THE FULFILLMENT PROCESS

Topic Coverage

- Organizational levels in Fulfillment
- Master data in Fulfillment
- Fulfillment concepts
- The Fulfillment Process in detail
Basic Fulfillment Process

Organizational Data relevant to fulfillment

- Client
- Company code
- Sales organization
- Distribution channel
- Division
- Sales area
- Plant (shipping plant)
- Storage location
- Shipping point
- Credit control area
Sales Organization

Similar to Purchasing Organization--bears ultimate responsibility for selling materials and services.

Duties:
- Distributing goods and services
- Negotiating sales conditions
- Product liability and rights of recourse (legal)

Highest organizational level in sales reporting and execution.

One or more Sales Organization assigned to Company Code.
- Company Code must have at least 1 sales organization.

Typically created based on geography.

Distribution Channel

Means through which materials (or services) reach the customer.

Represents a distribution strategy or technique.

Used to:
- Differentiate wholesale, retail, internet sales, etc.
- Differentiate pricing, responsibilities, statistics, and plants.

A sales organization must have at least one distribution channel. The same distribution channel can exist in multiple Sales Orgs.
- Distribution channels are created at client level but assigned to Sales Organizations.
Division

Groupings of materials typically representing a product line.

Used to:
- Differentiate product characteristics or targets.
- Differentiate pricing, responsibilities, statistics, and plants.

A sales organization must have at least one division. The same division can exist in multiple sales organizations.

Division created at client level but assigned to sales organization.

Sales Area

Unique combination of:
- Sales Organization
- Distribution Channel
- Division

Org Data

<table>
<thead>
<tr>
<th>Sales Area</th>
<th>Org Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>C100</td>
<td>S100</td>
</tr>
<tr>
<td>Retail</td>
<td>Internet</td>
</tr>
<tr>
<td>Toys</td>
<td>Games</td>
</tr>
<tr>
<td>S200</td>
<td>Wholesale</td>
</tr>
<tr>
<td>Retail</td>
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<td>Games</td>
</tr>
</tbody>
</table>
(Delivering) Plant

Since a Company Code may have many Sales Organizations, a single plant may fulfill orders from multiple Sales Organizations.

In the context of manufacturing, a plant is where goods are produced.

In the context of sales and distribution, a plant is where goods or services are distributed or rendered.

Shipping Point

A physical location from which outbound deliveries are sent:
- Loading dock
- Mail room
- Rail depot
- Group of employees (to handle expedited orders)

Must have at least one shipping point; assigned at plant level.

The same shipping point can be assigned to many plants.
Shared Shipping Points

Shipping point

Storage facility (plant)

Front office (plant)

Storage facility (plant)

Factory (plant)

All shipments are sent from one shipping point, which is in the storage facility located by the front office.

Multiple Shipping Points

Storage facility 1 (plant)

Normal shipping points

Storage facility 2 (plant)

Express shipping point

Storage facility 3 (plant)

The express shipping point is used by all plants, as needed. Facility 2 uses the shipping points located at the other two facilities.
Credit Control Area

Responsible for granting and managing customer credit. Helps company manage risk and credit exposure.

Centralized
- Once credit control area for all company codes in the enterprise
- All customers in all company codes managed by one credit control area

Decentralized
- More than one credit control area in the enterprise, each managing credit for one or more company codes

Managed through a **credit management master record** which extends the customer master record for credit activities.

Centralized Credit Control Area

![Diagram of Centralized Credit Control Area]

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Decentralized Credit Control Area

Master Data

- Material master (what views?)
- Customer master (what segments?)
- Customer-material info record
- Condition master
- Output master
- Credit management master
### Material Master Data

**Basic Data**

**Sales: Sales Organization**  
Specific to sales org and distribution channel

**Purchasing**  
Materials management, plant

**Sales: General/Plant**  
Specific to plant

### Customer Master Data

**General Data**  
Valid across all company codes

**Financial/ Accounting data**  
Specific to a particular company code

**Sales Area data**  
Specific to a sales area
Segments Of Customer Master Data

Customer Master Data

- **General data**
  - Account number
  - Address

- **Company code data (FI)**
  - Reconciliation account
  - Payment terms
  - Communication

- **Sales Area data (Sales)**
  - Sales related
    - Sales area, pricing, currency
  - Shipping
    - Delivering plant, priorities, methods, tolerances, partial delivery
  - Billing
    - Terms, tax-related,
  - Partner functions: multiple roles
    - Sold-to-party, Ship-to-party, Bill-to-party, Payer

A customer can be served by multiple sales areas
**Partner Functions**

- Sold-to party*
- Ship-to party*
- Payer*
- Bill-to party*
- Personnel
- Forwarding agent
- Contact persons

*mandatory functions

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**Multiple Definitions Of A Customer**

<table>
<thead>
<tr>
<th>Client</th>
<th>(GBI) General data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company code</td>
<td>(US00) Accounting data</td>
</tr>
<tr>
<td>Sales area</td>
<td>(UE00 + WH + BI) Sales area data</td>
</tr>
</tbody>
</table>

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**Customer - Material Information Record**

Intersection of data for one customer and one material
Supersedes data in customer master and material master

**Examples of data**
- Cross references customer material numbers, descriptions
- Specific terms (e.g., shipping, tolerances, partial deliveries, delivering plant) for this customer/material
- Alternate delivery plant
- Alternate shipping terms/methods
- Alternate packing
- Alternate tolerances
- Alternate partial deliveries (not accepted for this material)

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**Conditions Master**

**Prices**
- Material price
- Customer specific price

**Freight**
- IncoTerms

**Surcharges and discounts**
- For customer, material, or combination

**Taxes**
Output Conditions

Specifies transmission medium for customer

Examples of output
- Quotation, Order confirmation, Invoices

Medium
- Mail, fax, EDI

Master data includes
- Output type, medium, time (immediate or later), partner function

Layout of actual form is defined in “SAPscript”

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Credit Management Master Record

Extension of the customer master record

General data (client level)
- Address, communication, total credit at the enterprise level

Credit control area data (credit control area level)
- Credit limit for the credit control area
- Risk category

Overview (key data from other areas)
Fulfillment Process Steps

“Order-to-Cash Process”

Pre-sales Activity

CRM light – establishing and maintaining customer relationships
Activities include
  - Creating and tracking customer contacts
  - Mailing campaigns
  - Responding to customer inquiries and requests for quotations
  - Quotations
  - Outline agreements
    - Contracts
    - Scheduling agreements—material procurements on specified time schedule
Elements Of The Pre-Sales Activity

Data In A Quotation
Elements Of A Sales Order

Trigger
• Customer PO

Data
• Organizational data
• Master data
• User input
• Contracts

Task
• Create sales order
• Perform credit check
• Track contracts

Outcomes
• Sales order
• Update contracts
• Availability check
• Delivery schedule
• Requirement transfer

Data In A Sales Order

Sales order

Pricing conditions
• Conditions

Contracts
• Contract number
• Material number
• Quantity
• Delivery dates

Customer-material info records
• Conditions
• Shipping data
• Billing data

Customer master
• Contact information
• Shipping data
• Billing data
• Partner functions

Material master
• Material description
• Unit of measure

User input
• Partner functions
• Material number
• Quantity
• Dates

Organizational data
• Client
• Company code
• Sales area
• Delivery plant

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Structure Of A Sales Order

3 document levels: header, line items, schedule line. Schedule lines (for each item) show delivery quantities and dates.

Backward Scheduling and ATP

Available-to-Promise (ATP)—uncommitted stock and receipts considered to be available to satisfy potential customer orders.
Inventory Sourcing

Transfer of requirements (materials management / materials planning)
From stock
  - Materials management
Internal procurement
  - In-house production process
External procurement
  - Procurement process

Shipping

Create outbound deliveries
Picking (optional)
Packing (optional)
Transfer requirement (if WM is enabled)
Post goods issue
Elements Of The Shipping Step

Shipping/goods issue is the first step in the sales order process with an FI impact.
Shipping may be the first goods movement in the sales order process (unless warehouse management enabled).

Data In A Delivery Document
Structure Of A Delivery Document

Deliveries

One order can be broken up into multiple deliveries
Multiple orders can be consolidated into one delivery

Constraints for the above:

- Same customer
- Same shipping point
- Same delivery date
- Same ship-to-address
Impact of Post Goods Issue

Material document created
Accounting document created and G/L updated
  Stock accounts (stock valuation reduced) (credited)
  Cost of goods sold (debited)
CO document created
Billing due list updated
Sales documents updated (status)

FI Impact Of The Shipping Step

Inventory
- finished goods
  Debit
  $42,000
  Credit

Inventory
- trading goods
  Debit
  $1,500
  Credit

Cost of goods sold
  Debit
  $43,500
  Credit

Debit
  Customer
  Credit

Debit
  Bank
  Credit

Debit
  A/R
  Credit

Note: Inventory and COGS values are based on cost, not selling price.
Cost of bikas: $1400 per bike (30 bikas)
Cost of t-shirts: $15 per shirt
What is COGS?

Income statement “formula”:

Sales Revenue
Less Cost of Goods Sold
Equals Gross Profit
Less Overhead (non-COGS) costs
Equals Net Profit
Less Taxes
Equals Net Profit after Taxes

Billing

Focus: Create invoices
Many deliveries can be reduced to one billing document
  Criteria: Same payer, billing date and destination country
One delivery can be expanded to many billing documents
Elements Of The Billing Step

Credit memo: issued if billing price too high, product is defective, or other reason we wish to reduce amount customer must pay.

Debit memo: increases the amount the customer must pay (invoice price too low).

Data In A Billing Document
Revenue is booked for a sale during the billing process.
**FI Impact Of The Billing Step**

Post incoming payment  
FI documents created, G/L updated  
Cash/Bank account  
Customer / AR accounts
Elements Of The Payment Step

- **Trigger**: Incoming payments
- **Data**: Organizational data, Master data, Transaction data, User input
- **Task**: Record payments, Apply payments to open items
- **Outcomes**: GL Account entries, Customer credit (increase), FI Document

Data In A Payment Document

- **Customer master**: Customer account
- **Organizational data**: Client, Company code
- **User input**: Dates, Payment amount
FI Impact Of The Payment Step

Customer Payment With Discount
Processing Customer Payment

Credit Management Process

Used to determine if credit should be granted to a customer (i.e., should process continue?)

Credit is checked when:

- Sales order is created or changed
- Delivery is created or changed
- Post goods issue

Approval based on

- Orders being processed, Deliveries, billing, and receivables, and numerous other criteria
Credit Management Process

- Create sales order
- Perform credit check
- Within limit?
  - Yes: Continue fulfillment process
  - No: Block delivery
- Review credit
- Inform customer
- Release

Integration With Other Processes

- Fulfillment
  - Financial accounting
  - Management accounting
  - Production
  - Procurement
  - Material planning
  - Project systems
  - Inventory and warehouse management
Reporting

General SAP reporting options
  Online lists
  Work lists
  Analytics

Fulfillment specific reporting options
  Document flow

Work Lists
Document Flow

Expected document flow:
- Standard Order
- Delivery
- Transfer Order (picking)
- Goods Issue (delivery)
- Invoice
- Accounting Document (payment)

Information Structures