

Sales and Distribution (SD)

Curriculum: Introduction to S/4HANA using Global Bike

Teaching material - Information



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

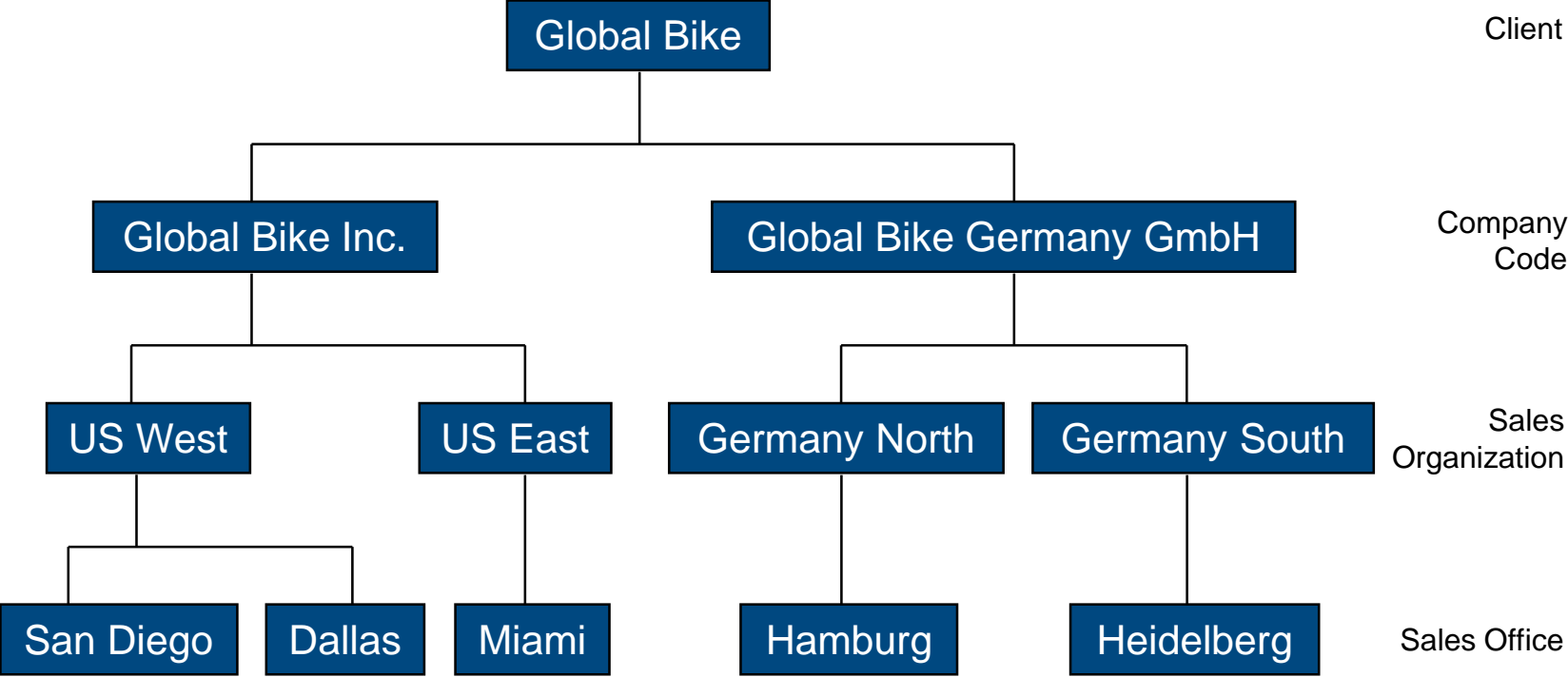
SD Organizational Structure

- 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

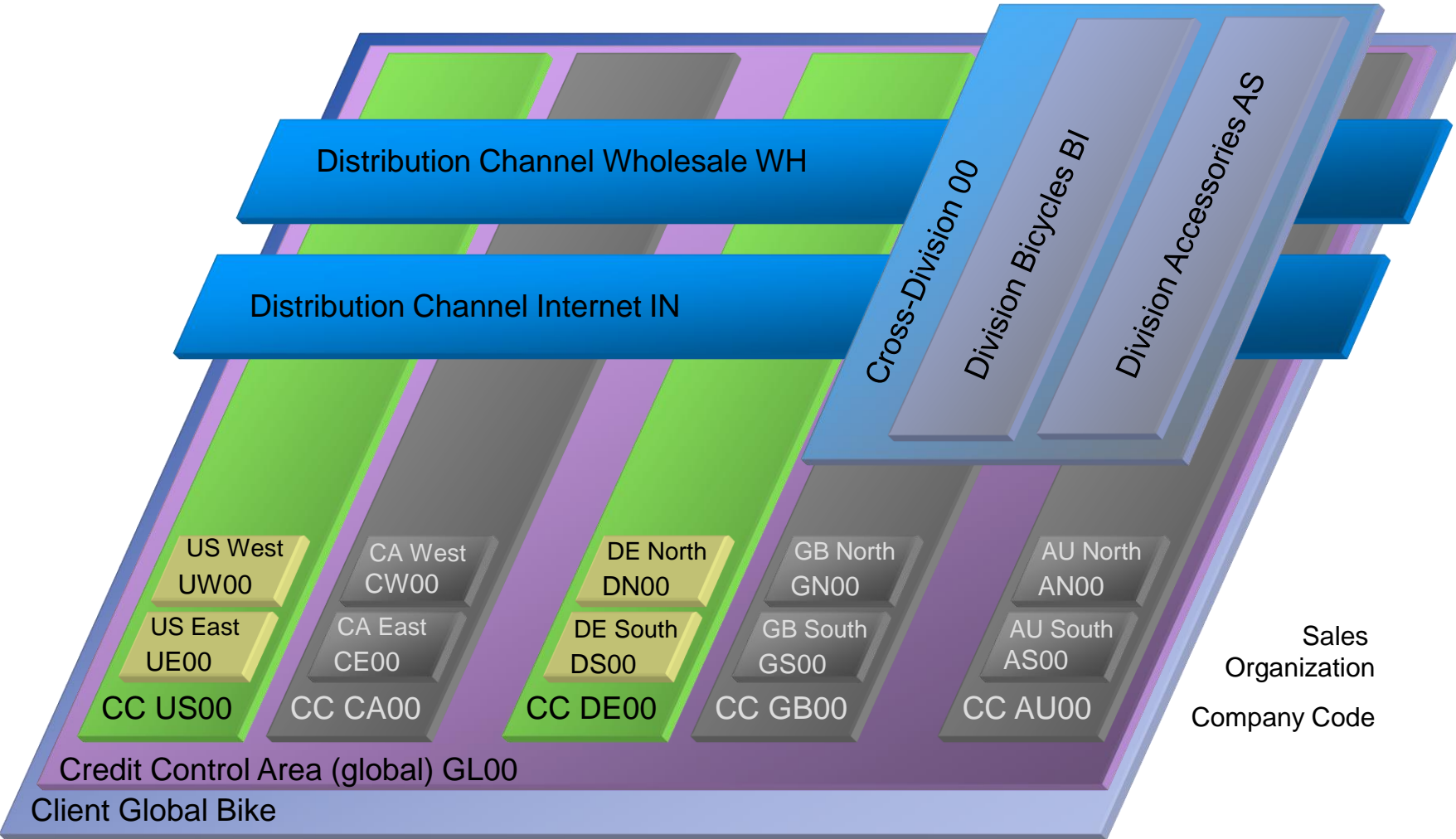
SD Organizational Structure

- 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

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More ▾

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

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Group 🔍

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)

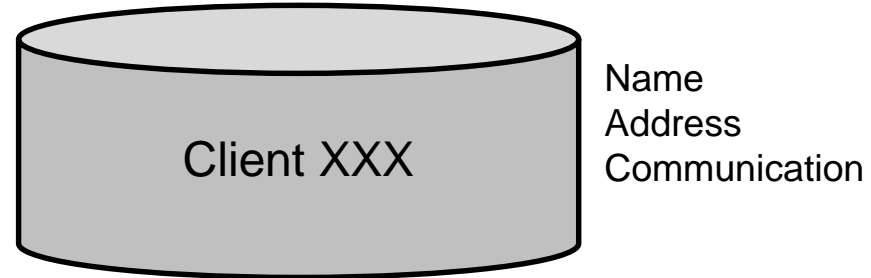
Customer Master Data

- 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

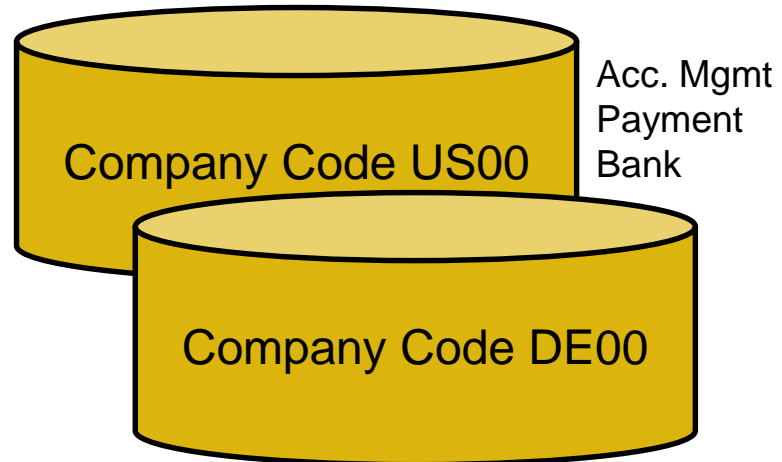
The screenshot displays the SAP Business Partner form for 'The Bike Zone 000' (ID 1003063). The header bar shows the SAP logo and 'Business Partner' with a dropdown arrow. Below the header, the customer name 'The Bike Zone 000' and ID '1003063' are shown. A building icon is next to the 'Grouping: Internal number assignment (0001)' and 'Business Partner Category: Organization (2)' fields. The 'Standard Address' field contains '2144 N Orange Ave 32804 Orlando US'. The 'Standard Communication' field is empty. A navigation bar below the header includes '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

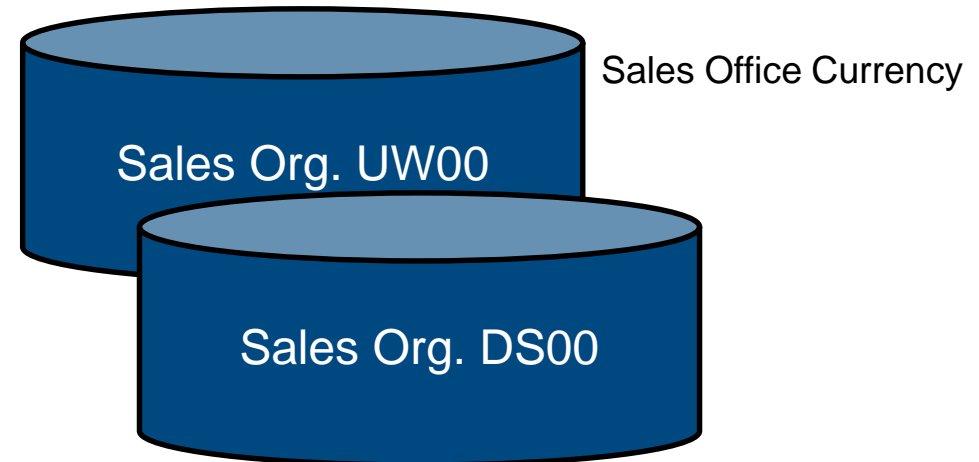
General Information relevant for the entire organization:



Company Code specific information:



Sales Area specific information:



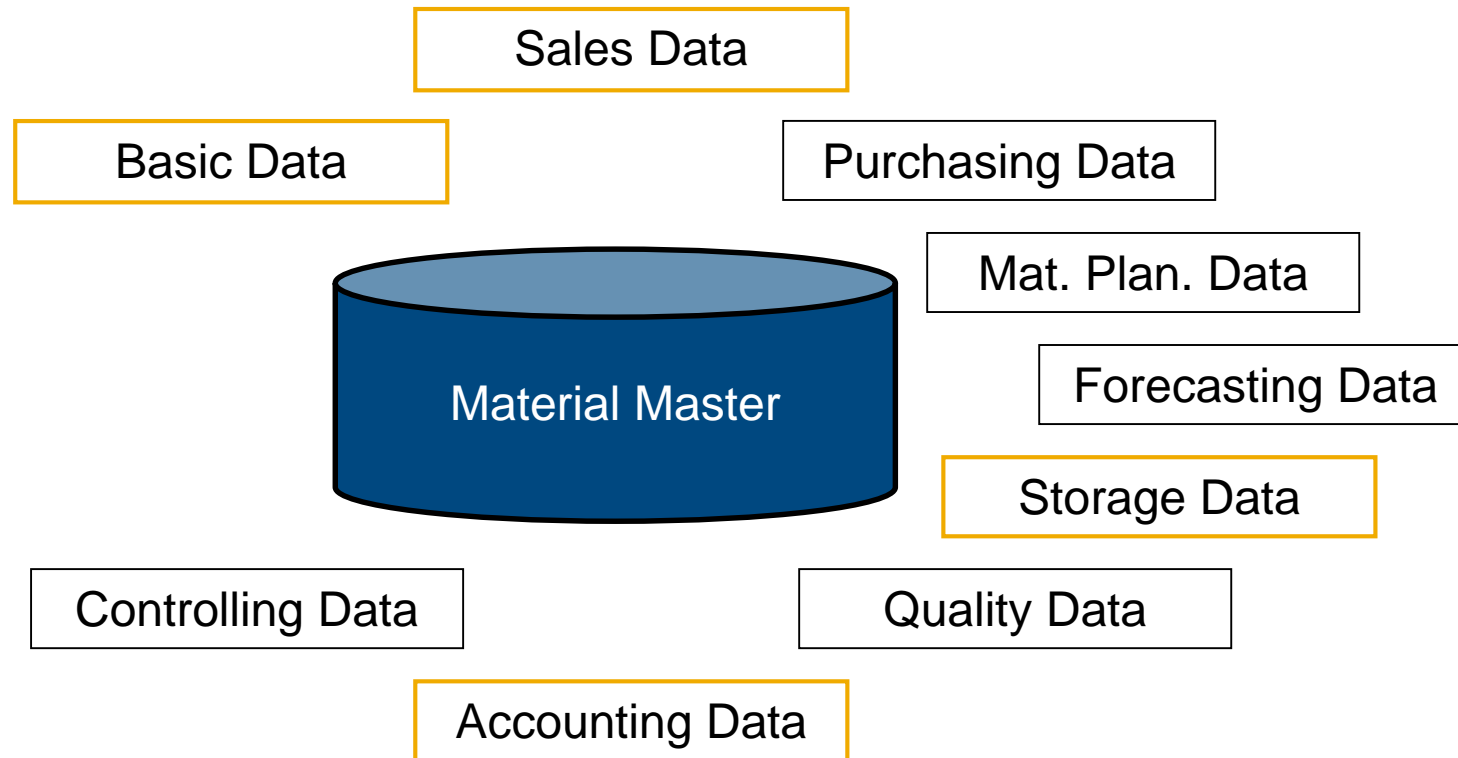
Material Master Data

- 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 view for a product named 'Deluxe Touring Bike (black)' with material number 'DXTR1000'. The interface includes a top navigation bar with the SAP logo and a 'Product' dropdown. Below the header, there is a blue icon representing a bicycle. To the right of the icon, key data points are listed: Product Type: Finished Product (FERT), Product Category: Product, Product Group: Finished Bikes (BIKES), Base Unit of Measure: Each (EA), GTIN, and Revision Level. A horizontal menu below these details includes tabs for General Information (selected), Product Compliance, Components, Texts, Sales, Storage, and Warehouse Management. The main content area is divided into sections: 'Basic Data' containing fields for Division (Bicycles (BI)), Old Product Number (—), Batch Management Required (No), and Marked for Deletion (No); 'Descriptions' which is currently empty; and a table at the bottom showing the product name in different languages.

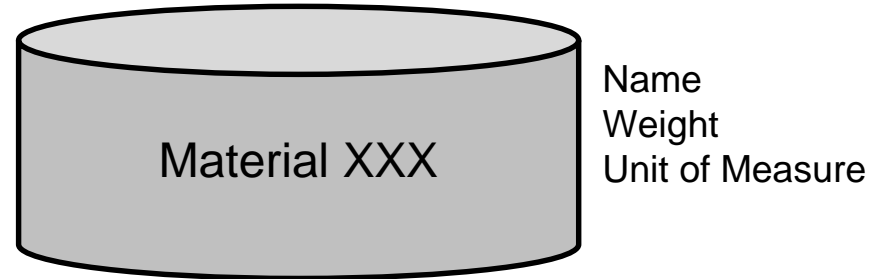
Language	Product
German DE	Deluxe Touring Bike (schwarz)
English EN	Deluxe Touring Bike (black)

Material Master Views

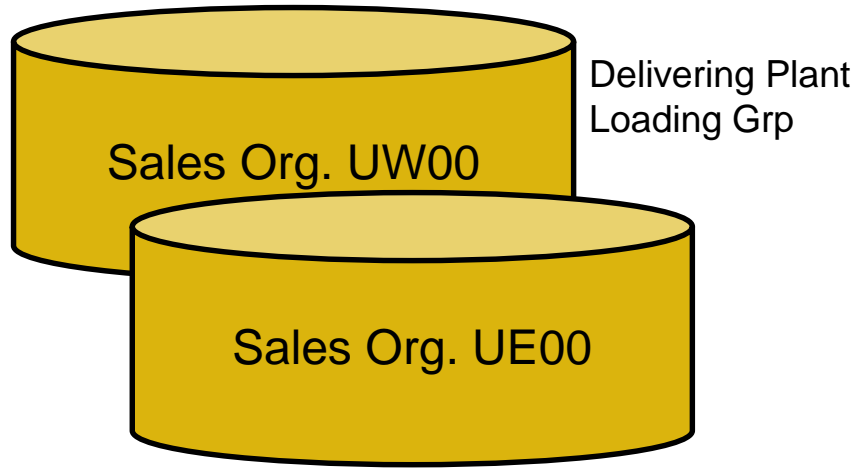


Material Master

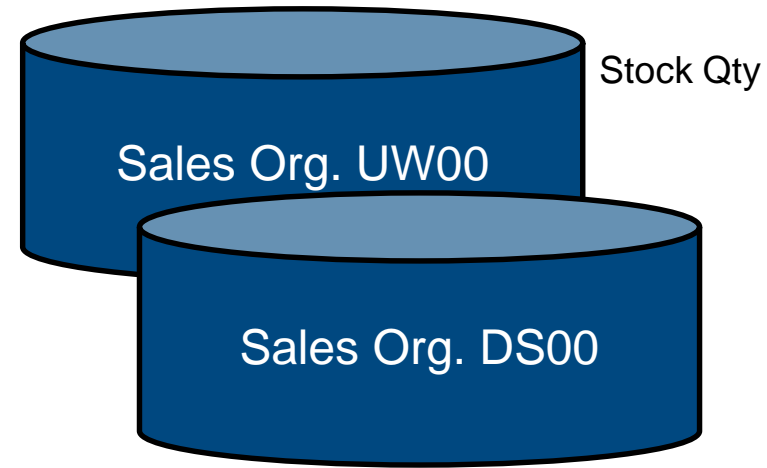
General Information relevant for the entire organization:



Sales specific information:



Storage Location specific information:



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

Navigation: < > >>

Sales Document Item: 10 Item category: TAN Standard Item

Material: DXTR1000 Deluxe Touring Bike (black)

Tabs: Sales A Sales B Shipping Billing Document **Conditions** Account Assignment Schedule lines Partner Texts Order

Quantity: 5 EA Net: 14,012.50 USD Tax: 0.00

Buttons: 🔍 + - 66 Condition Record Analysis Update

Pricing Elements

	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

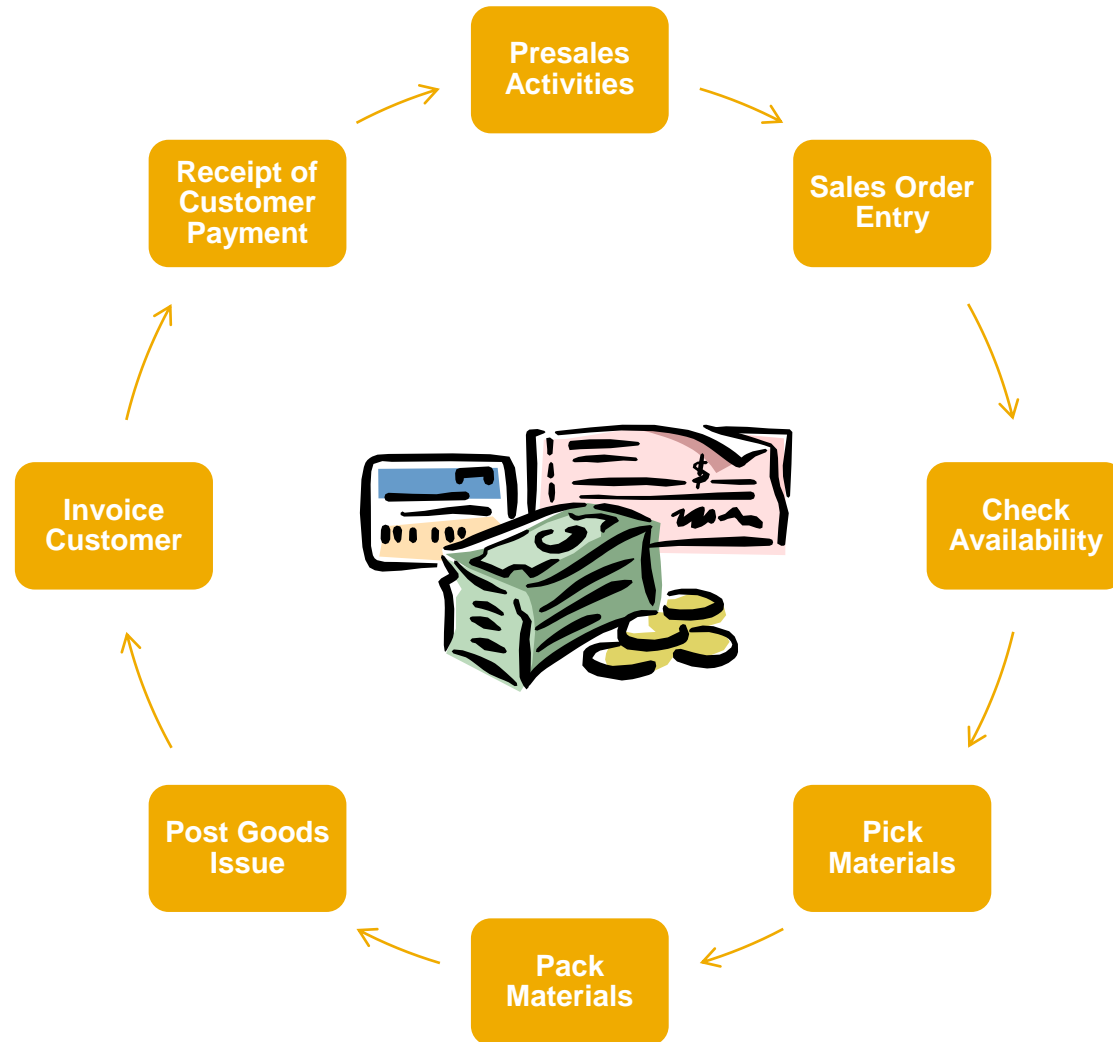
Output

- 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 presales 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 predefined 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	Description	Price	Price unit	Value
000010	DXTR1000	Deluxe Touring Bike (black)			
	5 EA	3,000.00 USD	1 EA		15,000.00
	Material	50.00- USD	1 EA		250.00-
	% Discount from N	5.000- %			737.50-
	Net Value for It	2,802.50 USD	1 EA		14,012.50
000020	PRTR1000	Professional Touring Bike (black)			
	2 EA	3,200.00 USD	1 EA		6,400.00
	% Discount from N	5.000- %			320.00-
	Net Value for It	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 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

- 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

Sales A
Sales B
Shipping
Billing Document
Conditions
Account Assignment
Schedule lines
Partner
Texts
Order Data
Status
Structure

Fixed Date and Qty: ☐
Order Quantity: EA

Delivery Time:
Delivered qty:

Sales
 Shipping
 Procurement

Quantities/Dates

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	<input type="text"/>		5	CP	0

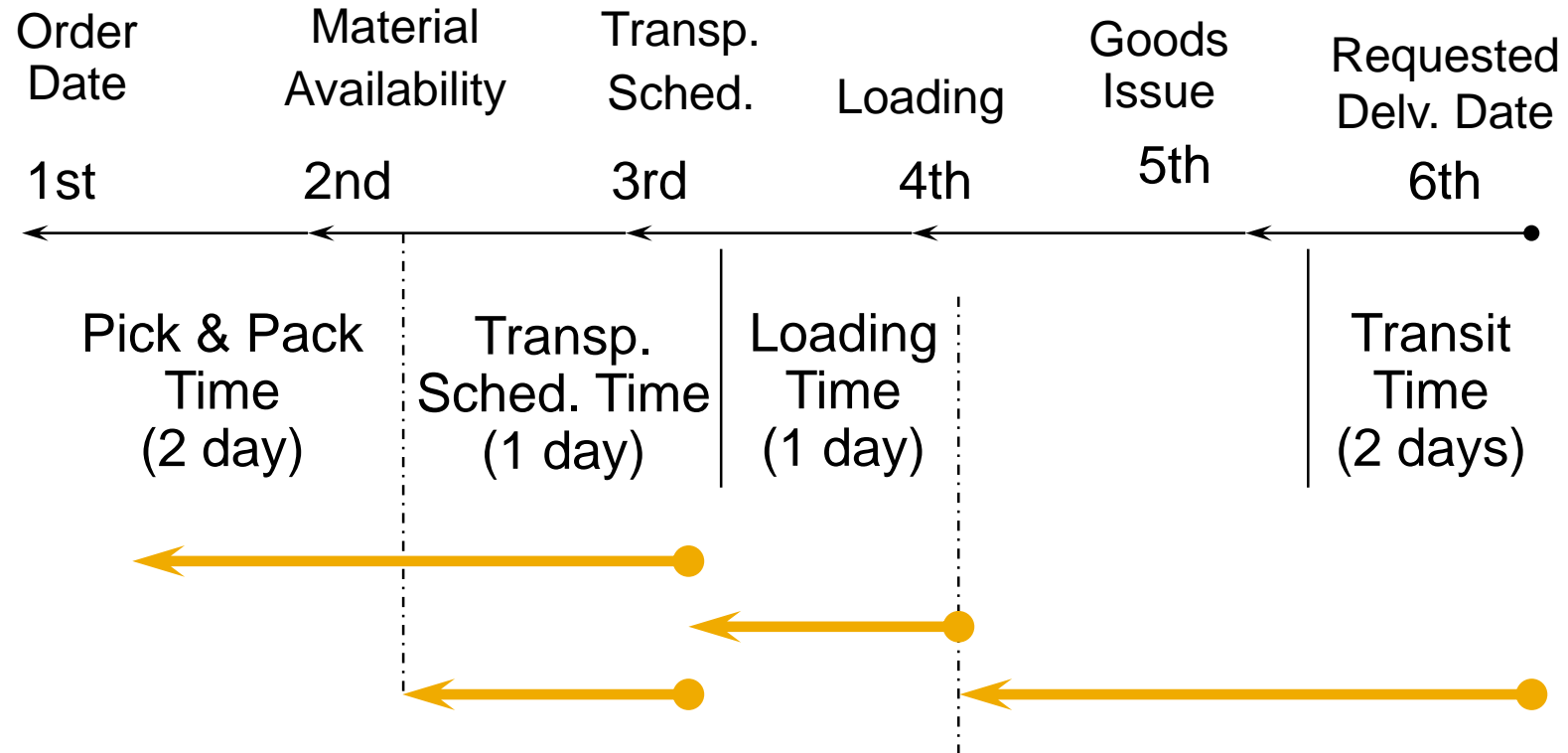
Sales Order

- 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

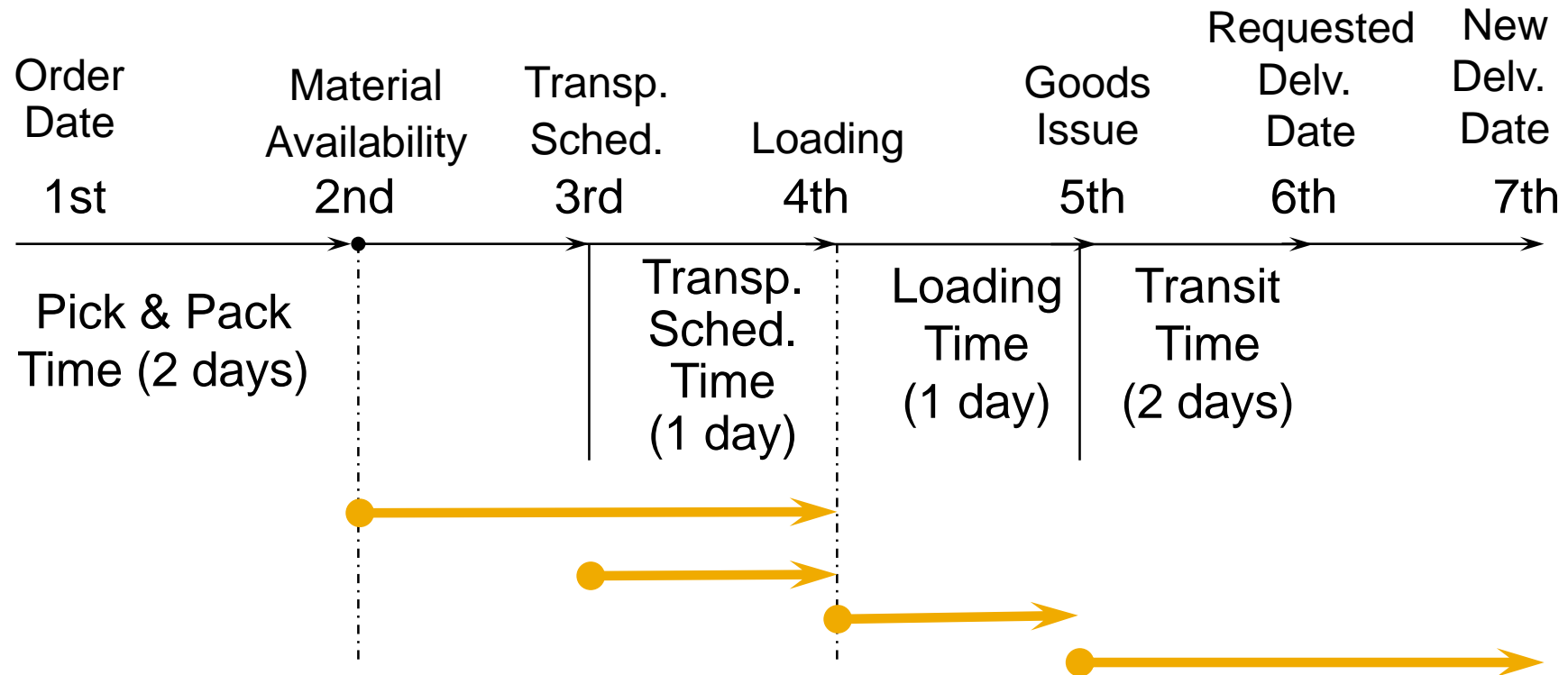
Delivery Scheduling

- 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

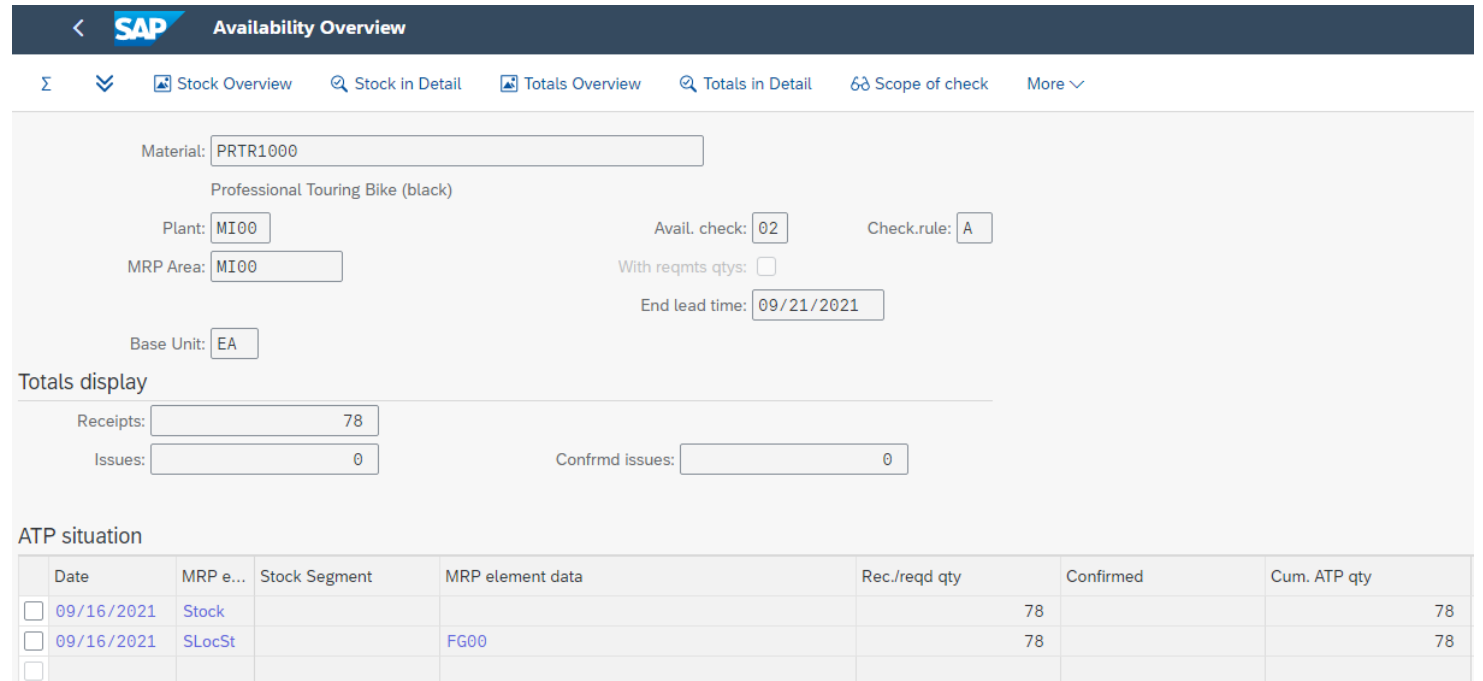


Shipping & Route Determination

- 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. At the top, there's a navigation bar with the SAP logo and the title 'Availability Overview'. Below this, a toolbar contains icons for 'Stock Overview', 'Stock in Detail', 'Totals Overview', 'Totals in Detail', 'Scope of check', and a 'More' dropdown. The main form area contains several input fields: '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's a 'Totals display' section with 'Receipts' (78), 'Issues' (0), and 'Confrmd issues' (0). At the bottom, there's an 'ATP situation' table.

	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

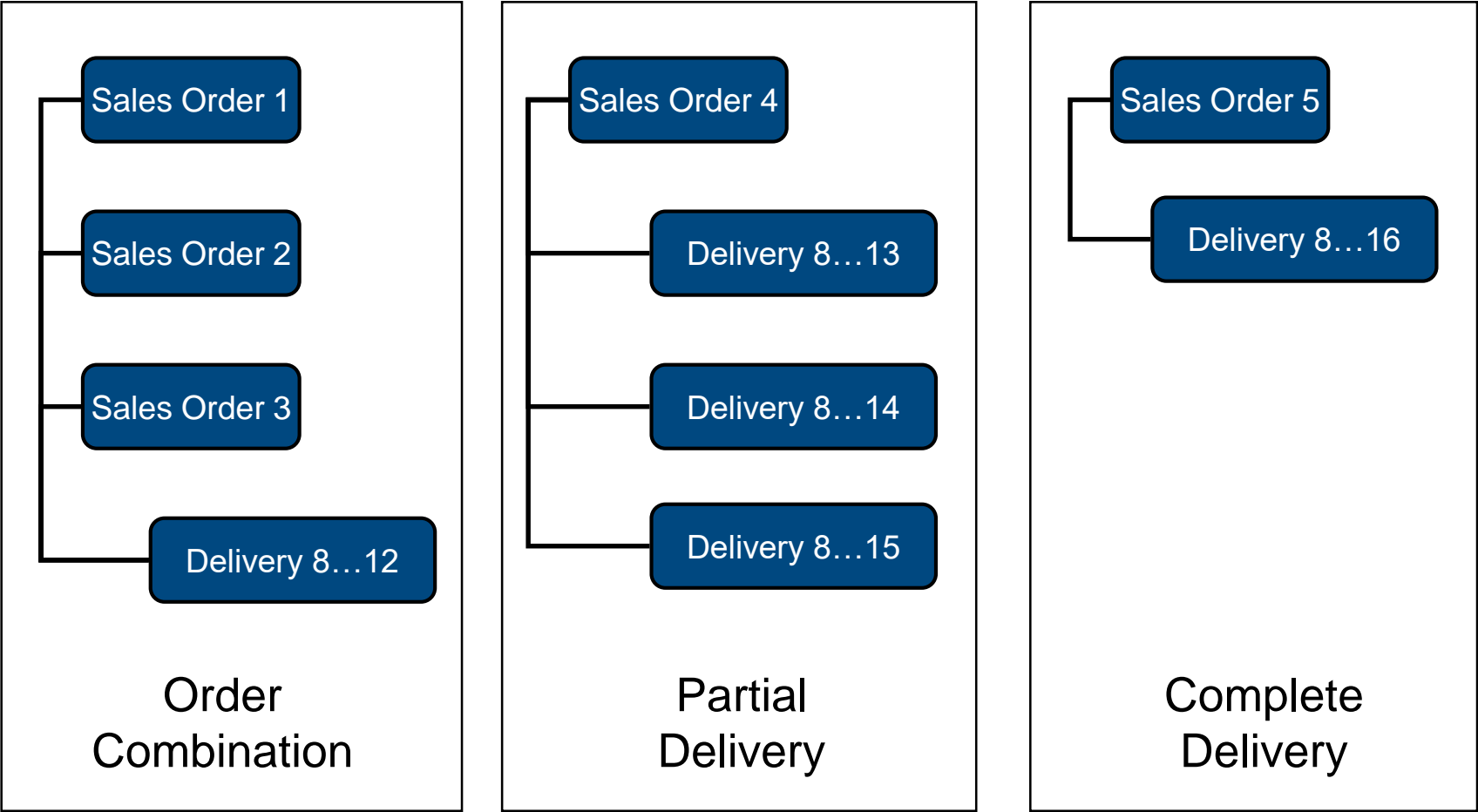
Credit Check

- 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

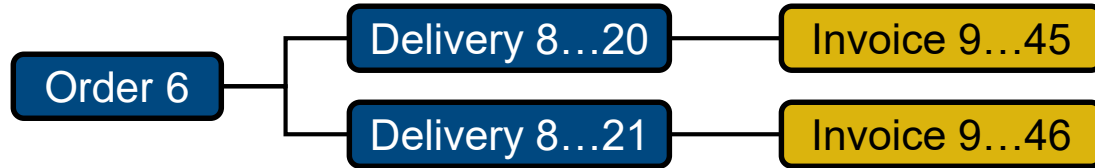
- Event that could indicates the legal change in ownership of the products
 - It signals that the goods have left the premises of the seller. Legal change in ownership depends on the “Incoterm” and what is written in the sales order terms and conditions.
- Reduces inventory and enters Cost of Goods Sold
- 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

Delivery-based
Invoicing



Collective
Invoicing



Split
Invoicing

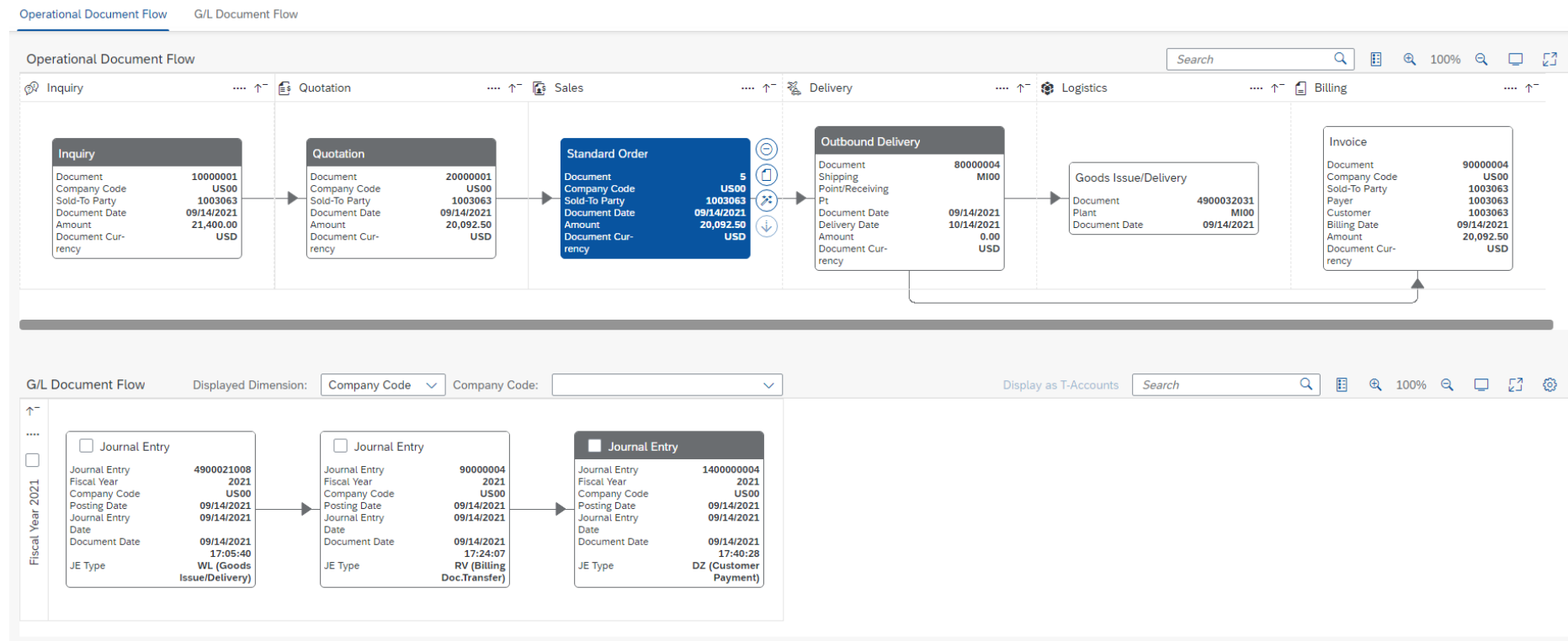


Payment

- 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

