

SAP R/3 SERVICE MANAGEMENT IN RELEASE 3.0

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SAP R/3

SERVICE MANAGEMENT

IN RELEASE 3.0

Introduction

Typically, supply chain management systems have focused on optimizing the procurement of material through to the distribution of finished goods. The implementation of R/3 Service Management in an enterprise extends the supply chain by providing support for products after they have been sold. In a company's drive to achieve a high level of customer satisfaction, the elements of post-sales transaction processing must be addressed. Service Management as an integral link in the supply chain provides support for these transactions.

The level of customer service provided by a company has a direct impact on market share, costs, and profitability. A company's responsiveness in dealing with customer service issues has a direct correlation to their number of satisfied customers, as well as potential customers.

Response to a customer's request demands a high level of efficiency in order to ensure that the customer of today remains a customer in the future. Not only does efficient service management strengthen customer relations, it serves to generate future sales due to the tracking and support of subsequent post sales transactions.

Issues and Challenges

In the competitive environment of the 1990's and beyond, customers are the focus of any successful business. Increasingly, customer satisfaction provides a company with a sustainable competitive advantage. It serves to differentiate one company from another. Traditionally, product, price, and promotion have been considered the primary tools to attract and retain customers. This is no longer quite as true. Customer service can have a significant impact on creating demand, as well as maintaining the current customer base. Through close customer contact and high quality service, a company's competitive edge, its long-term relationship with its customer, will be maintained and strengthened.

Even companies in the high tech industry who manufacture technologically advanced products with a highly skilled workforce, are faced with this dilemma. Often a high tech manufacturer will face the challenge that as soon as the product is delivered to market, or sometimes even before, it has already been duplicated or imitated by a competitor. Additionally, technical support requirements will grow exponentially as high tech products continue to penetrate the mass consumer market. As the time to market steadily declines, support costs grow, and increasingly aggressive pricing strategies are implemented, companies in a variety of industries find their customer base, as well as their profits, are under attack.

The dilemma of reengineering business to improve efficiency while maintaining a high level of customer service effects all industries. In a company's drive to decrease costs and improve response time, the outsourcing of customer service support and maintenance is often considered. The risk associated with this approach to improve operation efficiency includes moving further away from the customer and his support requirements. Release 3.0 Service Management provides a company with the opportunity to maintain a close relationship with the customer and a corresponding level of responsiveness through an integrated approach to supply chain management.

The challenge in this dynamic environment is to establish the most efficient means of customer service in the market. Any commitment that is made to the customer must be kept in a timely and efficient manner. Additionally, a link must be established in the supply chain between each event which will ensure that information flows easily throughout the organization. Exceptional customer service, and therefore customer satisfaction, is based on the perception that everything is perfect. The integration of Service Management, as the crucial driver of exceptional customer service, with other functions in the logistics chain can provide a company with a tool to generate revenue, reduce costs, maintain customer satisfaction and thus, maximize profitability.

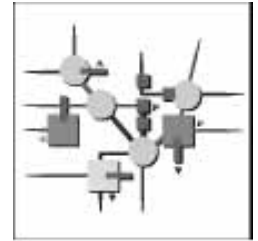
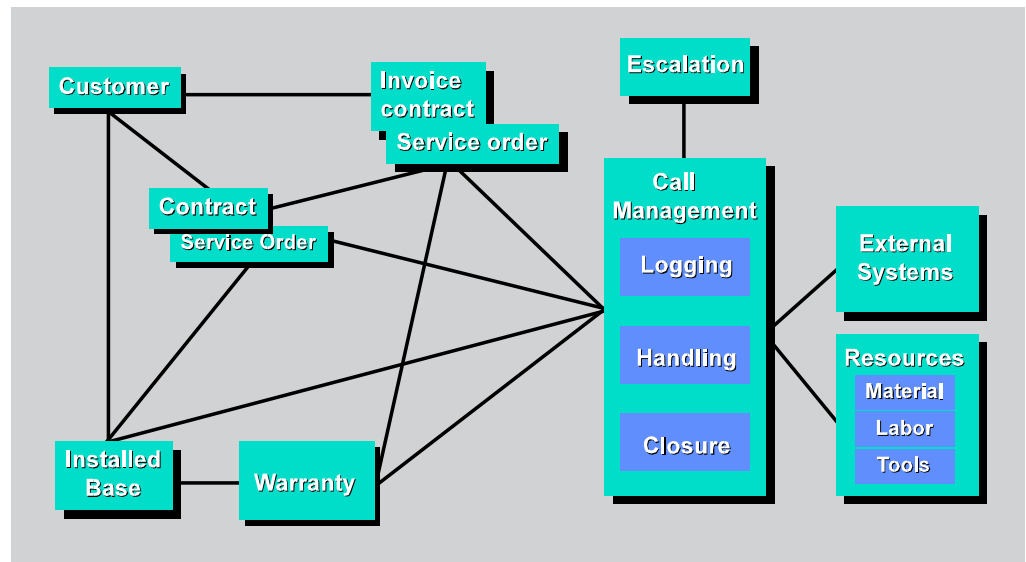


Figure 1: Service Components Overview



SAP Solution

The Service Management functionality in Release 3.0 encompasses events related to customer service which provide support for the product after it has been sold ranging from help desk support to technician dispatch. The solution may operate independently or for maximum enterprise efficiency, as an integral part of the total R/3 solution. Service Management in R/3 supports the core processes through a common integrated system which allows a service provider to reengineer their customer service system in sync with the demands of their industry.

If the approach is taken that Service Management is an extension of the supply chain then optional integration with relevant functionality from the areas of Controlling (CO), Materials Management (MM), Plant Maintenance (PM), Sales and Distribution (SD), and Human Resources (HR) is cru-

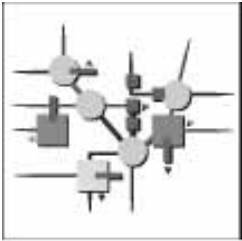
cial. This integrated approach allows a variety of business processes, as well as the requirements of different industry sectors to be addressed.

The concept of service as a product offering allows for the service to be sold with a product in a sales document or to be sold independent of a product sale. Additionally, the service may be custom configured or modeled within the service contract, as well as bundled with other services. Standard SAP functionality allows the service to be configured in a unique manner per the customer's requirements. Incremental pricing for the service product can be viewed within the order or contract as each new characteristic of the service product offering is selected. This is particularly important for companies that encourage their sales force to participate in a customer's needs analysis. Not only is this functionality

applicable to orders and contracts, it can also be used in the quotation process.

The main components of the service management module in Release 3.0 include:

- Service Contracts
- Installed Base Management
- Warranty
- Call Management with Escalation
 - ◆ Call Logging
 - ◆ Call Handling
 - ▶ Hotline Call with Notification Tasks
 - ▶ SD Order
 - ▶ Service Order
 - ◆ Call Closure
- Resource Related Billing
- Billing



Detailed SAP Functionality

Organizational Structures

The flexible organizations found in today's companies require that master data in Service Management support this type of dynamic environment. Although the master data is flexible in order to support change within the organization, the high degree of integration with other structures and functions in the R/3 system is still maintained.

Increasingly as the service picture becomes more complex a solution must be offered which addresses the outsourcing of service, support for third party products, and other unique arrangements. SAP's Release 3.0 solution provides an extremely flexible set of master data information which can address these requirements. This data provides the basis to structure both internal and external entities.

The key elements of master data setup are:

Internal Organizational Units

Maintenance Planning Plant

The maintenance planning plant is responsible for planning service and maintenance requirements. This plant is responsible for service and planning at its own plant, as well as at other plants within the same company.

Maintenance Work Center

The maintenance work center is the entity responsible for carrying out service and maintenance activities. Often it is specified as a group of skilled technicians who specialize in a specific discipline. An employee can be linked to a work center. This means that a specific individual can be viewed from a skill and qualifications perspective.

Personnel

It is possible to assign a personnel number to specific tasks defined for an activity in a service order. The personnel number is managed in HR and can include detailed organizational and skill data. This information allows a service order to be assigned to an appropriately skilled worker. Additionally, the assignment of specific partners, such as technician responsible, service group responsible or third party service provider, can be made via standard SAP partner functionality in the sales order, service contract, service notification, service order, and installed base.

Sales Area

A sales area consists of a sales organization, distribution channel, and division. This information is required to process all service or product transactions.

External Organizational Units

Vendor

In addition to a company providing a service, there is also the requirement for a company to sub-

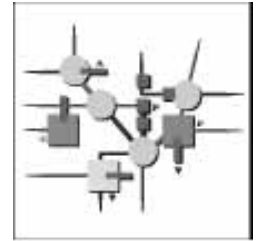
contract service requirements to a particular vendor. Using standard SAP partner functionality it is possible to tie vendors to services which should be outsourced. At the time a service order is created, a purchase requisition can easily be created in order to outsource the service.

Customer

A customer may have multiple partners which can take on specific roles during the management of service and maintenance. This would include linking service objects and calls to specific employees at the customer's site. Additionally, the customer's installed base information can be tracked in the system, including third party equipment.

Service Management Concept

Service Management must provide a global and integrated view of a customer's installed base and status information. Release 3.0 provides real-time access to all Service Management functions. Changes in status or configuration are noted and can be communicated to the proper organizations immediately. Data can be captured in the Logistics Information System in order to carry out statistical reporting based on predefined objects and measures. Not only is support and service carried out for the customer in a timely and flexible manner but this functionality is fully integrated into other application areas. For example, before a commitment to dispatch a technician to a customer's site can be made, a particular technician's availability must be checked. Or if a preferred technician is unavailable, then a



check against all available resources is automatically carried out in order to provide the customer with a projected repair time. The integrated solution considers all constraints and propose alternatives if a resource, such as a person or material, is not available.

SAP realizes that companies have very unique service requirements and therefore, their vision of service may vary widely. In order to support customer specific requirements, there are a number of predefined points in the SAP software programs where a company may opt to move outside of standard SAP functionality and integrate to an external decision support system or write their own enhancement to support a unique business requirements. The standard "SAP Enhancement" concept facilitates this process. This concept can be used to program specific tasks which should be carried out in a notification or to interface the service notification transaction with a geographic information system. This enhancement concept is standard in R/3 and any enhancements made are protected during release upgrades. In effect they allow a user to meet specific business requirements without modifying the standard R/3 system.

The key components of the SAP R/3 Release 3.0 Service Management solution are as follows:

Service Contract

Agreements which cover the service or maintenance of specific technical objects provide the basis for service contracts. The contract can be composed of multiple service product offerings tied to a customer's installed based service objects including functional locations, pieces of equipment, and serialized master records. The structure of the service objects depends on the decisions made regarding how the customer's installed base is structured. Several installed base objects can also be linked together via an object list.

Service contract functionality in Release 3.0 supports the creation of rental and service contracts. As with other SD documents, service contract functionality encompasses standard SAP order functionality, for example, in the area of partners, output, and pricing. There are new pricing conditions which support the creation of contract specific pricing agreements. In order to carry out scheduled maintenance, a service contract may also be linked to a maintenance plan item.

In an effort to provide companies with the flexibility to establish renewal and cancellation procedures as dictated by their service product offerings, robust user defined renewal and cancellation schemes are provided. As a contract nears expiration, four activities may occur: a follow-up sales activity such as a visit by a salesman, generation of a letter or other output, generation of a quotation,

or creation of a subsequent contract. Of course, creation of a quotation or subsequent contract would take into account any new pricing elements. There is also a base time element that indicates at what point the activity should be triggered.

Rules surrounding the cancellation of a contract include determining at what point in time the contract may be canceled by the customer without penalty, as well as what base date the cancellation should be tracked against. For example, the customer may cancel up to 3 weeks before the one year anniversary of installation of the piece of equipment or the customer may cancel up to 4 weeks before the one year anniversary of the contract effectively date. Two or more cancellation rules may apply to one service product if one rule is active the first year of the contract and another rules is active in years two through five. If a contract is canceled prior to expiration, pro-ration of the contract is supported.

In order to support the periodic billing requirements of contracts, a billing plan is provided at the line item level. This form of invoice creation plays an important role in rent settlement with periodic invoice creation and in partial billing of projects with billing dates linked to milestones in a project. The opportunity to link invoice creation to milestones in a project reflects the integration of Service Management to the Projects System in R/3.

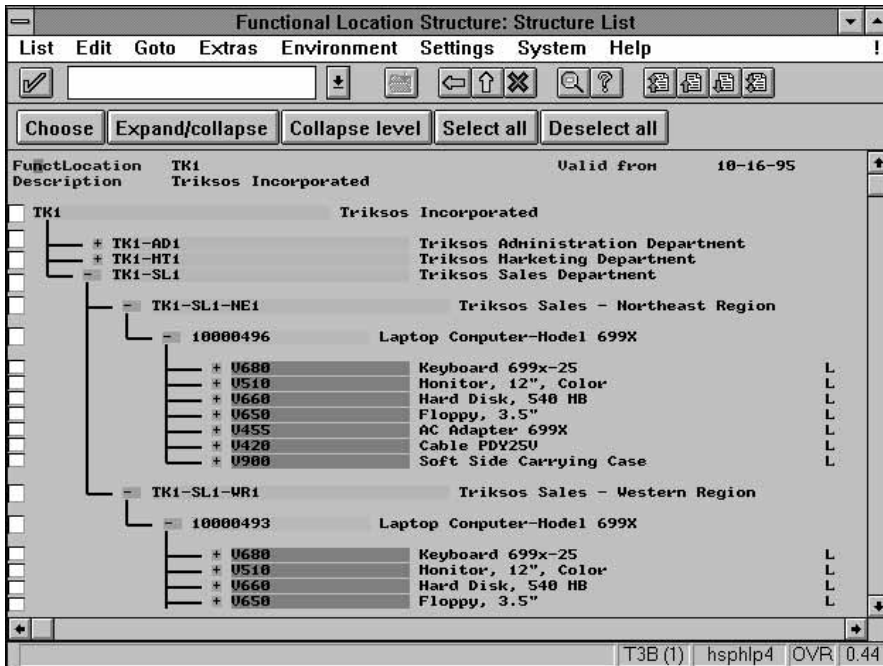
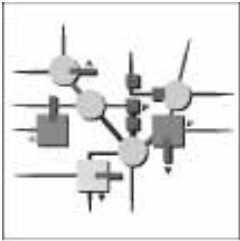


Figure 2: Functional Location: Structure List

Installed Base Management

Since many customers prefer to view and order their equipment in a manner which is unique to their organization, the Service Management functionality in Release 3.0 allows for both logical and physical groupings of technical objects. Therefore, companies can structure their service objects in a manner that is most appropriate for their industry. For example, the requirements to structure the installed base of a utility company differ greatly from the requirements of a manufacturer of precision high tech testing equipment.

Service objects in the installed base may be represented by materials, pieces of equipment, functional locations, assemblies, spares, and bills of material. Serialization of objects is optional. The ability to easily

search for equipment located at your customer's site is supported, as well as the opportunity to view third party equipment located at your customer's site. The dynamic nature of installed base tracking is facilitated by the ability to easily install and dismantle equipment, while tracking all changes via an individual history record.

The decision on how to structure the installed base offers a variety of opportunities. This flexible environment supports the creation of a detailed equipment master record including manufacturer data, location data, usage data, end user data, serial number information, etc. Or if your environment requires only minimal data, a slim version of the equipment master may be created which includes basic equipment and usage data.

A brief overview of the possibilities of structuring service objects is as follows:

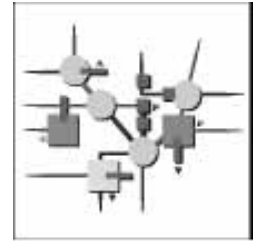
Material Master

In a manufacturing or distribution process that included a large number of similar or identical service objects, for example, a personal computer, the material master is the fastest and most effective manner in which to structure the object. Serial numbers can be automatically assigned to technical objects which are identified as material masters in the R/3 system. Serial number tracking is possible in a wide variety of business transactions in Release 3.0.

Equipment Master

If your environment requires detailed information on the service object, including history, monitoring of maintenance and service activities, cost monitoring, and serial number tracking then the equipment master is an ideal solution. For example, in the personal computer market the manufacturer of a PC would be able to track detailed, serialized information concerning that object which would assist in future maintenance planning and service. Among the most important attributes of the equipment master is the opportunity to record a great deal of detailed information such as address data, partner detail, classification data, and to attach relevant documents or drawings.

More complex pieces of equipment can be represented in an equipment hierarchy. This makes sense in an environment where several seri-



alized components must be linked to one another in a hierarchical manner. Customer information is easily transferred among the levels and once partner and contact information is assigned at the highest level it becomes valid for all objects in the installed base.

Functional Location

A functional location can be used to structure the service objects at your customer's site if your customer requires a more logical view of his equipment in the R/3 system. Since functional locations can be structured by function, process, or location, this is a solution for companies interested in tracking the history of service and maintenance associated with a particular function, process, or location. For example, you may sign a contract with your customer to service all PC's located in multiple geographic locations throughout the United States. When the customer calls to place a service notification he references his service object as being located on the 12th floor of the ABC building. A functional location would provide an easy way to facilitate identification and communication with the customer.

The functional location also allows the installation and dismantling of equipment to be executed. Similar to the equipment master, the functional location includes address information, accounting data, and sales and distribution data.

Measurement Points and Counters

Service requirements in various industries require the administration of maintenance and billing activities to be based on measurement points and counters readings. Measurement points are fixed measures. Counters are utilized in order to record incremental increase or decrease of measurement readings. In Release 3.0 the maintenance plan can be tied to counters which can serve to trigger a maintenance activity. Measurement points and counters can also be assigned to both equipment masters and functional locations. Since an object may have multiple counters assigned, the trigger for the maintenance plan may be based on either the first point or the last point being reached.

Bills of Material

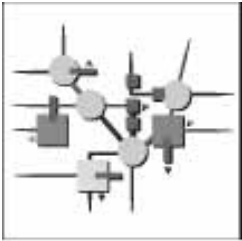
There are two primary uses of BOM information in Service Management. The BOM is used to formally structure a piece of equipment, material or a functional location into its components with accompanying quantity and unit of measure. Another use of BOM information is to allocate spares to a piece of equipment or assembly for servicing purposes.

Warranty

In the initial release of Service Management in Release 3.0, a master warranty will be provided which describes details of the warranty conditions such as the condition which is covered and the duration of the warranty. The single warranty record for a specific identifiable unit such as a serial number or equipment number will be available in later releases.

Call Management

In today's environment call management must incorporate functionality which allows the service center to respond in a prompt, efficient manner to customer inquiries. A Customer Service Engineer (CSE) must have access to many tools in order to quickly identify a customer's inquiry and problem. These tools should include installed base information and previously logged requests for support. In order to provide the customer with an anticipated date for closure regarding the problem, the system must integrate all activities including the call logging, call handling, and call closing process. These elements must also be incorporated into a monitoring or escalation scheme which serves to alert and route those transaction that require action because a company's responsiveness in dealing with service issues can have a measurable impact on perceived customer performance. It is imperative that a customer's problem be solved quickly and on the first call if at all possible. The emphasis should be on problem resolution.



The SAP release 3.0 solution shifts the call management paradigm from simply a problem reporting mechanism to a resolution process designed to efficiently handle customer inquiries. The opportunity to integrate SAP Workflow into the process greatly enhances a company's responsiveness to their customers requests. For example, Workflow facilitates the escalation of service notifications within an organization.

Increasingly, as service management continues to differentiate a company's product offering, increased technical support must be utilized to support the process. R/3 allows the CSE to capture detailed object specific information from the customer regarding the request for service. Even an inexperienced user of R/3 is able to capture information in a quick and efficient manner. As mentioned above the availability of

user exits in the call management process allows enhanced technology to become an important part of the solution. Via these user exits standard R/3 Service Management functionality can interface to an external decision support system which can improve the overall call logging operation by providing the CSE with an enhanced capability to quickly identify potential solutions based on the data collected in the call logging process.

Call Logging

Whether your company maintains a help desk processing center or a technician dispatch operation, the call logging process allows for the quick identification of technical problems and customer account information. The service notification is the universal document to capture all information relating to the customer's inquiry, whether it is a re-

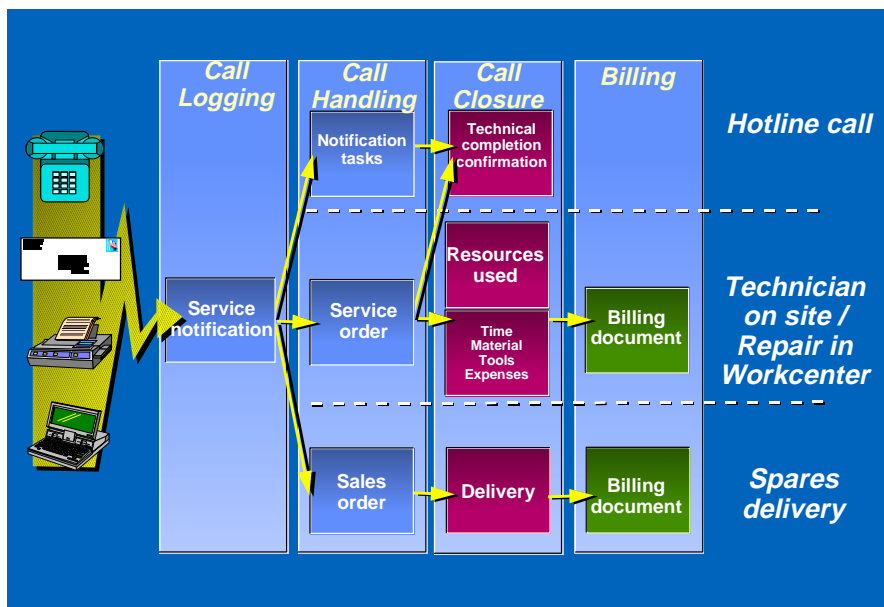
quest for technical assistance via telephone, a request for spares or documentation, a request for a technician on-site, or authorization for in-hour repair.

Standard SAP matchcodes support a variety of object search strategies from inside the notification. SAP integration will automatically pull up all relevant data such as address information, other service notifications, and installed base information. Tools to support the identification of the inquiry or problem, such as code catalogs and the classification system, are available. Since the identification of data is very object specific, it supports a very sophisticated capturing of relevant information in the notification.

Additionally, if your company operates on a single point of contact for all customer service issues, standard SAP functionality allows the service notification to be automatically routed to particular employee(s) at the support center via SAP Workflow. Routing is also possible on a more manual basis. Although there may be multiple contacts at a company for a particular customer, the trend at many companies is for the customer to perceive that all problems, inquiries, and requests are handled by one central point of contact.

As the call is logged and the notification is created, automatic system integration with the service contract will notify the CSE if the object is covered under one or more service contracts. An object information screen provides the CSE with the necessary tools to quickly access all related data such as object struc-

Figure 3: Call Management



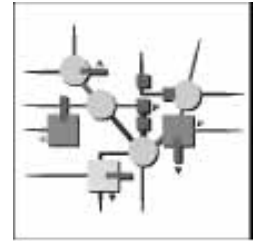


Figure 4: Create PM Order: Central Header

ture, maintenance plans, existing contracts, and most importantly, any open calls. If the technical object is under contract, information regarding service windows, reaction time, and reaction response is automatically pulled into the notification. This becomes the framework by which calls are monitored and escalated, as necessary. The service contract also creates the list of tasks to be carried out in order to process the request. The tasks are user defined and based on the reaction time scheme from the service contract. If no service contract is available other system defined parameters will result in default entries. In Release 3.0, a monitor in Service Management graphically depicts the status of tasks within the framework of the pre-determined escalation path.

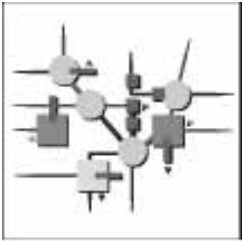
Call Handling

Once data is collected in the notification, the actual handling of the call supports a variety of customer service operations in various industries. Depending on the problem as outlined in the notification there are various activities that may occur at the time of call handling. If the support center operation is a hotline desk then the activities will be comprised of tasks generated from the notification. For example, detailed technical support would be provided via phone. In the case of spares or documentation which must be shipped to the customer, an SD order will be created with subsequent shipping and billing. The final case, involves the creation of a service order (maintenance order) in order to either dispatch a technician on-

site to your customer's facility or repair your customer's equipment in your workcenter facility.

In order to support flexible call handling procedures, it is possible to move directly from the service notification to a SD order or a service order. The service order is used to manage one-time repair work, as well as regular maintenance. Since it is the basis for the cost control of the work and for the resource planning, it is required anytime labor is involved in repair activities. The service order may also be linked to a project in the SAP Projects System. This functionality supports linking multiple service orders to a project and ultimately, the opportunity to view the profitability of the project.

At the time of service order creation, SAP integration with HR and MM initiates an availability check of required resources including material, tools, and labor. In an integrated supply chain the activities associated with resource planning are crucial in order to support the customer in an efficient manner. Depending on the business requirement, planning may be carried out at different levels of detail. Work standards and BOM's can support this planning process. To carry out service order scheduling, operations and sub-operations are used to describe the individual steps of the service job. Additionally, maintenance task lists can be utilized as a reference and input tool in order to reduce input time during work scheduling. Lists can be classified as equipment specific or general task lists. They are comprised of header data, operations and sub-



operations (including workcenters, description of activities, standard values) and materials allocated to the operation. Components, such as a spare part, can be allocated to each operation and an availability check can be executed. The check against resources includes technician availability and skill level, as well as tool and part availability.

SAP integration also provides for the planning and costing of materials, tools, and labor associated with the order. The service order can be created for one or more service notifications. Additionally, multiple technical objects can be listed for one type of repair or service activity.

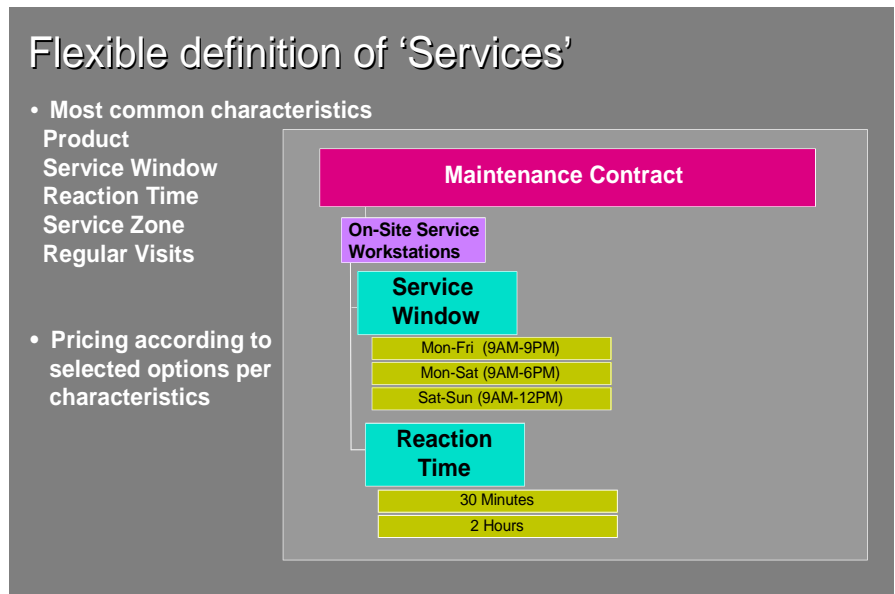


Figure 5: Service Product

Call Closure

As operations are carried out in the service order and the technician reports back, this becomes the basis by which the order is closed. Completion confirmation reporting can include time recording, material usage, travel expenses, installed base changes, activities, measurement readings, and counter readings. If a service order was not created in order to handle the call, only the notification requires closure.

Resource Related Billing

After a service order is closed, integration with the CO module is crucial. A resource related billing transaction takes place prior to billing the customer for any repair activities. Resource related billing is relevant in each one of the following scenarios:

- Service is billed directly (i.e. time and material basis)
- Service is covered only partly under a service contract
- Service is part of a project

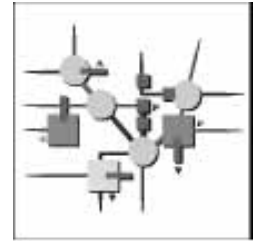
Since all service activities performed, including labor, travel, and material used, are reported in the call closure transaction, cost information is available which allows the costs to be collected on the account assignment object assigned to the order. If a service is covered by a service contract the R/3 system will bill the customer only for the portion that is payable by the customer.

Billing

Once the resource related billing is completed, invoicing to the customer and the corresponding revenue determination, as well as subsequent profitability analysis can be

carried out depending on the requirement.

- If no service contract exists for the service order, the revenues from the customer invoice are posted to the service order, allowing the determination of the net revenue from the balance of the revenue and the costs collected on the order. The service order can then be settled to a profitability segment or a general ledger account.
- If the service order is assigned to a service contract, the costs and revenues are collected on the service contract item. Again, this allows contract profitability to be viewed.
- If the service order is assigned to a project, the costs and revenues are collected on the project and project profitability can be analyzed.



Business Processes

Case 1

- How to offer the customer a service solution based on their needs?

Increasingly, as customer service becomes a differentiator in the market, providers of service are confronted with the issue of how best to position their product offering in this competitive environment. For example, each of the following can greatly influence how the product is packaged and priced:

- Service Window
- Reaction Time
- Help Desk Support
- Service Travel Zone
- Spares Requirements
- Install Base Tracking/Management

Requirement:

The Marketing department of a large organization has purchased computer equipment from a well known manufacturer. In preparation for the installation process, the negotiation for maintenance is in process. Requirements for the Marketing department include immediate response Monday - Friday with minimal coverage on weekends. For equipment breakdowns, availability of spares is a crucial issue.

History has shown that it is most economical for spares to be covered under the service contract. Also, when an employee at the customer's site calls for assistance or to request a service call, a mechanism must be in place to facilitate the employee's identification of the damaged equipment.

What is the Solution?

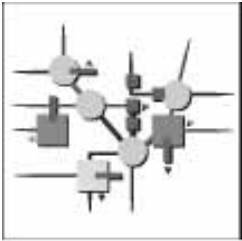
Using the standard SAP configuration management tool it is possible for the sales person to configure a unique service solution for the customer. This functionality allows the service product to be configured as the customer outlines his or her key requirements.

A number of characteristics are selected as the service offering is configured in the service contract.

These characteristics are stored in the R/3 system as attributes of a standard service offering and corresponding values are selected that further define the service product offering. Furthermore, dependency knowledge is tied to the configuration and a consistency check is carried out in the service contract as the sales person composes the solution.

For example, the customer requests the service "Hardware Service". The customer requests an estimate for the total price based on the requirements he previously outlined. Because this service was selected, the customer has four different service windows or hours of coverage that may be chosen. The customer selects Monday-Friday 8 AM - 12 PM and 1 PM - 5 PM. As

Figure 6: Create Service Contract



the selection is made, the service contract price builds up in the lower left-hand corner of the contract configuration entry screen. Now the customer request a response time scheme of 30 minutes for this service window. The salesperson selects this option in the configuration; however, an inconsistency message is received. With this service window, only response times in excess of one hour are available. Therefore, the salesperson selects a one to two hour service response time and pricing of the solution continues.

Now the salesperson must determine what parts or labor are covered under this contract. Since the salesman knew that parts were not a critical issue he advised the customer to select this particular service plan which is an option that delivers only labor. Dependency knowledge in the R/3 configurator determines under which circumstances various options, such as spares or labor coverage, will be available. The price of the contract increases incrementally as the portion of the covered labor increase. Again, dependencies determine under what circumstances a 25%, 50%, or 75% discount on spares is possible. For example, the customer could select a 50% discount. However, after the salesperson informs him of the simulated total price for a one year contract, the customer might select the 25% discount on spares in order to bring the price more in line with his expectation. The salesman enters a specific pricing agreement in the service contract which will permit a 25% discount on all spare parts.

On a line item level the service contract is tied to the functional location which means that this service package would apply to all equipment structured below the functional location in an equipment hierarchy. This lower level service object information can be viewed via an installed base structure list. Therefore, when an employee calls with an inquiry or to report a breakdown, he or she can either identify their location and the CSE in the call center can drill down to the actual object via a structure list or the employee can provide the serial number of the damaged piece of equipment. This structure will be especially useful when a technician is on-site to execute repairs because install base information at the customer's site can be accessed via a laptop connection.

In terms of contractual details, the contract is valid for two years and will be billed on a periodic basis. The billing plan on the line item level will trigger an invoice on the first day of the month for the next 24 months. The cancellation procedure allowed on this type of contract automatically defaults into the transaction. The contract is based on the acceptance date of the contract and the customer may cancel only in the first two weeks of the contract. Otherwise, notice of cancellation must be received three months prior to the end date of the contract. If a cancellation notice is not received then the contract will be automatically renewed. A letter informing the customer of the renewal will be generated four months prior to the automatic renewal date.

The customer is pleased with the outcome of the service contract configuration, including the pricing. Therefore, the deal is done and the contract will be activated upon the official acceptance date which will be recorded in the contract.

Case 2

■ How to manage incoming calls?

Often the first contact that a customer has in a post transaction event is with the customer service center. That initial contact should be responsive, efficient and should solve the customer's problem or inquiry right at that time. The tools must be in place to clearly understand the problem, identify the solution, and communicate the anticipated timeframe to the customer. In order to solve the customer's problem on the first call, there may be a need to interface to a decision support system. Internally, the mechanism must be in place to manage and prioritize incoming calls and requests.

Requirement:

A large hardware manufacturer has many regional support centers in the US which support one central queue where inquiries and problems are logged. Customer service at the company is based on the concept of friendly, efficient service. As calls are taken they are routed to the customer service engineer (CSE) responsible for that account. The CSE has access to an internally developed decision support system which is utilized to provide the customer



Object Information

System Help

Object Information

Reference Object display Environment

Notifs

BrkdnReptd: 1 ProcessDays: 0 IS

NotifCreat: 7 CompNotif: 0 Not.

OrdsCrtcd: 1 Compl.ords: 0 Ord.

Description	Date	Completion P
CPU defect, needs replacement.	08-18-1995	2
Cable defect. Spare needed.	08-18-1995	
Keyboard is not functioning.	09-06-1995	

Contract

Sales document: 40000098 10 WU Item cat.: WUN

Description: Hardware Service - Laptop (Non-Config)

Installat.date: Material group:

ContractStrtDte: 10-05-1995 ContractEndDate: 10-04-1996 Cnt.

Continue Maintenance items Link from/to Link object

DVR 0.88

with a solution on specific technical issues. If the problem is ongoing the engineer is obligated to update the customer regarding anticipated closure per a predefined response time scheme.

What is the Solution?

Customer inquiries and problems may be transmitted via a variety of communication methods to the service center: mail, fax, and electronically. In this particular case the problem is submitted via fax and the information is scanned into R/3 using SAP ArchiveLink®. The scanned document is readily available to any CSE in order to facilitate customer follow-up.

The customer has identified the service object as a PC and provided the serial number for the PC. The CSE utilizes a standard SAP matchcode to find the equipment master associated with the serial number. After this information is recorded, additional data automatically defaults into the notification such as customer address and partner information. These partners include both internal and external partners. Before a decision can be made regarding the handling of the call, relevant information must be recorded. As the CSE records the description of the problem, "Monitor is malfunctioning," the CSE views the install base information which was accessed via the structure list and notices that the serial number for the service object should actually be that of the monitor, not the PC. As the CSE selects the correct serialized monitor, the system prompts the

user to input additional information which clearly defines the problem. Tools to assist in problem identification are pre-defined code catalogs and the classification system which prompts the CSE to ask relevant questions regarding the customer's hardware and network configuration which might be relevant in coding the problem or in the solution analysis follow-up.

Based on information the CSE collects, there clearly is a need to dispatch a technician. However, if it was only a help desk issue, the CSE could have accessed an external decision support system which would have provided solution information based on the problem data outlined in the notification. The solution system interfaces with the SAP R/3 system via a standard user exit.

Within the service notification the service window and response time scheme have automatically defaulted into the transaction because the serialized monitor is covered under an existing service contract. The CSE also views the object information associated with the service object. From this screen the CSE can view historical information associated with a service object, as well as a current contractual information relevant for that object.

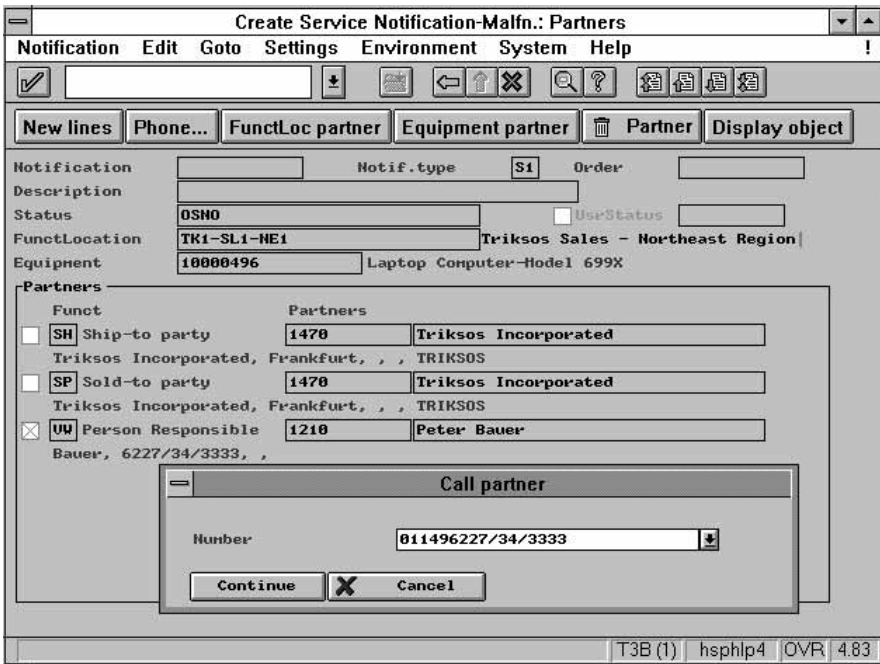
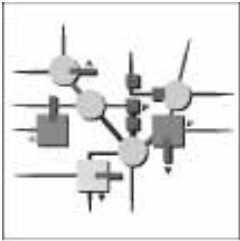


Figure 8: Create Service Notification: Partners

In fact, one of the existing notifications indicates that there is a service order planned for today's date. On the off chance that the dispatched technician might be able to handle both problems, the CSE goes to the partner screen of the notification and selects the technician that automatically defaulted into the no-

tification. As the CSE double clicks on the partner, an external Application Program Interface (API) link automatically calls the technician via a cellular phone. The technician is enroute to the customer's site and will be able to service the damaged monitor.

Conclusion

The main driver behind the implementation of R/3 Service Management in an organization will vary greatly among companies, as well as industries. Cost containment, improved efficiencies, and the tracking of product due to liability issues are all valid reasons to pursue the implementation of a service solution. The strength of Release 3.0 Service Management is flexibility which is detailed enough to support a wide range of industries ranging from the support of mass market commodity products to sophisticated pieces of equipment. Additionally, the integrated functionality in R/3 Service Management solution maximizes supply chain efficiencies by taking the supply chain one step further; from procurement, production, and distribution to service. Positioning service as a key point of differentiation in your market and as an integral portion of all logistics applications will provide a measurable return when your customer perceives the value that your service can provide.