

Introduction

Welcome to SAP's R/3 SD, the Sales and Distribution application that is part of the world's most popular and comprehensive client/server software system.

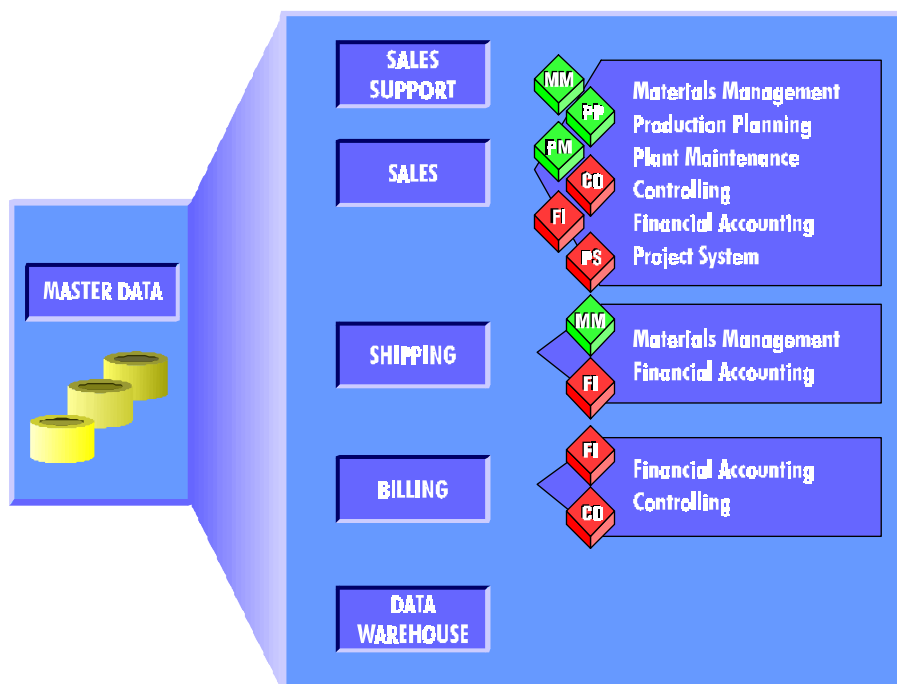


Fig. 1-1: R/3 SD System Diagram

This introduction includes four components:

- ☐ A look at the marketplace needs that make open, three-tiered client/server based systems attractive today.
- ☐ Some of the business reasons why SAP's R/3 System is the overwhelming choice for organizations adopting client/server solutions.
- ☐ A look at sales and distribution issues facing executives in today's marketplace.
- ☐ A few of the reasons why SAP's R/3 SD is the solution of choice for market-leading sales and distribution systems worldwide.

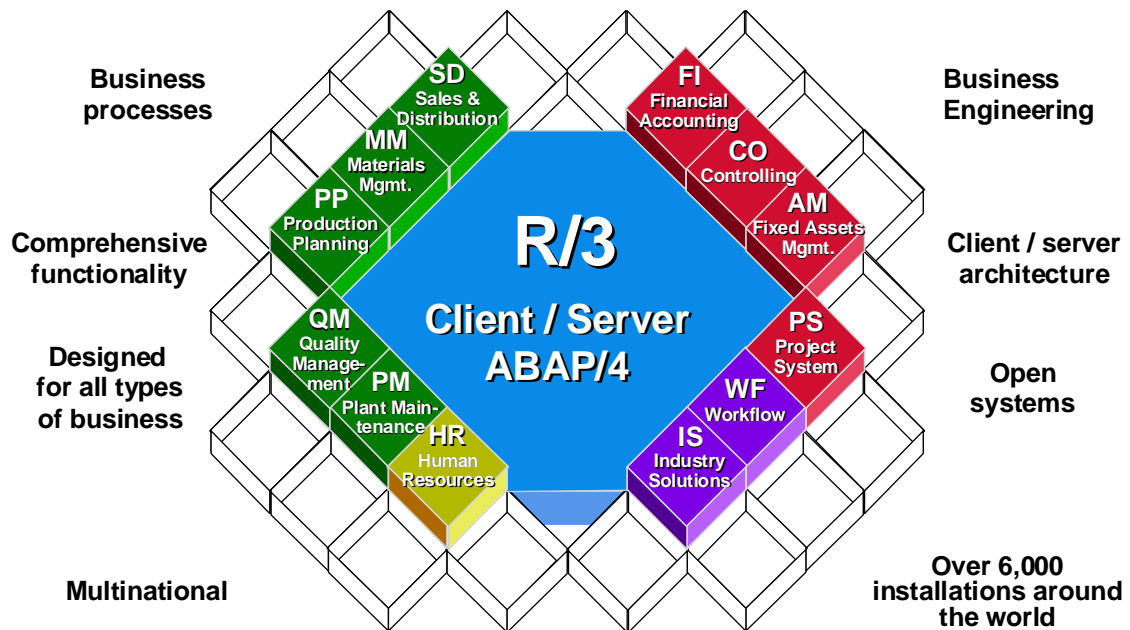


Fig. 1-2: SAP R/3 System Diagram

You must establish a solid IT architecture for all business applications in order to create strategic advantage and to position your organization for breakthrough results. That new architecture is three-tiered, client/server and standards-based. -- John J. Donovan, MIT professor, *Business Reengineering with Information Technology*.

Enterprise organizations must change in order to survive. Traditional enterprise relationships and models are collapsing. Customer expectations increase at a rate that severely taxes most organizations. Traditional business methods of response now fail to improve conditions: Cost cutting, financial restructuring and brand promotion all yield short-term gains at best. The most effective approach toward revitalization, whether in business, academia, government or any large enterprise, is to rethink or reengineer structures and processes.

Enterprise Information Technology Trends:

Marketplace pressures today drive companies to simultaneously reduce both costs and time to market, while improving product quality and capability. Every firm struggles to reengineer itself, its production processes and its products to meet these requirements.

As a result, the successful business of tomorrow will be fundamentally different from the business leaders of today. These differences will extend to every aspect of information systems.

Whether in departmental organization or on the warehouse or factory floor, change is the only facet of your business that will not change. Adaptability must be universal.

Important information must be available to the people who need it. Data needs to reflect what is happening now, not last week or last month: it must be real-time data. Where a need exists within the company, data must be accessible to anyone, anytime, anywhere.

We must all find ways to overlay formerly consecutive processes to make them concurrent. Promoting efficiency and reducing time to market requires that we simplify and automate rather than proliferate processes, whether they are in distribution, production, engineering or sales.

A good solution that meets a business need in isolation is just not enough, because sitting right next to that application is another one requiring some of the same information. For maximum productivity, your data must move between business applications automatically, to avoid duplication of effort and missing or erroneous data.

Whatever you make or distribute, and however you work, your business is a process. While we call some specific business types process industries, in fact all businesses are processes, and are best analyzed and organized as processes. Process thinking encourages the continual, incremental improvements that help maintain peak performance in any organization.

Businesses want to reduce the time required to get new systems and processes up and running. Bringing new systems up with reduced functionality or reduced customization makes it possible to get them running sooner. Add complexity and customization later, as needed.

Moving data freely into and out of information systems is crucial. Users demand the ability to link their solutions together, even if those solutions come from different companies. Software solutions must work on a variety of hardware platforms, and must adhere to communications standards that enable users to move information from place to place with ease. It must also be easy to move necessary information outside your enterprise to other organizations.

The best business solutions allow users to customize the user interface to meet their specific needs. Ease of use does not mean simple-minded or limited in scope, but rather the freedom and flexibility to choose how you wish to approach your work.

Flexible Structure

Real-Time Access to Data

Concurrent, Simplified Processes

Enterprise-Wide Integrated Solutions

Process Thinking

Lean Implementation

Open Systems

Ease of Use

SAP's R/3 System Enterprise-Wide Solutions

"SAP is a world-class company with a long tradition of building robust industrial-strength high-quality applications and supporting technology foundations. R/3 is quickly becoming a de facto standard application for large multinational manufacturers."

— Benchmarking Partners, Cambridge, Mass.

The de facto Standard

Fully Integrated Components

SAP's enterprise-wide R/3 System solutions meet the needs of constantly changing, continually evolving businesses. The R/3 System's components are fully integrated. Once you enter your data, it resides in the central database shared by all R/3 applications. Transaction-related process chains trigger the next activity as needed from engineering to production planning to sales and distribution. R/3's full integration pulls your enterprise together, promoting data access, flexibility, and productivity.

Enterprise-Wide Integration

Enterprise-wide integration and functionality is the hallmark of SAP's R/3 System. No other product or suite of products offers the breadth of open systems, client/server functionality that is at your command with the R/3 System. No other product or suite of products provides the R/3 System's functional links between processes that multiply the power of each person's work.

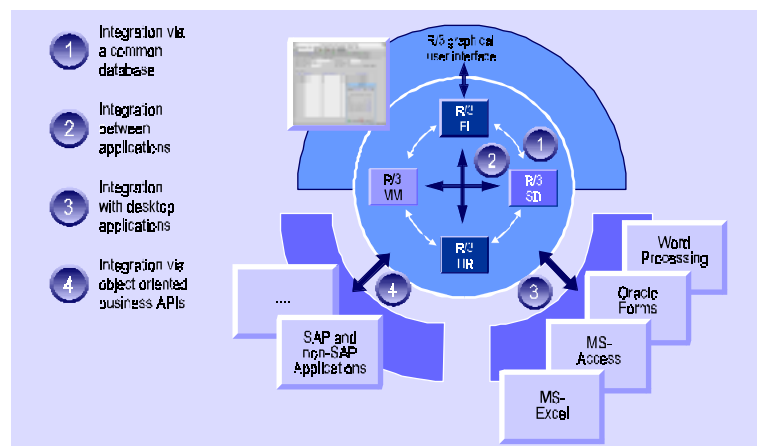


Fig. 1-3: Application Integration in R/3

Real-Time Information

The R/3 System's ability to "drill down" to whatever level of detail a user needs is legendary. More than any other product, wherever and whenever you need information, the R/3 System provides it — up-to-the-minute, real-time information. That need for up-to-the-minute information may be

in the executive suite, in accounting, sales or on the factory floor: the R/3 System delivers the data.

SAP has more than 20 years of experience designing sophisticated application software for backbone and mission critical business processes. Nine of the top ten Fortune 500 companies use SAP software. SAP developed most of the R/3 System's functionality in close cooperation with these customers and integrates the best business practices of the world's most successful companies into the R/3 System — so with the R/3 System you get know-how from leading enterprises. The R/3 System's business processes are flexible, pragmatic and well documented. Today they form a widely acknowledged standard for Business Process Reengineering (BPR).

Users want not only standard software, but also standard business processes and guidance on how to implement them successfully. With the R/3 System you get the "best of breed" for all common business processes. With the R/3 System you are on a faster and safer road to real improvements than with a "template" of core functionality. You do not need to compromise on flexibility, however. If you need or want to fine tune or tailor your R/3 System, the capability is there. You can even use the R/3 System's existing forms as a collection of templates.

The R/3 System remains the only enterprise-wide three-tiered architecture. It implements the concepts promoted by MIT's Professor John J. Donovan, among others. Three-tiered client/server architecture separates the computer areas devoted to database, application functionality and presentation to promote maximum flexibility, freedom of component choice and the ability to change and add to the system as your organization grows.

Mission-Critical Business Processes

Best of Breed

Enterprise-Wide, Three-Tier Architecture

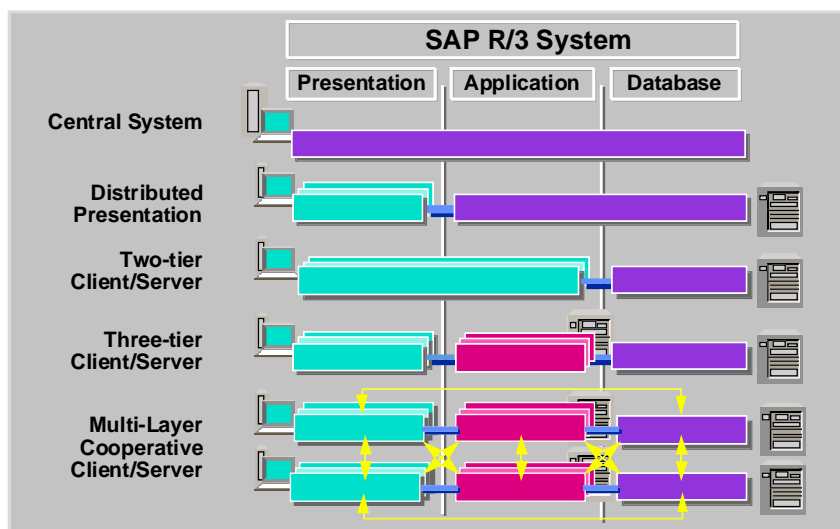


Fig. 1-4: Three-Tier, Multi-Layer Cooperative Client/Server R/3

R/3 Internet Extensions

The development of the Internet, including the World-Wide Web, promises to make dramatic changes in communications between businesses and with customers. SAP is working with several partners to develop enhanced Internet extensions for the R/3 System, for release during 1996. For further information, see SAP's Web pages at <http://www.sap-ag.de>.

Concurrent Engineering

The R/3 System's integrated structure eases the move to concurrent engineering. Concurrent engineering cuts time-to-market by stacking up business processes whenever functions can take place concurrently rather than consecutively. The R/3 System's flexibility and integration help you form the real-time workflow application links required for concurrent engineering.

Lean Implementation

The R/3 System promotes lean implementation through its modular structure. By selecting key portions of the R/3 System for first implementation, and minimizing customization, new users bring the full power of the R/3 System to bear on their business issues with great speed and at reasonable cost. Once running, the R/3 System makes it easy to add more functional pieces. Tools on various system levels allow you to fine tune all R/3 System functional modules. Gradually adding functionality makes core solutions available sooner without sacrificing long-term application muscle.

Desktop Integration

Desktop integration in the R/3 System means that whenever you want data moved into a desktop PC application it is literally a mouse-click or two away. Execute a PC download or export to move a file to your PC hard drive and then open it in a favorite spreadsheet or word processor application. No awkward or failure-prone communications hardware or software will get in the way of your productivity.

R/3 Reference Model

SAP's R/3 Reference Model helps you determine the opportunities in your organization for business process reengineering. The result is the reorganization of your organization around event-driven process chains configured to meet the specific needs of your enterprise. This can help streamline your organization to increase efficiency, customer satisfaction and profitability.

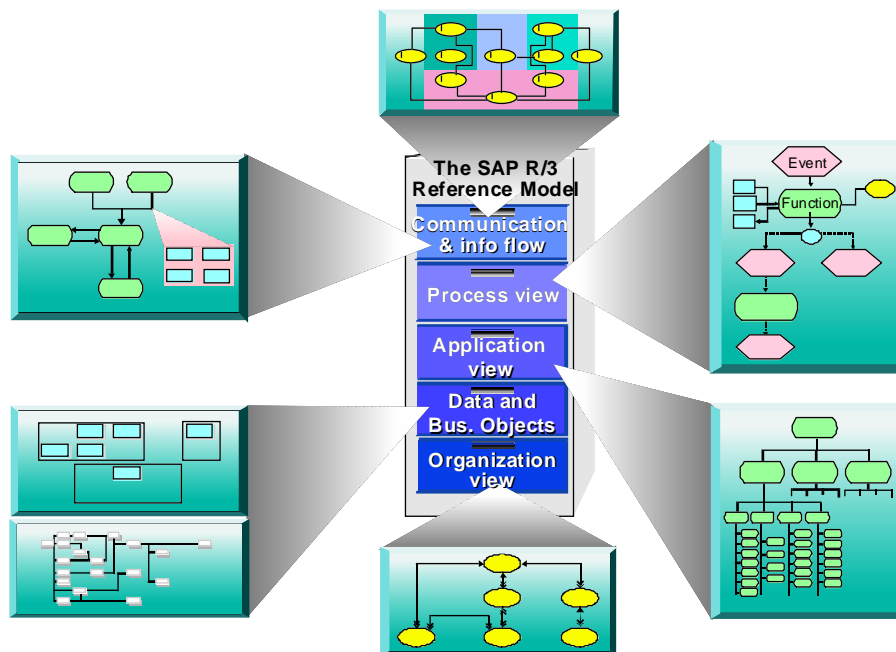


Fig. 1-5: SAP R/3 Reference Model

Online integrated graphics in the R/3 System save you time and effort, while making your information more meaningful. From most locations in the R/3 System you can instantly create full-color 2-D or 3-D graphics from your data. And while you can, of course, change data that instantly affects the graphic you've selected, you can also use your mouse to change the graphic: the R/3 System changes the data to fit.

Online Integrated Graphics

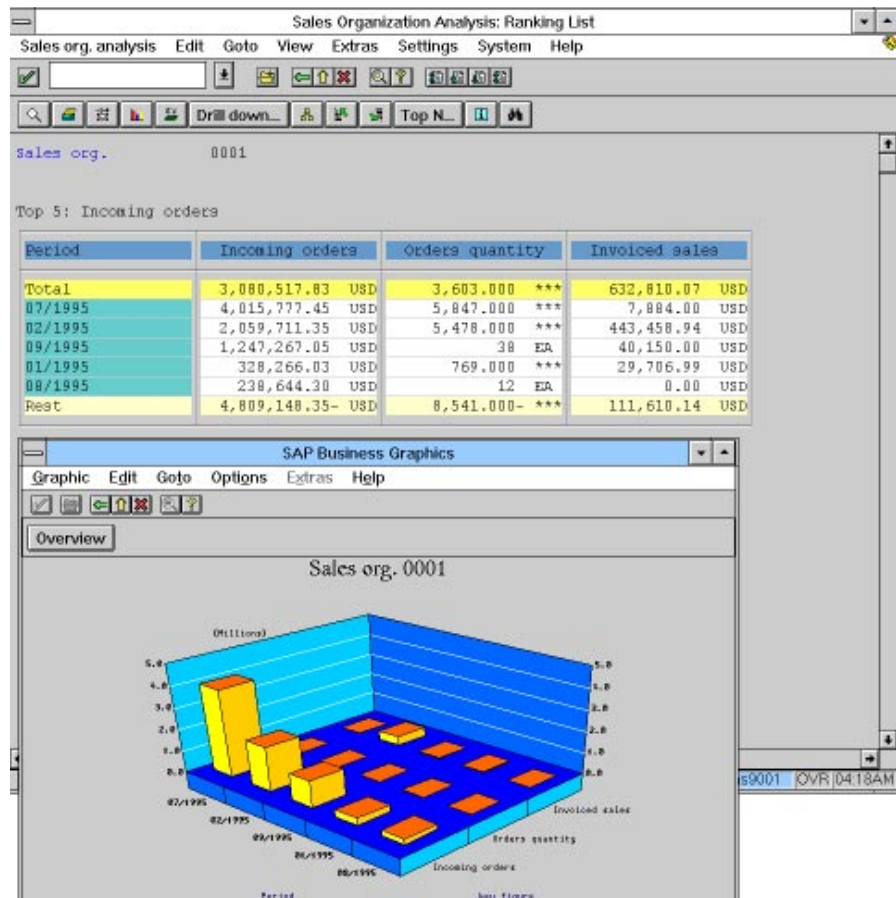


Fig. 1-6: Online Integrated Graphics

Open Systems Standards

No matter how much you customize your R/3 System, you will not be far away from open systems standards that link you to the rest of the world. Your R/3 System servers can include a number of UNIX-based open systems hardware platforms from vendors such as Bull, Digital, HP, IBM, SNI and Compaq, as well as IBM's AS/400. Client desktop systems include PC, Macintosh and various Windows NT systems. Your central R/3 System relational database can be Oracle, Informix, ADABAS, DB2/6000 or Microsoft SQL Server, all of which support ANSI-SQL queries. Graphical interface systems include MS Windows, OSF Motif, Presentation Manager and Macintosh. The R/3 System also supports robust communications technologies, including EDI, TCP/IP, CPI-C, OLE 2.0 and OSF/DCE/DME.

Graphical User Interface

The R/3 System's graphical user interface maintains a number of functions at your fingertips and ready for instant use. Users can easily navigate through R/3 using pull-down menus, icons, fast-path codes, drill-down buttons and other features.

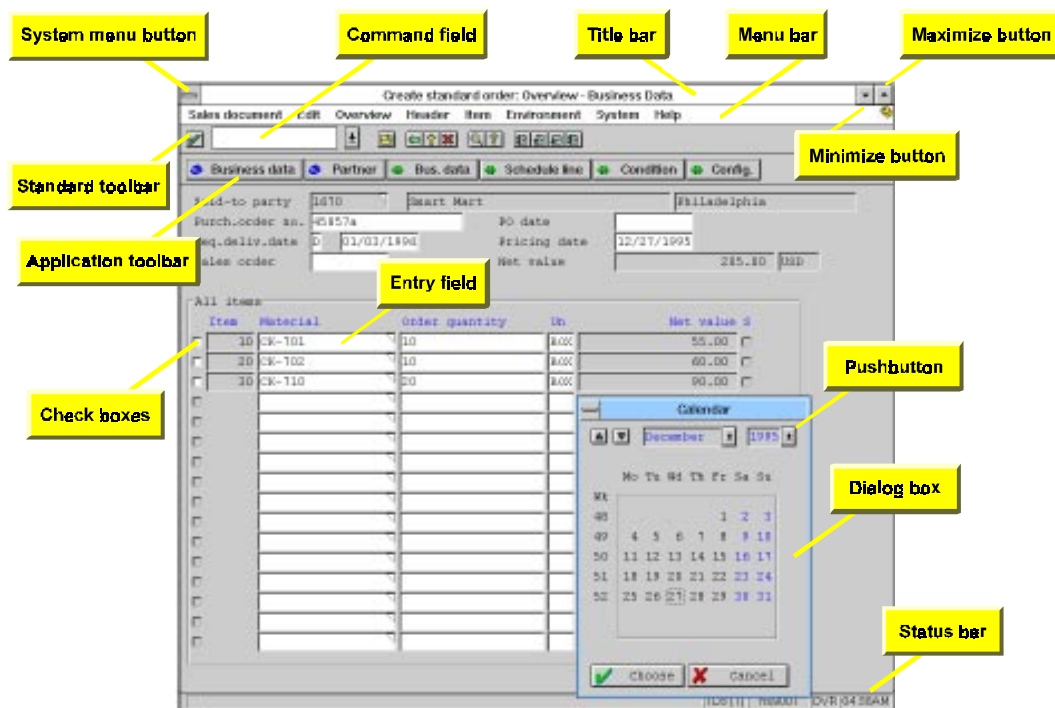


Fig. 1-7: R/3 Graphical User Interface

The Sales and Distribution Marketplace

Fundamental restructuring takes place today throughout the enterprise, including sales and the materials and product distribution network (also known as the supply chain). The forces now driving change in enterprise distribution systems include several trends:

- ❑ Product development cycles shrink and overlap as companies produce larger numbers of individual products.
- ❑ Customer expectations rise steadily as users demand high-quality, low-priced goods.
- ❑ Information technology advancements make it possible to process customer orders electronically, in real time, even over long distances.
- ❑ Globalization requires that systems supporting your enterprise be able to move goods and information quickly and reliably across any distance.
- ❑ Distributors are increasingly powerful and influential in their relationships with producing companies.

- ❑ Pressures to cut costs accompany continuing pressures to increase the speed and quality of service.

Market forces today drive firms to simultaneously improve customer service, reduce total cycle time from order to delivery and invoicing, improve distribution quality and reduce distribution costs. Three methods for achieving these goals are business process reengineering, new technology implementation and strategic alliances with customers.

Strategic alliances exist because today's markets are increasingly user-driven. Users expect to get what they want and need. To deal with this environment of fierce competition for customers, coupled with the continuing problem of effective product differentiation, wise companies develop strong relationships with both vendors and customers. In doing so, they minimize competition while maximizing their chances of recognizing and meeting user needs.

R/3 is designed to work well with all of these methods.

R/3 Sales and Distribution (SD) from SAP

SAP's R/3 SD addresses your sales and distribution needs with a world-class solution serving users world wide. SD is a process-driven application fully integrated into the R/3 System.

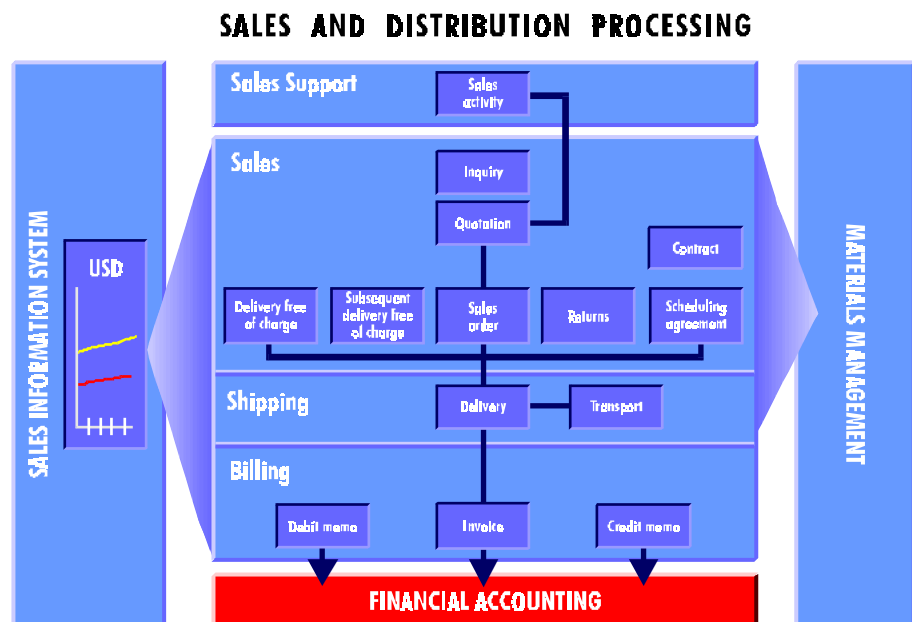


Fig. 1-8: Processing in R/3 Sales and Distribution

SD's Strengths:

Multi-company, multi-lingual, multi-currency sales order processing enables you, to enter an order for international business one time, in one language. Transactions with partners in other countries can be automatically converted to other languages and currencies by R/3 SD. Each of your partners receives transactions in the appropriate local language and local currency, helping you serve the global marketplace by making border crossings simple.

Multi-Lingual, Multi-Currency Processing

Fine-tuning techniques personalize SD to fit the way your enterprise functions. By being able to fine tune your order types, you can quickly adjust your system to the ever-changing demands of your business. Your sales won't skip a beat. Continuous change is the norm for business in the 90s. SD allows you to reconfigure your business processes on an ongoing basis, not just during initial implementation.

Fine-Tuning Techniques

Pricing flexibility and completeness is such a strength of R/3 SD that in its January 1995 evaluation of SD, Benchmarking Partners of Cambridge, Mass. called this capability "world class pricing that supports even the most challenging industries." By using rules to determine your pricing, you can store even the most complex pricing scenarios. R/3 SD liberates your customer service representatives from the pain of complicated pricing and lets them concentrate on their mission: sales and service. SD pricing crunches numbers while you crunch the competition.

Pricing Flexibility

Order status/customer service inquiries give you easy access to extensive information about the condition of orders in your system. You can even graph the progress of an order through the system. Your customer service personnel can answer order status questions before the customer asks them.

Order Status and Customer Service Inquiries

In routine order processing, one simple screen suffices. Enter the customer, the product, the quantity. Master data takes care of all the rest. Depending on availability and credit check, with one click of your mouse, the order is posted.

"Best in Class" Order Entry

R/3 order entry allows you to enter a customer order using your customer's product number instead of your own. Once you store both your product number and your customer's product number in a customer material information record, you can simply enter the customer's number, and the system will reference your product number, saving you time and effort at order entry.

Customer Product Number Order Entry

High-volume order entry allows you to enter even the largest sales order as a single document. And at the same time, you can still move quickly to a customer part number or a specific product number within that order.

High-Volume Order Entry

R/3 SD can treat each item in a sales order like a separate order, so you have maximum flexibility to work with order information and keep customers satisfied.

Item Independence

Rebate Processing

Rebate processing in SD gives you a rich set of options, including rebates based on products, groups of products, customers and buying groups. This feature was designed for the consumer packaged goods industry, where rebates are the rule. Let SD minimize your billing disputes, so your staff can do other more productive work.

EDI

EDI is a critical part of sales. Your business needs to move in the fastest way possible - as electronic data. EDI means that electronically transmitted data immediately becomes available to users and applications on your R/3 SD system. SD's EDI interface ensures that your sales operation has state-of-the-art speed and integration. EDI can even trigger a workflow process. For example, a workflow event could be triggered for a sales order due to an invalid product number, or a credit hold, or other criteria.

Sales Information System

R/3's Sales Information System allows you to collect, consolidate and use data from all types of SD activities. Spot trends early by studying real data and comparing it with plan projections. Then take action to solve problems or take advantage of developing opportunities. You can quickly filter out the most important information from the mass of data within SD, and work with exactly the depth of information your task requires.

Cross Reference Capabilities

Cross reference capabilities in the system allow you to determine the appropriate product number based on different criteria, such as a customer's product number, UPC code or obsolete products. You can also determine the appropriate product from a list based on pack code selection rules. For example, a customer may not allow products with coupons inserted into the packaging of any product. These pack codes can be filtered out of the selection list before the system performs the substitution.

Availability Checking

Availability checking verifies before you even complete order entry that you have sufficient quantities on hand to satisfy a new order. If you do not have enough on hand to ship right away, availability checking determines in real time when the desired quantity will become available. You can specify whether your system will check on the basis of available to promise (ATP) quantities or whether it will do a check against planning. The system also takes replenishment lead time into account. You can even check availability in multiple plants. All of this means your organization can make sales order decisions with up-to-the-minute information about potential delivery bottlenecks, helping you complete business processes on schedule while improving customer satisfaction.

Integration with Materials Management and Financial Accounting

Integration with Materials Management automatically initiates a purchase requisition in Purchasing when you initiate a sales order containing third-party items. The purchased product can then be shipped directly to the customer, or shipped to the warehouse in order to be consolidated with other products on the sales order. Integration with financial accounting (R/3 FI) begins as soon as you assign sales organizations and plants. Several sales organizations can be active within one company code. A single plant can be

assigned to several sales organizations. When you make these assignments, you create links in the R/3 System for the automatic movement of financial data. This is the depth of integration responsible for R/3 SD's "world-class" reputation.

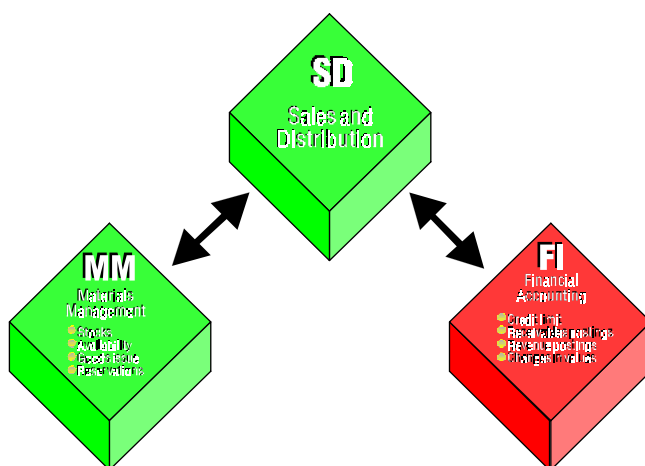


Fig. 1-9: SD Integration with Materials Management and Financial Accounting

Batch control in SD allows you to allocate an individual batch in the sales order, or wait until the shipment is processed before identifying batches. Further, SD checks to ensure that your batch specifications meet the customer's required specifications. SD also checks to ensure that expiration dates, and any other customer-unique requirements, are met.

Batch Control

Service management in SD includes a complete suite of customer service functions, including call management, warranty management and service contract processing. This includes rented or purchased equipment maintenance and repair contracts, allowing you to record the entire process, ensuring prompt service response and accurate billing.

Service Management

Returns, credit and debit processing in SD processes goods returned by customers. Complaints capabilities include free of charge deliveries, returns, credit and debit memos, with or without reference to preceding sales transactions. The system can help ensure accurate, approved transactions by proposing a delivery or billing block in case a second department must review the transaction.

Returns, Credit and Debit Processing

R/3 SD gives you a great deal of flexibility in credit checking. You can use credit limit checks at various times in the sales cycle, from order receipt to delivery. You can set up credit checks for centralized or decentralized operation, or anywhere in-between. For a given customer, you can define a total limit, and/or specify limits for credit control areas. You can also specify how the system responds when limits are exceeded.

Credit Limit Check

Configurable products is another area of great flexibility. When you enter a configurable product in a sales order, R/3 SD automatically calls up a con-

Product Configuration

figuration editor to make it simple for you to select from predetermined configuration options. You can define dependent options and create sets of materials with multiple configuration levels. You can even carry out availability checks for critical parts in configurable products.

Foreign Trade

Continually changing foreign trade regulations and tariffs present a formidable challenge to any organization operating internationally. These restrictions affect your entire logistics chain from raw materials to finished goods, inventory and financial accounting. R/3 SD's foreign trade functionality enables you to efficiently fulfill these requirements, including support for EDI interfaces for foreign trade information, flexible management of export licenses, automatic declarations to authorities, and representation of preference agreements. R/3 SD ensures that international borders do not become barriers to your organization.

Shipping and Transportation

Shipping and transportation management in R/3 provides tight integration of SD with the R/3 System's Materials Management and Financial Accounting modules, so current shipping information is at your fingertips, wherever you are in the system. The shipping module also provides comprehensive support for foreign trade processing; deadline monitoring of shipments in process; flexible processing of deliveries; support for picking, packing and loading; as well as flexible shipping output.

World-Wide Client/Server Application Leader

R/3 SD is a powerful component in a very popular suite of integrated applications. More than 6,000 leading client/server companies worldwide have adopted R/3's integrated set of solutions since the product's introduction in 1992. R/3 now serves the client/server needs of more than 400,000 users worldwide. SAP is now the worldwide leader in client/server application software. SAP ranks number one for software sales in Europe and number five worldwide, with \$1.88 billion in 1995 sales.

