

CRM2008

MARCH 3 – 5 • LAS VEGAS

8 Key Decisions to Make When Transitioning from SAP ERP Service Management to SAP CRM

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In This Session ...

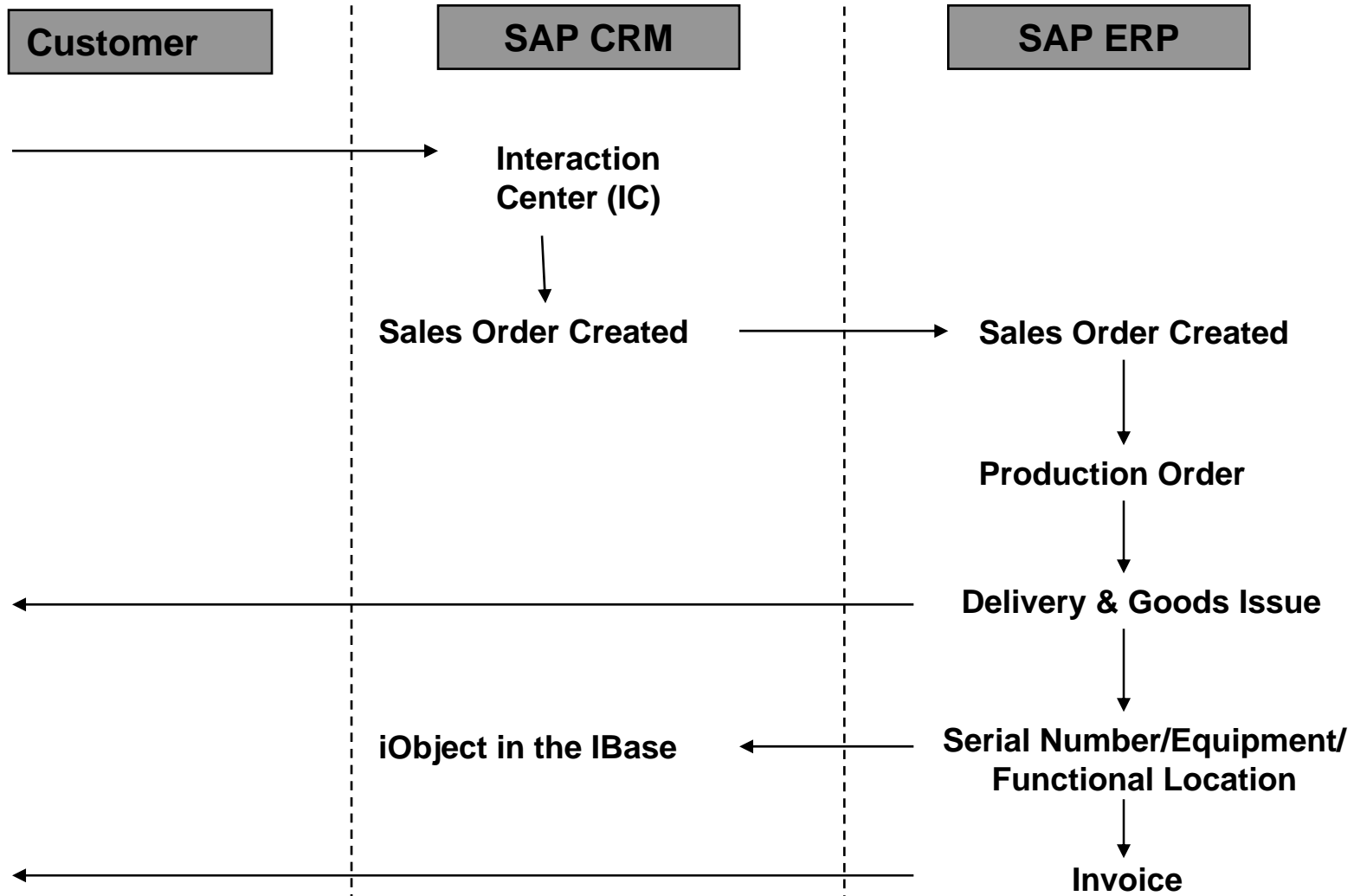
- Some of the frequently asked questions when replacing SAP ERP service management with CRM Service include:
 - ♦ Master data, mainly equipment – How does this show up in SAP CRM?
 - ♦ Service contracts – Can we download this from SAP ERP? Where should we bill the contracts?
 - ♦ Revenue recognition of contracts – How would this work from SAP CRM?
 - ♦ Ordering spare parts – How is this integrated with logistics?
 - ♦ Procuring external parts and labor – How is this integrated with SAP ERP Purchasing?
 - ♦ Return orders – How is this integrated with the reverse logistics processes in SAP ERP?
 - ♦ Service costing – Do I have the same flexibility as in SAP ERP?
 - ♦ Service history – Should I load this into SAP CRM?

What We'll Cover ...

- Master data
- Service contracts
- Billing
- Service costing
- Logistics integration
- Wrap-up

A Scenario for a Hi-Tech Company Using SAP CRM

Sales Process



Standard Scenario

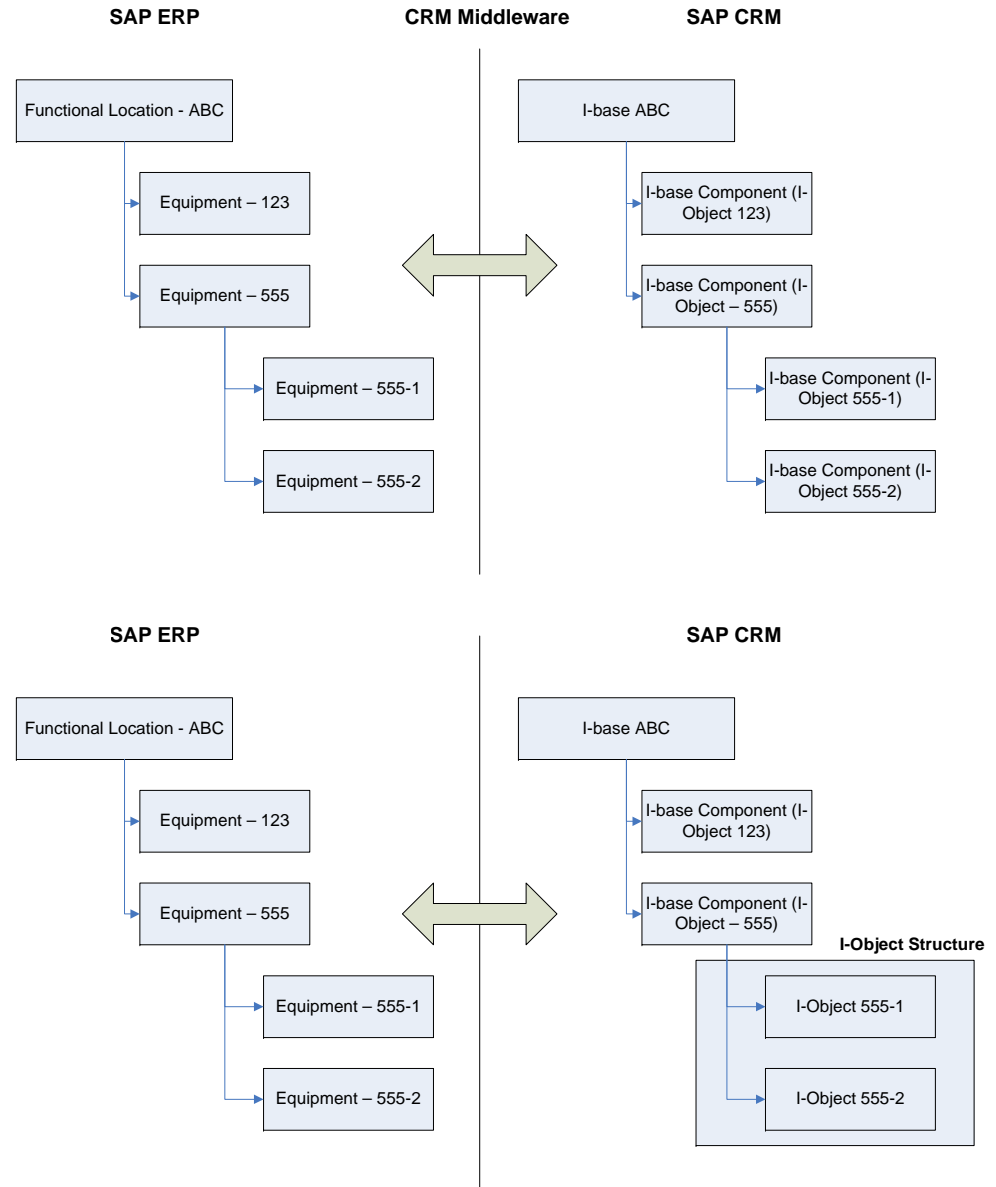
- Equipment is created in SAP ERP, either from a delivery (serialized material where the serial number profile is configured to create equipment) or from the production order
- On saving the equipment, the data is replicated to SAP CRM via middleware
 - On the SAP CRM side, an iObject of type “0401” is created and an IBase component is also created
- If the equipment is a child of another equipment, for example, a sub-item in a Bill of Materials (BOM), and the parent equipment has previously been distributed to SAP CRM, then the child equipment is attached to the parent
 - As a result, the IBase component for the child is attached into the IBase of the parent
 - ▶ Standard information from the equipment such as serial number, material number, and so on is copied over

Standard Scenario (cont.)

- If the parent has not yet been replicated to SAP CRM, then a new IBase is created with a new component
 - ♦ The moment the parent becomes available in CRM, the child component is moved under the parent, and the IBase for the child is marked as “Deleted”
- If there are partner records to the equipment in SAP ERP, then the partners are also replicated across
 - ♦ The partners can be assigned either to the IBase component itself or to the iObject (depends on configuration of the object family)

Integration to SAP ERP Equipment Master

- Information exchange (at the equipment level) to the iObject level is bidirectional
- In customizing, you can choose between creating IBase components vs. creating iObject structure
- Equipment configuration can also be loaded from SAP ERP
 - ♦ A prerequisite for this is that the configuration knowledgebase has been loaded



Integration to SAP ERP Equipment Master (cont.)

- **Middleware technical data**
 - ♦ Replication object: EQUIPMENT, EQUI_CONFIG (only for configuration), SERIALNUMBER (to download pure serial numbers)
 - ♦ BDoc type: CRM_EQUI_DMBDOC, CRM_EQUI_CONF
- **BAdI CRM_EQUI_LOAD is provided by SAP to influence data during the download process**
 - ♦ A standard implementation is provided: CRM_EQUI_LOAD_STDIMP and method PERFORM_LOAD takes care of creating the iObject and IBase, as mentioned previously

Integration to SAP ERP Equipment Master (cont.)

- **Limitation with the standard load program**
 - ♦ SAP creates a new IBase for every “functional location” in SAP ERP, which does not work if you want to see all equipment across all functional locations for a single customer in one IBase
 - ▶ **A custom implementation of BAdI CRM_EQUI_LOAD fixes this problem**
- **To enable delta download of equipment changes from SAP ERP to SAP CRM, you need to make an entry in transaction BF31 (in SAP ERP) with event code PM000020, APPL - BC-MID and Function EQUIPMENT_COLLECT_DATA**

Integration to SAP ERP Equipment Master (cont.)

- The following set types are used by SAP CRM to store basic information on the equipment:
 - ◆ COM_TA_R3_ID – contains the following fields:
 - ▶ TAR3_ID: Technical Asset Number
 - ▶ TAR3_STRUCTURE_CODE: Structure Indicator
 - ▶ TAR3_CATEGORY: Category of Technical Asset
 - ▶ TAR3_TYPE: Type of Technical Asset
 - ▶ R3MATERIAL_ID: Material
 - ▶ R3SERIAL_NO: Serial Number (this is an alternative ID)
 - ▶ R3BATCH_ID: Master Batch DEF



Integration to SAP ERP Equipment Master (cont.)

- The following set types are used by SAP CRM to store basic information on the equipment: (cont.)
 - ♦ COM_TA_MANUFAC – Manufacturer Information
 - ▶ MANUFACTURER_ID: Manufacturer
 - ▶ MANUFACT_COUNTRY: Country of Manufacture
 - ▶ MANUFACT_REGION: Manufacturer Region
 - ▶ MANUFACT_MODEL: Model Description
 - ▶ MANUFACT_PART: Manufacturer Part Number
 - ▶ MANUFACT_SERIALNO: Manufacturer Serial Number
 - ▶ CONSTRUCTION_DATE: Date of Manufacture



Tip

The iObject is much richer in functionality than the equipment master and it makes sense to move equipment/IBase maintenance from SAP ERP to SAP CRM

What We'll Cover ...

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Service Contracts – Key Elements

- A service contract is a long-term agreement that contains the following key ingredients:
 - Type of service contract – Gold, Silver, Maintenance, Repair, represented by products in the Product Master
 - Products purchased by the customer that the contract covers (Object List)
 - Types of services/spares that the contract includes (Product List)
 - Service Level Agreements (SLAs) – Service Profile and Response Profile
 - Pricing agreements (special prices for services/spares as agreed upon with the customer)
 - Pricing conditions (service contract price)
 - Billing parameters (one-time vs. billing plan)
 - Period of coverage
 - Cancellation procedure

Service Contracts – Key Elements (cont.)

- Automatic contract validation during service processing and escalation management when breaching SLAs
- Rule-based pricing, billing, and accounting of warranty costs
- Possible to have a quotation before creating actual contract
- Integration into FI-CO for revenues from the billing plan and costs from service orders created against the contract

Service Contracts – Enhanced Features

- Service contracts can be limited by quantity/value and the call-off list can be viewed from the contract itself
- Service plans can be used to generate and track periodical service/maintenance plans
- Service agreements allow the sale of “corporate” service contracts
- Support for payment by credit, debit, and other payment cards when using SAP ERP Billing
- Usage-based billing (Pool Contracts)
- Warranty Claim Management using CRM Case Management
- Improvements to service plans

Service Contract – Snapshot

Service Contract: 5001770, Prestige 6x12
Back

Save | Cancel | New | Create Follow-Up | Print | Print Preview

Service Contract Details Edit

General Data

ID 5001770

Description Prestige 6x12

Sold-To Party [Tech Support](#)

Contact [Raquel Ortiz](#)

Employee Responsible [Wendy Snyder](#)

Processing Data

External Reference PRESTIGE

Status Open

Net Value 9.000,00 USD

Dates

Contract Start 12.03.2007 00:00

Contract End 12.03.2008 00:00

Items Edit List

Actions	Item No.	Higher...	Product ID	Quantity	Unit	Product	Item Cat...	Service...	Respon...	Net Value	Curre...	Status
	100		SER_SLA_6X12	1	AU	Prestige 6x12	Service ...	Mo - Sa ...	1 to 8 h...	9.000,00	USD	Released

Billing Plan Edit

Settlement Rules

Settlement Period Monthly

Billing Date To First of the Month

Billing Doc. Creation Date Five Days Before Invoice Date

Settlement Periods

Settlement	To	Bill.Doc.Created	Billing Value	Crcy	Billed	Billing Date
12.03.2007	11.04.2007	24.02.2007	750,00	USD	<input type="checkbox"/>	01.03.2007

Comparison with SAP ERP

- SAP CRM service contracts can be managed better than SAP ERP contracts, as renewals can be managed as new line items within existing contracts
- Revenue Recognition (time and service) in conjunction with SAP ERP Controlling
 - ♦ Prerequisite – use of Internal Orders in SAP ERP
- Billing possible in SAP CRM or SAP ERP
- Contracts can be defined at the IBase, IBase Component, or iObject level
- Product List defines which services are covered by the contract
 - ♦ This list can be flexibly defined by a combination of products, product categories, and partner product ranges (with exclusion rules)

Comparison with SAP ERP (cont.)

- It's possible to set up one contract with different line items representing different contracts you have for the customer and the equipment
 - ♦ For example, you can have a regular contract line item, a quantity/value-based contract item, and a service plan item (PMI) all in the same contract
- Strong integration into SAP ERP FI-CO for billing and costing as in SM
- Several SAP NetWeaver[®] Business Intelligence (SAP NetWeaver BI) reports are available that analyze a contract and its profitability

Migrating from SAP ERP

- There is no standard download program for SAP ERP service contracts migrating into SAP CRM contracts
- Either a custom download will have to be created or the contracts will have to be migrated manually
 - ♦ Prerequisite to running a custom download would be to download the equipment master
- Due to the flexibility of SAP CRM contracts, the mapping from SAP ERP to SAP CRM can be designed in many different ways
 - ♦ Therefore, SAP does not provide a standard download



Heads Up!

Service Contracts

- Service Contracts

- ♦ Warranties

- ♦ Revenue Recognition

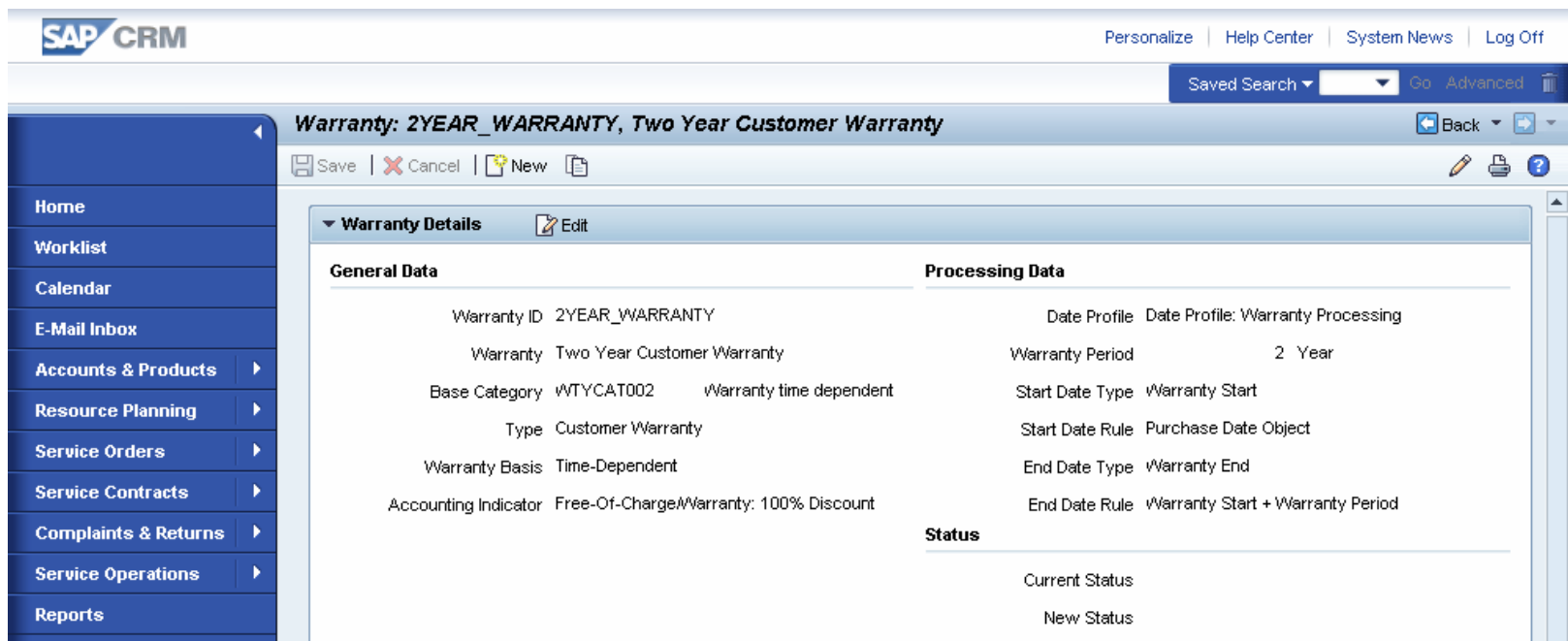
Warranties in SAP CRM

- **Warranty – a promise made to the customer that does the following:**
 - ♦ Guarantees that a product is without defects
 - ♦ Provides validity for a specific period
 - ♦ Defines entitlements for repair or exchange of defect parts wholly or in part without charge
- **Flexible creation and maintenance of warranties representing the warranty entitlements applicable for certain products**
- **Registration of warranty assignment to customers' products and tracking of entitlement provided to a customer through product lifecycle**

Warranties in SAP CRM (cont.)

- Recognition and validation of warranty entitlement during all service-related business processes
- Warranty analytics
 - ◆ Information provided about the amount of products with or without warranty
 - ◆ Expired warranties monitored per installed base and individual object
 - ◆ Warranty expense analysis

Warranty Snapshot



The screenshot shows the SAP CRM interface for a warranty. The top navigation bar includes 'SAP CRM', 'Personalize', 'Help Center', 'System News', and 'Log Off'. The main header displays 'Warranty: 2YEAR_WARRANTY, Two Year Customer Warranty' with a 'Back' button. Below the header is a toolbar with 'Save', 'Cancel', 'New', and a document icon. The main content area is titled 'Warranty Details' and contains two columns: 'General Data' and 'Processing Data'. The 'General Data' column lists: Warranty ID (2YEAR_WARRANTY), Warranty (Two Year Customer Warranty), Base Category (WTYCAT002 - Warranty time dependent), Type (Customer Warranty), Warranty Basis (Time-Dependent), and Accounting Indicator (Free-Of-Charge/Warranty: 100% Discount). The 'Processing Data' column lists: Date Profile (Date Profile: Warranty Processing), Warranty Period (2 Year), Start Date Type (Warranty Start), Start Date Rule (Purchase Date Object), End Date Type (Warranty End), and End Date Rule (Warranty Start + Warranty Period). Below these columns is a 'Status' section with 'Current Status' and 'New Status' fields.

General Data		Processing Data	
Warranty ID	2YEAR_WARRANTY	Date Profile	Date Profile: Warranty Processing
Warranty	Two Year Customer Warranty	Warranty Period	2 Year
Base Category	WTYCAT002 - Warranty time dependent	Start Date Type	Warranty Start
Type	Customer Warranty	Start Date Rule	Purchase Date Object
Warranty Basis	Time-Dependent	End Date Type	Warranty End
Accounting Indicator	Free-Of-Charge/Warranty: 100% Discount	End Date Rule	Warranty Start + Warranty Period

Status

Current Status
New Status

- Flexibility in defining start and end date rules for the warranty
- Different types of warranties – time-based, counter-based, both
- Warranty period and coverage can be defined as well
 - All services and spares that are covered by the warranty can be defined as well as warranty exclusion rules

Assignment and Tracking of Warranties

- **Product master**
 - ♦ Warranty information for individual objects created with reference to a product, such as product registration via e-service
 - ♦ Warranty information for non-individualized customer products, such as complaint processing for consumer products
- **Individual object**
 - ♦ Assigned automatically when referencing a product master
 - ♦ Enablement of date attributes for individual objects such as delivery date or installation date to be used for start date determination
- **Installed base component**
 - ♦ Rule-based or manual maintenance of warranty start date

Comparison with SAP ERP Service Management

- Warranty is its own object in CRM Service
 - ♦ It can be created automatically when an equipment is downloaded from SAP ERP to SAP CRM
 - ▶ The validity dates will be defined by date rules
- Warranties in SAP ERP cannot be downloaded, but they can be easily recreated in SAP CRM during the equipment download process
- Extended Warranties, which are paid for by the customer, can be modeled in a couple of ways:
 - ♦ As service contracts with their own pricing
 - ♦ As a service product that is added to a billable service order so as to charge the customer
 - ▶ Along with this the existing warranty assignment dates can be extended

Service Contracts

- Service Contracts

- ♦ Warranties

- ♦ Revenue Recognition

Revenue Recognition

- SAP CRM now has a high degree of integration into SAP ERP
- Well-known revenue recognition process from SAP ERP can be addressed directly with SAP CRM data
- Distribution of revenues according to the fiscal periods
- Time- and service-related revenue recognition available
- Separation of revenue recognition from the billing process
- Posting period of the billing document is not necessarily the same as the posting period for revenue recognition
- Revenue recognition enables companies to better manage revenues across time

Revenue Recognition (cont.)

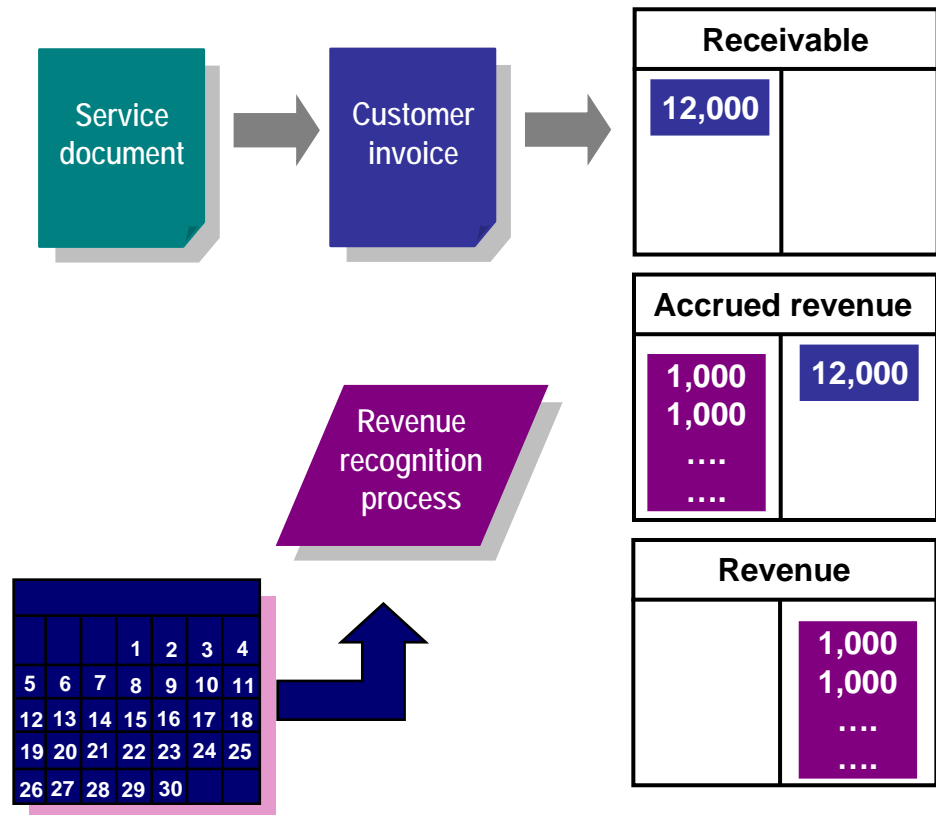
- Distinguish between two different cases:
 - ◆ Periodical billing contracts
 - ▶ Periods for contract invoices (scheduled in the contract-related billing plan) differ from the fiscal periods
 - ▶ Time-related revenue recognition
 - ▶ Revenues are distributed in equal proportions in specific time periods
 - ◆ Target value/target quantity contracts
 - ▶ With service contracts, the services to be delivered are usually predefined by:
 - *Target quantity*
 - *Target value*
 - *The point in time or the volume of the service consumption are different*
 - *Service-related revenue recognition*
 - *The revenues are realized on the basis of a specific event, e.g., onsite maintenance*

Revenue Recognition (cont.)

• Periodical billing contracts

- Service contract data that has been transferred to SAP ERP for revenue recognition includes:
 - ▶ **Start/End date**
 - ▶ **Billing plan**
- The data will be stored corresponding to the existing internal order

Time-related revenue recognition



Revenue Recognition (cont.)

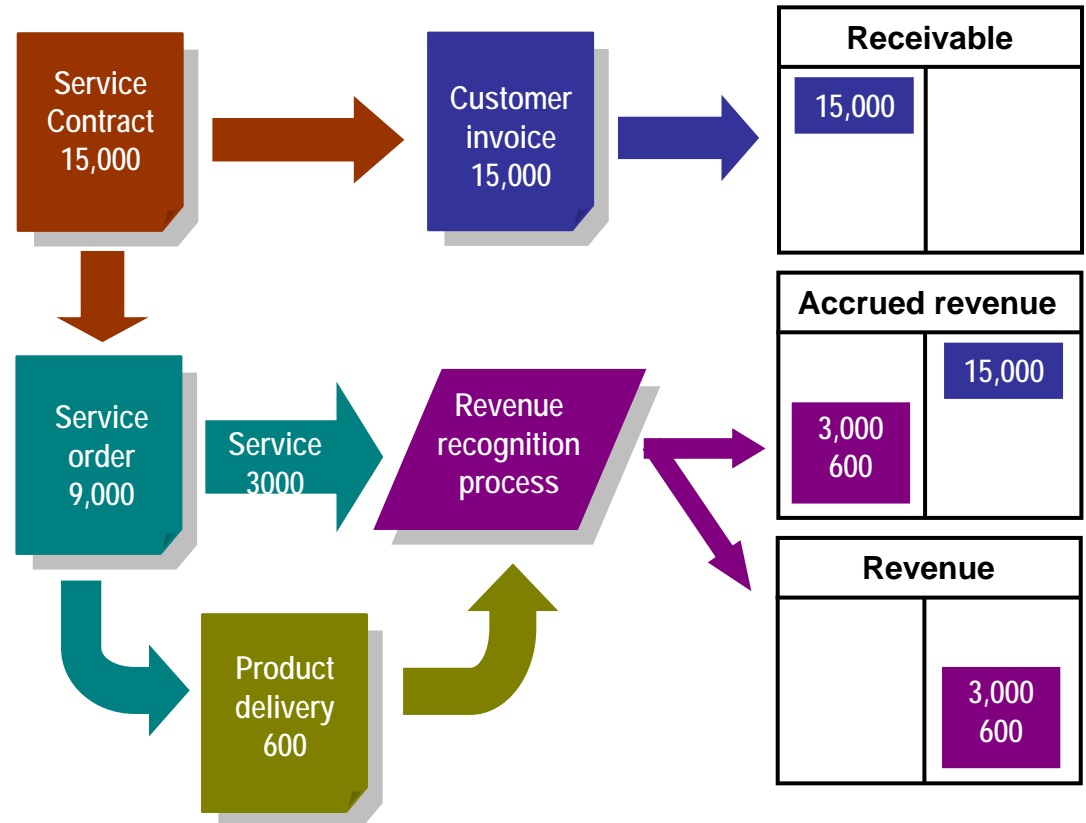
- Target value/target quantity contracts

- Service contract data that has been transferred to SAP ERP for revenue recognition includes:

- ▶ Start/End date
- ▶ Billing plan
- ▶ Target quantity/value

- The data will be stored corresponding to the existing internal order

Service-related revenue recognition



Revenue Recognition Tips

- You have to use Internal Orders (IOs) in SAP ERP as the cost collector for this scenario
- The posting of revenues to a deferred account or from the deferred account to realized revenue is done using Results Analysis
- Statistical Indicator ABGMNG is used to capture the planned revenue, total actual revenue, and current cumulated revenue (in case of service-related revenue recognition)
 - A typical scenario for service-related revenue recognition is when each item in the service contract creates an internal order and all service orders released against that service contract are billed to the internal order of the service contract or each order has a separate internal order that is settled against the IO of the service contract



Tip

Comparison with SAP ERP

- SAP ERP uses a revenue recognition report – VF45, VF44, or VF46 – to post revenues based on accrual period and quantities
- For service contracts it is important to complete a contract in SAP ERP before migrating it to SAP CRM so as not to introduce inconsistencies in the revenue recognition process
- SAP ERP does not use Results Analysis for revenue recognition

What We'll Cover ...

- Master data
- Service contracts
- **Billing**
- Service costing
- Logistics integration
- Wrap-up

SAP CRM Billing vs. SAP ERP Billing

- SAP CRM service documents can be billed either in SAP CRM or in SAP ERP, this includes:
 - ◆ Service Orders and Confirmations
 - ◆ Service Contracts
 - ◆ Spare Part Orders
 - ◆ Credit and Debit Memos
 - ◆ Exchange Orders
 - ◆ Warranty Claims

Comparison of Main Features

Feature	In SAP ERP?	In SAP CRM?
Billing Due List to see what is in the queue to be billed	Yes	Yes
Collective Billing, to combine various due list entries into a single bill	Yes	Yes
Integration of Billing with ERP Financials (posting to FI)	Yes	Yes
Comprehensive work bench to enhance Billing with new fields, custom search parameters, etc.	No	Yes
WebClient User Interface	No	Yes
Capability to integrate credit card payments	Yes	No
Capability to print out invoices	Yes	Yes
Capability of handling high volumes	Yes	Yes
Integration to Costing (posting of revenues to an internal order or other cost element)	Yes	Yes

Billing in SAP CRM

- Integration between CRM documents and CRM billing is seamless and controlled via status at the line item level (To be invoiced, Invoiced, etc.)
- Uses the CRM Billing Engine, which is driven by the Billing Engine Framework
 - ◆ The Billing Engine Framework is easily extensible using transaction BEFN
 - ▶ This can be used to enhance the billing due list and the billing document, e.g., with new fields

Billing in SAP CRM (cont.)

- Several BAdIs are available to influence the data that goes into the billing due list or the billing document
 - ♦ This can be combined with enhancements to the framework as previously mentioned
- The invoice can be printed using SmartForms
 - ♦ The form will have to be created from scratch in SAP CRM (not possible to re-use form from SAP ERP)
- No out-of-the-box functionality for credit card integration into SAP CRM billing

CRM Billing Due List in SAP CRM 2007

Search: Billing Due List Back

Search Criteria Hide Search Fields

Transaction ID is + -

Billing Status is + -

Payer ID is + -

Billing Date is between and + -

Maximum Number of Results

Result List

Release Billing Block | Individual Billing | Collective Billing Print Edit

Bill. Status	Transact. ID	Transact. Type	Payer	Net Value	Crcy	Billing Type	Block	Billing Date
▲	1	Claim for Partn...	REMA US Inc. ...	10.000,00-	USD	Claim Settleme...	Not Blocked	26.10.2007
▲	92	Claim by Partner	ED Systems / ...	10,00-	USD	Claim Settleme...	Not Blocked	21.01.2008
▲	93	Claim by Partner	ED Systems / ...	10,00-	USD	Claim Settleme...	Not Blocked	21.01.2008
▲	8000001010	Service Order	High Com / BO...	1.999,00	USD	Invoice	Not Blocked	21.01.2008
▲	8000001016	Service Order	High Com / BO...	250,00	USD	Invoice	Not Blocked	21.01.2008
▲	8000001022	Service Order	High Com / BO...	250,00	USD	Invoice	Not Blocked	22.01.2008

SAP CRM Billing Document in SAP CRM 2007

Billing Document: 90000048, Media Store Back

Save | Cancel | Output | Preview Output | Create Follow-Up | Cancellation | Transfer to Accounting Edit Print Help

Details Edit

<p>General Data</p> <p>Document Type Invoice EDS Service ID 90000048 Payer ID 3271 Payer Media Store / ANTIOCH IL 60002 Payer Address PO Box 1030 / ANTIOCH IL 60002 Billing Unit Billing Unit US / DENVER CO 80214-5546</p>	<p>Processing Data</p> <p>Payment Status Open Cancellation Status Billing Document Transfer to Acctg Status Transferred</p> <p>Dates</p> <p>Billing Date 18.01.2008 Value Date 18.01.2008</p> <p>Delivery and Payment Terms</p> <p>Incoterms FH Payment Terms 14 days 2%, 30 net</p>
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Prices Close

Gross Value 0,00 USD	Net Value excl. Freight 0,00 USD
Net Value 0,00 USD	Shipment Costs 0,00 USD
Tax Amount 0,00 USD	

Items Print Edit Close

Item No.	Product ID	Product	Qty	Unit	Net Value	Crcy	Tax	Crcy	Gross Value	Crcy
10	REPAIR	Repair Ser...	1,000	AU	0,00	USD	0,00	USD	0,00	USD

Billing in SAP ERP

- Billing CRM documents in SAP ERP is achieved by creating SAP ERP Credit/Debit memos
- The SAP CRM document (items) has to be marked as relevant for “external billing”
 - ♦ Once the document is saved, an SAP ERP Debit memo is created via CRM middleware
 - ▶ The Debit memo can then be billed using standard SAP ERP billing
- Pricing (including manual conditions) can be transferred, unchanged, from SAP CRM to SAP ERP
- The billing integration can be influenced using BAdI CRM_EXT_BILLING
- The SAP ERP Debit and Credit memo document types to be used are configured in the SAP CRM plug-in in SAP ERP

Advantages of Using SAP CRM Billing

- All activity is happening in the same system, i.e., the documents and the billing items are contained in the same system
 - ◆ Easy for administrators to troubleshoot issues
- Nice user interface for administrators to use
- Extensible engine to accommodate various customer requirements
- Flexible integration to SAP ERP Financials

Advantages of Using SAP ERP Billing

- Any company that has an SAP ERP backbone has probably already implemented the SAP ERP Billing Engine
 - ◆ With this option, the company has the capability to leverage a proven technology for billing and also re-use the efforts and investments put into this area
 - ▶ The SmartForm for printing the invoice can be re-used
 - ▶ Billing Engine customization can be re-used
 - ▶ Billing administrators do not have to be retrained as the technology and platform remains the same
 - ▶ Billing document and FI document is in the same system
 - ▶ Credit Card integration is available in the SAP ERP Billing Engine

Things to Keep in Mind

- **If choosing SAP ERP billing be aware of the following:**
 - ♦ A lot more documents will be generated in your landscape — for every SAP CRM Service document, you will have at least one SAP ERP document (Debit memo)
 - ♦ A lot more traffic between SAP CRM and SAP ERP (middleware) and consequently higher monitoring needs
 - ♦ Integration scenarios need to be thoroughly tested, especially around service contract billing as billing plans are complex structures



Heads Up!

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- Service contracts
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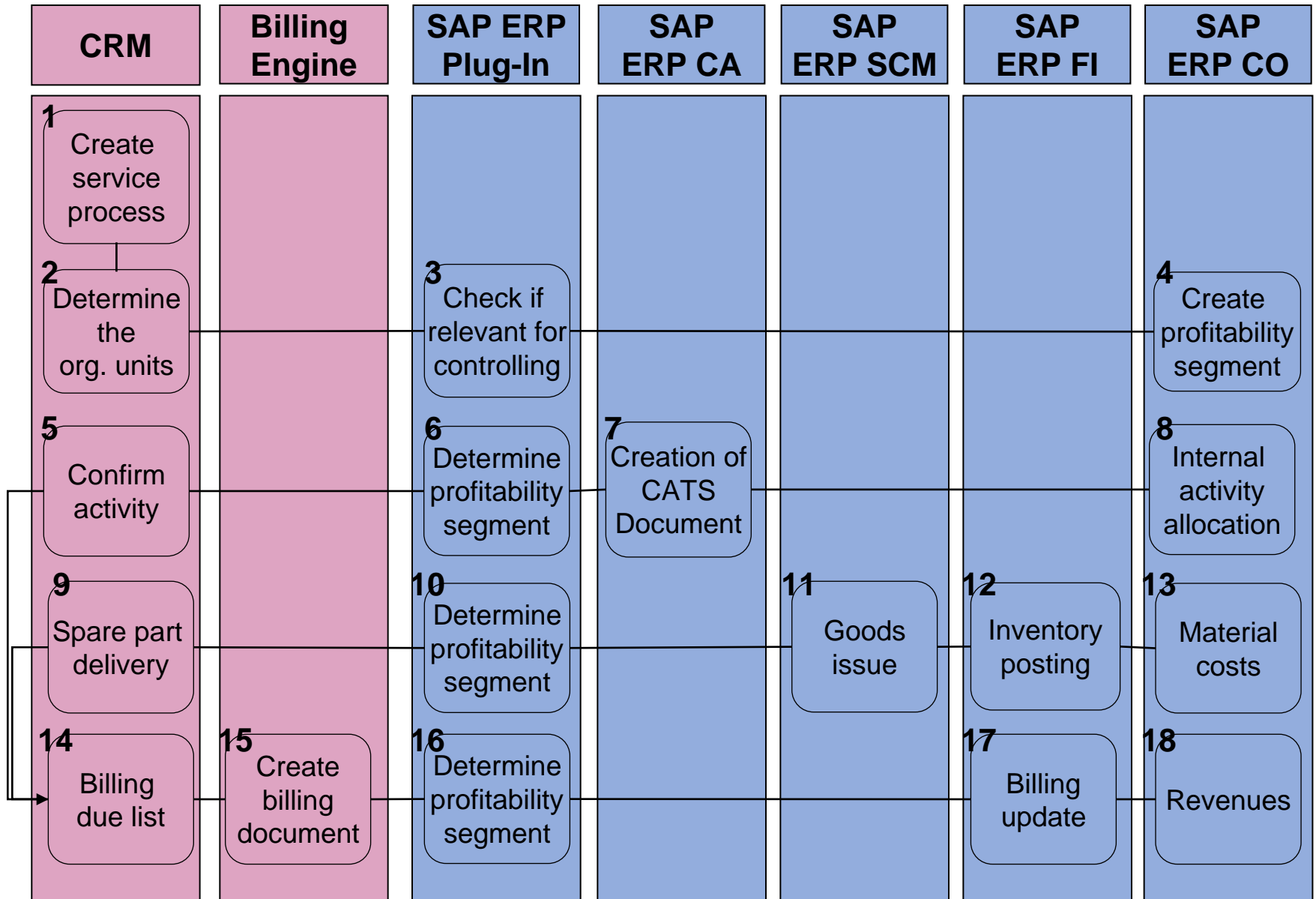
Service Costing

- **Three controlling scenarios**
 - ♦ Mass-object controlling
 - ♦ Single-object controlling
 - ♦ Controlling for account assignment recipient
- **Customizing of the controlling scenario at the level of SAP CRM Service organization – CRM business transaction type**

Mass-Object Controlling

- The system uses the *account assignment table* to assign the SAP CRM service order to a profitability segment
- Table IAOM_ASSIGNMENTS in SAP ERP holds the profitability segment linked to the SAP CRM document
- Costs and revenues are posted directly to a profitability segment
- Analysis of costs and revenues in profitability analysis (CO-PA) with original SAP CRM attributes, such as CRM Service organization or CRM product category

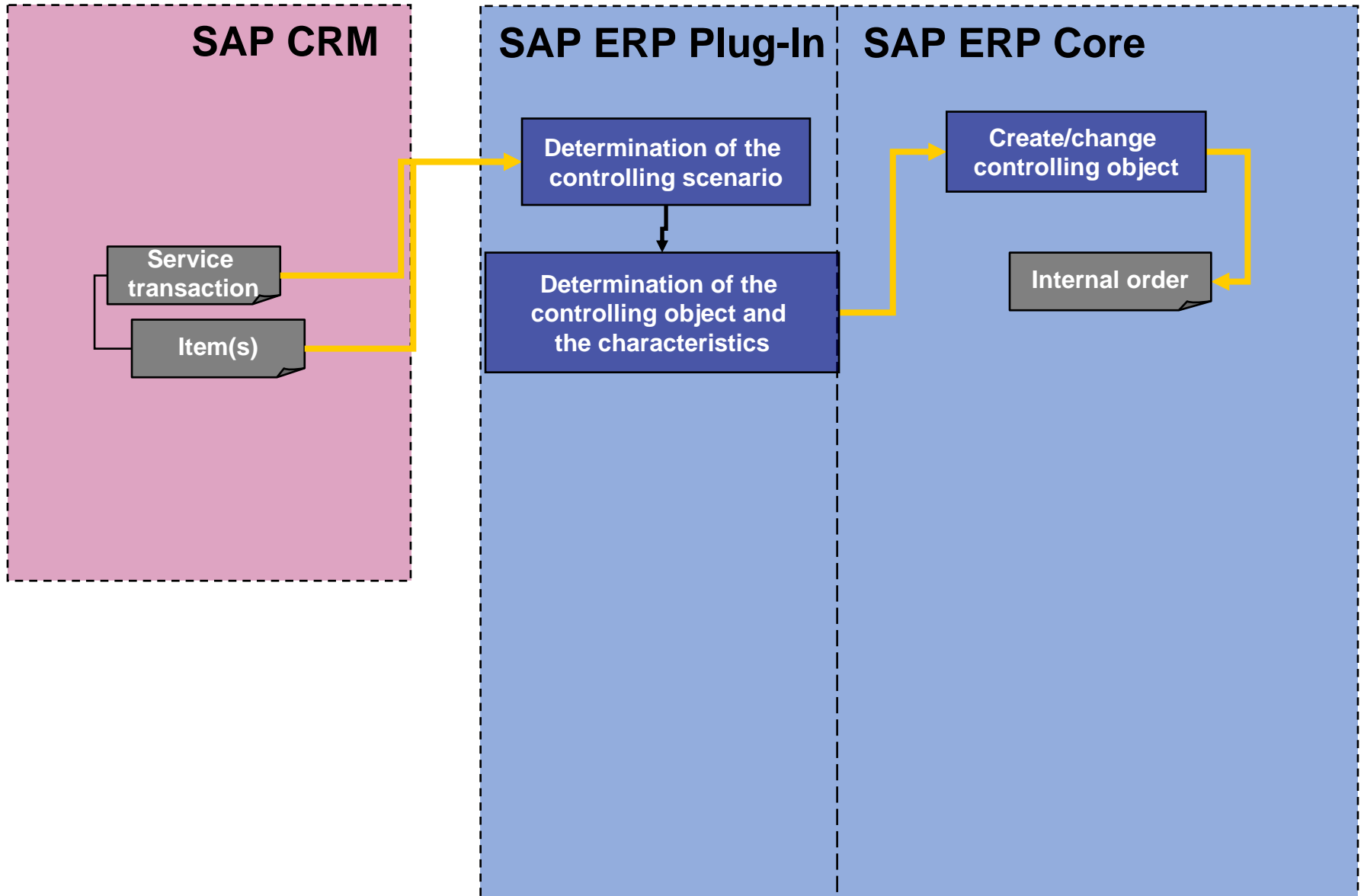
Mass-Object Controlling – Process Flow



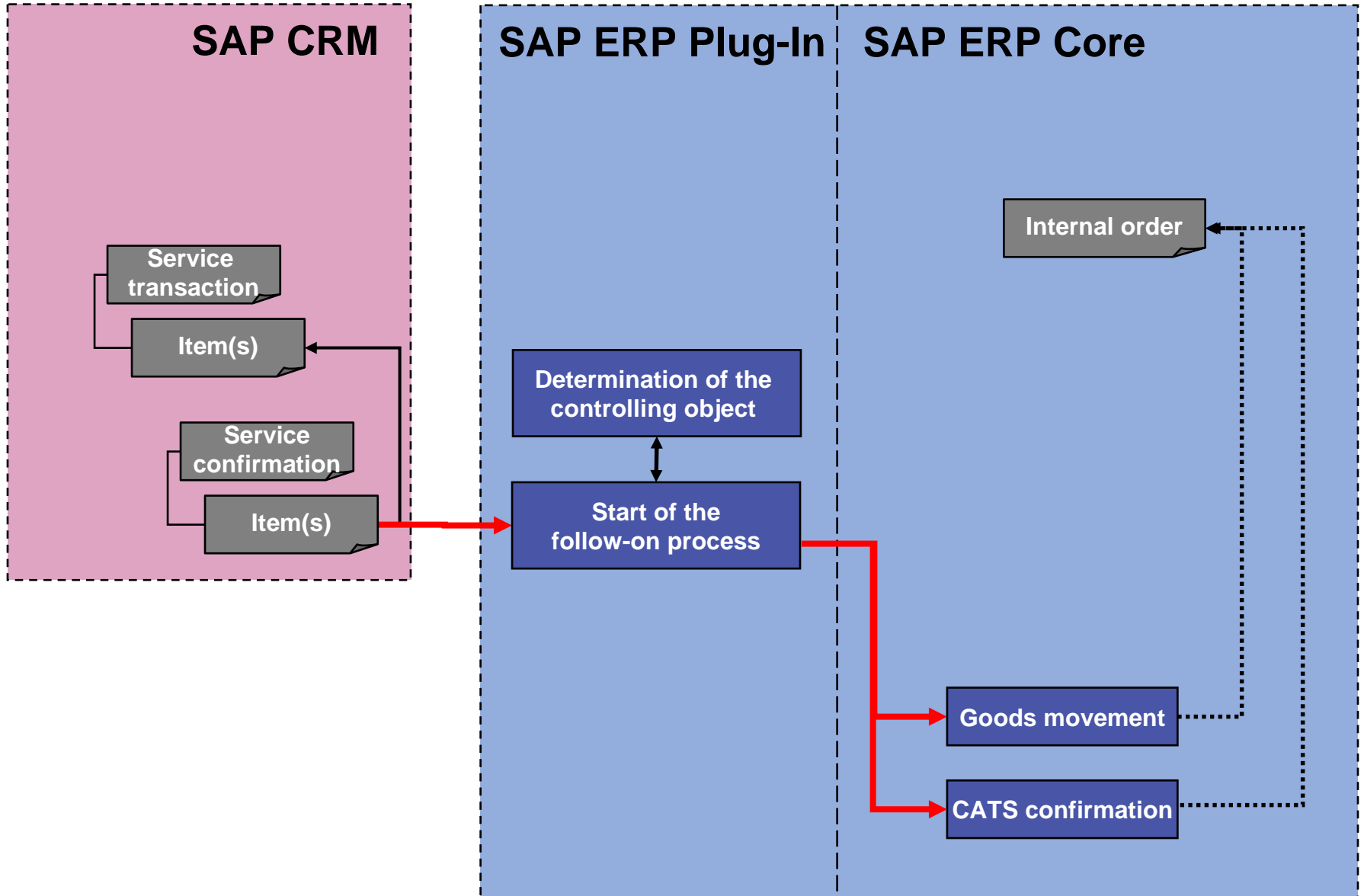
Single-Object Controlling

- Controlling by SAP CRM service order or by SAP CRM service contract
- The internal order type SAPS is used
 - This can be changed using BADI IAOM_BUSINESS_SCENAR
- The system uses the account assignment table to assign the SAP CRM service order/contract to an internal order
- Cost and revenues are posted to the internal order
- Overheads and process costs can be applied
- Results analysis on Work In Process (WIP)
- Settlement of cost of sales and revenues to Profitability Analysis (CO-PA)
- Original SAP CRM attributes are available on the internal order, in reporting and in Profitability Analysis (CO-PA)
- A settlement profile is assigned to the internal order and thereby a source structure and a PA transfer structure per customizing
- The accounting indicator will be passed with each confirmation in SAP CRM to the cost object

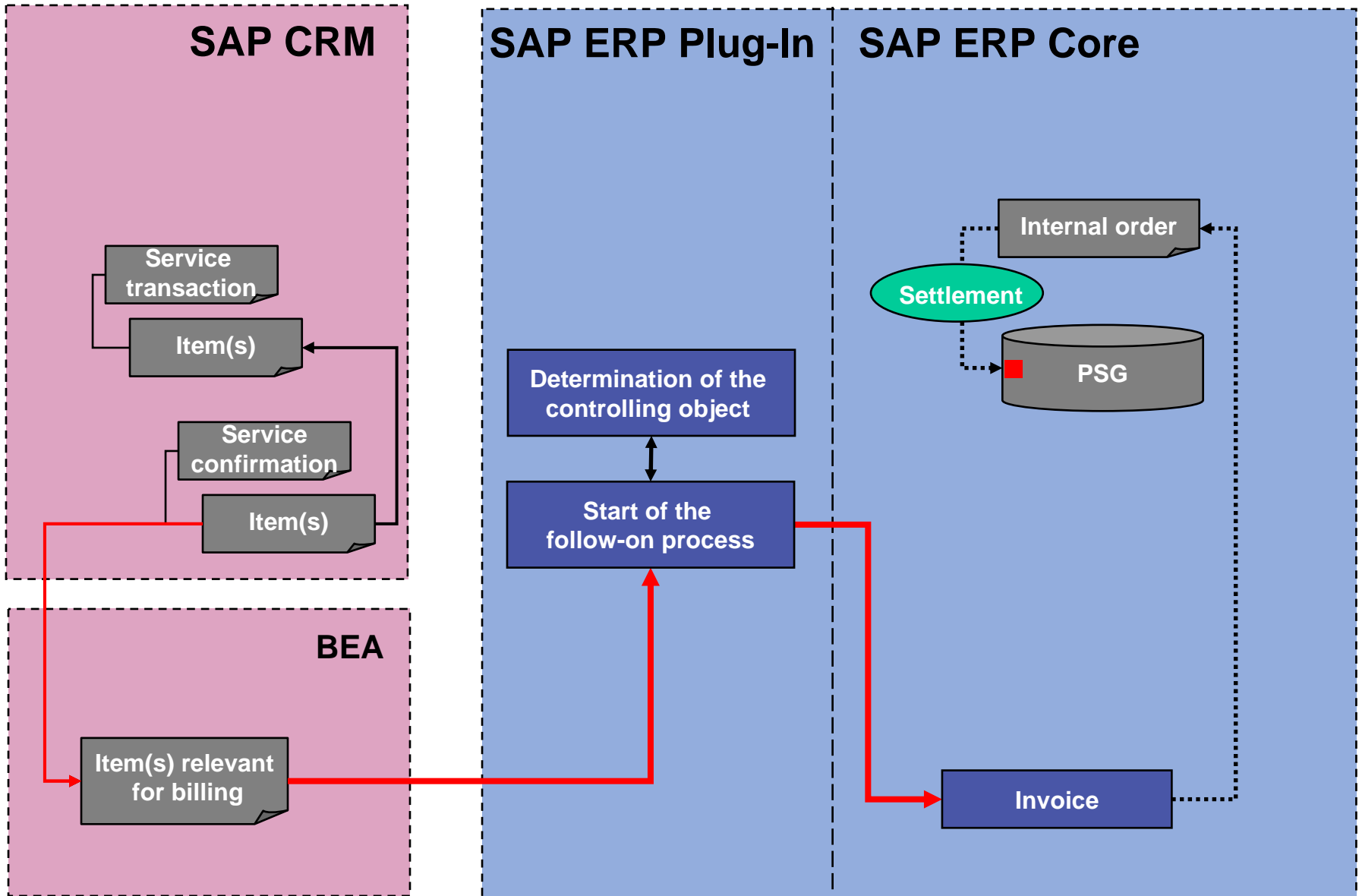
Scenario: Single-Object Controlling



Scenario: Single-Object Controlling (cont.)



Scenario: Single-Object Controlling (cont.)



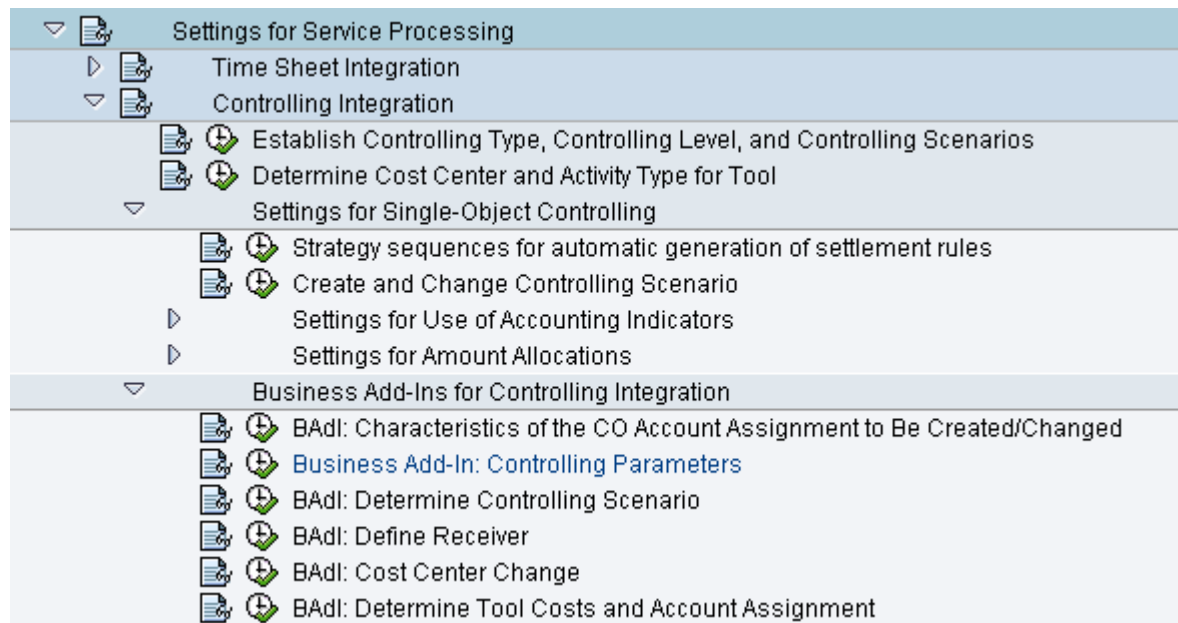
BEA = Billing Engine Applications

Controlling for Account Assignment Recipient

- **Additional cost receivers can be used:**
 - ◆ Internal order (CO)
 - ◆ Work breakdown structure (WBS) (PS)
 - ◆ Customer order (SD/CRM)
 - ◆ External type, to be defined by customer
- **Cost receivers are manually entered into the SAP CRM service order**
- **Cost receivers are transferred to SAP ERP to generate settlement rule for internal order**

Comparison with SAP ERP

- The same flexibility in SAP ERP service management for costing is now fully available in SAP CRM Service
 - Booking costs to an internal order, profitability segment, sales order, work breakdown structure, network, etc.
- Accounting indicator can be used to flexibly define settlement rules
- Complete CO integration configuration is done in SAP ERP plug-in



Time Sheet Integration Scenario

- Call Center Agents/Service Representatives and Field Service Engineers need to record the number of hours they have worked on a specific customer reported problem
- These hours can either be covered by a service contract or billable to the customer
- Regardless, these hours need to be reflected in the time sheet of the particular employee in SAP HCM
- CRM Service provides the capability to upload labor hours entered by an engineer/service representative to the time sheet in HCM
- To upload labor hours to the time sheet in SAP HCM:
 - The labor hours have to be entered in the Service Confirmation
 - ▶ Along with this you can also choose to use the Service Type and Valuation Type
 - *Service Type could be values like "Junior, Senior, Platinum" and Valuation Type could be "Regular Time" and "Overtime"*

Time Sheet Integration Scenario (cont.)

- **To upload labor hours to the time sheet in SAP HCM:**
 - The engineer should be identified in the partner function “Executing Service Employee” with the appropriate personnel number stored in the BP master data
 - The CATS data entry profile should be set up in the CRM plug-in in SAP ERP
 - ▶ **This profile controls the behavior of CATS when integrating data from CRM**
 - *For example, if overtime hours are not allowed then the profile can be configured to raise an error – You need an HCM consultant for this!*
 - You can control if the labor hours are posted into the time sheet or simply posted in the CATSDB table for the purpose of recording costs
 - ▶ **This is controlled by customizing the mapping between Service Type, Valuation Type, and Attendance and Absence types**
 - Use transaction CAT2 to post data from CATSDB to the appropriate Account Assignment Object like the Internal Order

What We'll Cover ...

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When Do We Need to Integrate with Logistics?

- **There are four main scenarios**
 1. Customer would like to buy spare parts
 2. Customer has reported a problem that needs an engineer to replace certain parts in the equipment
 - ▶ **The spare parts are either stocked by the company itself or it needs to be procured from an external vendor**
 3. Customer has reported a problem and the equipment is under warranty, therefore, he is entitled to exchange this with new equipment
 4. Customer would like to send the defective product back for repair
- **All above scenarios are also covered in SAP ERP service management**

Scenario 1: Customer Would Like to Buy Spare Parts

- Two options:
 - ◆ Spare parts are ordered on a sales order
 - ▶ Sales order type and item categories have to match in SAP CRM and SAP ERP
 - ▶ Sales order will replicate to SAP ERP Sales Order with pricing information as determined in CRM
 - ▶ Sales order in SAP ERP can be delivered, goods picked and issued, and invoiced
 - *Corresponding status at the item level flows back to the SAP CRM sales order*
 - ▶ Use this option if this is a common scenario and there are no special pricing agreements with the end customer captured in the service contract

Scenario 1: Customer Would Like to Buy Spare Parts (cont.)

- Two options: (cont.)

- ♦ Spare parts are ordered on a service order

- ▶ Spare parts on a service order DO NOT replicate to SAP ERP automatically

- *They have to be copied into a sales order in SAP CRM (using actions) and then this will work as mentioned in the above option*

- ▶ Use this option only if there are special pricing agreements on a service contract between the company and the end customer

- *Service contract pricing agreements can influence pricing on a service order ONLY and not on the sales order*

Scenario 2: Customer Has Reported a Problem That Needs an Engineer

- The problem reported by the customer requires one or both of the following:
 - ♦ Spare parts are required to fix the issue
 - ♦ Engineer needs to be dispatched to fix the issue
- Decisions to be made
 - ♦ Are the parts going to be shipped directly to the customer?
 - ♦ Are the parts going to be carried by the engineer in his van?
 - ♦ When are the parts invoiced? Upon usage or upon shipment?

Are the Parts Going to Be Shipped Directly to the Customer?

- In this scenario there are two choices:
 - ♦ Are the parts invoiced only after it is confirmed that it has been used?
 - ▶ If this is the case you will need to use the Customer Consignment Logistics Integration Scenario
 - *Parts are consigned to the customer on a Consignment Fill-Up Order (CFO). The CFO is a sales order and can be created as a follow-up to the service order using actions. This replicates to SAP ERP as a CFO and is then delivered and shipped from there to the customer.*
 - *Once parts are used, the engineer creates a service confirmation and indicates which parts are used and which are not used. The used parts are withdrawn from the customer consignment stock using Movement Type 291W. The unused parts can be returned to stock on a Consignment Pick-Up Sales Order (also created as a follow-up from the Service Confirmation using actions).*
 - *Example action to use to generate the follow-up documents: COPY_DEF_ITEMS*

Are the Parts Going to Be Shipped Directly to the Customer? (cont.)

- In this scenario there are two choices: (cont.)
 - ♦ Are the parts invoiced to the customer as soon as it is shipped?
 - ▶ In this case you do not need to use Consignment Orders – Since the customer is paying for the parts upfront, simply generate a normal sales order as a follow-up from the service order using actions
 - *The sales order will replicate to SAP ERP and can be delivered, shipped, and invoiced from there*
 - *The engineer does not have to confirm usage of a part as the customer has actually bought this upfront*

Do the Parts Need to Be Procured?

- If the parts are not internally sourced (i.e., available in an internal plant) the engineer has two options:
 - ♦ Buy the part himself and add it to the service order/confirmation as an expense item
 - ♦ Trigger a Purchase Requisition/Purchase Order in SAP ERP for the same part
- In the latter choice, the Purchase Requisition/Purchase Order decision is a configuration setting in the Logistics Integration → IMG → CRM → Transactions → Settings for Service Processes → Integration → Logistics Integration
 - ♦ This is defined based on transaction type and item category

Scenario 3: Customer Has Reported a Problem and the Equipment Is Under Warranty — Do the Parts Need to Be Procured?

• Configuration

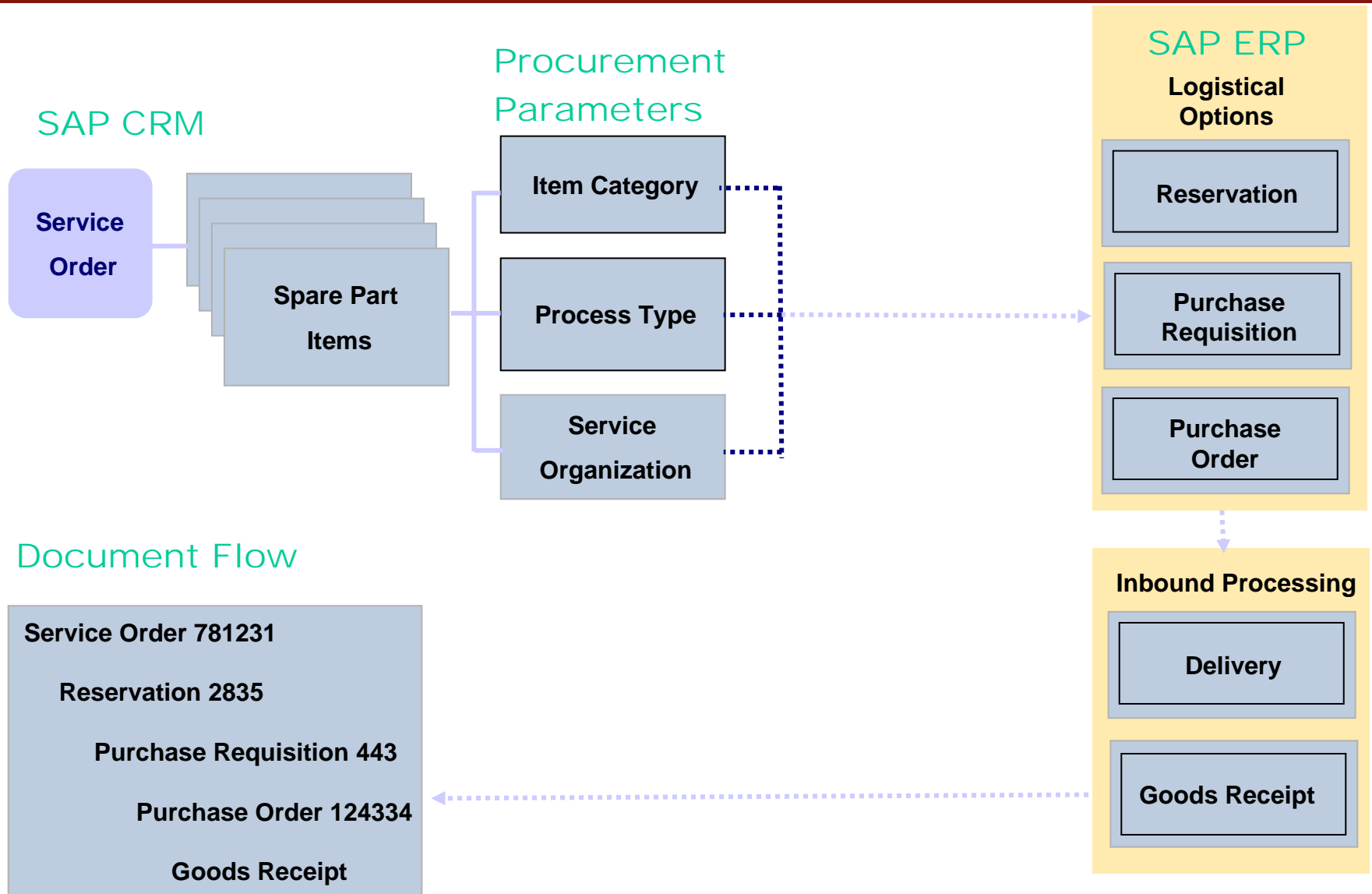
CRM Service: Customizing Table for Logistics Scenarios				
Trans.Type	Item Cat.	Service	Org Unit (Service)	Logi.Scen.
YS07	YSIT	0 500000		AUTO Automatic Procurement (C)
				RSRV Reservation
				PREQ Purchase Requisition
				ORDR Purchase Order
				AUTO Automatic Procurement (OLTP)

• Options are:

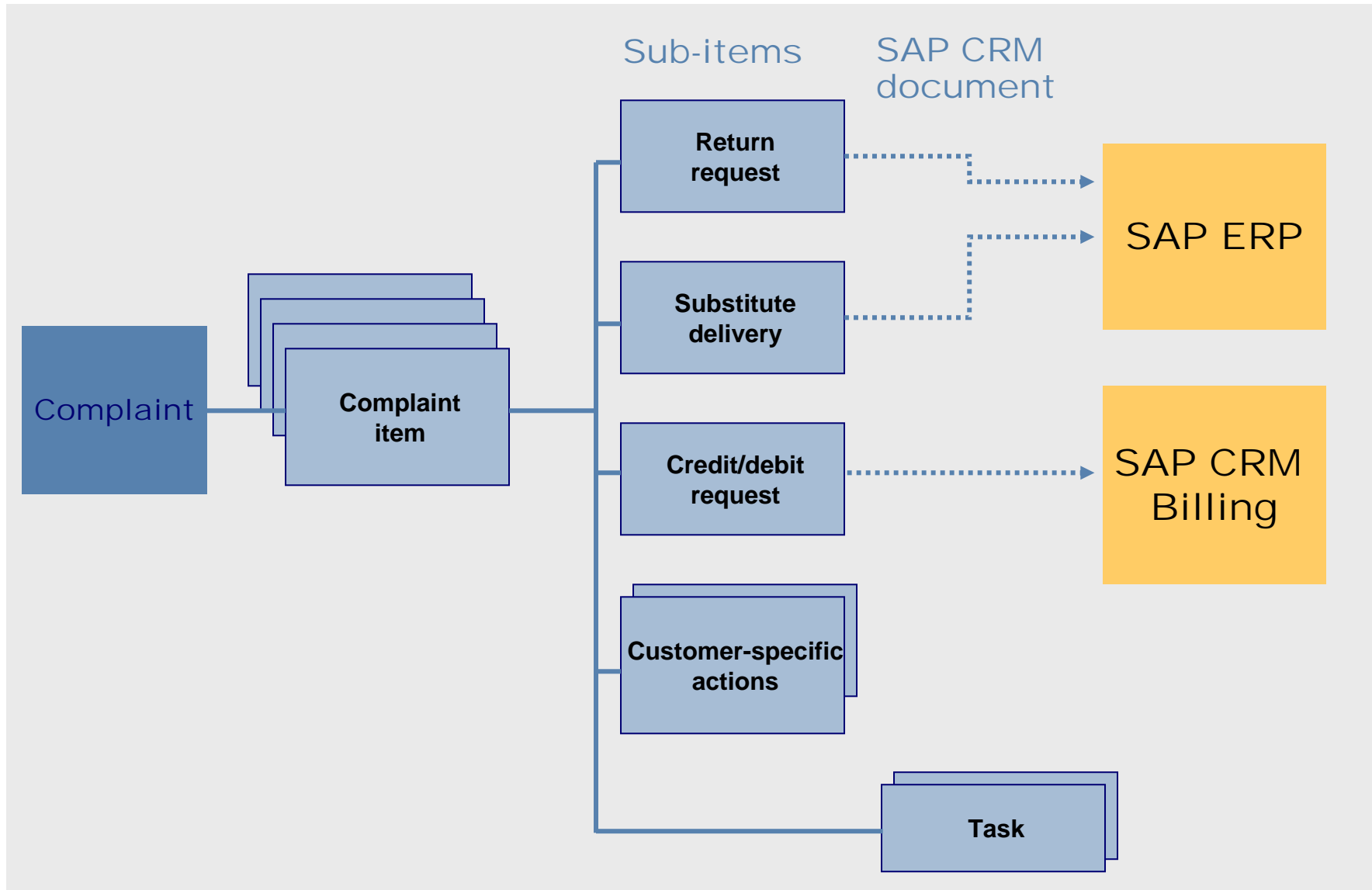
- ♦ Reservation – parts are assumed to be in stock and reserved
- ♦ Purchase Requisition – a requisition is to be created in SAP ERP
- ♦ Purchase Order – a PO is created directly in SAP ERP

Customer Relationship management
General Settings
Basic Functions
Settings for Service Processing
Time Sheet Integration
Controlling Integration
Logistics Integration
Create and Change Logistics Scenario for Material Withdrawal
Set Purchasing Document Types for CRM Logistics Integration
Copying Rules for Texts When Creating Purchasing Documents
Grouping of Items
Business Add-Ins for Logistics Integration
Billing Integration
Settings for Financial Accounting

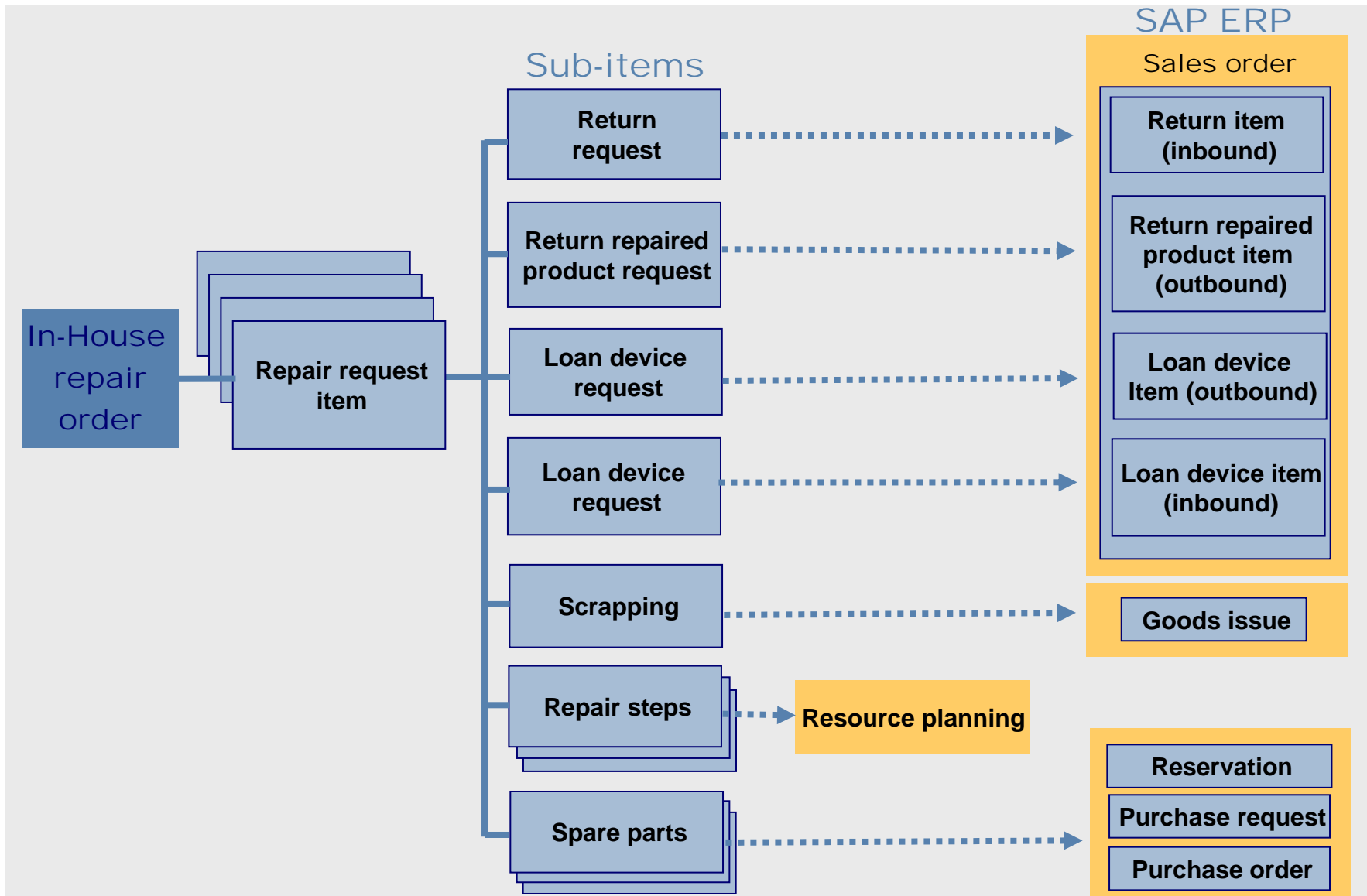
Scenario 3: Customer Has Reported a Problem and the Equipment Is Under Warranty – Procurement of Parts



Exchange Scenario



Scenario 4: Customer Would Like to Send the Defective Product Back for Repair – In-House Repair



Comparison with SAP ERP Service Management

- All features of SAP ERP Service Management integration to Logistics Execution in Sales and Distribution are also available in SAP CRM
 - ♦ Creation of sales orders, purchase orders, returns, goods movements, consignments, etc.
- It is important to decide which logistics scenario suits the organization the best
- Utilize actions in SAP CRM to simplify the process for the end user

Are the Parts Going to Be Carried by the Engineer in His Van?

- If your company prefers that the engineer be responsible for all parts that are used in service then you have two options:
 - ♦ Engineer Consignment Stock
 - ▶ In this scenario, the engineer is consigned the parts on a Consignment Fill-Up Order and unused parts are returned on a Consignment Pick-Up Order
 - ▶ This option strictly controls the usage and distribution of parts to the field engineers
 - ♦ Engineer Van Stock
 - ▶ In this scenario, engineers are modeled as storage locations in a plant (typically a service plant)
 - ▶ When confirming usage of a part, the goods are issued from the engineers storage location against the service confirmation
 - ▶ Engineers can request replenishments of parts in the storage location
 - ▶ This is a less strict control of parts as engineers are not forced to return unused parts back into stock

What We'll Cover ...

- Master data
- Service contracts
- Billing
- Service costing
- Logistics integration
- Wrap-up

Resources

- **Help.sap.com**
 - ◆ Controlling Integration
 - ▶ http://help.sap.com/saphelp_crm60/helpdata/en/c2/c7453bf2a8bc07e10000000a114084/content.htm
 - ◆ CRM Service
 - ▶ http://help.sap.com/saphelp_crm60/helpdata/en/45/91e027aef44d6de10000000a155369/content.htm
 - ◆ Service Billing
 - ▶ http://help.sap.com/saphelp_crm60/helpdata/en/46/5dda00a04902f9e10000000a1553f6/content.htm
- **CRM RKT 5.0/2007**
 - ◆ <http://service.sap.com/rkt>
 - ▶ Requires login credentials to the SAP Service Marketplace

7 Key Points to Take Home

- SAP CRM is rich in functionality without the loss of any integration to SAP ERP
- When moving from SAP ERP to SAP CRM Service, you may want to bring in some historical service order/notification information
 - There is no download available for this information and will have to be extracted from SAP ERP and uploaded into SAP CRM using LSMW
- Master data strategy is key – especially designing the IBase right and downloading equipment
- Logistics integration is supported for various scenarios
 - It's important to decide upfront on the strategy for distributing parts to an engineer upfront

7 Key Points to Take Home (cont.)

- The various service costing scenarios will put a Financials person at ease, ensuring that all costs and revenues can still be captured in SAP ERP FI-CO
- Billing service can be either in SAP CRM or in SAP ERP
 - ♦ If you have credit card payment as a scenario, then you have to use SAP ERP billing!
- The SAP CRM service contract is far more flexible than the SAP ERP service contract
 - ♦ It is sure to excite the contract administrators!

Your Turn!



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