

Sales and Distribution (SD)

Curriculum: Introduction to S/4HANA using Global Bike





Teaching material - Version

- 4.1 (June 2022)

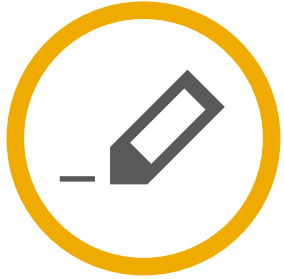
- Software used
 - S/4HANA 2020
 - Fiori 3.0

- Model
 - Global Bike

- Prerequisites
 - No Prerequisites needed



Module Information



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Target Audience

- Beginner

Module Information



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

Unit Overview

- 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 organizational 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

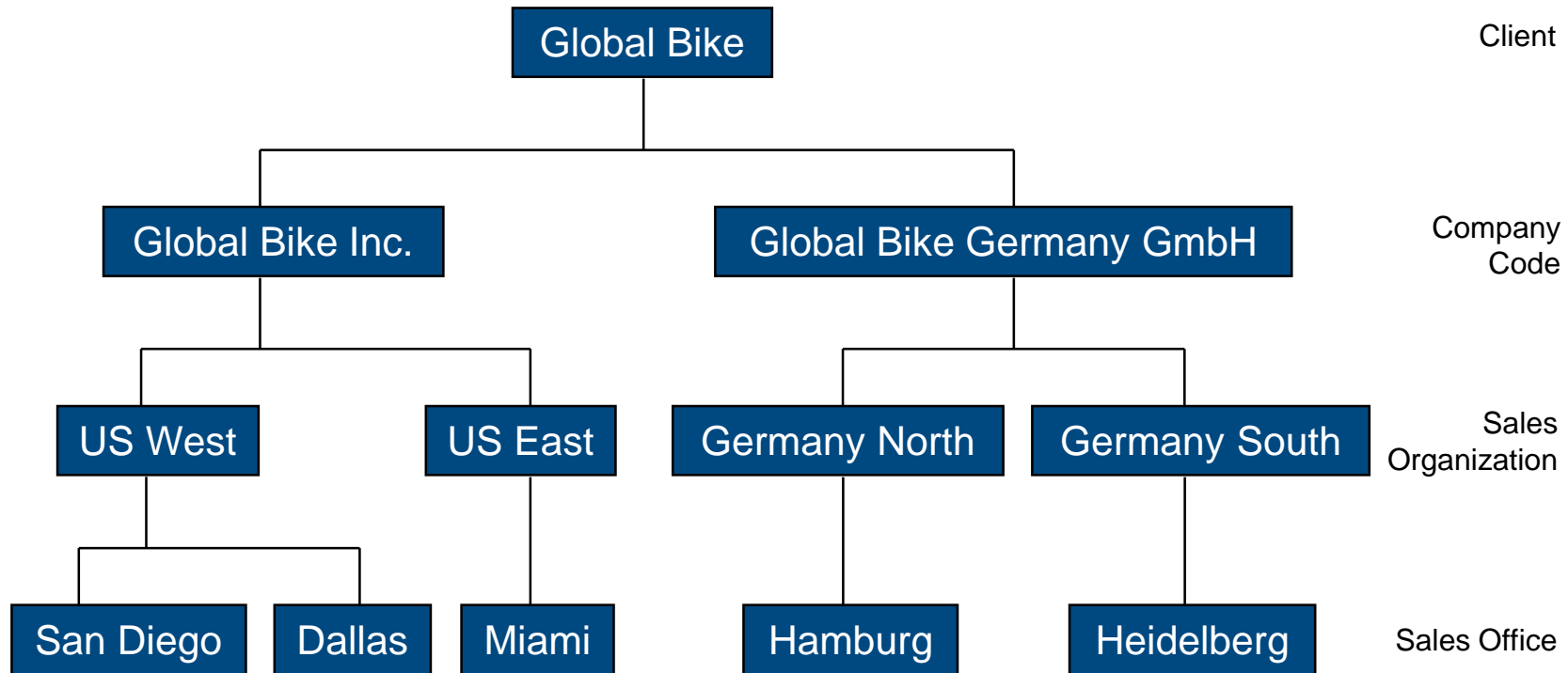
- Division
 - A way of grouping materials, products, or services

- Sales Area
 - Combination of Sales Organization, Distribution Channel and Division
 - Determines conditions (i.e. pricing) for sales activities

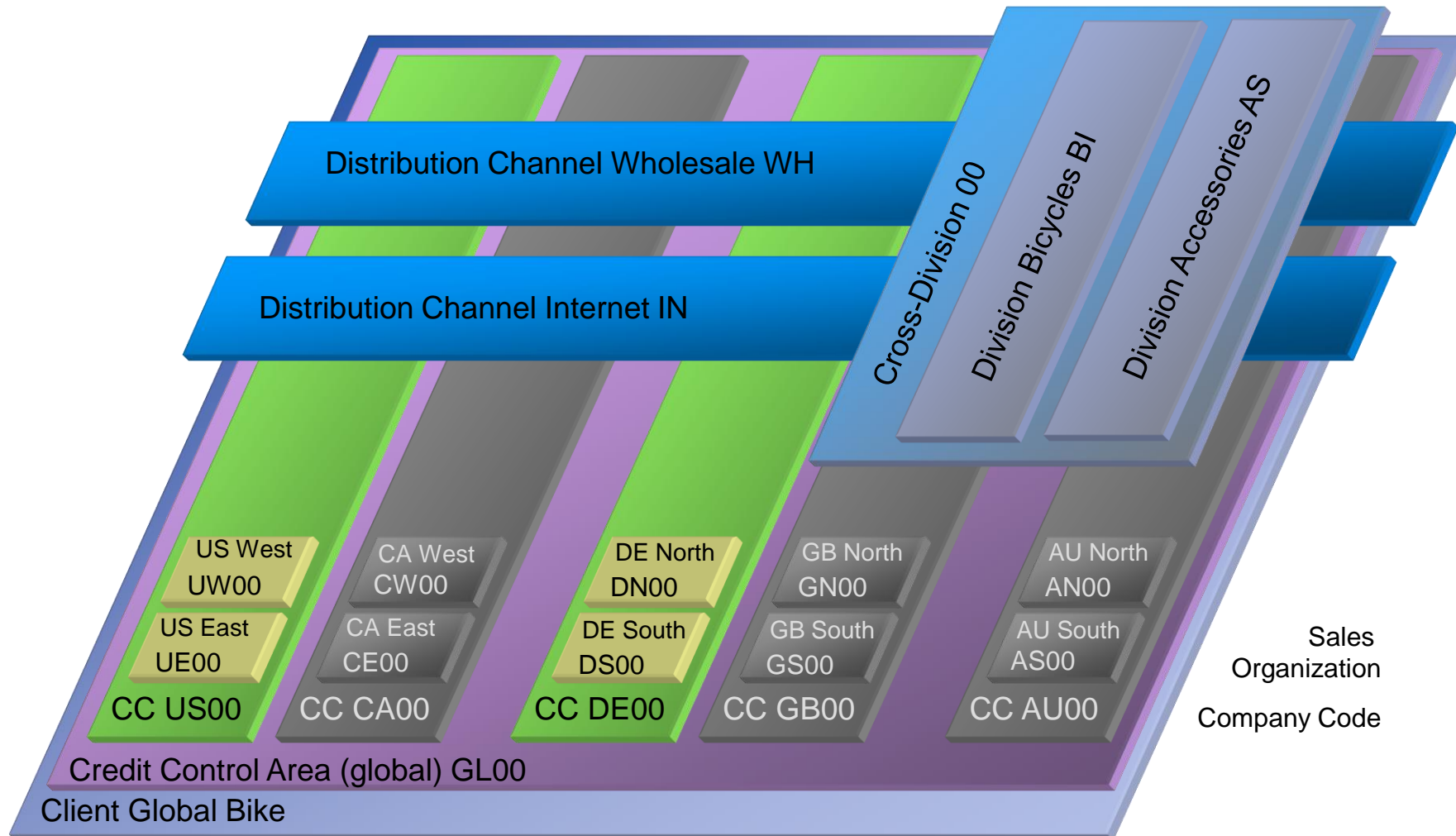
- Plant (here: Delivering Plant)
 - Plant from which the goods should be delivered to the customer

- 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)



Unit Overview

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

SD Master Data

SAP Display Standard Order 5: Overview

Standard Order: 5 Net Value: 20,092.50 USD

Sold-To Party: 1003063 The Bike Zone 000 / 2144 N Orange Ave / Orlando FL 32804

Ship-To Party: 1003063 The Bike Zone 000 / 2144 N Orange Ave / Orlando FL 32804

Cust. Reference: 000 Cust. Ref. Date: 09/14/2021

Customer Master

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

Req. Deliv.Date: D 10/14/2021 Deliver.Plant:

Complete Dlv.: Total Weight: 57,170 G

Delivery Block: Volume: 0.000

Billing Block: Pricing Date: 09/14/2021

Pyt Terms: 0001 Pay immediately w/o deduction

Inco. Version:

Incoterms: FOB

Inco. Location1: Miami

Material Master

Sales Condition

All Items

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

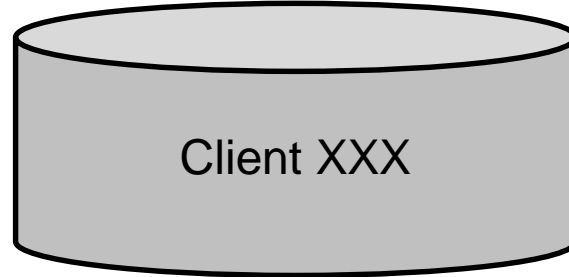
Customer Master Data

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

The screenshot shows the SAP Business Partner interface for 'The Bike Zone 000' (ID: 1003063). The header includes the SAP logo and 'Business Partner' with a dropdown arrow. Below the header, the customer name 'The Bike Zone 000' and ID '1003063' are displayed. A blue icon representing a building is shown next to the text 'Grouping: Internal number assignment (0001)' and 'Business Partner Category: Organization (2)'. To the right, the address '2144 N Orange Ave 32804 Orlando US' is listed under 'Standard Address' and 'Standard Communication'. A navigation bar below the header contains tabs: 'Basic Data' (selected), 'Roles', 'Address', 'Bank Accounts', 'Payment Cards', 'Identification', 'Contacts', and 'Attachments'. The 'General Information' section contains several input fields: 'Title' (set to 'Company'), 'Name 1' (set to 'The Bike Zone 000'), 'Name 2', 'Name 3', 'Name 4', 'Search Term 1' (set to '000'), and 'Search Term 2'.

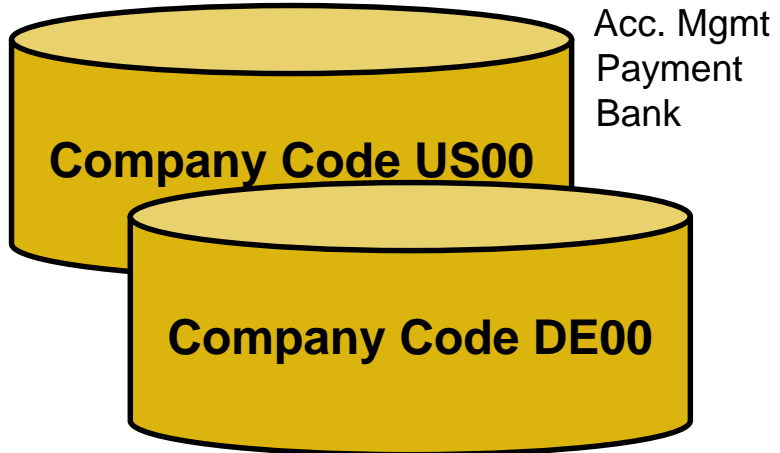
Customer Master

General Information relevant for the entire organization:

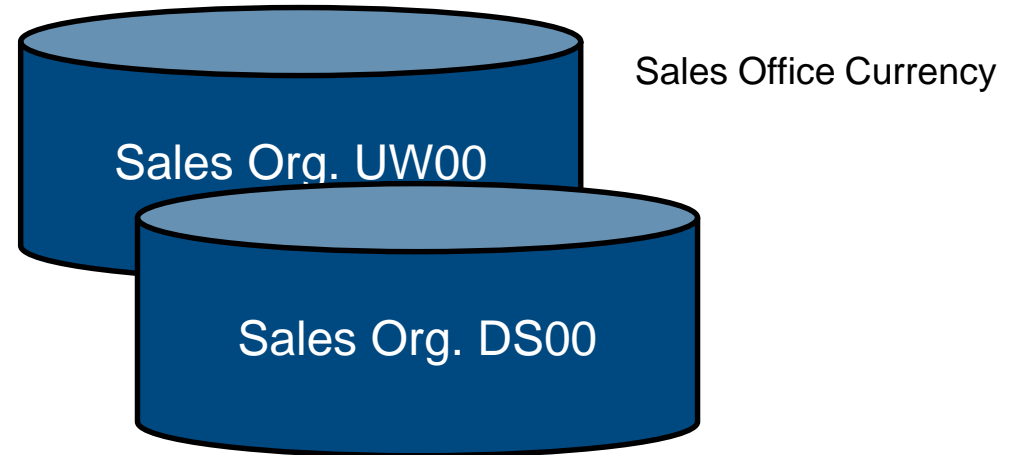


Name
Address
Communication

Company Code specific information:



Sales Area specific information:



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

The screenshot shows the SAP Material Master Data for 'Deluxe Touring Bike (black)' (Material DXTR1000). The interface includes a navigation bar with 'SAP' and 'Product' dropdown, and a main content area with various tabs and data fields.

Product Information:

- Product Type: Finished Product (FERT)
- Product Category: Product
- Product Group: Finished Bikes (BIKES)
- Base Unit of Measure: Each (EA)
- Revision Level:
- GTIN:
- GTIN Category:

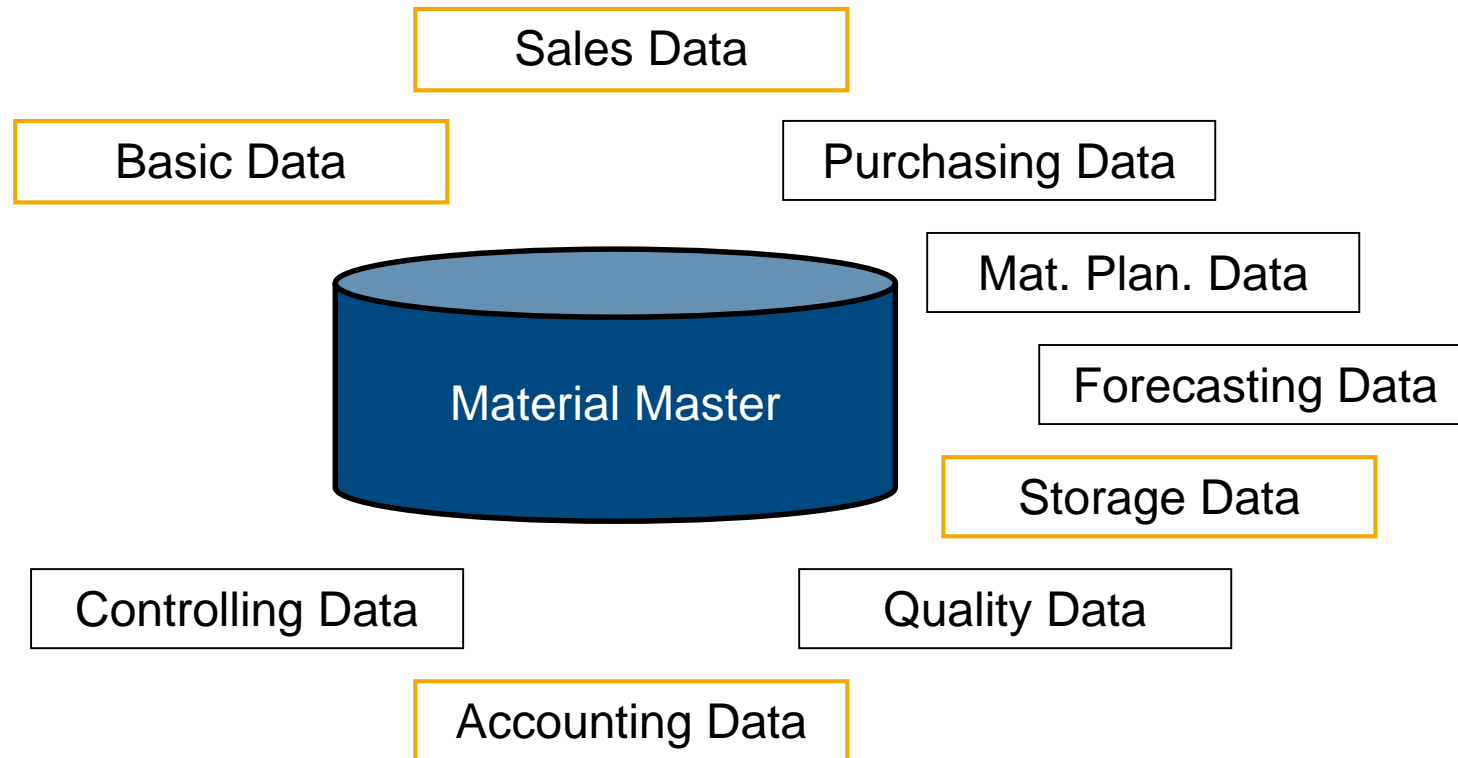
Basic Data:

- Division: Bicycles (BI)
- Old Product Number: -
- Batch Management Required: No
- Marked for Deletion: No

Descriptions:

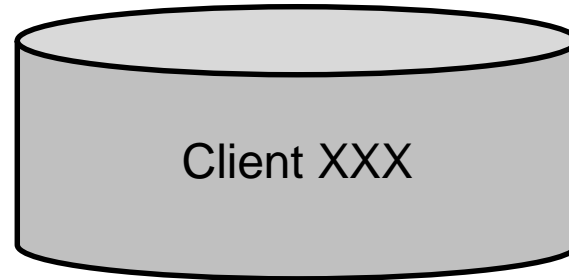
Language	Product
German DE	Deluxe Touring Bike (schwarz)
English EN	Deluxe Touring Bike (black)

Material Master Views



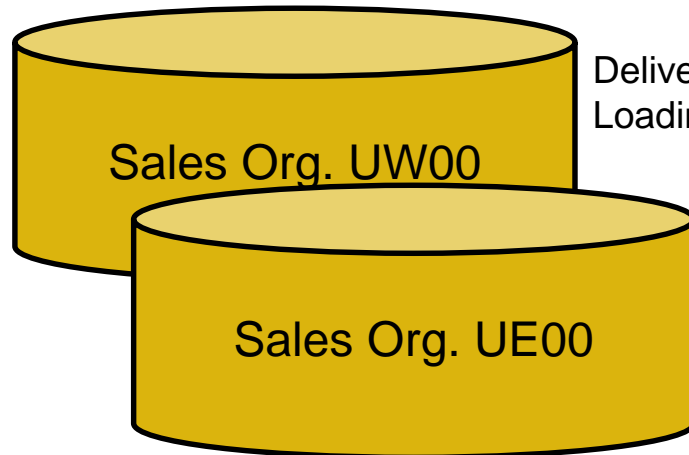
Material Master

General Information relevant for the entire organization:



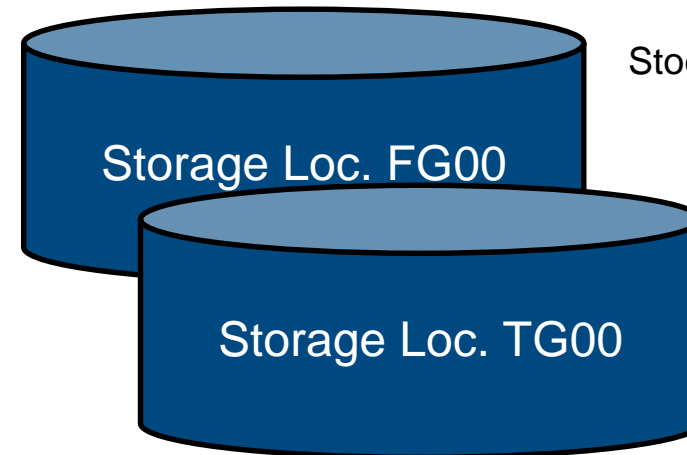
Name
Weight
Unit of Measure

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 screenshot shows the SAP Pricing Elements table for a sales document. The table lists various pricing conditions and their values. The 'Condition Value' column shows the calculated values for each condition.

I...	CnTy	Description	Amount	Crcy	per	UoM	Condition Value	Curr.	Status	NumC...
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PR00 Price	3,000.00	USD	1	EA	15,000.00	USD		1
<input type="checkbox"/>		Gross Value	3,000.00	USD	1	EA	15,000.00	USD		1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	K004 Material	50.00-	USD	1	EA	250.00-	USD		1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	RA00 % Discount from Net	5.000-	%			737.50-	USD		0
<input type="checkbox"/>		Discount Amount	197.50-	USD	1	EA	987.50-	USD		1
<input type="checkbox"/>		Rebate Basis	2,802.50	USD	1	EA	14,012.50	USD		1
<input type="checkbox"/>		Net Value for Item	2,802.50	USD	1	EA	14,012.50	USD		1
<input type="checkbox"/>		Net Value 2	2,802.50	USD	1	EA	14,012.50	USD		1
<input type="checkbox"/>		Total	2,802.50	USD	1	EA	14,012.50	USD		1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	SKTO Cash Discount	0.000	%			0.00	USD		0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	VPRS Internal price	1,400.00	USD	1	EA	7,000.00	USD		1
<input type="checkbox"/>		Standard - USA /With	1,402.50	USD	1	EA	7,012.50	USD		1

Output

- Output is information that is sent to the customer using various media, such as:
 - Electronic Data Interchange (EDI)
 - Email
 - Mail
 - Fax
 - XML

- Functions for sales, shipping, transportation, and billing

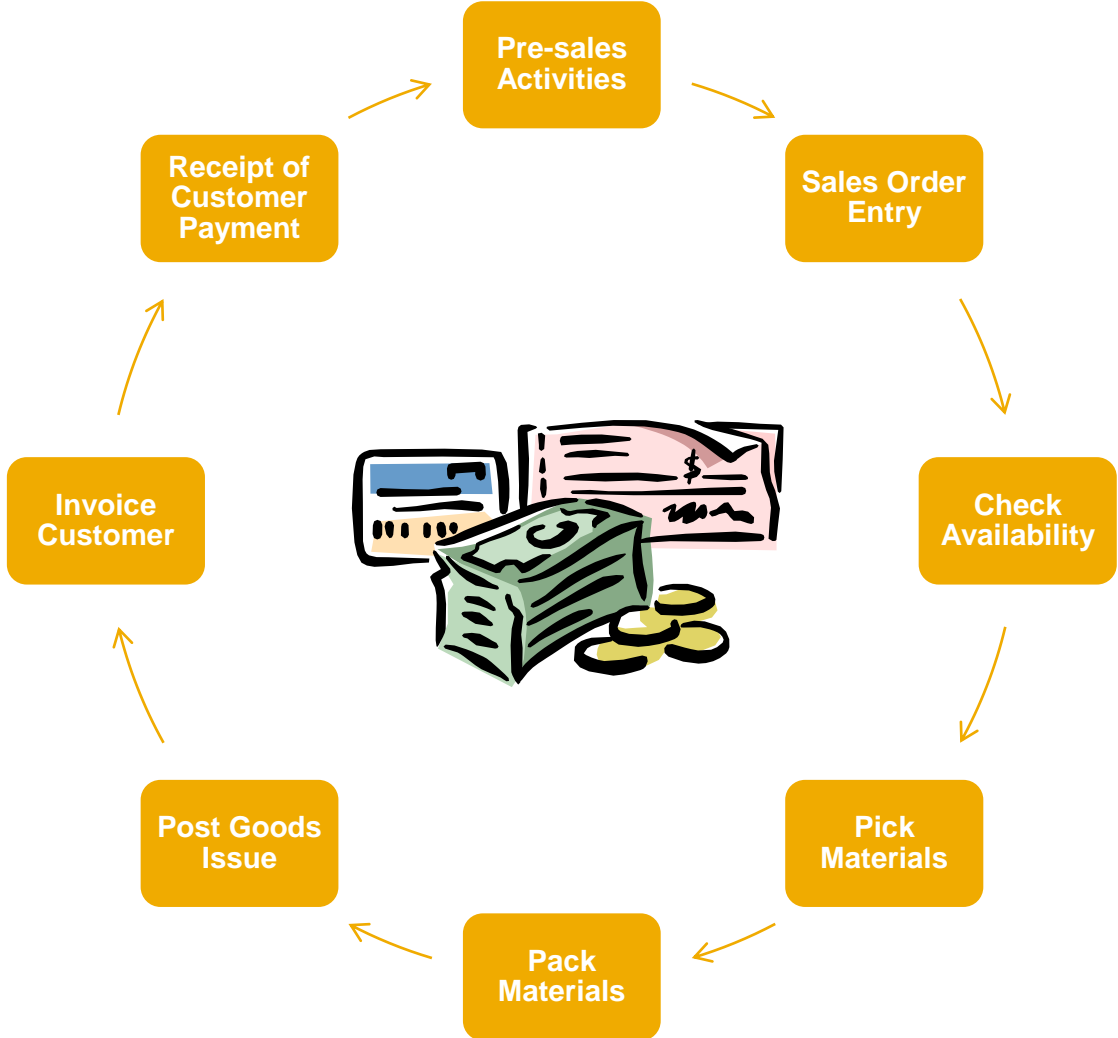
- Examples of output types in SD processing are order confirmations, freight lists, and invoices
 - The output type defines how the output should be transmitted (sent via EDI, or as a print-out)

- Generation of
 - Sales activity output (e.g. customer telephone calls, mailing campaigns)
 - Group output (e.g. freight lists)

Unit Overview

- 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 the processes of sales, distribution, and marketing of companies as well as their product and services to its customers
- It contains the following functionality
 - Creating and tracking customer contacts and communications (sales activity)
 - Implementing and tracking direct mailing, internet, and trade fair campaigns based on customer attributes
- Pre-sales documents: Inquiries and Quotations
- 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
 - Past sales activity
 - Past communication
 - Contact information
 - General company info
 - Credit limits and usage
 - Current backorders

Inquiry

- An inquiry is a customer's request to a company for information or quotation in respect to their products or services without any obligation to purchase
 - How much will it cost
 - Material/Service availability
 - May contain specific quantities and dates

- The inquiry is maintained in the system and a quotation is created to address questions for the potential customer.

Company		Inquiry				
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: Currency USD						
Terms of payment Payable immediately without deduction						
Terms of delivery FOB San Diego						
Weights (gross/net) - Volume - Mark						
Gross weight		57,170 G	Net weight 57,170 G			
Please see our promotional offer enclosed. Delivery as long as stocks last.						
Item	Material	Qty	Description	Price	Price unit	Value
000010	DXTR1000	5 EA	Deluxe Touring Bike (black)	3,000.00	USD 1 EA	15,000.00
000020	PRTR1000	2 EA	Professional Touring Bike (black)	3,200.00	USD 1 EA	6,400.00
Final amount						21,400.00

Quotation

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

- Legally binding on the vendor

- Conditions can apply at various levels:
 - to the entire quotation
 - at item level, to the material to be supplied or to the planned procurement in the case of services
 - at service-line level for individual services (tasks or activities)

Company		Quotation				
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: Currency USD						
Terms of payment Payable immediately without deduction						
Terms of delivery FOB San Diego						
Weights (gross/net) - Volume - Mark						
Gross weight 57,170 G Net weight 57,170 G						
Please see our promotional offer enclosed. Delivery as long as stocks last.						
Item	Material	Qty	Description	Price	Price unit	Value
000010	DXTR1000		Deluxe Touring Bike (black)			
		5 EA		3,000.00	USD	15,000.00
	Material			50.00-	USD	250.00-
	% Discount from N			5.000-	%	737.50-
	Net Value for Ite			2,802.50	USD	14,012.50
000020	PRTR1000		Professional Touring Bike (black)			
		2 EA		3,200.00	USD	6,400.00
	% Discount from N			5.000-	%	320.00-
	Net Value for Ite			3,040.00	USD	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 an order: phone, internet, e-mail
 - 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: e.g.: customer data, total cost of the order

- Line Item(s)

- Information about the specific product: e.g.: 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

The screenshot displays the SAP 'Display Standard Order 5: Overview' interface. The top section shows header information including Standard Order: 5, Net Value: 20,092.50 USD, Sold-To Party: 1003063 (The Bike Zone 000 / 2144 N Orange Ave / Orlando FL 32804), Ship-To Party: 1003063 (The Bike Zone 000 / 2144 N Orange Ave / Orlando FL 32804), Cust. Reference: 000, and Cust. Ref. Date: 09/14/2021. Below this is a navigation bar with tabs for Sales, Item Overview, Item detail, Ordering party, Procurement, Shipping, and Reason for rejection. The main area contains various fields for delivery details: Req. Deliv. Date: 10/14/2021, Deliver. Plant, Complete Div., Total Weight: 57,170 G, Delivery Block, Volume: 0.000, Billing Block, Pricing Date: 09/14/2021, Pyt Terms: 0001 Pay immediately w/o deduction, Inco. Version, Incoterms: FOB, and Inco. Location1: Miami. A toolbar with icons for navigation and actions is visible. Below the header is the 'All Items' table:

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

Below the table is another navigation bar with tabs for Sales A, Sales B, Shipping, Billing Document, Conditions, Account Assignment, Schedule lines, Partner, Texts, Order Data, Status, and Structure. The 'Schedule lines' tab is active, showing fields for Fixed Date and Qty, Delivery Time, Order Quantity: 5 EA, and Delivered qty: 5. A toolbar with search and navigation icons is present. At the bottom is the 'Quantities/Dates' table:

P..	Delivery Date	Order Quantity	Rounded qty	Confirmed Qty	Sa...	Delivery Block	Delivered qty	Sch...	Purchase Re...	Requ...
<input type="checkbox"/>	D 10/14/2021		5	5	5	EA		5	CP	0

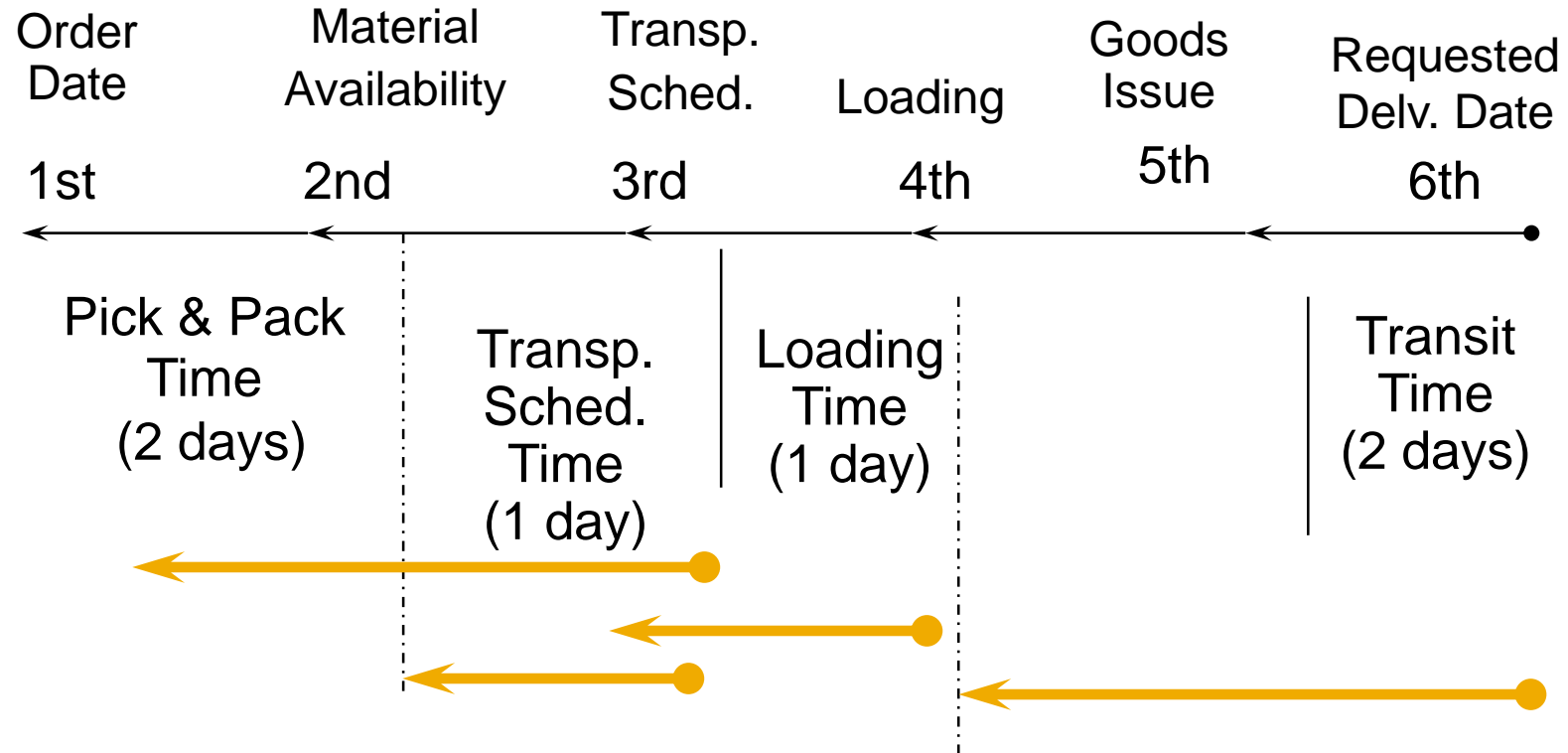
Sales Order

- 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

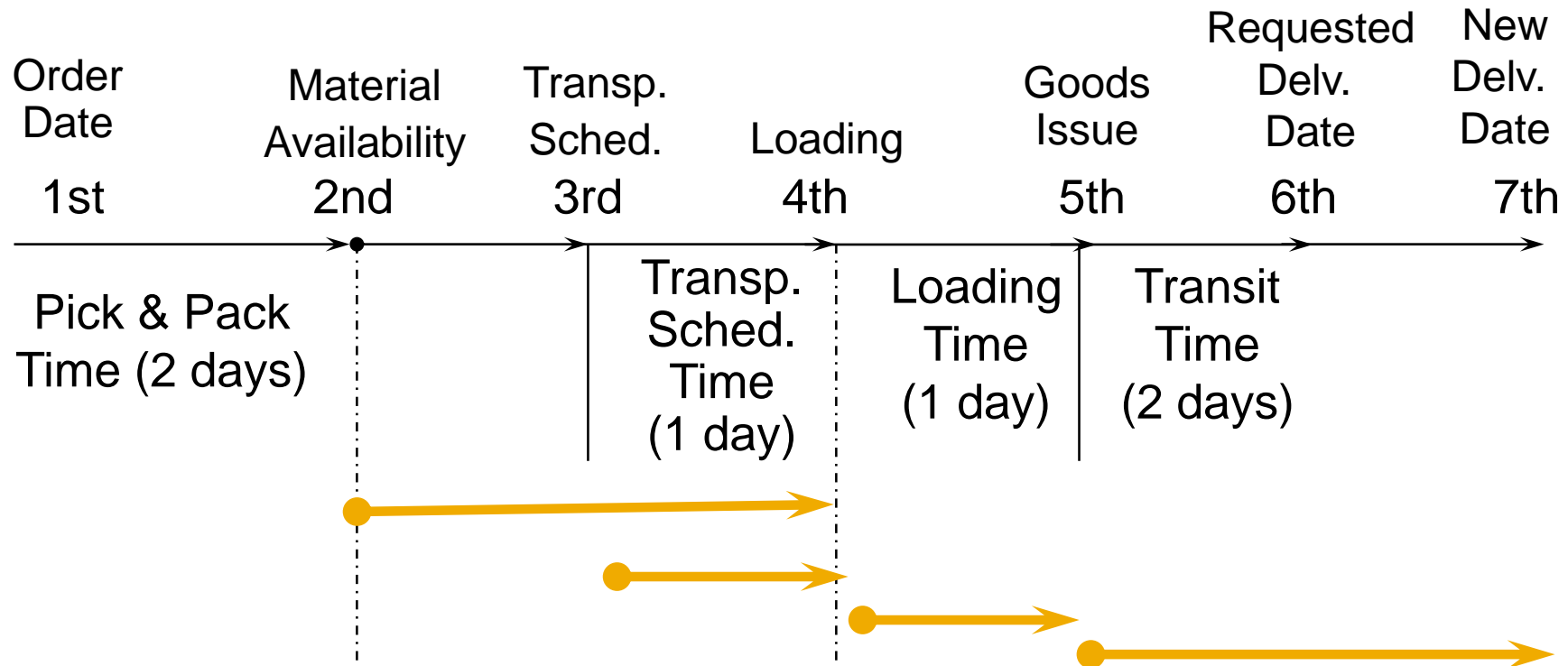
Delivery Scheduling

- 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 USERS

The screenshot shows the SAP Availability Overview interface for material PRTR1000 (Professional Touring Bike (black)). The interface includes a navigation bar with the SAP logo and the title 'Availability Overview'. Below the navigation bar, there are several tabs: 'Stock Overview', 'Stock in Detail', 'Totals Overview', 'Totals in Detail', 'Scope of check', and 'More'. The main content area contains input fields for Material (PRTR1000), Plant (MI00), MRP Area (MI00), Base Unit (EA), Avail. check (02), Check.rule (A), With reqmts qtys (checkbox), and End lead time (09/21/2021). Below these fields, there is a 'Totals display' section with input fields for Receipts (78), Issues (0), and Confirmed issues (0). At the bottom, there is an 'ATP situation' table with columns for Date, MRP e..., Stock Segment, MRP element data, Rec./reqd qty, Confirmed, and Cum. ATP qty.

	Date	MRP e...	Stock Segment	MRP element data	Rec./reqd qty	Confirmed	Cum. ATP qty
<input type="checkbox"/>	09/16/2021	Stock			78		78
<input type="checkbox"/>	09/16/2021	SLocSt		FG00	78		78
<input type="checkbox"/>							

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 and 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, calculated 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 automatically so we can not manually enter them

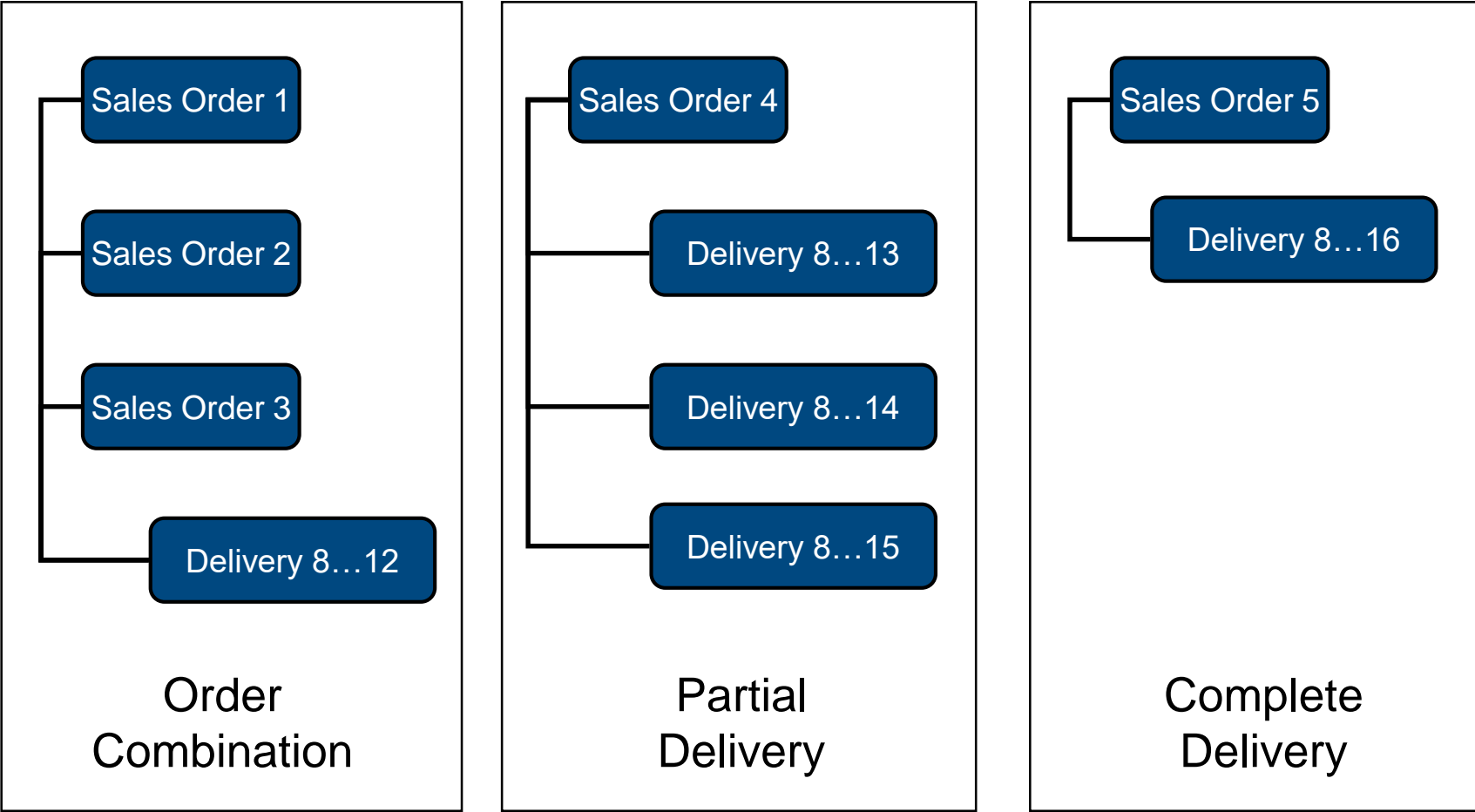
Credit Check

- 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 report 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 progressing the shipping:
 - Picking
 - Packing
 - Post Goods Issue
- Integrated with the Material Management (MM), extended Warehouse Management (eWM) and Finance (FI) modules

Shipping



Delivery Creation

- Checks order and materials to determine if a delivery is possible — delivery block (hold), completeness
- Confirms availability
- Determines total weight & volume
- Generates packing proposal
- 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 the following processes:
 - 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

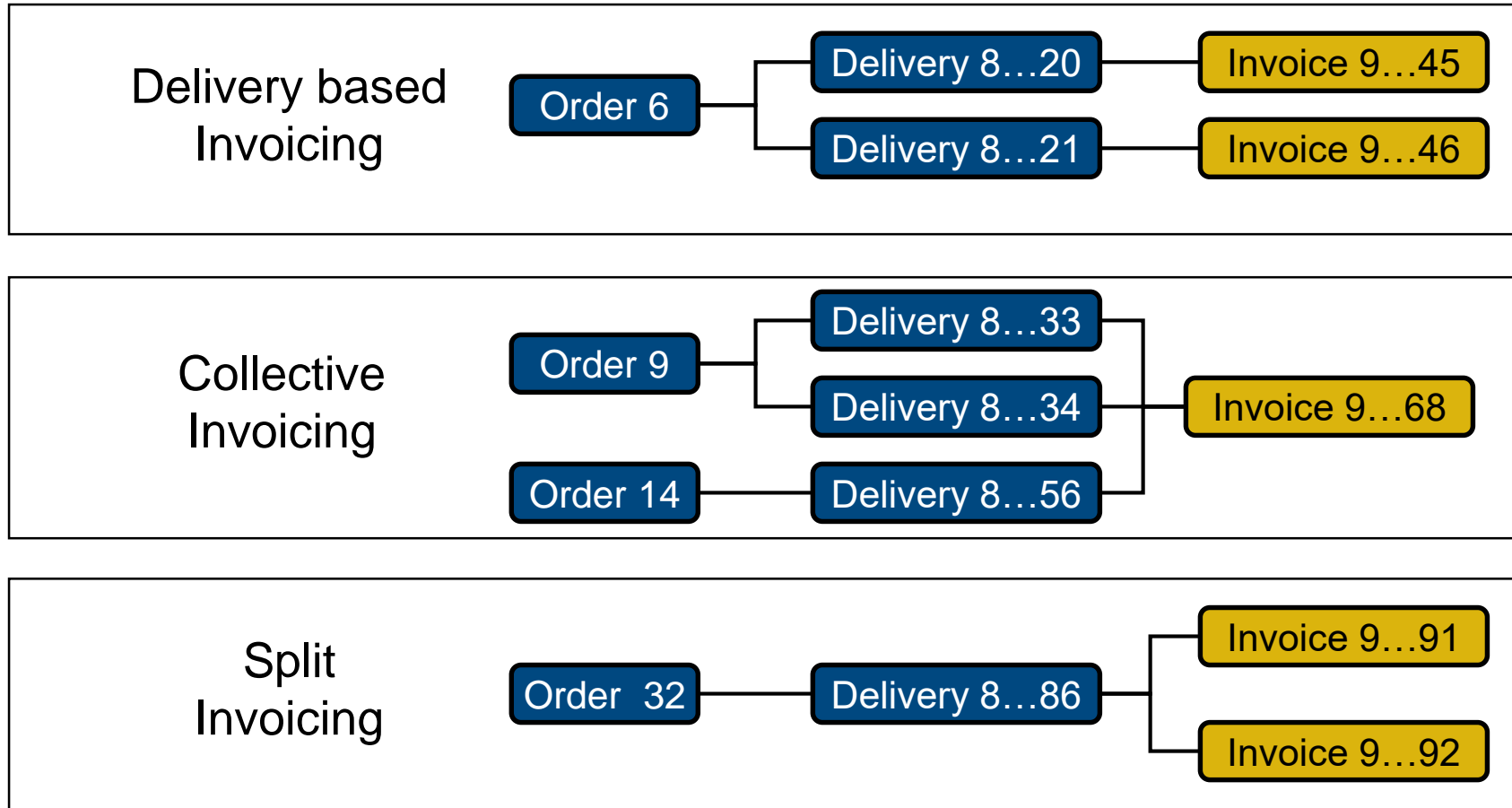
Goods issue

- Event that could indicate the legal change in ownership of the products
 - It signals that the goods have left the premises of the seller. Legal change in ownership depends on the “Incoterm” and what is written in the sales order terms and conditions.
- 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.
- The billing document will automatically create a debit posting to your customer's sub-ledger account and credit it to your revenue account
- It is at this point that the sales process is passed over to Financial Accounting to await payment.

Billing Methods

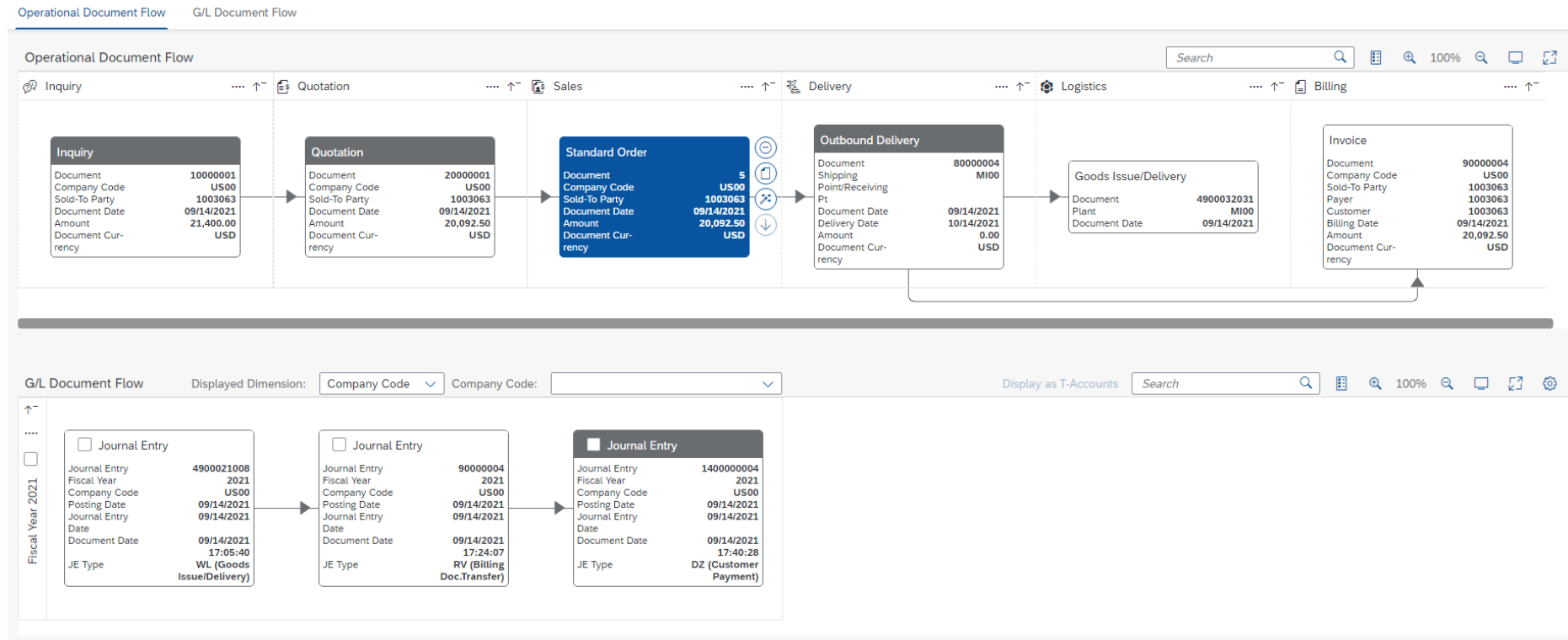


Payment

- 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).



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

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

