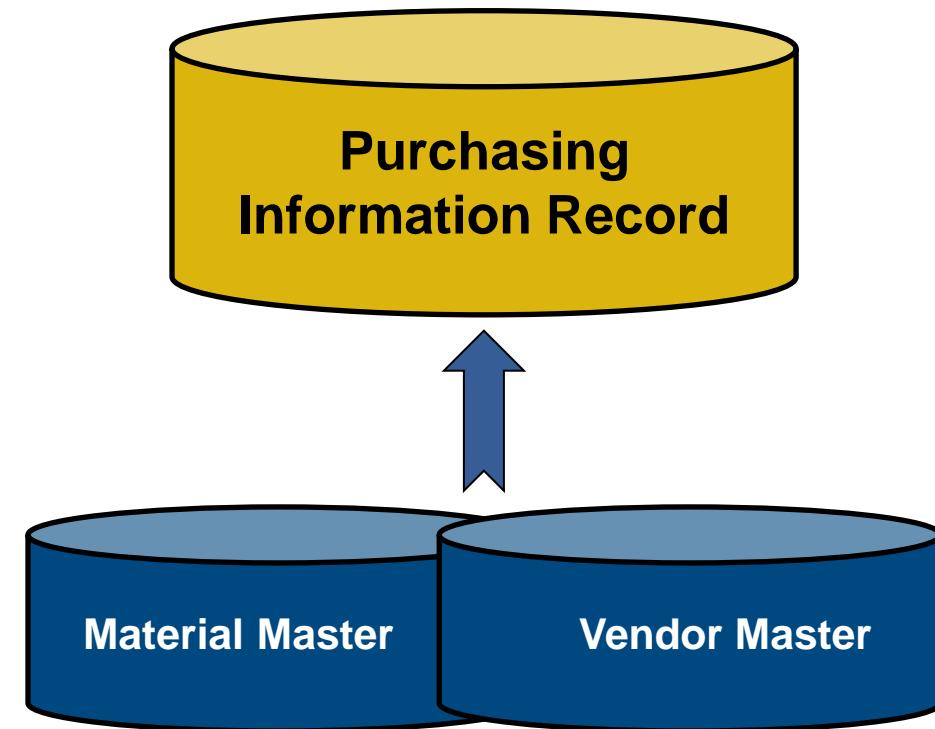
Delivering Plant  
Loading Grp

**Storage Location specific information:**



# Purchasing Information Record

- Framework for Purchase Order
  - Contains the relationship between a vendor and a material
- Can be created:
  - Manually
  - Automatically – Quotations
  - Automatically – Purch. Orders
- Reporting
  - Vendor Evaluation

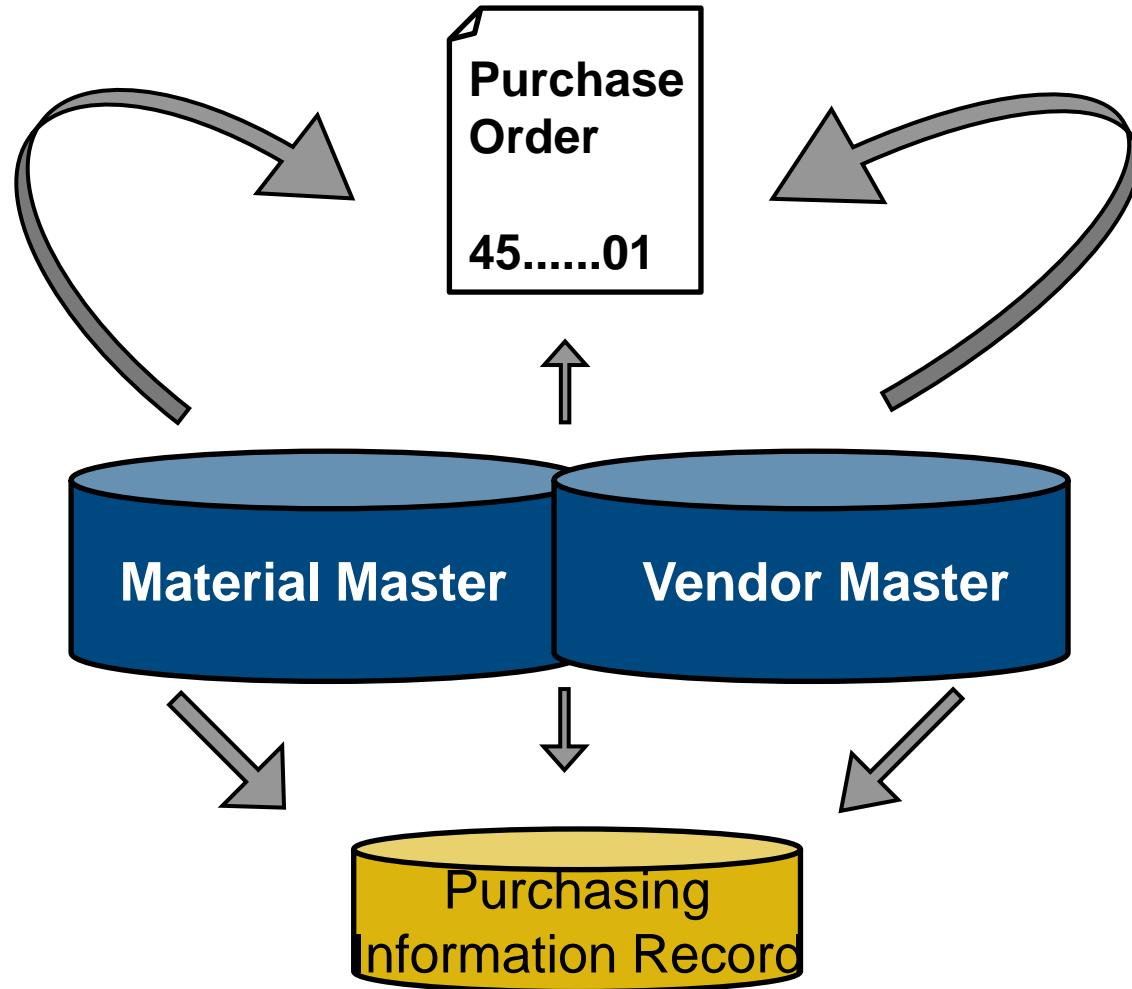


# Purchasing Information Record

---

- Allows buyers to quickly determine:
  - Which vendors have offered or supplied specific materials
- Info Records contain:
  - Data on pricing and conditions
  - Last purchase order
  - Tolerance limits for deliveries
  - Specific lead times
  - Availability periods
  - Vendor Evaluation data
- Serves as default information for Purchase Orders

# Master Data in Use

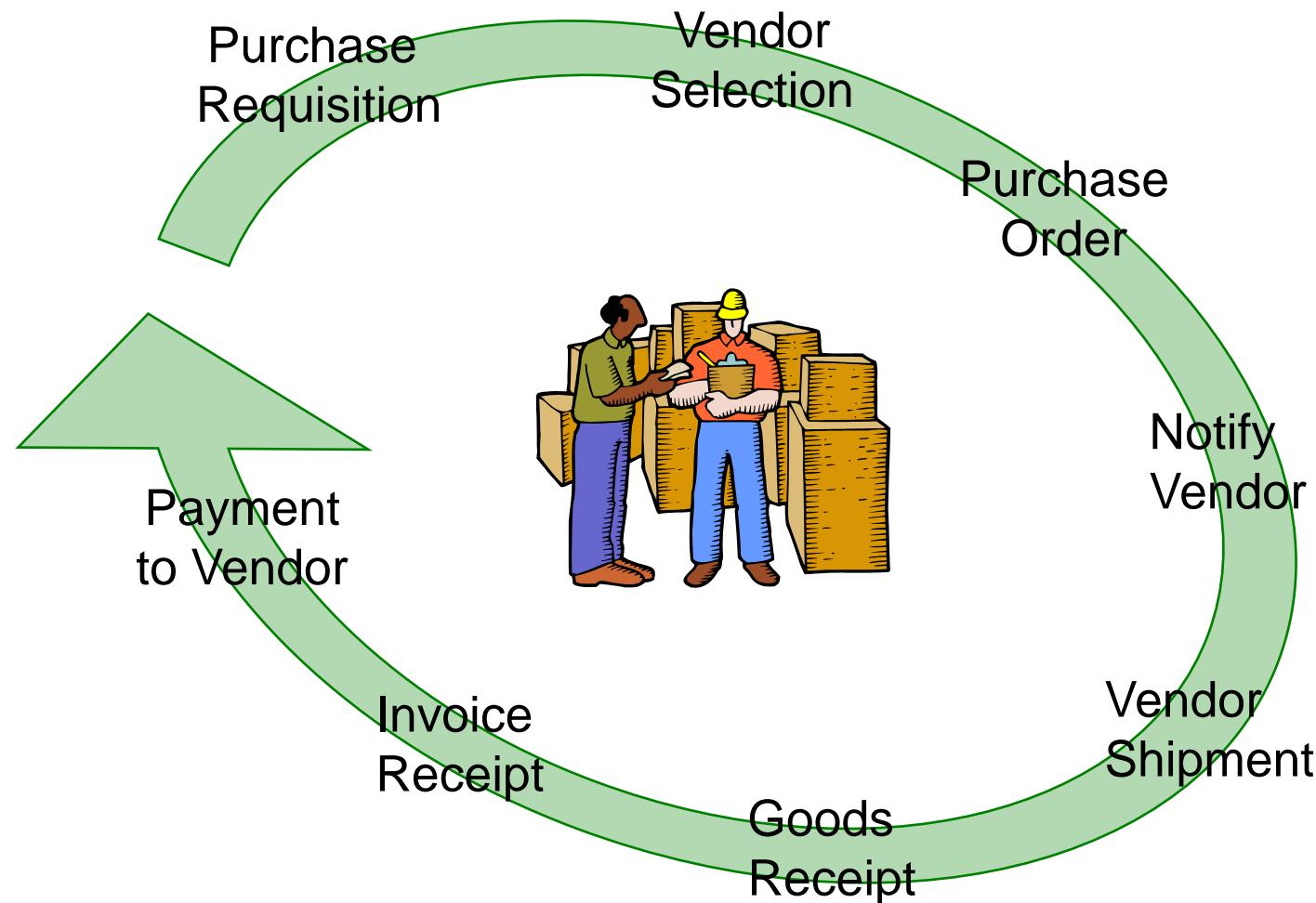


# Agenda

---

- MM Organizational Structure
- MM Master Data
- MM Processes
  - Procure-to-Pay Process

# Procure-To-Pay Process



# Purchase Requisition

---

- Internal Document instructing the purchasing department to request a specific good or service for a specified time
- Requisitions can be created two ways:
  - Directly - Manually
    - person creating determines: what, how much, and when
  - Indirectly - Automatically
    - MRP
    - Production Orders
    - Maintenance Orders
    - Sales Orders

# Requisition Sourcing

---

- 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

# Internal Sourcing

---

- 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)

# Source List

---

- 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.

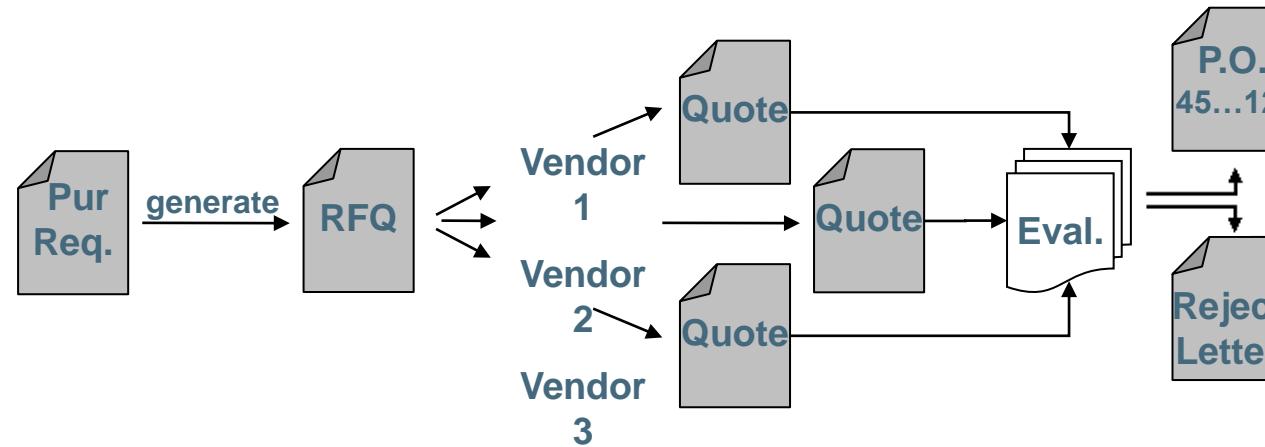
# Outline Agreement

---

- 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

# Request for Quotation

- 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



# Quotation from Vendor

---

- 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 once Identified

---

- 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 sub criteria 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.

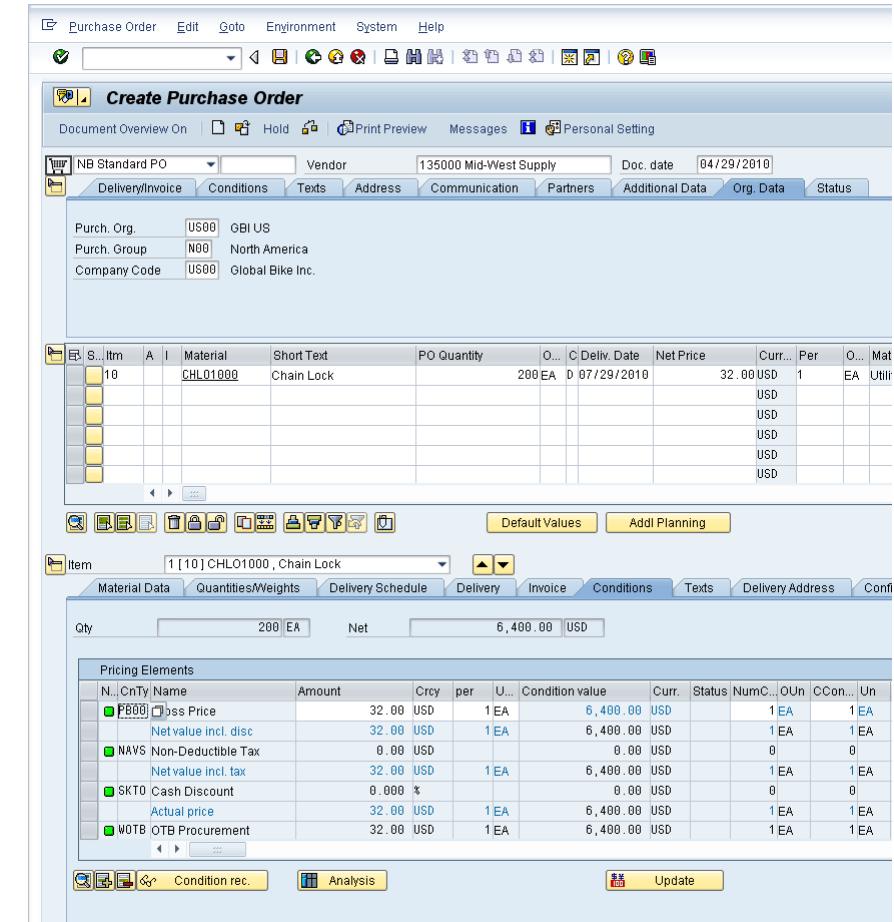
# Purchase Order

---

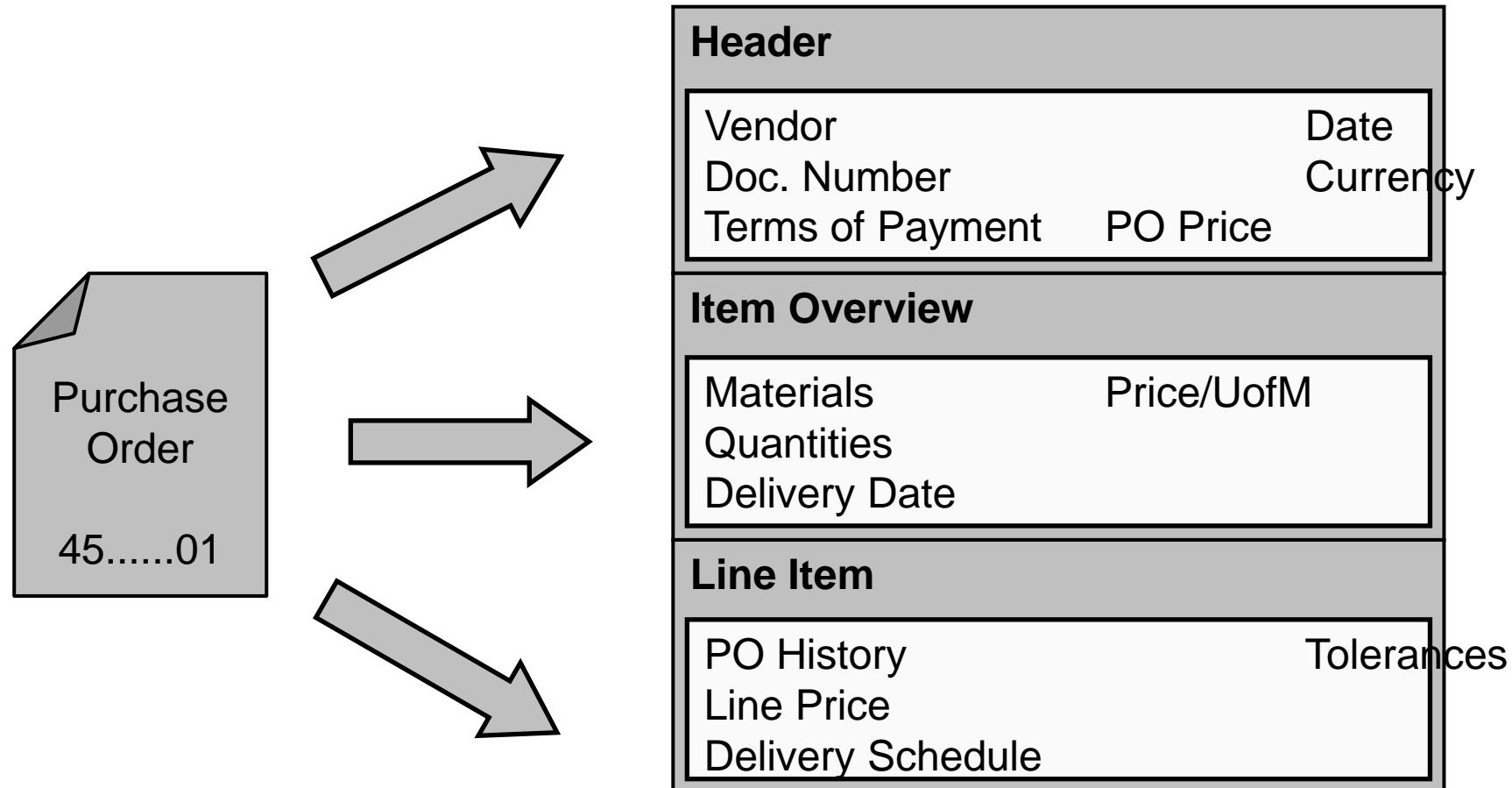
- A purchase order is a formal request to a vendor for a specific material or service under the stated conditions
- Purchase Orders can be created manually
  - Reference a Purchase Order
  - Reference a Purchase Requisition
  - Reference a RFQ/Quotation
  - Without Reference
- Purchase Orders can be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

# 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



# Purchase Order Structure

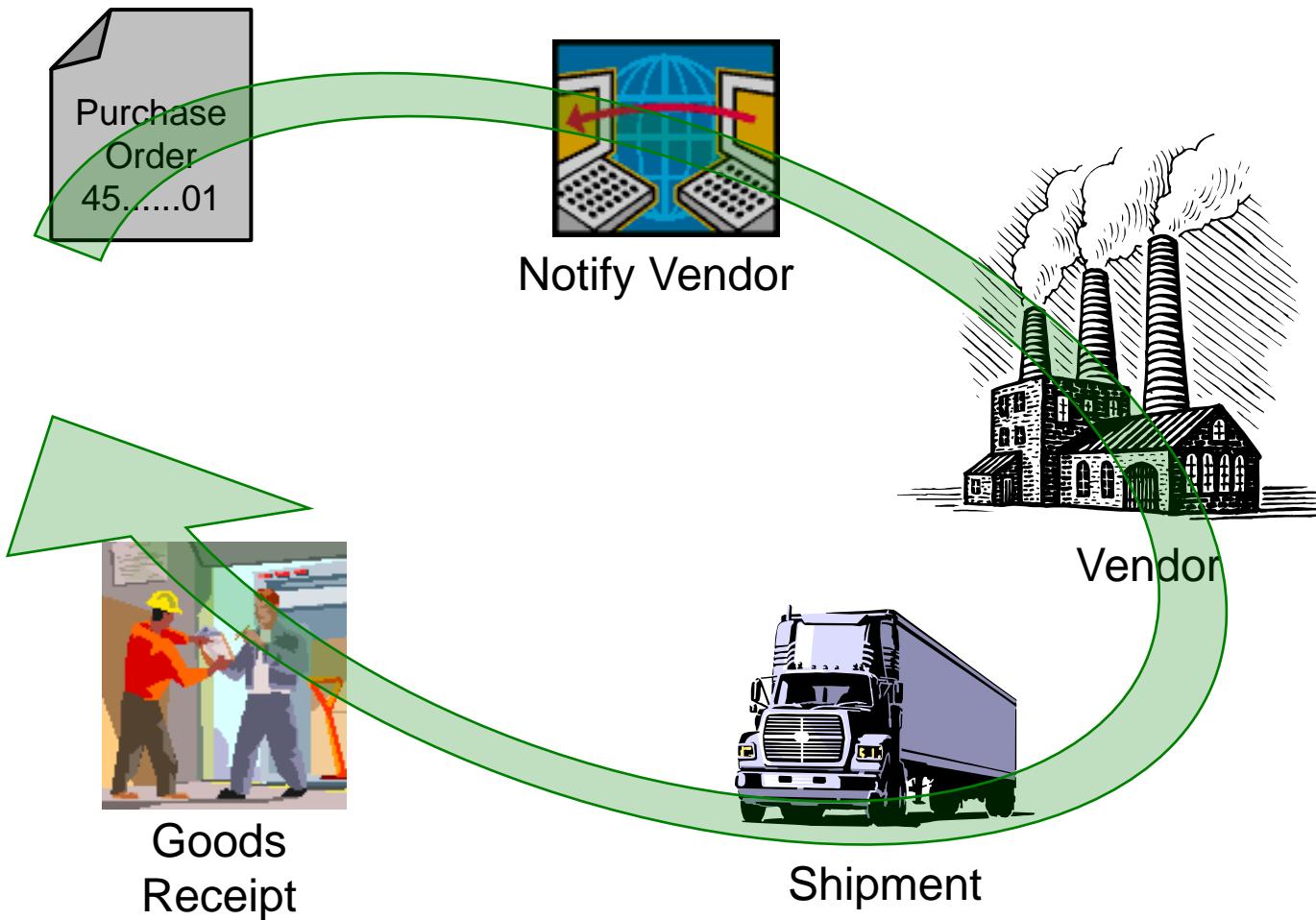


# Purchase Order Output

---

- Once a Purchase Order has been created the vendor needs to be notified
  - Printed
  - E-mail
  - EDI
  - Fax
  - XML
- There are a variety of forms that aid in the purchasing process and are generated from the Purchase Order
  - Purchase Order Output
  - Order Acknowledgement Forms
  - Reminders
  - Schedule Agreements

# Goods Receipt



# Goods 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 updated with the receipt
  - Updates Physical Inventory
  - Updates Inventory G/L Account

# Material Movements

---

- When a goods movement takes place it is represented by a Movement Type
  - Movement types are three-digit keys used to represent a movement of goods
    - 101 – goods receipt into warehouse
    - 103 – goods receipt into GR blocked stock
    - 122 – return delivery to vendor
    - 231 – consumption for a sales order
    - 561 – initial entry of stock
- Destinations for Receipt of Goods
  - Warehouse – Unrestricted, Quality, Blocked
  - Quality
  - Goods Receipt Blocked Stock

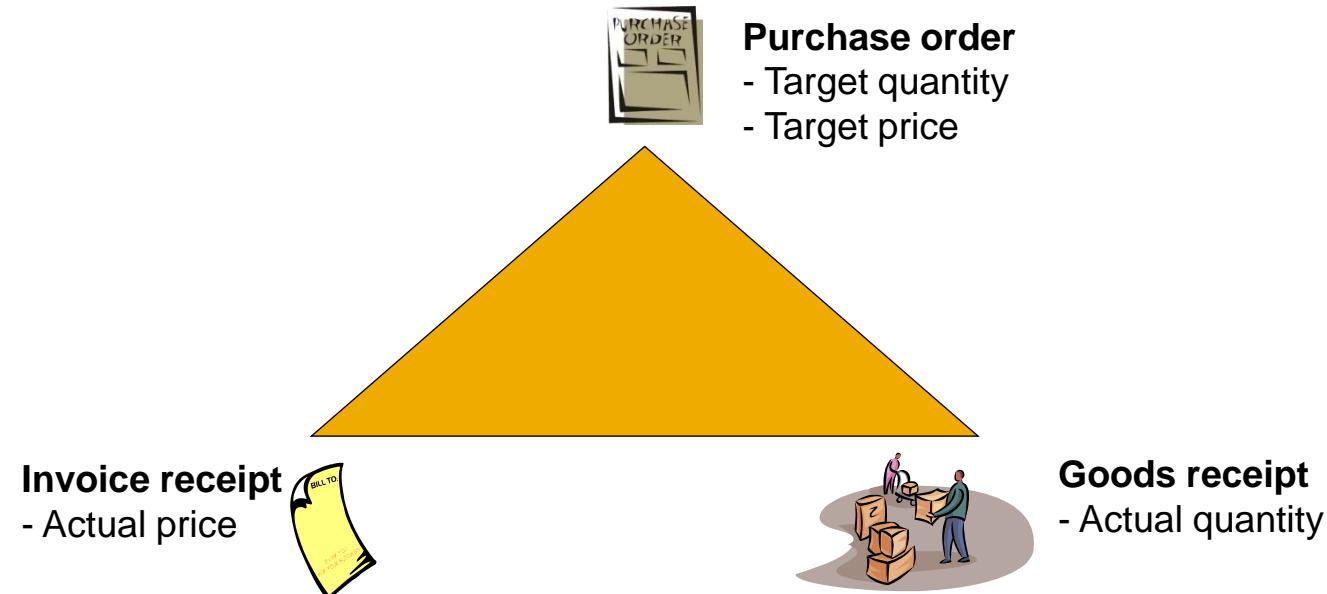
# Effects of a Goods Receipt

---

- When a Goods Movement for the receipt of goods takes place a series of events occur
  - Material Document is Created
  - Accounting Document is Created
  - Stock Quantities are Updated
  - Stock Values are Updated
  - Purchase Order is Updated
  - Output can be generated (GR slip / pallet label)

# Invoice Processing

- 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



# Invoice Processing

---

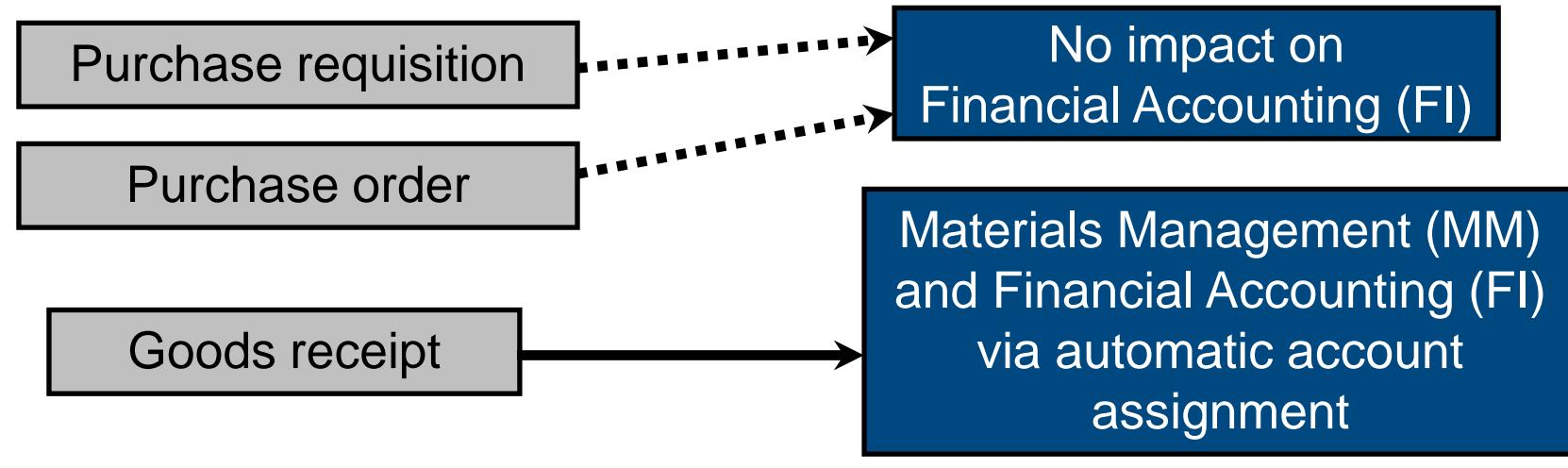
- When an invoice is saved it applies the liability from the Goods Receipt of our Purchase Order to a Vendor
- Upon verification the:
  - Purchase Order is updated
  - Material Master is Updated (MAP)
  - Accounting Document is created
- Once the Invoice has been posted the verification process is completed and the payment process is initiated within Financial Accounting

# Payment to Vendor

---

- Can be done automatically or manually
  - Post Outgoing Payment vs. Payment Program
- Elements of the Payment Transaction:
  - Payment Method
  - Bank from which they get paid
  - Items to be Paid
  - Calculate Payment Amount
  - Print Payment Medium
- Process will create a financial accounting document to record the transaction

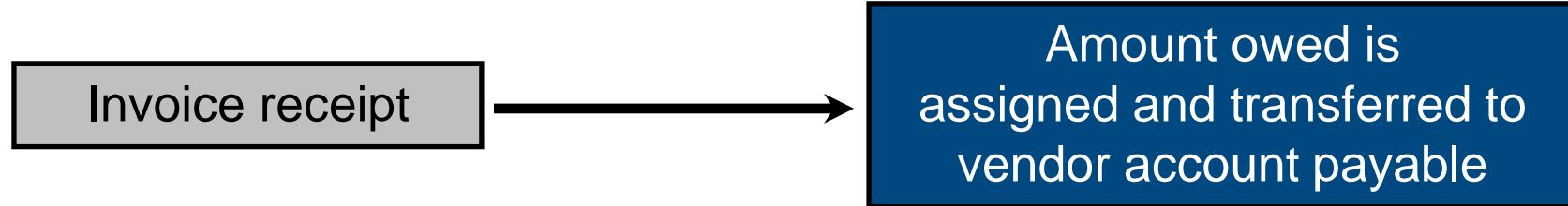
# Goods Receipt / Invoice Receipt Reconciliation Account



Inventory	
Dr	Cr
\$100	

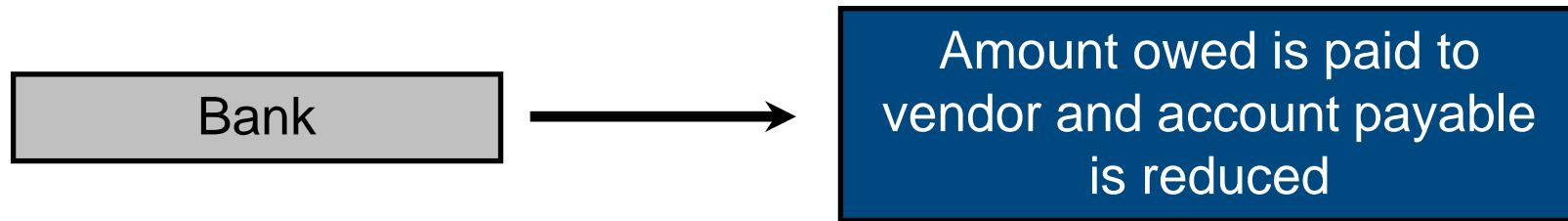
GR / IR	
Dr	Cr
	\$100

# Goods Receipt / Invoice Receipt Reconciliation Account



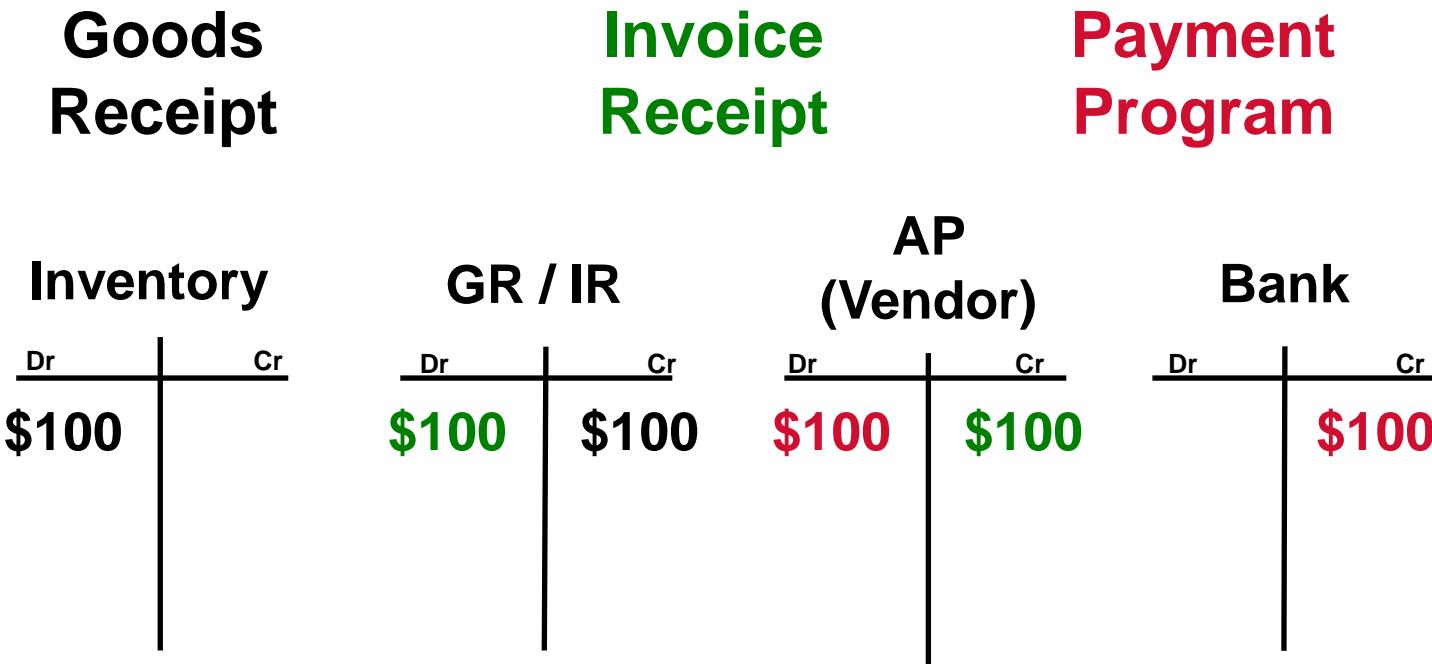
GR / IR		Vendor A/P	
Dr	Cr	Dr	Cr
\$100			\$100

# Vendor Payment



Bank		Vendor A/P	
Dr	Cr	Dr	Cr
	\$100		\$100

# FI – MM Integration Point



# Financial Accounting (FI)

Curriculum: Introduction to ERP using Global Bike



# Teaching material - Information

---



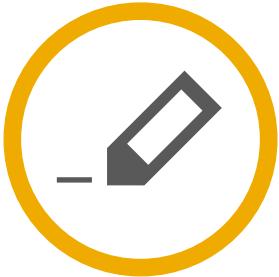
## Teaching material - Version

---

- 3.1 (July 2017)
- Software used
  - SAP ERP 6.08
- Model
  - Global Bike
- Prerequisites
  - No Prerequisites needed

# Module Information

---



## Authors

---

- Bret Wagner
- Stefan Weidner



## Target Audience

---

- Beginner



## Learning Objectives

---

You are able to

- define the central organizational structures of the FI module.
- summarize the master data which is most important for the FI module.
- explain a standard financial accounting process.
- outline the basic functionalities of FI reporting.
- recognize some of integration points to other SAP modules.

# Agenda

---

- FI Organizational Structure
- FI Master Data
- FI Processes
- FI Reporting

# Goal of Financial Accounting (FI)

---

- Financial Accounting is designed to collect the transactional data that provides a foundation for preparing the standard portfolio of reports.
- In general, these reports are primarily, but not exclusively, directed at external parties.
- Standard reports include:
  - Balance Sheet
  - Income Statement
  - Statement of Cash Flows

# Target Audience

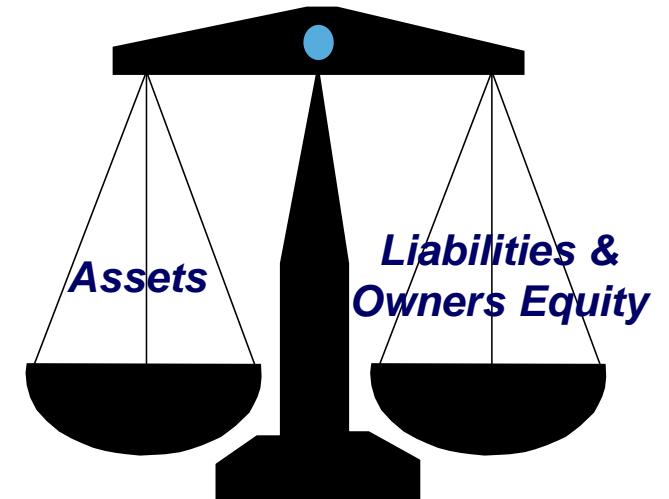
---

- Internal
  - Executives
  - Senior Management
  - Administrative Staff
  - Employees
  
- External
  - Legal Authorities
  - Banks
  - Auditors
  - Shareholders
  - Insurance
  - Taxing Authorities
  - Media
  - Financial Analysts

# FI Organizational Structure

---

- Client
  - An independent environment in the system
- Company Code
  - Represents an independent legal accounting unit
  - Balanced set of books, as required by law, are prepared at this level.
  - A client may have more than one company code
    - United States
    - Germany
    - United Kingdom
    - Australia
    - ...

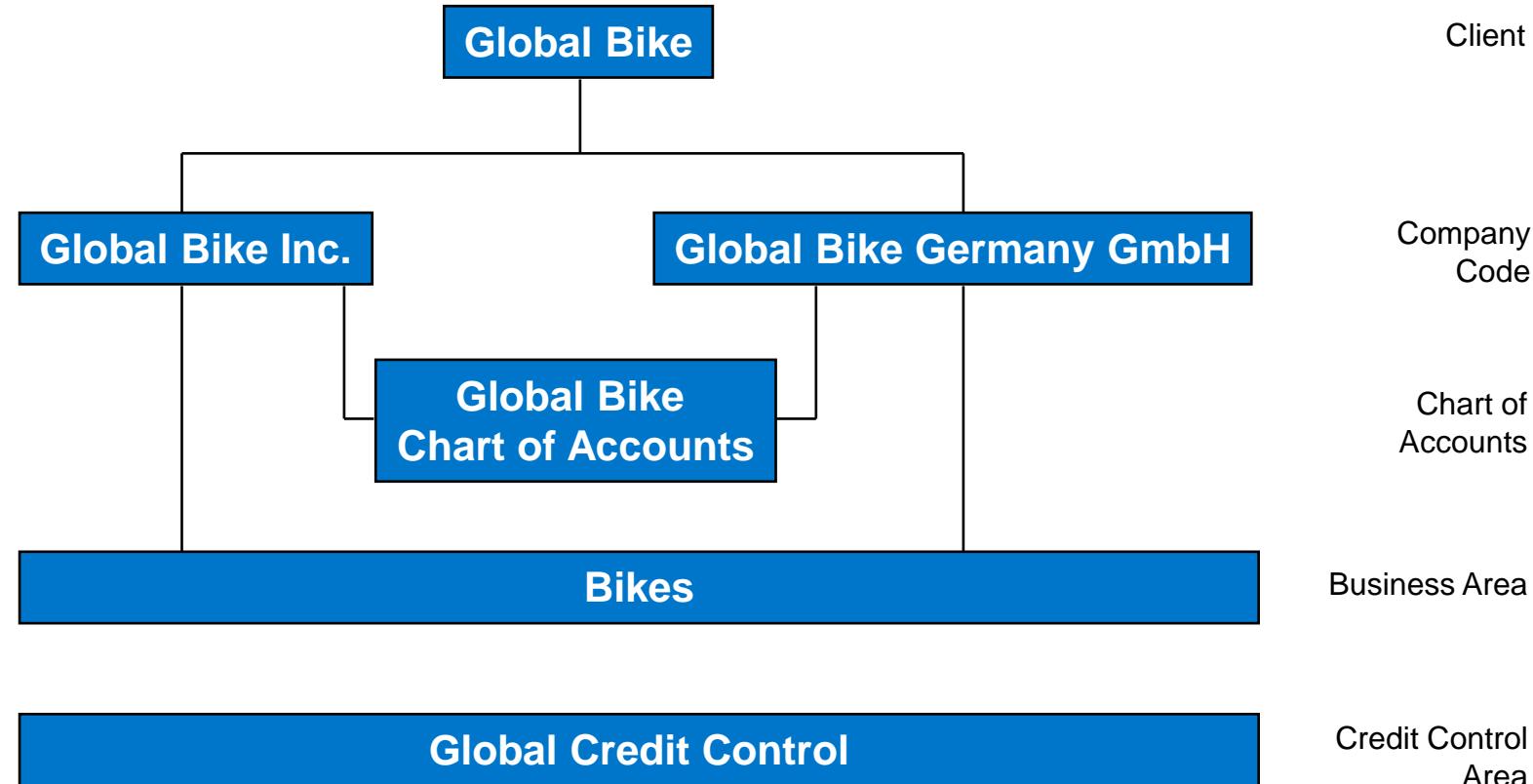


# FI Organizational Structure

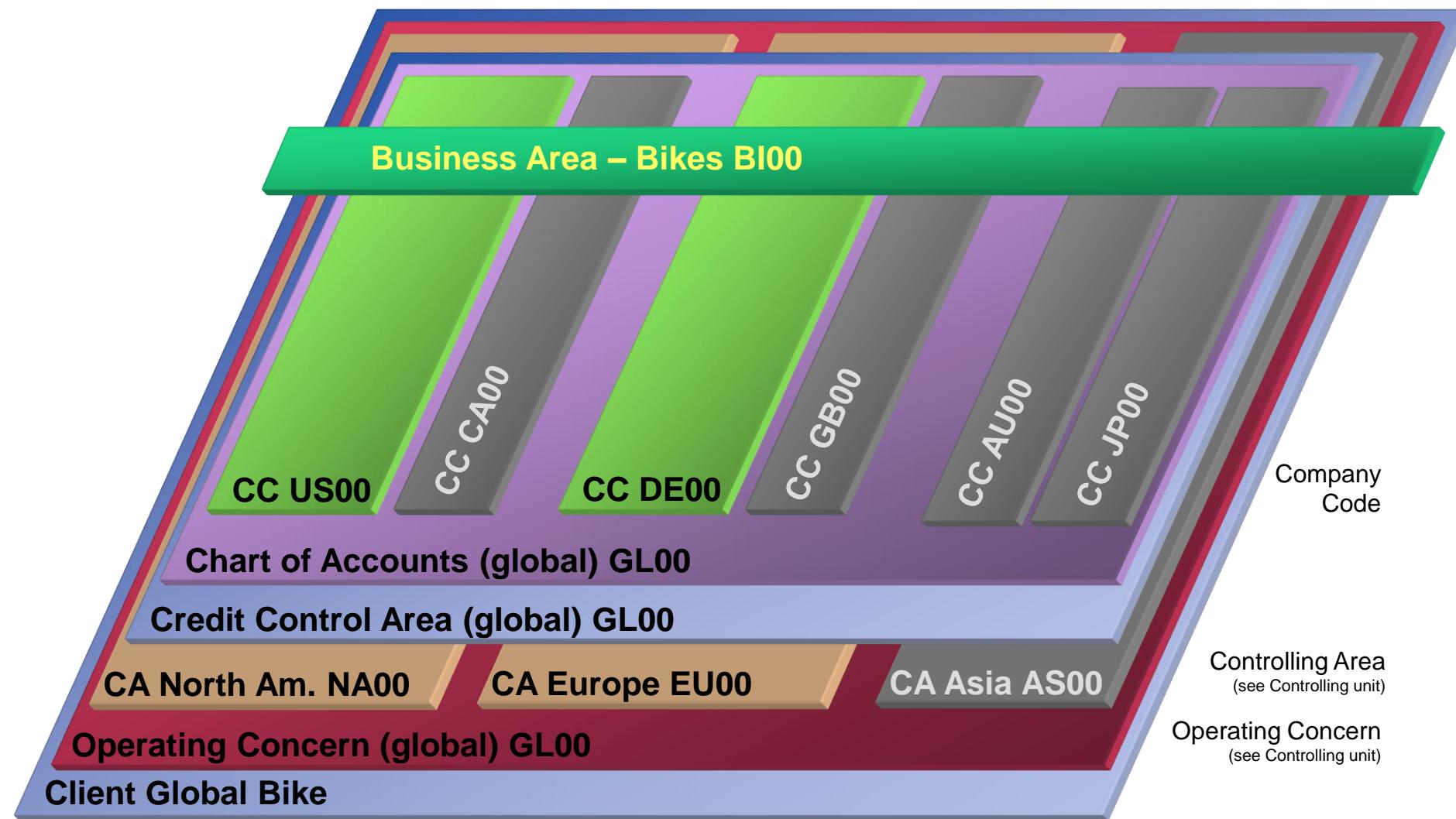
---

- Chart of Accounts
  - A classification scheme consisting of a group of general ledger (G/L) accounts
  - Provides a framework for the recording of values to ensure an orderly rendering of accounting data
  - The G/L accounts it contains are used by one or more company codes.
- Credit Control Area
  - An organizational entity which grants and monitors a credit limit for customers.
  - It can include one or more company codes
- Business Area
  - An organizational unit that represents a separate area of operations or responsibilities within an organization and to which value changes recorded in Financial Accounting can be allocated
  - Financial statements can be created for business areas, and these statements can be used for various internal reporting purposes.

# Global Bike Structure for Financial Accounting



# Global Bike Enterprise Structure in SAP ERP (Accounting)



# Agenda

---

- FI Organizational Structure
- FI Master Data
- FI Processes
- FI Reporting

# FI Master Data

---

- General Ledger (G/L) Accounts
  - The unique combination of Company Code and Chart of Account creates a data storage area called a General Ledger.
  - The General Ledger contains a listing of the transactions effecting each account in the Chart of Accounts and the respective account balance.
  - It is utilized in the preparation of financial accounting statements.

# FI Master Data

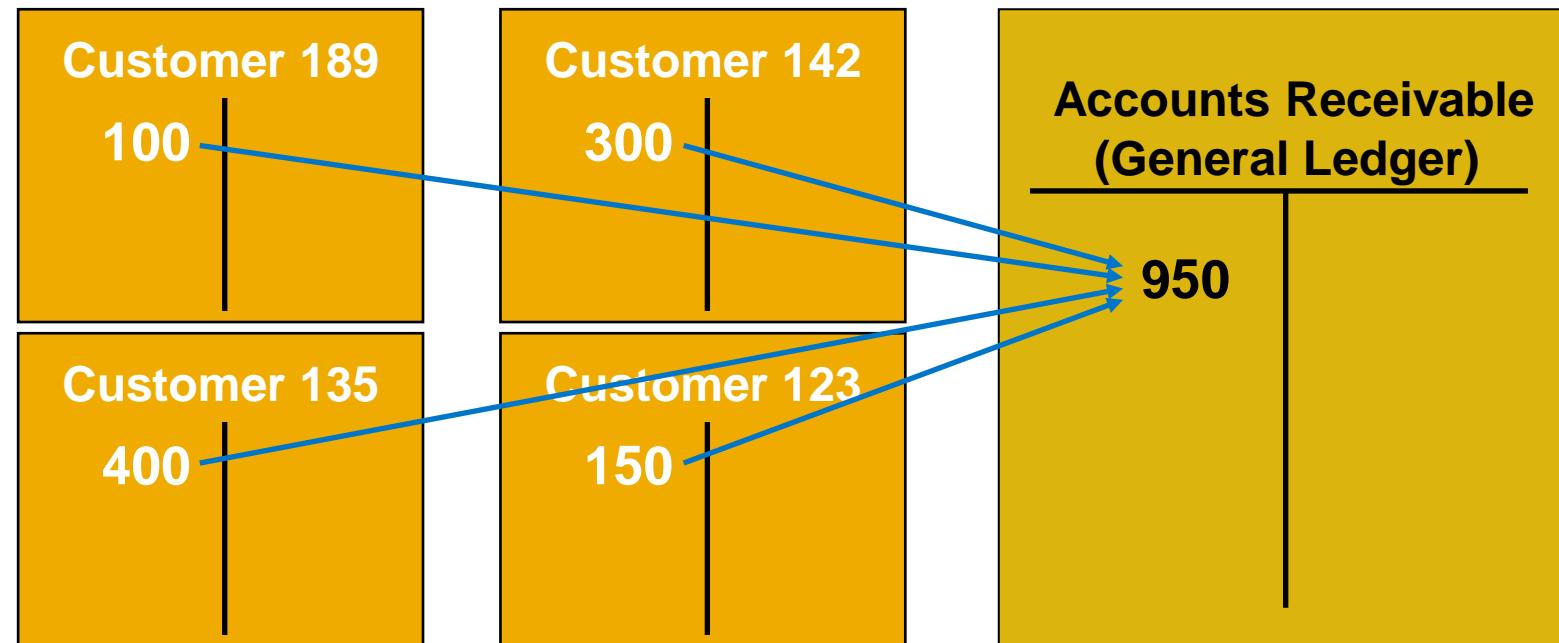
---

- Customer and Vendor Master Data
  - Customer and vendor account balances are maintained in FI through fully integrated accounts receivable and accounts payable sub-modules.
  - Financial postings for customers and vendors are made directly to their respective individual accounts and accompanied by a concurrent automatic posting to the General Ledger.

# Customer Accounts

- Accounts Receivable Sub-Module (FI-AR)

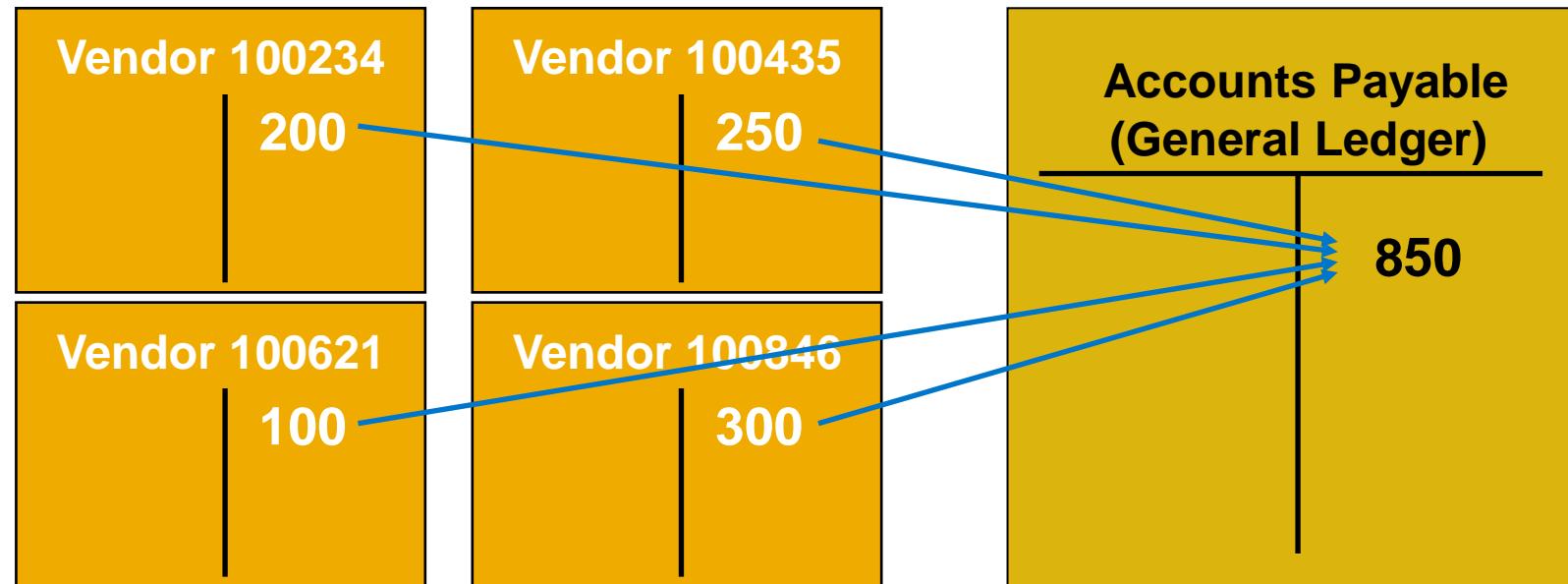
- Information with respect to customers who purchase the enterprise's goods and services such as sales and payments made
- Substantive and important integration between Sales and Distribution (SD) and Financial Accounting (FI)
- Billings in SD generate FI journal entries for sales activity



# Vendor Accounts

- Accounts Payable Sub-Module (FI-AP)

- Information with respect to Vendors from whom the enterprise purchases goods and services such as purchases and payments made
- Substantive and important integration between Materials Management (MM) and Financial Accounting (FI)
- Purchase and goods receipt activities in MM generate FI journal entries



# Agenda

---

- FI Organizational Structure
- FI Master Data
- FI Processes
- FI Reporting

# FI Processes

## ■ Posting a G/L Entry

**Enter G/L Account Document: Company Code US00**

Tree on   Company Code   Hold   Simulate   Park   Editing options

Basic data   Details

Document Date	05/22/2010	Currency	USD
Posting Date	05/22/2010		
Reference	000		
Doc.Header Text	Transfer of Funds		
Cross-CC no.			
Company Code	US00	Global Bike Inc. Dallas	

Amount Information

Total deb.	5,000.00	USD
Total cred.	5,000.00	USD

COO

2 Items ( No entry variant selected )

St...	G/L acct	Short Text	D/C	Amount in doc.curr.	Loc.curr.amount	T...	Tax jurisdicn code	WAssignment no.
<input checked="" type="checkbox"/>	101000	Alt Bank	S Debi▼	5,000.00	5,000.00			
<input checked="" type="checkbox"/>	100000	Bank	H Crec▼	5,000.00	5,000.00			

Document 100000016 was posted in company code US00

# Agenda

---

- FI Organizational Structure
- FI Master Data
- FI Processes
- FI Reporting

# FI Reporting

- G/L Account Summary

**G/L Account Balance Display**

Activate Worklist Choose Ledger

Account Number	101000	to	
Company Code	US00	to	
Fiscal Year	2010		
Ledger	0L		

Period	Debit	Credit	Balance	Cum. balance
Bal.Carryforward				
1				
2				
3				
4				
5	5,000.00	175.00	4,825.00	4,825.00
6				4,825.00
7				4,825.00
8				4,825.00
9				4,825.00
10				4,825.00
11				4,825.00
12				4,825.00
13				4,825.00
Total	5,000.00	175.00	4,825.00	4,825.00

# FI Reporting

---

## ■ Balance Sheet

- Presentation of an organization's Assets, Liabilities, and Equity at a point in time
- Assets: What the company owns
- Liabilities: What the company owes
- Equity: The difference between Assets and Liabilities
- $\text{Assets} = \text{Liabilities} + \text{Equity}$

# FI Reporting

## ■ Balance Sheet Example

### Assets

Cash	1,000
Accounts Receivable	3,000
Equipment	<u>500</u>
Total Assets	4,500

### Liabilities

Accounts Payable	1750
Taxes Payable	<u>500</u>
Total Liabilities	2,250

### Equity

Common Stock	2,000
Retained Earnings	<u>250</u>
Total Equity	2,250

Total Liabilities  
and Equity

4,500

# FI Reporting

---

- Income Statement
  - Presentation of an organization's revenues and expenses for a given period of time (e.g. monthly, quarterly, or yearly)
  - Revenues, in a simple sense, are inflows of cash as a result of selling activities or the disposal of company assets.
  - Expenses, in a simple sense, are outflows of cash or the creation of liabilities to support company operations.
  - $\text{Revenues} - \text{Expenses} = \text{Net Income}$

# FI Reporting

---

- Income Statement Example

**Revenue**

Sales	11,000
Deductions	<u>750</u>
Total Revenue	10,250

**Operating Expenses**

Cost of Goods Sold	4,500
Operating Expenses	<u>3,750</u>
Total Expenses	8,250

Net Income Before Taxes	2,000
Taxes	<u>750</u>
Net Income	1,250

# FI Reporting

---

- Statement of Cash Flows

- Considers the associated changes, both inflows and outflows, that have occurred in cash – arguably the most important of all assets – over a given period of time (e.g. monthly, quarterly, or annually)



# Accountants and Audit Trails

---

- Audit trails allow an auditor to begin with an account balance on a financial statement and trace through the accounting records to the transactions that support the account balance.
- Audit trails enable an auditor to trace individual transactions to the effected account balance(s) on a financial statement.

# SAP Document Principle

---

- Each business transaction impacting FI writes data to the SAP database creating a uniquely numbered electronic document.
- The document number can be used to recall the transaction at a later date.
- It contains, for example, such critical and necessary information as:
  - Responsible person
  - Date and time of the transaction
  - Commercial content
- Once written to the SAP database, a financial document (one impacting the financial position of the company) can not be deleted from the database.
- It can be changed to some degree.
- The SAP document principle provides a solid and important framework for a strong internal control system – a requirement of law for companies that operate in the United States and in most other countries in the world.

# SAP Document Principle

**Document List**

CoCd	DocumentNo	Year	Type	Doc. Date	Posting Date
US00	100000016	2010	SA	05/22/2010	05/22/2010
	100000017	2010	SA	05/22/2010	05/22/2010

**Document Header: US00 Company Code**

Document Type	SA G/L Account Document		
Doc.Header Text	Test for Change		
Reference	000	Document Date	05/22/2010
		Posting Date	05/22/2010
Currency	USD	Posting Period	05 / 2010
Ref. Transactn	BKPF Accounting document		
Reference key	0100000016US002010	Log.System	A64CLNT400
Entered by	WEIDNER	Parked by	
Entry Date	05/22/2010	Time of Entry	00:49:09
TCode	FB50		
Changed on		Last update	
Ledger Grp		Ledger	
Ref.key(head) 1		Ref.key 2	

**Document Changes : Overview**

Technical names on

Document 0100000016 Company Code US00 Year 2010

Date	Field	New	Old
05/22/10	Changed on	05/22/2010	00/00/0000
05/22/10	Document Header Text	Test for Change	Transfer of Funds

# SAP FI Module

---

- Fully integrated with other SAP modules including, but not limited to:
  - Sales and Distribution (SD)
  - Materials Management (MM)
  - Production Planning and Execution (PP)
  - Managerial Accounting (CO)