SAP01

Fundamentals

Participant Name : _____

Participant Handbook
Course Version: 2006 Q2 19.08
Course Duration: 32 hours



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Contents

Course Overview vii
Course Goals vii
Course Objectives vii

Unit 1: Introduction 1-1
Lesson: SAP: The Company 1-2
Lesson: Product Overview 1-13

Unit 2: Navigation 2-1
Lesson: Logging On and Personalizing Your User Interface 2-2
Lesson: Navigating in the SAP System 2-12
Lesson: Using Help 2-29

Unit 3: Systemwide Concepts 3-1
Lesson: System-Wide Concepts 3-2

Unit 4: Logistics 4-1
Lesson: Procurement 4-2
Lesson: Sales Order Management 4-23
Lesson: Production 4-41

Unit 5: Financials 5-1
Lesson: Accounting Foundation 5-2
Lesson: Financial Accounting 5-14
Lesson: Management Accounting 5-29

Unit 6: Human Capital Management 6-1
Lesson: Human Capital Management 6-2

Unit 7: mySAP Technology 7-1
Lesson: Client/Server Architecture 7-2
Lesson: The Database 7-19

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Course Overview

The SAP UAP 10 – Fundamentals is prerequisite course for all other SAP UAP Module specific courses. SAP UAP 10 is designed to provide the participant with baseline knowledge of SAP solutions, application components, and terminology. Because this is an overview course the details of the SAP solutions and application components are left to subsequent courses.

Course Prerequisites

Required Knowledge

- Working knowledge of Microsoft Office and Internet browsers

Recommended Knowledge

- Working knowledge of business processes

Course Goals

This course will prepare you to:

- Explain the terminology used by SAP
- Describe the concept behind SAP's business solutions
- Develop the baseline SAP knowledge necessary for participation in more detailed SAP courses

Course Objectives

After completing this course, you will be able to:

- Identify the range of SAP solutions
- Participate in more detailed SAP classes
- Effectively use SAP terminology

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Unit 1

Introduction

Unit Overview

This unit will give you an overview of SAP as a company and will discuss the products and solutions offered by SAP.

Unit Objectives

After completing this unit, you will be able to:

- SAP's milestones and history
- Explain SAP's product offerings
- Name the central SAP solutions
- Explain the concept and history of an ERP system
- Explain the different between a solution and a component

Unit Contents

Lesson: SAP: The Company.....1-2
Lesson: Product Overview….....1-13
Test Your Knowledge 1-31

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Lesson: SAP: The Company

Lesson Overview
In this lesson we will highlight SAP's history and milestones as a company.

Lesson Objectives
After completing this lesson, you will be able to:

- Discuss SAP's milestones and history

Business Example
You are interested in SAP's company history.

SAP's Company History
1972: Five former IBM employees – Hasso Plattner, Dietmar Hopp, Claus Wellenreuther, Klaus Tschira, and Hans-Werner Hektor – launch a company called SAP (Systems Analysis and Program Development). Their vision: to develop standard application software for real-time business processing. Still a private corporation, the company is headquartered in Weinheim, Germany, with its main office in nearby Mannheim; however, the five company founders are most often found at their customer's computer centers, including ICI in Ostringen. The first software programs were written primarily at night and on weekends. At the end of the first business year, SAP already had nine employees and a turnover of DM 620,000.

1973: The first financial accounting software is completed, the RF system. This forms the basis for the continuous development of other software components in what came to be known as the R/1 system. New customers from the local region implement SAP software, including the cigarette manufacturer Rothandle in Lahr and the pharmaceutical company Knoll in Ludwigshafen. These new customer use IBM computers and the DOS operating system.

1974: SAP demonstrates its flexibility for the first time. Within eight weeks, the RF system is converted from DOS to OS. There are already 40 companies on the reference list.

1976: SAP GmbH Systeme, Anwendungen and Produkte in der Datenverarbeitung (Systems, Applications, and Products in Data Processing) is set up as an auxiliary sales and marketing firm. Five years later in 1981, the private corporation established in 1972 (Systems Analysis and Program Development) dissolved, and its rights are transferred to SAP GmbH, giving the company its current name (Systems, Applications, and Products in Data Processing). SAP now has 25 employees and a turnover of DM 3.81 million.

1977: The company headquarters moves from Weinheim to Walldorf. For the first time, SAP installs its system at customer sites outside Germany; two Austrian companies decide to implement SAP software. The company is reorganized to support active sales and distribution.

1979: SAP starts to use its first own server, a Siemens 7738. Previously, SAP employees carried out all development in the data centers of regional companies, such as ICI, Thermal, Knoll, Grunzwieg+Hartmann, and Freudenberg. SAP's first "development center" is still housed in rented space; however, work is already

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underway on the first stage of construction for a company headquarters building. Intensive work with IBM's database and dialog control system provides the impetus for a new approach to SAP software. SAP R/2 is brought into the world.

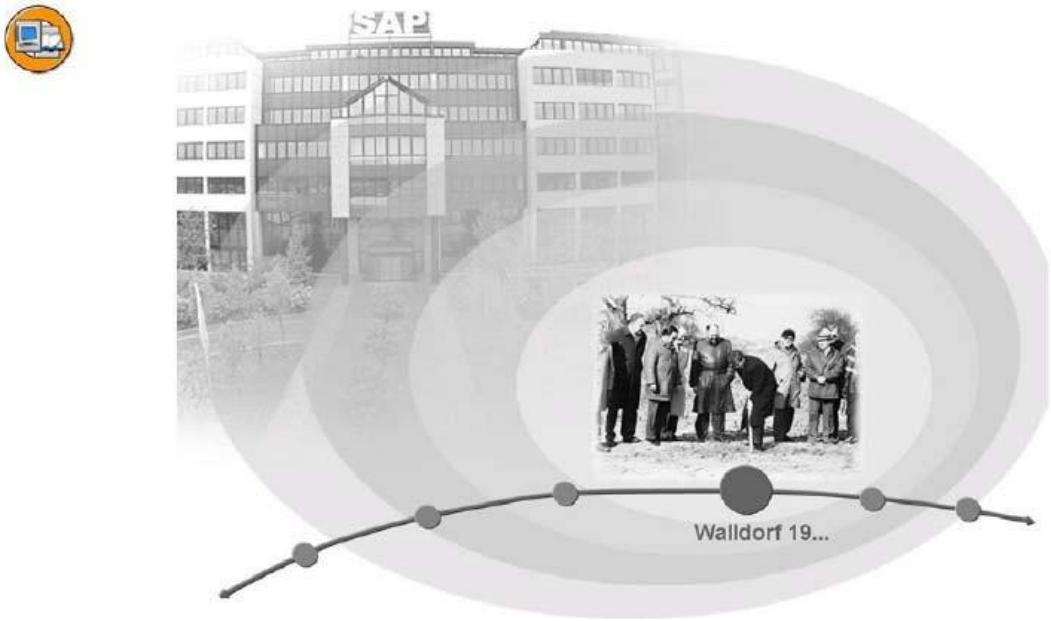


Figure 1-1: SAP: Founded in 1972 by Five Former IBM Employees

1980: SAP moves into the company's first building on Max-Planck-Strasse in Walldorf's industrial park. The software development area and its 50 computers are now finally under one roof. The new data processing infrastructure is also built. The Siemens 7738, an IBM/370-148, is installed, although this is changed to a higher performance 4341 later in the year. This IBM model has 4 MB of memory. The palette of products is also increased. The RV order processing software is added to the product range.

1982: SAP celebrates its 10th birthday. Its offices are already too small and the first building extension is built in record time. Over 250 companies in Germany, Austria, and Switzerland work with SAP software. Revenue reaches approximately DM 24 million, and the company has 100 employees. One of the company founders leaves the company.
1984: SAP takes on 48 new employees. This increase in personnel resources is brought about in particular by the further development of SAP's modules (RK, PPS, and RP). SAP (International) AG is founded in Biel, Switzerland. The intention is to deal with foreign markets from this base in Switzerland. SAP has 163 employees and revenues of DM 46 million.

1986: SAP founds its first country subsidiary in Austria. It also opens its first branch office in Ratingen, near Dusseldof, Germany. SAP increases its capital stock from DM 500,000 to DM 5,000,000. The growing number of employees leads to the creation of smaller organizational units headed by department managers. A new financial regulation leads to a flood of orders: approximately 100 new orders are received for SAP's asset accounting software. After three years in development, SAP's new human resources software is made available to customers. The company makes its first appearance at the CeBIT software trade

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fair in Hanover, Germany. Revenues reach the DM 100 million mark earlier than expected.

1987: Work begins on SAP's training center in Walldorf's industrial park. The first SAP software congress in Karlsruhe is used as a platform for the exchange of information between users and interested parties. The new generation of servers from IBM means that SAP software is now available to midsize companies (annual revenue from DM 30 million to 200 million). SAP Consulting is founded to serve this customer sector. The standardization of software production becomes an incentive for SAP to start developing a new generation of software: SAP R/3.

1988: SAP GmbH becomes SAP AG. In October, 1.2 million shares are listed on the Frankfurt and Stuttgart stock exchanges. SAP's international business grows; country subsidiaries are established in Denmark, Sweden, Italy, and the United States. The international training center is opened in Walldorf. This also incorporates a sport park for SAP's 940 employees. Dow Chemicals becomes SAP's 1000th customer. To meet the requirements of specific industries, SAP begins to develop RIVA, a billing and administration system for utilities.

1990: SAP stock reaches DM 85 million following the issue of preference shares. The increased funds are used to finance increasing investments. DM 110 million is made available for R&D, both for the further development of R/2 and the new development of R/3. SAP now has over 1700 employees and its revenue exceeds DM 500 million.

1991: SAP presents its R/3 system for the first time at the CeBIT in Hanover. The product meets with overwhelming approval due to its client/server concept, uniform appearance of graphical interfaces, consistent use of relational databases, and the ability to run on computers from different providers. Revenues and employee numbers continue to rise. At the end of the year, SAP has 2685 employees in Germany and its 14 subsidiaries, and has revenues of DM 707 million.

1992: After successful installation at selected pilot customers, SAP R/3 is released to the general market. This heralds the start of a new stage in SAP's growth. As it celebrates its 20th anniversary, SAP intensifies its partner strategy in accordance with the expected high installation figures for R/3. Independent consulting companies support customers during the installation of R/3.

1995: SAP in Germany increases its sales activities targeted at midsize companies by collaborating with system resellers. The American company Burger King, Inc. is the 1000th Human Resources customer. Microsoft also begins to use SAP. Shortly afterward, the German Manager-Magazin chooses SAP as its company of the year. Deutsche Telekom AG implements R/3; it requires 30,000 R/3 workstations and represents the largest contract in the company's history.

1996: SAP and Microsoft present a joint Internet strategy. Coca-Cola, the largest soft drinks manufacturer in the world, decides to implement SAP R/3. A number of SAP customer events set new records. At the European SAPPHIRE '96 in Vienna, 4,300 customers and interested parties take the opportunity to gain information about SAP's products and strategies, and over 8,000 participants visit the American SAPPHIRE. SAP is named company of the year for the third time by Manager-Magazin.

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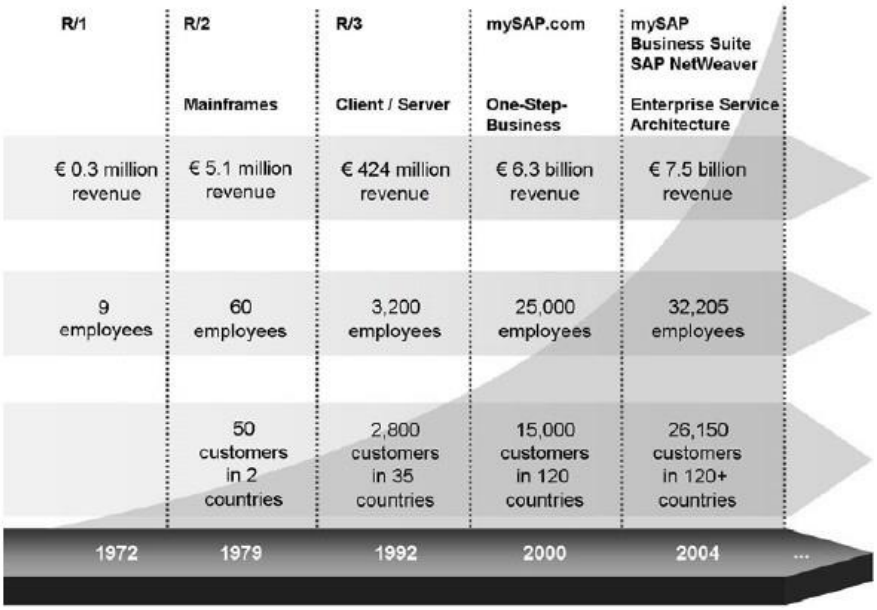


Figure 1-2: SAP Continued Growth

1997: SAP celebrates its 25th anniversary. Among the guests at the official celebration is the German Chancellor Dr. Helmut Kohl. SAP's earnings before taxes exceeds the DM billion border for the first time. Customers like Daimler-Benz and General Motors decide to implement SAP R/3 and more then two million users worldwide work with SAP products.

1998: Dietmar Hopp and Klaus Tschira, two of the founders of SAP, announce their decision to leave the board of directors; both move into the supervisory board. Dietmar Hopp takes over the presidency. Hasso Plattner and Henning Kagermann are appointed as co-chairman of the board of directors. From August, SAP shares can be bought on the New York Stock Exchange. More than 15,000 participants come to the 10th SAPPHIRE USA in Los Angeles, where the main topic is "EnjoySAP." In this year, worldwide, 6,500 new employees start at SAP - an increase of 50% to the existing workforce.

1999: In May, Co-Chairman and CEO Hasso Plattner announces the mySAP.com strategy, heralding the beginning of a new direction for the company and its product range. mySAP.com connects e-commerce solutions with existing ERP applications using up-to-date Web technology. In the same year, numerous my SAP.com customers are won, among them Hewlett-Packard and the pharmaceutical company Hoechst Marion Roussel. Almost 15% of the revenue of EUR 5.1 billion is used for research and development.

2000: 10 million users, 36,000 installations, 1,000 partners, and 22 industry solutions: SAP is the leading global provider of e-business software solutions that integrate processes within and beyond company boundaries. SAP, with headquarters in Walldorf, Germany, is the third largest independent software provider worldwide. With the continuous extension of the product and services portfolio, SAP changes from a component to a solution provider. Nestle signs the biggest contract in SAP history up to this point.

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2001: The New Economy bubble has burst, but the trust in SAP and its solutions is not broken, the revenue reaches EUR 7.3 billion. By taking over TopTier, SAP extends its solution offering by company portals.
2002: While the success for SAP began with SAP R/2, in 1992 SAP R/3 was responsible for the international breakthrough. The brand SAP represents high quality enterprise software. Shai Agassi becomes member of the board of directors and becomes responsible for new technologies
2003: An era ends. Hasso Plattner, the last of the founders of SAP, leaves the board of directors and is elected head of the supervisory board. In January, SAP announces the solution concept behind mySAP Business Suite. In addition to the name change from mySAP.com to mySAP Business Suite, SAP introduces a new ERP solution: mySAP ERP. With SAP Labs China in Shanghai, SAP opens the ninth development site outside Walldorf. Research centers in India, Japan, Israel, France, Bulgaria, Canada, and the United States contribute expert IT knowledge for SAP.

2004: Enterprise Services Architecture delivers the first version of SAP NetWeaver 04. The resonance from the new integration and application platform is overwhelming. By the end of 2004 the new product has more than 1000 customers. In total, more then 24,000 customers in over 120 countries run 84,000 installations of SAP Software. SAP announces the future of Enterprise Services Architecture. It is planned that by mid-year all enterprise applications of SAP will be service-based and offer the customer the utmost flexibility.

Branch Offices and Subsidiaries of SAP AG

SAP has a network of development centers, training centers, and service subsidiaries. For example, there are development centers (the SAP Labs) in Palo Alto (U.S.), Sophia Antipolis (France), Bangalore (India), and Tokyo (Japan). SAP has local subsidiaries in more then 50 countries that are responsible for sales, consulting, training, and services.

There are a number of training centers in the United States: Newton Square (Philadelphia), Atlanta, San Francisco, and Dallas, just to name a few. In Germany, there are training and consulting centers in Walldorf (Baden), Berlin, Hamburg, and Ratingen (Diisseldorf).

SAP Hosting AG & Co. KG, a wholly owned subsidiary of SAP AG, operates on a global scale, and is based in St. Leon-Rot, Germany. It also has branch offices in Walldorf, Philadelphia, Palo Alto, Tokyo, Sydney, Singapore, and Bangalore. SAP Hosting offers comprehensive hosting services that enable companies to access the most up-to-date SAP solutions quickly and effectively. The services are optimally tailored to the requirements of mySAP Business Suite customers and include evaluation hosting, implementation hosting, application hosting, remote application operations, application management, and hosted learning.

SAP Manage provides **SAP Business One**, a product developed for small and midsize businesses (SMBs). SAP Manage also markets and supports the product in Israel.
SAP SI is an IT consulting house for companies that partially or fully implement SAP software solutions. It integrates processes and systems and helps customers to increase their company value. SAP SI develops the necessary IT strategy for this and ensures that it is implemented. With more than 1,000 active customers

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from almost all industry sectors within Germany and abroad, SAP SI has an impressive portfolio in IT consulting and system integration. SAP SI provides the following IT services: IT strategy and architecture consulting, conversion planning and implementation, customer-specific development, and the operation and optimization of IT solutions.

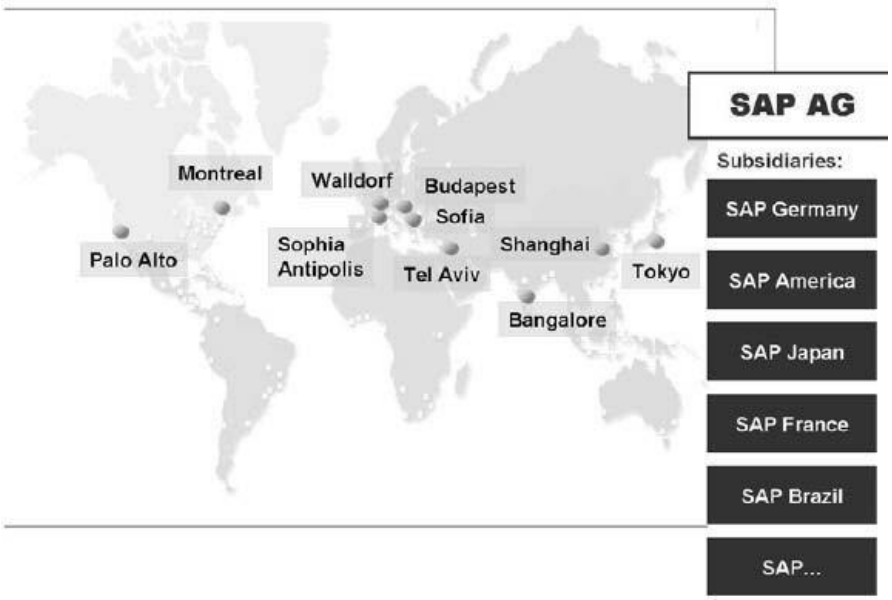


Figure 1-3: Branch Offices and Subsidiaries

Steeb is Germany's leading provider of SAP systems for midsize businesses. It offers high-performance ERP, e-business, and industry-specific solutions to prepare companies for future challenges. Steeb has been involved with midsize companies since 1974 and offers complete solutions for both SAP systems and its own product, SC/400. The complete program offered includes both software products and the corresponding services (consulting, implementation, support), as well as hardware and networks. Steeb's industry focus lies in the manufacturing industry, wholesale trade, and the service industry. Steeb's advanced solutions (as//) series provides preconfigured SAP solutions for automobile suppliers, machine and equipment manufacturers, and configure-to-order manufacturers in the metal, wood, and plastic industries.

SAP's Employees

SAP's distinctive atmosphere hits you the moment you arrive. Applicants that visit SAP for the first time soon see why the company is so popular. The people here are relaxed and friendly, and the energy in the corridors makes you feel that you have entered a university campus.

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Figure 1-4: SAP Employees

An Exemplary Corporate Culture
New employees are introduced to the SAP world through special orientation events, trainee programs, and a mentoring concept that ensures each employee has practical guidance during this time. Since a team mentality is highly valued at SAP, all employees can rely entirely on their colleagues. New employees, in particular, can benefit from the tips and information provided by more experienced colleagues.

Achievement Orientation, Creativity, and Innovation
The SAP culture offers a large amount of personal freedom. This freedom motivates and inspires employees to develop and realize their ideas. Creative and innovative concepts are always welcome within the team and new ideas are supported. This backing encourages every employee and increases productivity both within the team and beyond departmental boundaries. The lack of bureaucratic red tape and hierarchical restrictions allows information to quickly get to where it needs to be.

Training Through Personal Development
SAP employees know they need to be able to react flexibly to changes, and their knowledge always has to be up to date. Personal initiative is therefore taken for granted, as is acting responsibly as a representative of the company. This mindset is characteristic of SAP employees. The SAP culture also means that flexible work times are utilized to the best possible advantage and accepting responsibility at an early stage is seen as an incentive to perform.

Reference customers are customers who have implemented SAP solutions successfully and are now prepared to pass on their experience of the implementation project and production operation. This exchange of information takes place through visits to reference customers, telephone calls, presentations, and interviews.

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Reference Customers and Partners



Figure 1-5: Reference Customer and Partners

The collaboration between SAP and providers of associated software ensures that SAP's business solutions and other application systems can communicate smoothly.

SAP's software partner program provides software providers with standard, defined interfaces. These interfaces can be used to integrate additional products seamlessly into SAP solutions.

Service partners support our customers during the selection, implementation, and operative use of SAP products. These partners generally have many years of SAP experience and belong to the SAP Alliance Partner Service and SAP Partner Service. Partner companies can take part in a qualification process to prove their expertise in certain SAP products or solutions, which results in them being awarded Special Expertise Partner (SEP) status.

Social Engagement

As the leading global provider of enterprise software, SAP has a responsibility to ensure that its business processes are smooth and transparent. However, SAP does not just have responsibilities to its customers and partners, but also to society in general. For this reason, social engagement is an important component of SAP's corporate strategy.

Corporate citizenship

SAP would like to play its part in the creation of a productive and transparent environment that is of benefit to everyone. SAP promotes partnerships and cooperation with all social organizations that also respect this goal, and is actively engaged in social, scientific, and cultural activities.

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Figure 1-6: SAP's Social Engagement

Regional engagement

"Promote development - Seize future opportunities through innovation." Under this motto, SAP supports organizations and institutes in the local area of its branch offices.

Government relations

We take seriously our responsibilities as a competent partner and adviser, as a thought leader, and development leader. SAP therefore supports national and international programs that are customer-friendly, fair, reliable, and based on a market economy.

Sport sponsorship

Speed, precision, and tangible results are reasons behind SAP's global leadership as a provider of enterprise software. Therefore, SAP supports competitive sporting events and the desire to be the best in a given discipline.

Internet Portal

Most of the information in this lesson is taken from SAP's Internet portal. For more information, visit www.sap.com. You can fmd information about the company and its products, services, and partners.

The menu path within the portal is easy to follow. If you cannot fmd information directly from the selection menu, you can use the search function.

Many customers also want to receive local offers and information in their own language. Customers can choose from a number of country-specific SAP portals.

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http://www.sap.com

Figure 1-7: www.sap.com

Information can be downloaded from a number of areas within the portal. Product descriptions can be downloaded free of charge as a "solution in detail" or "white paper."
The Training area provides information about training courses offered by SAP and the current training catalog. You can display a course description for courses you would be interested in taking. If you already have a customer number, you can also book the course online.

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Lesson Summary

You should now be able to:

- Discuss SAP's milestones and history

Related Information

For more information about SAP partner services, visit www.sap.com. From the navigation menu, choose Partners.

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Lesson: Product Overview

Lesson Overview

In this lesson, you will learn that SAP offers a number of products for a wide variety of companies and different solutions for companies of varying sizes.

Lesson Objectives

After completing this lesson, you will be able to:

- Explain SAP's product offerings
- Name the central SAP solutions
- Explain the concept and history of an ERP system
- Explain the different between a solution and a component

Business Example

You want to introduce new software into your company and therefore want to gain information about the solutions and products offered by SAP.

Products

History of Enterprise Resource Planning (ERP) Systems

In the 1970s, the concept of an enterprise resource planning (ERP) system did not exist. With its R/1 system, SAP developed a software product that handled process data in real time and saved it to a central database. This meant that companies could access their own data quickly and have a high level of control and transparency.

In the 1980s, these systems came to be known as standard ERP systems. Since SAP had broken new ground in this area, it became the market leader. Integrated processes led to increased efficiency and reduced reaction time to unexpected events.

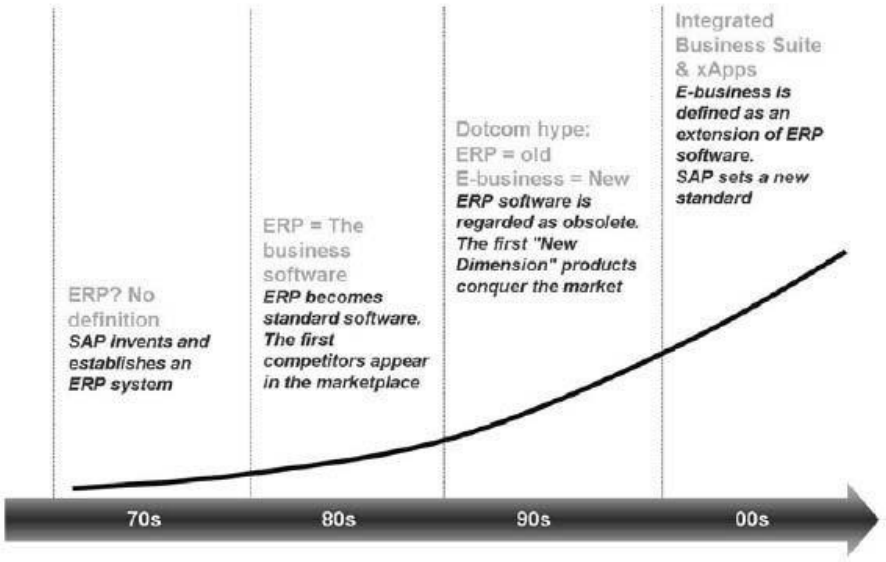


Figure 1-8: History of ERP Systems

In the 1990s, the Internet began to grow rapidly. New companies developed new applications for the Internet and the "new economy" was born. These firms

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became known as "dotcom" companies. They often had a small number of employees and had an Internet presence only. The market changed due to the growth of the Internet. New customer groups were defined and new ways of trading were discovered. Companies began to engage each other directly. As a result, business processes were defined that stretched across company boundaries. Planning data from business partners was used to optimize companies' supply chains. Sales orders were not only entered directly in the ERP system, but also in the field by field service employees using mobile devices. These new functions led to the development of new products. Such "new dimension products" led to an enhancement of ERP functions.

SAP developed systems for Internet purchasing (SAP Enterprise Buyer), customer service (SAP Customer Relationship Management), and comprehensive planning functions (SAP Advanced Planning and Optimization). Irrespective of the Internet, comprehensive accounting tools had also become necessary for companies' financial data. Data was no longer simply stored in a database, as was the case in an ERP system. In response to this, SAP developed SAP Strategic Enterprise Management and the SAP Business Information Warehouse.
At the beginning of 2003, SAP redefined the concept of an ERP system. It is no longer a system with a database; instead, it is a combination of products covering basic processes such as purchasing, sales, and production. In the areas of human resources, accounting, and basis technology, it corresponds to the enhanced solutions of the new dimension products. This mySAP ERP solution is compatible with additional components, enabling business processes to be defined on a cross-company level.

Product Overview

SAP offers a large palette of products for companies of all sizes. SAP provides scalable products that can be adjusted to the size and constantly changing processes of a company.

mySAP Business Suite is a complete package of open enterprise solutions that link all people involved, information, and processes, and therefore improve the effectiveness of your business relationships. The applications provide users with consistent results throughout the entire company network and give your company the flexibility needed in today's dynamic market situations. It consists of a number of different products that enable cross-company processes.

mySAP Business Suite offers a flexible software solution for larger companies that have a large number of users and processes that are constantly changing.

Accounting, human resources, and logistics are the heart of every enterprise. mySAP ERP encompasses all these vital business processes within a company and provides functions for both corporate headquarters and small subsidiaries. Every company can benefit from mySAP ERP.

All software has to be adapted to the specific company. A small company with few employees and relatively stable processes can use preconfigured SAP systems. mySAP AH4n-0ne is the brand name for vertical (industry-specific or country-specific) solutions that are based on the technology of mySAP Business Suite and were developed in conjunction with SAP's partners. All mySAP All-in-One solutions are certified by SAP and are provided and implemented by SAP partners.

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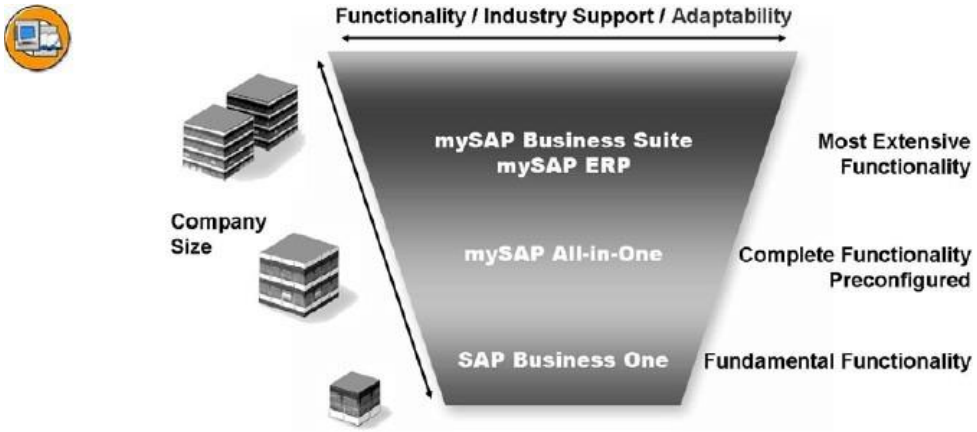


Figure 1-9: Different Sizes – Different Products

SAP Business One is a comprehensive, integrated ERP solution with an interface that is similar to Microsoft Windows. It is distinguished by simple navigation and drilldown options, innovative Drag&Relate functions, and integration with Microsoft Word and Excel.

mySAP Solutions

mySAP Business Suite consists of individual SAP solutions. Each solution has its own focus area and provides functions to map this area in a flexible and comprehensive way. All solutions are based on SAP NetWeaver technology.

Solutions and Components

mySAP solutions describe processes and functions from a process point of view.

Solutions are SAP's products seen from the point of view of the customer, with an outside-in focus on company processes. Components, however, represent SAP's technical view of software with an inside-out focus. Components are not the actual company solutions, simply the technical building blocks. Business experience, strategies, and know-how are incorporated in SAP software. The flexibility and comprehensive integration and adaptation options offered by SAP software results in high-performance, industry-specific, and cross-industry e-business solutions.

To differentiate between solutions and components, solutions have the prefix mySAP and components -- the (technical) detailed view – have the prefix SAP. For example, mySAP Customer Relationship Management (mySAP CRM) is the solution that the customer implements. SAP ERP Central Component, SAP Enterprise Portals, SAP Business Information Warehouse, and SAP Customer Relationship Management are technical parts of this solution.

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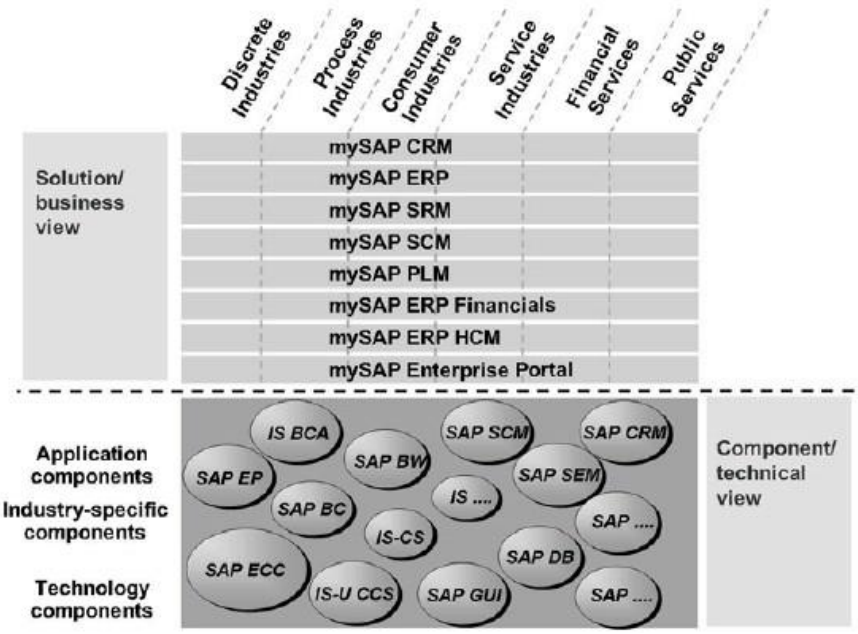


Figure 1-10: SAP Solutions and SAP Components

SAP NetWeaver

SAP's application and integration platform is the technical foundation for mySAP Business Suite and SAP xApps. It delivers a complete, open, and flexible infrastructure that allows you to easily integrate SAP and non-SAP applications.

SAP NetWeaver is divided into four areas:

People Integration

People Integration ensures that your employees have the information and functions that they require to perform their work as quickly and efficiently as possible. The functions of the SAP Enterprise Portal play a central role here.

Information Integration

Information Integration is used to manage all data relevant to companies. This includes data for your own company and data relating to third parties.

Process Integration

Process Integration ensures that business processes run across system boundaries in a heterogeneous system landscape. This is achieved by using XML data packages and workflow scenarios, for instance. SAP Exchange Infrastructure (SAP XI) plays a central role here.

Application Platform

The Application Platform supports Java 2 Enterprise Edition (J2EE) and ABAP (SAP's programming language) in one environment. It guarantees the independence of databases and operating systems, the complete support of platform-independent Web services and company applications, and an open environment that is based on recognized standards. The central component of the Application Platform is the SAP Web Application Server.

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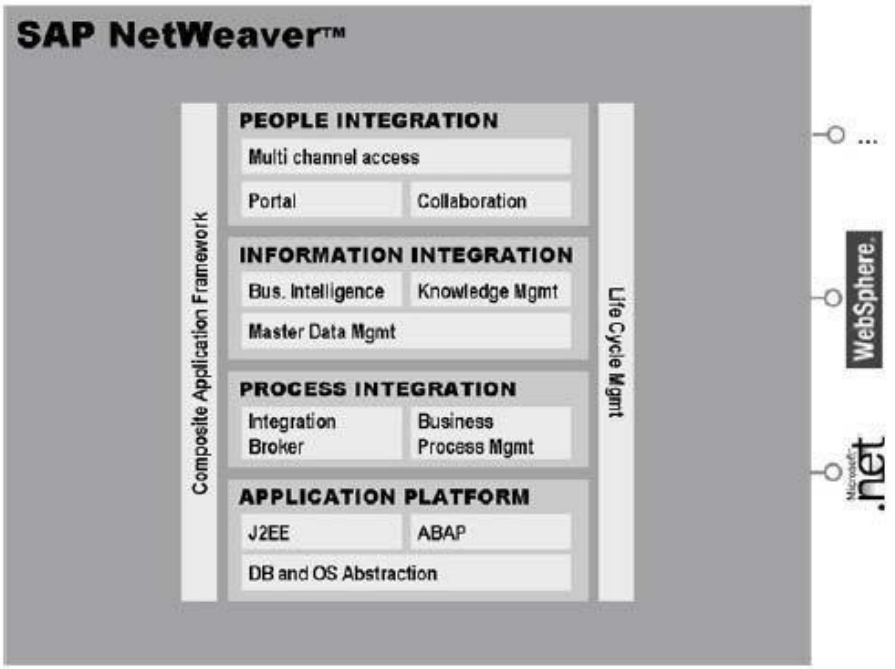


Figure 1-11: SAP NetWeaver



Figure 1-12: SAP NetWeaver: Components

mySAP ERP

It is imperative today more than ever to ensure that the business processes in an organization are integrated, streamlined, and transparent. mySAP ERP allows companies to gain better control of their administrative and operations environment and increase efficiency and profitability. Furthermore, the solution drives down the costs of integration and deployment by shortening time to benefit and leveraging existing IT investments.

mySAP ERP is designed in such a way that companies can implement only the business functions they need when they need them, thus simplifying upgrades and reducing total cost of ownership.

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With mySAP ERP, SAP has set a new standard for ERP systems. This solution incorporates the mySAP ERP Financials and mySAP ERP Human Capital Management solutions, and also contains basic functions for operations

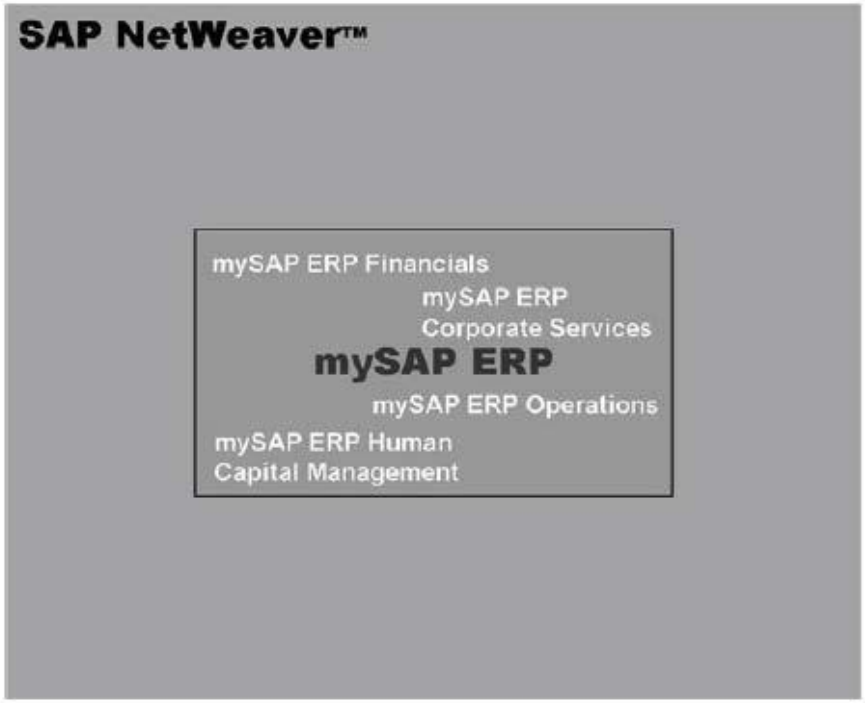


Figure 1-13: mySAP ERP

mySAP ERP Financials

The aim of this solution is to utilize a company's funds effectively and, therefore, increase profitability in the long term.

mySAP ERP Human Capital Management

Every company has employees. They are important resources, and mySAP ERP HCM enables you to utilize them effectively toward the success of your company. This solution covers all aspects of human resources, from recruitment and training through payroll.

The basic operations functions include, for example, sales, shipping, production, maintenance, and quality management. The processes are fully integrated. Previously, an ERP system was connected to a database only. With SAP, an ERP system is now a combination of components that integrate people, information, and processes in a comprehensive and flexible way.

mySAP ERP is also the core solution of the mySAP Business Suite.

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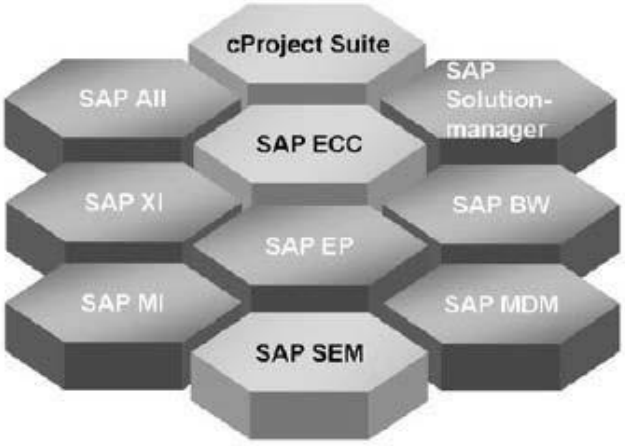


Figure 1-14: mySAP ERP: Components

SAP R/3 has been through a number of release cycles. For each new release, the functions have been extended, applications have been optimized, and interfaces to other software components have been enhanced. SAP R/3 is developed using ABAP, SAP's own programming language.

Since the SAP R/3 Enterprise release, changes and enhancements are integrated into the system as extensions. This accelerates and simplifies the upgrade process and adaptation to industry sectors.

SAP ERP Central Component (SAP ECC) is the evolutionary successor of SAP R/3 and is one of the main components of the mySAP ERP solution.

mySAP Business Suite

If you want to remain competitive in the current economic climate, you have to be flexible and capable of changing to meet constant new demands from your customers. mySAP Business Suite provides this flexibility in a complete package of open, integrated solutions for the entire value chain. Customers, employees, suppliers, and partners are brought together to form one unit in a process that takes almost no time at all.

The core functionalities and solutions from mySAP ERP are enhanced and extended through the following solutions in the mySAP Business Suite:

mySAP Customer Relationship Management

mySAP CRM is a solution that puts the customer first. The customer can contact companies through a number of communication channels.

mySAP Product Lifecycle Management

This solution offers functions for product development, product safety, quality, and maintenance.

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mySAP Supply Chain Management

Supply chains do not end at the warehouse doors. You can use mySAP SCM to plan and optimize supply chains across company boundaries.

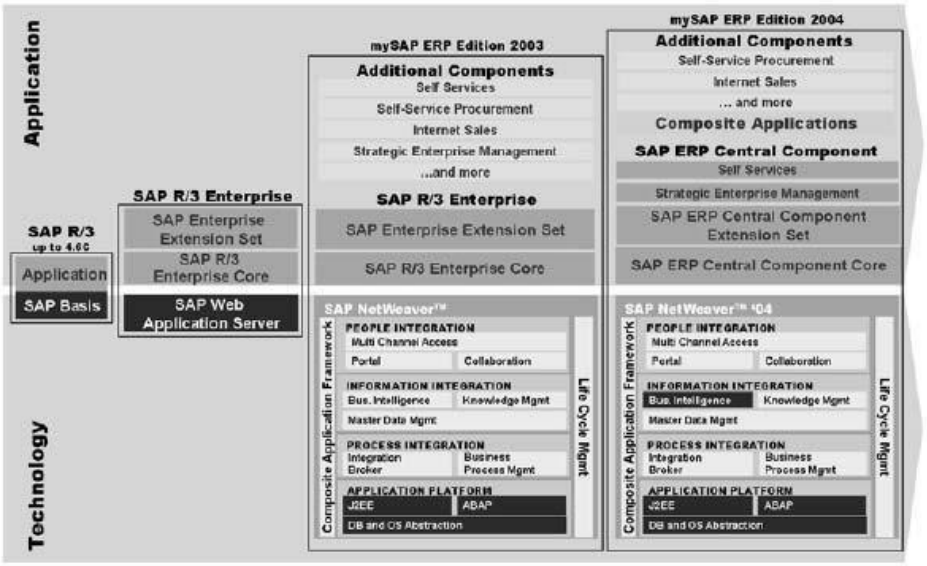


Figure 1-15: From R/3 to ERP

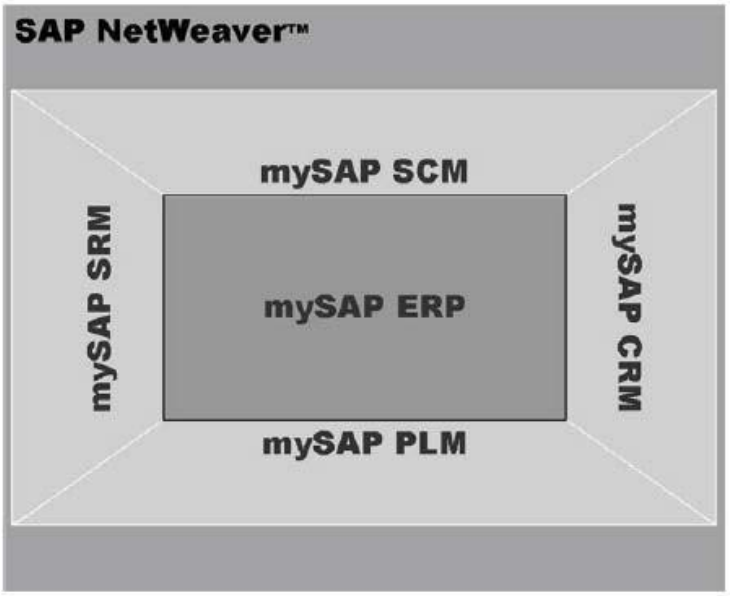


Figure 1-16: mySAP Business Suite

mySAP Supplier Relationship Management

Procurement over the Internet and marketplaces are only two ways to optimize purchasing. Employees can use this solution to provide procurement with information about demand directly from their work centers quickly, easily, and effectively.

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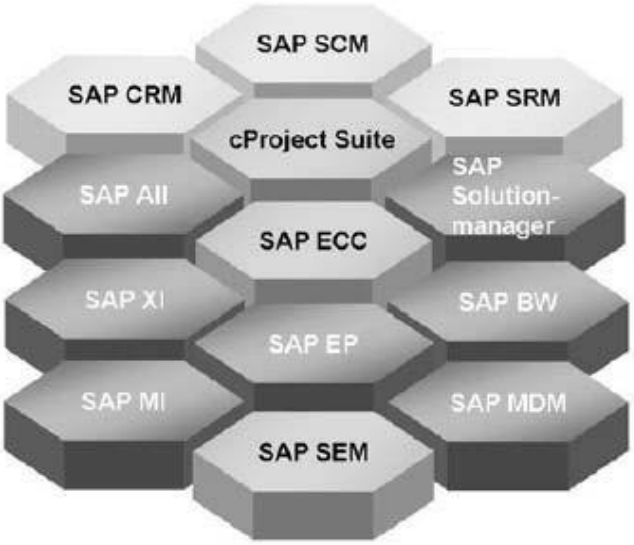


Figure 1-17: mySAP Business Suite: Components

Industry Portfolios

Whereas the mySAP Business Suite is generally industry-independent, many industries require specialized functions and processes. SAP fulfills this requirement through industry-specific solutions.

These industry solutions are partly the result of joint development with strategic partners. Industry-specific functions are developed within these industry solutions and offered as mySAP solutions upon completion.

More then 20 industry solutions are available today. Among these are solutions for:

Automotive

SAP for Automotive is designed to streamline and improve disjointed business practices, enabling you to closely manage multitiered networks of customers, suppliers, and partners. This solution set facilitates seamless integration and collaboration across multiple internal and external organizations. It also includes best practices that supports critical business processes, providing full visibility into enterprise data and increasing speed and flexibility worldwide.

Banking

Based on a flexible, scalable infrastructure, SAP for Banking provides a robust environment for incorporating new technologies, controlling core banking processes, and extending operations to the Internet. Innovative core banking capabilities seamlessly connect front-office activities with back-office systems, enable low-cost, real-time processing of key financial transactions, and speed the development of multichannel products and services that meet the needs of your demand-oriented market.

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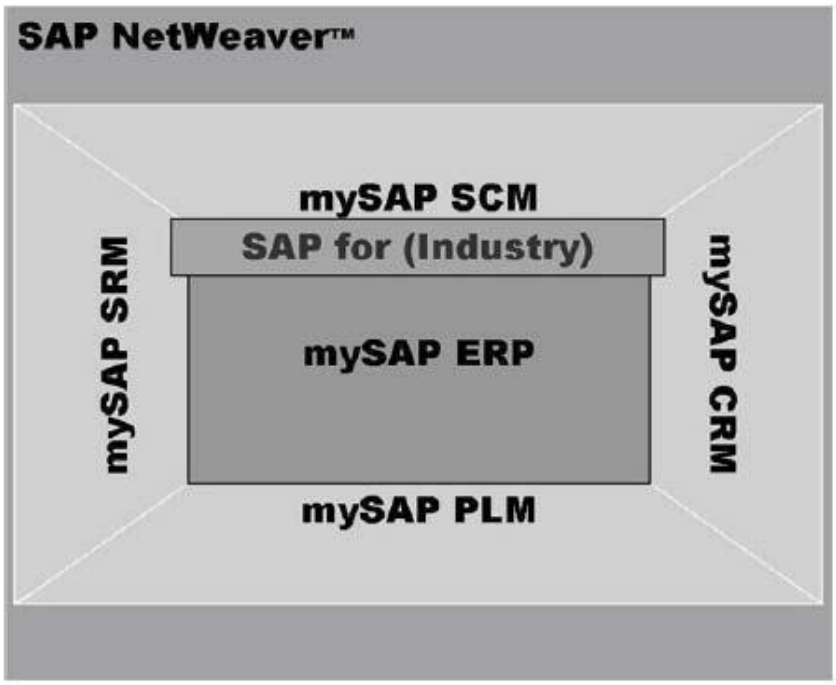


Figure 1-18: Industry-Specific Solutions

Chemicals

SAP for Chemicals delivers capabilities for sales and operations planning, quality management, recipe and batch management, and supply chain operations. Also included is detailed profit reporting by customer, product, or segment, along with integrated hubs that let you unify process control systems and monitor production execution.

Healthcare

Healthcare is a high-pressure industry facing demands for higher-quality patient care, cost controls, government regulations, and increasing competition. SAP for Healthcare integrates your healthcare processes -- from staffing and inventory to financials and patient-centric processes -- on an open platform designed for growth. And, when combined with leading, complementary applications, SAP for Healthcare provides an end-to-end solution for all administrative and clinical processes.

Logistics Service Providers

Designed in collaboration with many of the industry's leading companies, our comprehensive set of proven solutions, applications, technology, and services helps you manage your logistics business efficiently and profitably. SAP for Logistics Service Providers handles all order volumes and supports complex business processes in procurement, fulfillment, returns management, warehousing, and value-added logistics.

Mining

Mining consists of multiple processes, each with its own set of challenges, and mining operations must optimize these processes to reduce costs. What's more, mining operations need to ensure regulatory compliance and commit to sustainability, even as commodity prices shift based on global demand and

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supply. SAP for Mining enables you to meet the specific challenges of the mining industry by helping you manage your assets and operations and leverage global supply chain networks. As a result, you can increase efficiency and reduce costs.

Oil and Gas

In today's oil and gas industry, companies are caught between rising hydrocarbon prices and ever-growing pressure from customers and regulators. You make every effort to reduce production and distribution costs, but the need for profitability and accountability to your shareholders continues to increase. With SAP for Oil and Gas solutions, you can face the challenges of cost and profitability head on. This set of solutions gives you comprehensive tools that enable you to leverage key data, manage assets effectively, and maximize cash flow.

Public Sector

SAP for Public Sector creates fast, flexible, and responsive e-government by electronically connecting public administrations with citizens, businesses, suppliers, and other organizations via the Internet; enhancing communications; streamlining services; and cutting costs. With rich functionality tailored to the unique demands of the public sector, this set of solutions helps you meet the challenge of serving the public today.

Retail

Consumers have never been more in control. They have come to expect superb quality, selection, and service, and they're perfectly willing to abandon any retailer that can't deliver. In today's market, there's no margin for error. SAP for Retail provides a comprehensive solution designed specifically for the new retail environment, where every piece of your retail value chain – from forecasting and planning to allocation and replenishment – must be focused on meeting and surpassing customer expectations.

SAP xApps

SAP xApps are a new breed of applications that enable you to drive improvements and innovations in your company more easily. With their ability to combine existing, heterogeneous systems to form cross-functional processes, SAP xApps bring people, information, and business processes together to make your company more dynamic and competitive. This flexibility allows you to implement business-wide strategies more easily and efficiently. SAP xApps increase the value of existing investments in the core business area and maximize the return on strategic assets, including employees, knowledge, products, business relationships, and information technology.

SAP xApps realize strategies by using previously unparalleled functions that bring employees, data, and processes in a company together on one interface. SAP xApps provide both continuity and discontinuity. Continuity is ensured by increasing effectiveness and improving productive business transactions; discontinuity is provided in the sense that a company can perform an innovative change in an unusually flexible manner.

By using xApps, a company can optimize a sales process across multiple systems. Functions such as a credit check from the accountancy system, or delivery time and availability (Available To Promise: ATP) from the logistics systems are used

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to design an integrated sales process. The employee works on just one interface, whereas before they had to perform separate checks in three different systems.

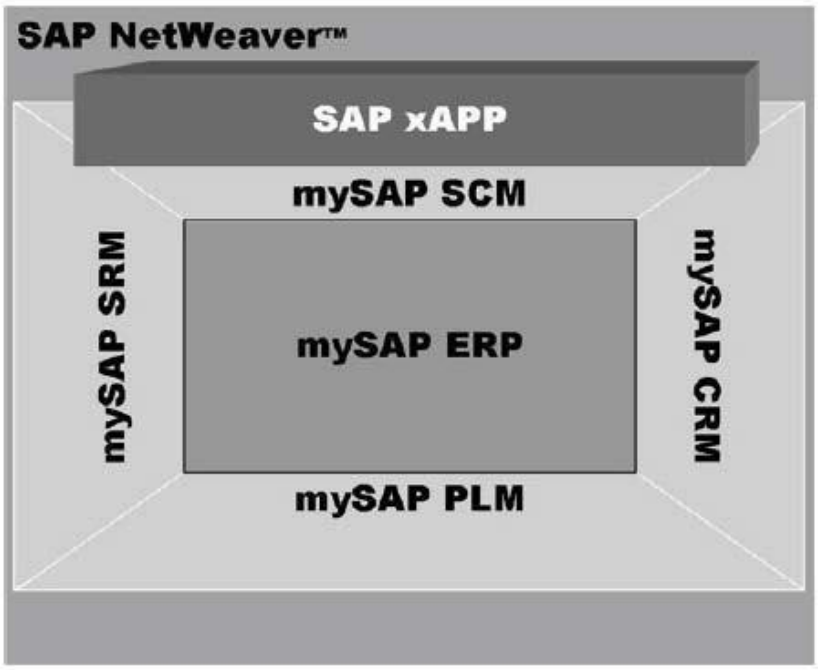


Figure 1-19: SAP xApps

The defining characteristics of SAP xApps are:

Cross-functional

SAP xApps can be implemented with a multitude of applications and information sources. This allows you to run critical integrated processes across heterogeneous systems in compliance with your company's business strategy.

Composite

SAP xApps execute flexible workflow and business processes independently of the underlying infrastructure. Furthermore, SAP xApps synchronize and improve existing business processes. This makes your company more flexible and, by improving the use of existing investments, it also increases your return on investment (ROI).

Cross-system

SAP xApps support a complex transfer of information (context, relevance), as well as the communication within the business itself, thereby simplifying the collaboration of working groups and sound decision making.

Information-driven

SAP xApps enable intelligent processes that are driven by decision-relevant business information. This enables a company to make informed, strategic decisions, which you can continually evaluate, and, if applicable, amend.

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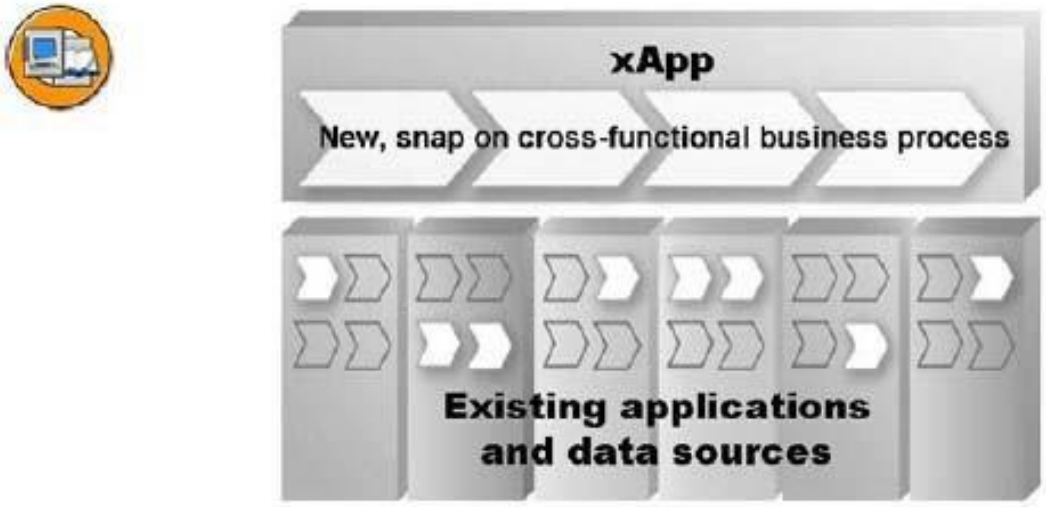


Figure 1-20: SAP xApps

Some examples of available xApps:

SAP xApp Cost and Quotation Management (SAP xCQM)
This solution enables the creation of a quotation through the upload of a bill of material (BOM), automatic pricing of existing components, streamlined eRFQ processing for new components, and execution of consolidated costs reports.

SAP xApp Resource and Portfolio Management (SAP xRPM)
SAP xRPM integrates information from existing project management, human resources, and financial systems to provide an overview of the project portfolio with easy drilldown to details for portfolio managers, project managers, resource managers, and project members.

SAP xApp Product Definition (SAP xPD)
SAP xPD is a simple, easy-to-use solution that addresses the hurdles and inefficiencies at the critical front end of product development processes, such as idea management and concept development.

SAP xApp Emissions Management (SAP xEM)
To comply with environmental regulations such as the Kyoto Protocol or the U.S. Clean Air Act, emissions management is a must for all energy-consuming and carbon-dioxide-producing businesses. SAP xEM helps corporations improve their compliance with emerging emissions regulations worldwide and increase revenue through trading of emissions credits

SAP Solutions for Small and Midsize Businesses

mySAP All-in-one
Each qualified mySAP All-in-One solution is a prepackaged, industry-specific version of mySAP Business Suite with built-in content, tools, and methodologies for a cost-effective, turnkey implementation. mySAP All-in-One solutions offer out-of-the-box flexibility combined with the power of SAP's world-class business solutions.

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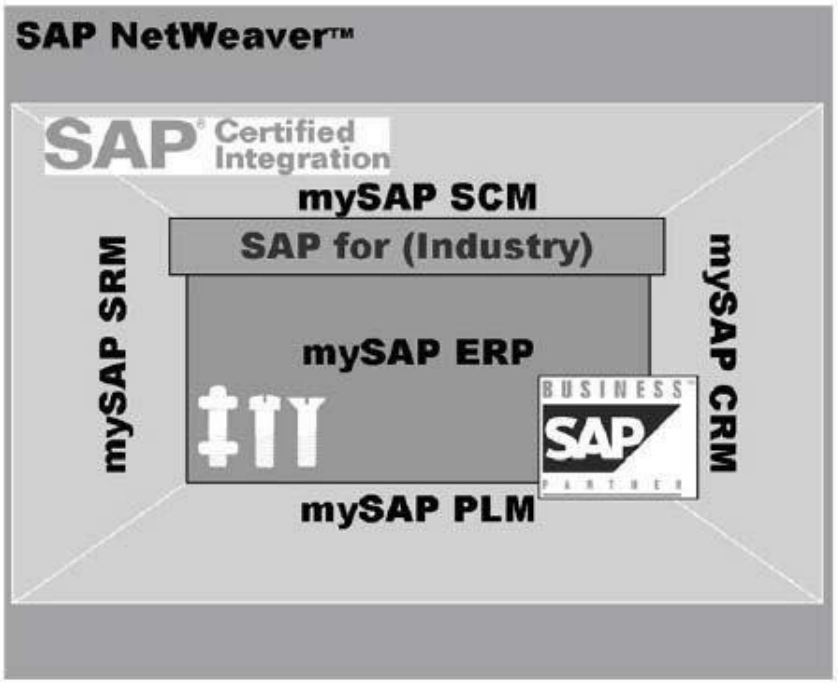


Figure 1-21: mySAP All-in-One

mySAP All-in-One provides the following advantages:

Rapid implementation and transparent costs

mySAP All-in-One is provided by selected, qualified partners who are familiar with the challenges of the respective market segment and industry. The software is implemented using a special implementation method that is based on experience gained from more than 15,000 customer installations in more than 20 industries worldwide. In comparison to traditional implementation projects, customers are able to save costs by 40% and reduce implementation time by 30%. Due to its scalability, the enterprise solution can be readily extended when the company grows, and can thus keep pace with any company changes.

Increased productivity and cost control

The comprehensive, preconfigured mySAP All-in-One industry solutions integrate financials, human resources, logistics, and customer relationships. As a result, the customer profits from increased transparency and simplified administrative processes. This also means more efficiency – not only for the company but also for partners and vendors.

Reliable partners

For several years, SAP's technological know-how has been complemented by the industry knowledge of selected and qualified partners. The mySAP All-in-One industry solutions reflect this valuable experience. SAP partners offer comprehensive solutions consisting of hardware, software and consulting – all of which are tailored to small and midsize businesses needs.

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Scalability

The flexible and powerful system technology, which is also used in big enterprises, supports the growth of small and midsize companies. The reason for this is simple: mySAP All-in-One can be easily adapted to changing business requirements.

SAP Business One

SAP Business One is an easy-to-use business and operational management solution for emerging and dynamic businesses ranging in size from 10 to several hundred employees. The solution is simple yet powerful, allowing an immediate and complete view of both business operations and customer activities.

SAP Business One provides the following advantages:

Rapid implementation

SAP Business One can be implemented within a few days and can be easily maintained. In addition, its familiar Microsoft Office environment allows occasional users to rapidly learn to use the software. The solution is based on open technologies and can be readily extended with special functions, if required.

Lower costs

Because it is cost effective, SAP Business One offers a wide range of functions for an integrated data processing. Thus, decision makers in small and midsize companies benefit from new value potential without exceeding their budgets.



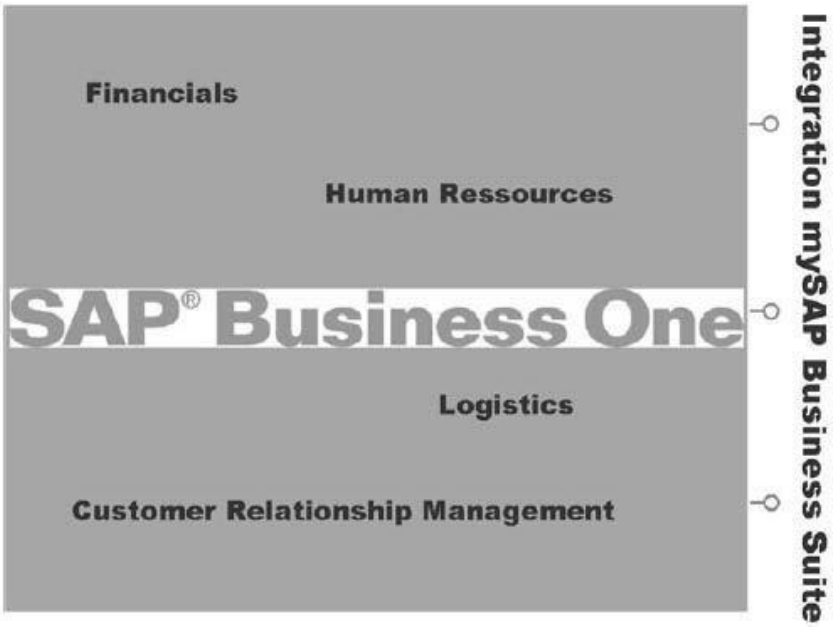


Figure 1-22: SAP Business One

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Increased productivity and cost control

As the user interface of SAP Business One is simple and easy to understand, users will quickly learn how to work with the system. This will increase their productivity and help reduce the costs. The Drag&Relate technology enables flexible access to business information. For example, if you click on the content of the Customer or Item Number field in the Quotation window and drag it to another screen, the relevant data will be evaluated. This technology relates different data to each other.

Sound business decisions

SAP Business One allows managers to quickly and effectively access strategic information from all enterprise areas and gives them full control of the relevant information and activities.

Scalability

When a company grows, processes usually become more complex and software requirements change. SAP Business One's flexible and efficient system technology can easily keep pace with the company's growth. SAP Business One can be extended by the functions your company requires. It also facilitates the transition to a more comprehensive IT system, such as the mySAP Business Suite.

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Lesson Summary

You should now be able to:

- Explain SAP's product offerings
- Name the central SAP solutions
- Explain the concept and history of an ERP system
- Explain the different between a solution and a component

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Unit Summary

You should now be able to:

- Discuss SAP's milestones and history
- Explain SAP's product offerings
- Name the central SAP solutions
- Explain the concept and history of an ERP system
- Explain the different between a solution and a component

Related Information

For more information access theses Internet sites:www.sap.com/solutions
www.sap.com/industries

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Test Your Knowledge

1. SAP is a solutions company.
   Determine whether this statement is true or false.

   ‰ True
   ‰ False

2. Which of the following is a solution?
   Choose the correct answer(s).

   ‰ A mySAP CRM
   ‰ B mySAP ERP Financials
   ‰ C SAP BW
   ‰ D mySAP SCM

3. mySAP solution platforms are open and flexible.
   Determine whether this statement is true or false.

   ‰ True
   ‰ False

4. List at least three cross-industry or industry solutions.

   ……

   ……

   ……

   ……

   ……

5. All of the mySAP solutions are role-based.
   Determine whether this statement is true or false.

   ‰ True
   ‰ False

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Answers

1. SAP is a solutions company.

   Answer: True

   Business experience, strategy, and know-how are intangibles, which, bundled together with the vast flexibility, integration, and customizing potential of SAP software, have resulted in more powerful e-business solutions within specific industries and across industry borders.

2. Which of the following is a solution?

   Answer: A, B, D.

   SAP solutions always have the prefix "mySAP".

3. mySAP solution platforms are open and flexible.

   Answer: True

   mySAP solutions platforms support databases, applications, operating systems, and hardware from almost every major vendor.

4. List at least three cross-industry or industry solutions.

   Answer:

   Cross-Industry Solutions: mySAP Enterprise Portals, mySAP CRM, mySAP SCM, mySAP SRM, mySAP PLM, mySAP ERP HCM, mySAP ERP Financials

   Industry Solutions: SAP for Aerospace and Defense, SAP for Automotive, SAP for Banking, SAP for Chemicals, SAP for Consumer Products, SAP for Engineering, Construction and Operations, SAP for Healthcare, SAP for High Tech, SAP for Higher Education and Research, SAP for Insurance, SAP for Media, SAP for Mill Products, SAP for Mining, SAP for Oil and Gas, SAP for Public Sector, SAP for Retail, SAP for Telecommunications, SAP for Utilities

5. All of the mySAP solutions are role-based.

   Answer: True

   All of the processes within the SAP systems are mapped back to user roles. The mySAP Enterprise Portal let you customize your interface so that you can perform tasks associated with your role.

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Unit 2
Navigation

Unit Overview
This unit will introduce you to logging on, navigating, and using the SAP help features.

Unit Objectives
After completing this unit, you will be able to:
- Create a new logon entry in the SAP Logon window
- Log on to any SAP system
- Create multiple active sessions
- Personalize your user interface
- Describe the layout of the SAP Easy Access screen
- List and use the three navigation methods to initiate a transaction in the SAP system
- Differentiate between the SAP standard menu and the role-based user menu
- Describe the favorites feature and add a transaction to your Favorites menu
- List and describe the forms of help in the SAP system
- Search for information and obtain help using the different help methods in the SAP system

Unit Contents
Lesson: Logging On and Personalizing Your User Interface… 2-2
Exercise 2-1: Logging on to SAP Systems… 2-4
Lesson: Navigating in the SAP System 2-12
Exercise 2-2: Navigating in the SAP System 2-20
Exercise 2-3: Creating Favorites Using the Menu… 2-22
Lesson: Using Help… 2-29
Exercise 2-4: Using Help Features… 2-33
Test Your Knowledge… 2-38

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Lesson: Logging On and Personalizing Your User Interface

Lesson Overview

You can access SAP systems using different front-end programs (graphical user interfaces) with a variety of designs. For example, the Business Explorer (BEx) is the front end for the SAP Business Information Warehouse component of mySAP Business Intelligence. In this lesson however, we will explain and demonstrate how to log on to the SAP system using the general logon front end, the SAP Logon. We will also introduce several methods by which you can customize your user interface.

Lesson Objectives

After completing this lesson, you will be able to:

- Create a new logon entry in the SAP Logon window
- Log on to any SAP system
- Create multiple active sessions
- Personalize your user interface

Business Example

To efficiently use the SAP system, new users need to familiarize themselves with the screens and navigation in the SAP system and define their own personal settings based on their individual business requirements.

The SAP GUI and SAP Log On

You can access SAP systems using front-end programs with a variety of designs. All SAP components are, however, accessible using a general front-end program, the SAP Graphical User Interface (SAP GUI). The SAP GUI is the standard program for accessing almost all SAP solutions. Several variants of the SAP GUI are available; these variants are all graphically equivalent, but adapted for use in different environments. For the sake of simplicity, additional descriptions refer to the SAP GUI for the Windows environment.

The SAP GUI program connects the front-end computer with a specific SAP system. For starting SAP GUI, SAP provides another program: SAP Logon. When you call up the SAP Logon, a window displays a list of SAP systems for which you can start the logon process. This list is derived from a file on the front-end computer: saplogon.ini. This file is normally preconfigured centrally and made available to end users. During logon, the SAP Logon program also enables log on load distribution using the resources available for the system selected.

Logon Process

Before you log on for the first time, your system administrator will give you an initial password. During the process of logging on, you should enter a new password, one that you alone will know. After that, use your own password whenever you log on.



Note: These procedures may differ somewhat at your company. For more information, contact your system administrator.

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If there are system-wide messages, the System Messages dialog box appears. After you have read the messages, choose Continue (or choose Enter) to close the dialog box.

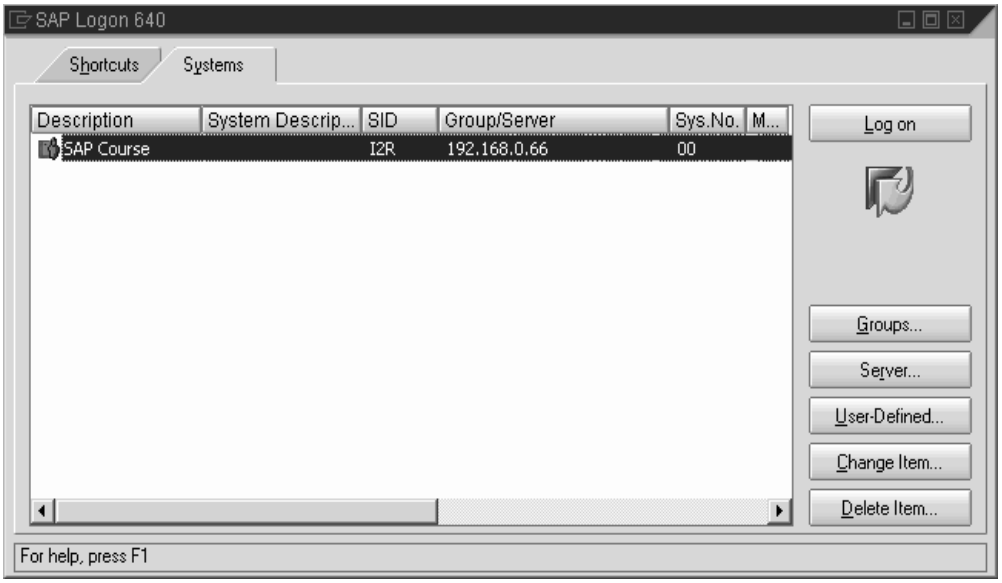


Figure 2-1: The SAP Logon Program



Figure 2-2: Logging on to an SAP System

Hint: If you select the TAB key after you have entered data in a field, the cursor moves to the beginning of the next field. However, if you enter the maximum number of characters possible in a field, you do not have to select TAB. For example, the maximum number of characters you can enter in the Client field is three. If you enter 10 0 in the Client field, the cursor automatically moves to the beginning of the next field.

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Multiple Logons and Multiple Sessions

There are two ways to open two SAP systems: using multiple logons or using multiple sessions. Using multiple logons actually creates a brand new logon for you. You should only be logged on once per SAP system, and should use multiple sessions if you want to view multiple windows. Using multiple sessions allows you to open several windows at the same time on the same computer.

The SAP system tracks multiple logons as of SAP R/3 4.6. The primary reasons for tracking multiple logons are security and licensing. If the same user logs on more than once, then for each subsequent logon, the system displays a warning message that offers the user the following three options:

1. Continue with this logon and end any other logons of this user in the system.
2. Continue with this logon without ending any other logons in the system (this is tracked).
3. Terminate this logon.

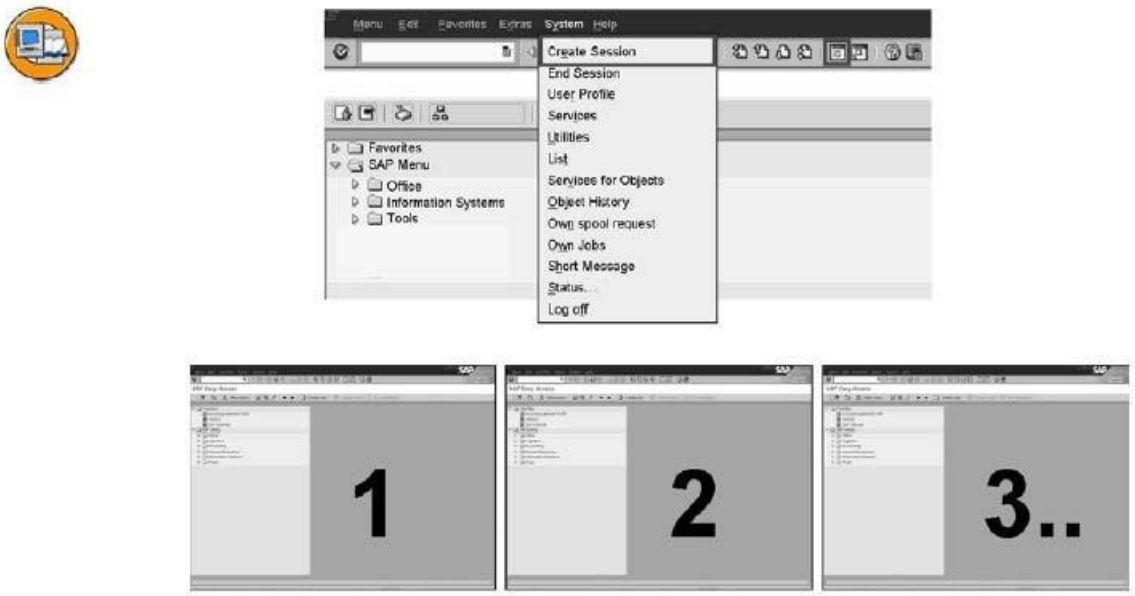


Figure 2-3: Multiple Sessions

You can create a new session at any time. This is especially helpful if you are in the middle of completing a transaction and you need to verify some information in order to complete the transaction. You can create several sessions, and each session is independent of the others. You will not lose any data in sessions that are already open. For example, closing the first session does not cause the other sessions to close.

Too many open sessions can result in slower system performance. For this reason, your system administrator may limit the number of sessions you can create. You can move among sessions as often as you like without losing any data. As long as you remain logged on to the SAP system, you can leave a session for as long as you like. Moving to a different session is like putting a telephone call on hold; you can resume the call whenever you are ready.

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Hint: Your system administrator can use a system parameter to define how many sessions are permissible for each logon to the SAP system. This parameter (rdisp/max_ alt_modes) is valid for all users of that system. Depending on the GUI and the SAP WebAS version this parameter can be set to any value between 2 and 6 or between 2 and 16.

To move from one session to another, click any part of the window that contains the session you want to go to (or use the keys specified for changing windows: ALT + TAB.
The window you choose becomes the active window by moving in front of all the other windows on your screen.

If you have several sessions open, you can minimize the sessions you are not using. When you need to use one of these sessions later, you can restore it by selecting the appropriate symbol in the status bar, making it the active session.
After you are done using a session, it is a good idea to end it. Each session uses resources that can affect how fast the SAP system responds to your requests. Before you end a session, save any data you want to keep.



Hint: When you end a session, the system does NOT prompt you to save your data.

Methods for Personalizing the User Interface

You have several personalization options available to help you set up your working environment.

Some of the many things you can do are:

- Change the layout of the SAP Easy Access screen
- Track your input history to provide input help
- Display status messages in a pop-up window instead of the status bar
- Set preferences for how data displays
- Adjust the color and behavior of the screens and fields

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Exercise 2-1: Logging on to SAP Systems

Exercise Objectives

After completing this exercise, you will be able to:

- Create a logon entry
- Log on to an SAP system
- Personalize your user interface

Business Example

As an employee of a company that manages their business with SAP, you need to gain access to an SAP system to do your daily business transactions.

Task 1:

Create a logon entry to identify which system you would like to gain access to. Then, access that system with the appropriate client, user ID, and password.

1. Create an entry in the *SAP GUI logon* screen based upon the information provided by the instructor.

Field	Entry
Description	SAP Course
Client	
Application Server	
SAP Router String	
System Number	

2. You have now created a logon entry. Use this entry to gain access to the SAP system with the information provided.

Field	Entry
User	<to be provided by the instructor>
Password	<to be provided by the instructor>
Client	<to be provided by the instructor>
Language	EN
New Password	

Task 2:

You are just beginning to use the SAP system and you want to personalize your user interface.

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1. The first thing you would like to do is to have the system and error messages appear in a pop-up window instead of the status bar.

2. Confirm that the date and currency format display according to your preference.

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Solution 2-1: Logging on to SAP Systems

Task 1:
Create a logon entry to identify which system you would like to gain access to. Then, access that system with the appropriate client, user ID, and password.

1. Create an entry in the *SAP GUI logon* screen based upon the information provided by the instructor.

Field	Entry
Description	SAP Course
Client	
Application Server	
SAP Router String	
System Number	

   a) Locate the *SAP Logon* program icon on your desktop.

   Note: There are a variety of ways to find the program and a variety of places it could reside on your desktop. These variables depend on how the GUI software was installed. Consult your technical support if you cannot find the application.

   b) Choose *User-Defined…*.

   c) Enter **SAP Course** in the *Description* field.

   d) Enter the *Application Server*: **sapsrv**.

   e) Enter *the SAP Router String*: <**leave blank**>.

   f) Enter the *System ID*: **I2R**

   g) Enter the *System Number*: **00**.

   h) Choose **R/3** for the *SAP System*

   i) Choose *Add*. The new logon entry appears in the list of SAP systems.

2. You have now created a logon entry. Use this entry to gain access to the SAP system with the information provided.

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Field	Entry
User	<to be provided by the instructor>
Password	<to be provided by the instructor>
Client	<to be provided by the instructor>
Language	**EN**
New Password	

a) Choose *SAP Course*.

b) Choose *Log on*.

c) Enter the *Client*: **<to be provided by the instructor>.**

d) Enter the *User*: **<to be provided by the instructor>.**

e) Enter the *Password*. **<to be provided by the instructor>.**

f) Enter the *Language*: **EN** (Optional).

g) Select *Enter*.

Note: You might be asked to change your password. If so, continue with the following steps. If you are not asked, skip to solution step **k**.

h) A password change dialog box displays. Enter a *New Password*. **<enter your own new password>.**

i) Enter *Repeat Password*. <**repeat the entry again to confirm the password change**>.

j) Choose *Enter*.

k) Choose *Enter* as many times as needed, reading any system messages that might display, until you get to the SAP *Easy Access* screen.

Task 2:
You are just beginning to use the SAP system and you want to personalize your user interface.

1. The first thing you would like to do is to have the system and error messages appear in a pop-up window instead of the status bar.

   a) Choose *Customizing of Local Layout*.

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Hint: This button appears in the system toolbar along the top of the screen.

b) Choose *Options…*

c) Choose the *Options* tab.

d) Choose:
- *Dialog Box at Success Message*
- *Dialog Box at Warning Message*
- *Dialog Box at Error Message*

e) Choose *OK*.

2. Confirm that the date and currency format display according to your preference.

a) From the Menu bar, choose *System Æ User profile Æ Own data*.
The *Maintain User Profile* screen opens in a new window.

b) Choose the *Defaults* tab.



Hint: You may need to toggle to the *Maintain User Profile* screen by pressing **ALT + TAB.**

c) Confirm that your decimal notation is set to a period and that your date format appears in **MM/DD/YYYY** format, if this is your preference.

d) Choose  *Save*. A confirmation that your user information was saved displays.



Note: The information window appears in a pop-up window instead of the status bar, as set up in the previous step.

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Lesson Summary

You should now be able to:

- Create a new logon entry in the SAP Logon window
- Log on to any SAP system
- Create multiple active sessions
- Personalize your user interface

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Lesson: Navigating in the SAP System

Lesson Overview

Once you have logged on to the SAP system, you will complete your day-to-day work by initiating transactions. You have a number of methods you can use to do this. In this lesson, we introduce you to the basic screen layout and show you how to navigate in the system to complete your daily work.

Lesson Objectives

After completing this lesson, you will be able to:

- Describe the layout of the SAP Easy Access screen
- List and use the three navigation methods to initiate a transaction in the SAP system
- Differentiate between the SAP standard menu and the role-based user menu
- Describe the favorites feature and add a transaction to your Favorites menu

Business Example

To efficiently use the SAP system, new users need to familiarize themselves with the screens and navigation in the SAP system.

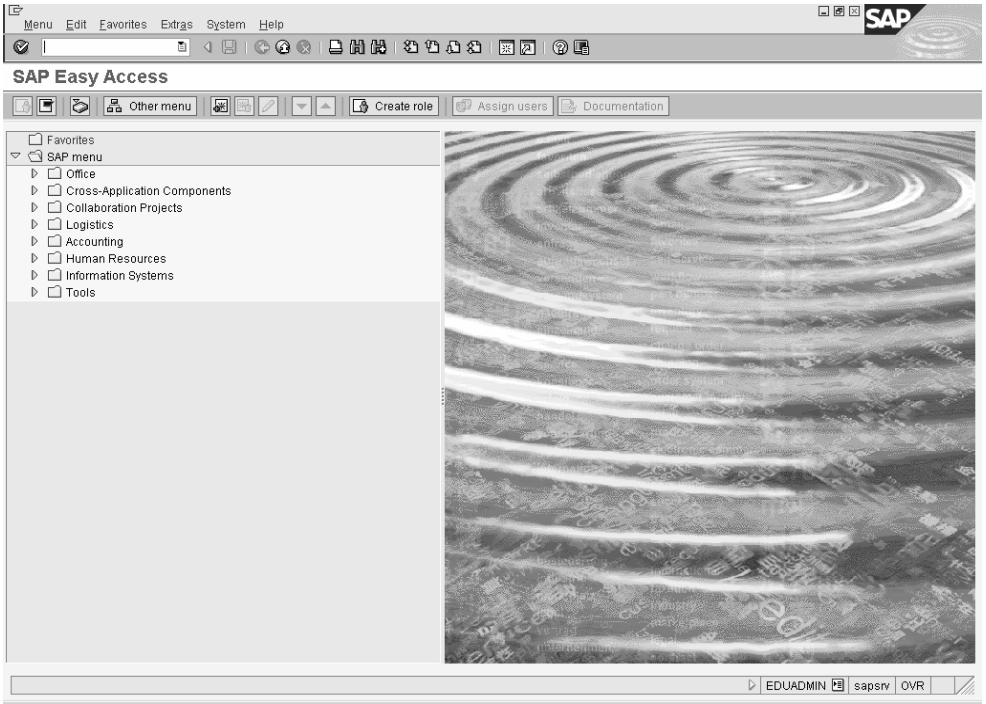


Figure 2-4: The SAP Easy Access

Screen Structure

The SAP Easy Access screen is the default initial screen in SAP systems. The left side of the screen contains a tree hierarchy of the menus available to you in the SAP system; you can use the right side of the screen to display your company logo. This graphic is made available centrally by your system administrator and cannot be customized by individual users.

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Hint: You can find a detailed description of how to configure the graphic in SAP Easy Access under Extras Æ Administration information (if you have the correct authorization). Please note that the graphic is stored in the system and transported to the front end every time a user logs on. Although it is transported in compressed form, the graphic should not exceed 20 KB. You can also prevent the graphic from being displayed by either choosing the Low Speed Connection setting in the SAP Logon program (see SAP Note 161053) or by choosing Extras Æ Settings in the SAP Easy Access screen.

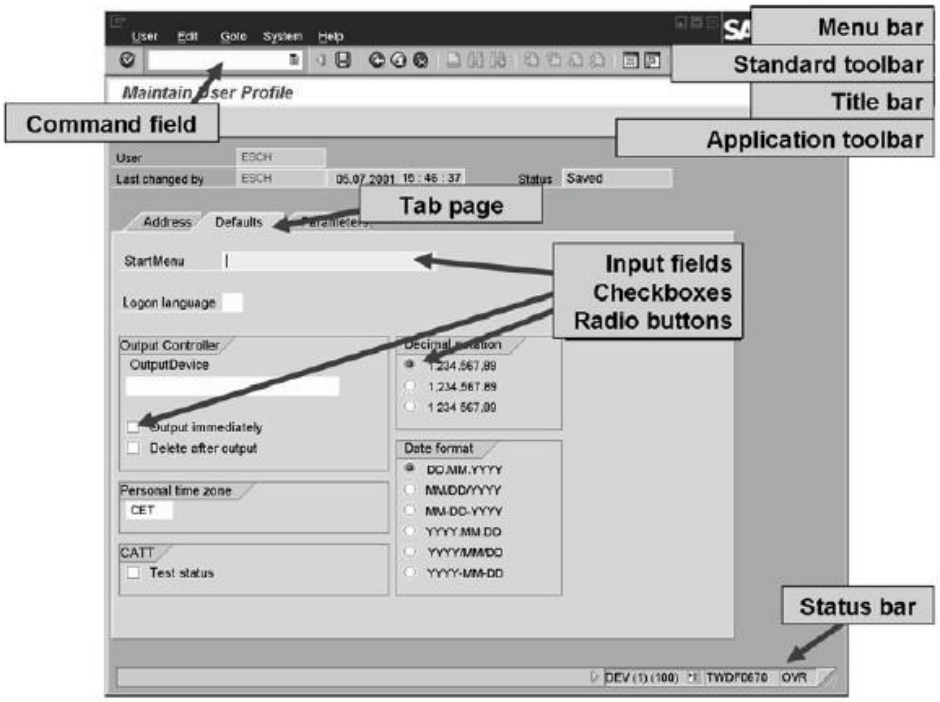


Figure 2-5: Screen Structure

An SAP screen can contain the following simple screen elements:

Command field

You can start applications directly by entering their transaction code in the command field (this is hidden as default). You can find the transaction code for an application either in the Overview menu on the SAP Easy Access screen, in the status bar (see below), or in the application itself under SystemÆ Status.

Menu bar

The menu bar is the top line of any primary window in the SAP system. The menus shown depend on which application you are using. These menus may also contain cascading menus.

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Standard toolbar
The buttons in the standard toolbar are shown on every SAP screen. If certain buttons are not available in an application, the buttons that you cannot use are deactivated. If you place the cursor over a button for a short time, the system displays a flag with the name or function of the button. If appropriate, the corresponding function key setting is also displayed.

Title bar
The title bar names the function that you are currently using.

Application toolbar
The application toolbar shows the buttons available in the application that you are currently using.

Checkboxes
Checkboxes allow you to select several options from a group of fields.

Radio buttons
With radio buttons, you can only select one option.

Tab
A tab allows you to organize several screen areas to improve clarity and organization of data.

Status bar
The status bar displays information on the current system status, such as warnings and errors. You can also change the display variant to show, for example, the transaction code of the transaction you are currently using.

Other elements include input fields and buttons.

Navigation Options

You have several options for navigating in an SAP system:

- Enter transaction codes in the command field.
- Choose items from menus in the menu bar.
- Choose items from the Favorites list or from the role-based user menus.

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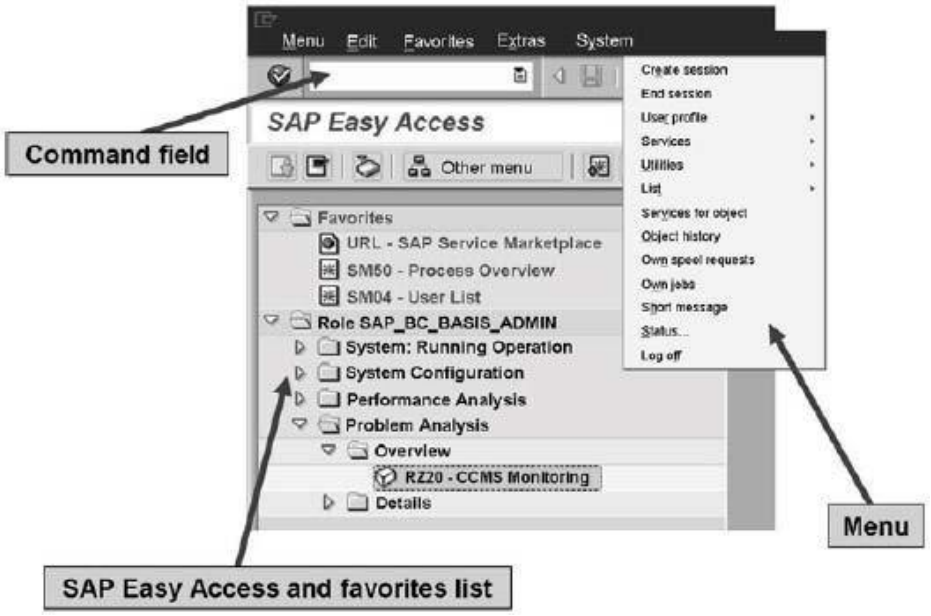


Figure 2-6: Navigation Options

Transaction Code

Every transaction or function in the system has a transaction code. You can enter the transaction code in the command field to initiate the transaction. This is one of the most direct ways to initiate a transaction.

Menus

Menus allow you to find a specific transaction when you do not know the transaction code. The menu is organized according to the task you are performing in the SAP system.

The menus are drop-down; therefore, when you choose a menu item, further options appear. Sometimes not all of the available menus fit on one line in the menu bar. In this case, they wrap to the next line. The drop-down principle stays the same.

Favorites or User Menus

Finally, you have the ability to set up favorites or user menus, which allow you to navigate directly to transactions, functions, and reports that you use frequently.

Using Transaction Codes

You can enter a system transaction code in the command field to go directly to a transaction or function. This is very convenient; provided you know the transaction code for the transaction or function you want. You can find the transaction code by first navigating to a transaction, and then choosing System Æ Status.

The following conventions are important time-saving tips for using transaction codes:

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Entry	Result
/n	Cancels the current transaction
/nXXXX	Initiates the specified transaction directly from another transaction
/o	Displays an overview of sessions
/oXXXX	Initiates the specified transaction in a new session
/nend	Ends the logon session with a confirmation pop-up window
/nex	Ends the logon session without a confirmation pop-up window
/i	Deletes your current session

Role-Based User Menus

SAP offers two formats to display a menu of transactions, reports, or Web-based applications. These are the SAP standard menu and role-based user menus. The SAP standard menu is a complete list of all possible transactions and reports offered by the system.

Role-based user menus are collections of activities used in business scenarios. Users can access transactions, reports, or Web-based applications through their role-based menus. Users can change aspects of roles to which they are assigned, for example, by creating their own Favorites list.



Figure 2-7: Role-based User Menu

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Hint: System administrators can use table USSERS_SMM to determine whether or not users are allowed to switch between the SAP menu and their role-based menus. If both menus are disallowed, then the user's role-based menu is displayed. Keep in mind that even though the users cannot display the SAP menu, they can still use the transaction codes to initiate transactions and functions if they have proper authorization to the transaction or function.

When assigned a role, users are assigned not only the menu, but also the authorizations they require to access the information, ensuring that the business data is always secure. Authorization profiles are generated according to the activities contained in the role, thus restricting the authorizations of each user in the SAP system to only those activities.

In the mySAP Enterprise Portal, you use a Web browser to view and execute the required tasks and activities. Roles can be assigned here, as well.

The system administrator can tailor the role-based menu to the personal requirements of each user by adding or deleting menu entries.

Caution: As a system administrator, you may be responsible for setting up role-based menus, which are then transferred to the front end. Therefore, it makes sense to keep roles as small as possible, since large roles could take a long time to transfer to the front end.



Hint: If a user has several roles, it is possible that some of the functions are repeated in different parts of the role-based menu. If you want to prevent this, please see SAP Note 357693 (and the other SAP Notes to which it refers) for information on finding and deleting duplicates.

Using Favorites

In SAP Easy Access, you can create a favorites list containing:

- Transactions
- Links to files
- Internet addresses

The favorites list, which is initially empty, can be edited by each user according to their preferences; you can only view your own favorites list.



Hint: Favorites can be organized into folders, and you can edit your favorites in the SAP Easy Access screen using the Favorites menu.

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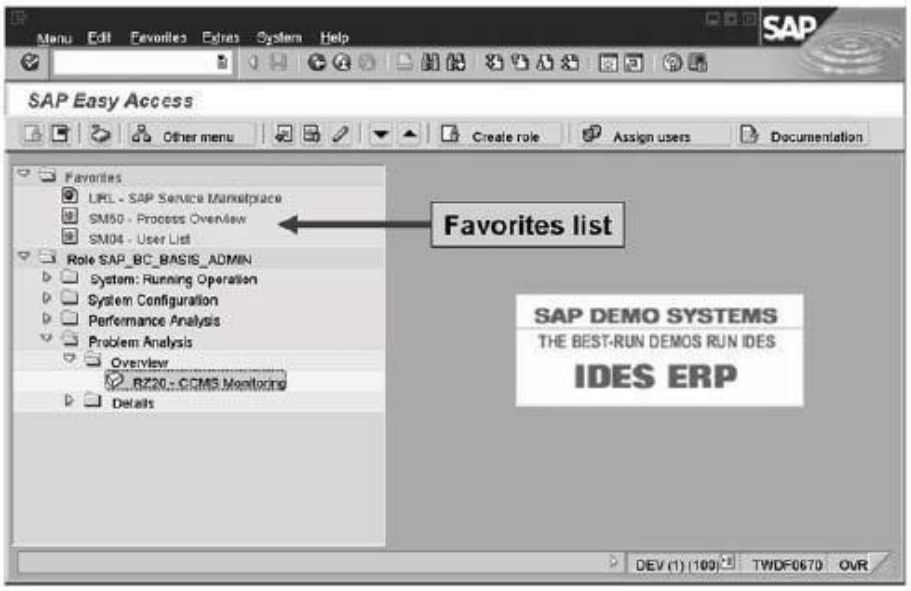


Figure 2-8: Favorites Menu

Status Bar

The status bar provides general information on the SAP system and transaction or task on which you are working. At the left of the status bar, system messages are displayed. The right end of the status bar contains three fields: one with server information, and two with status information.

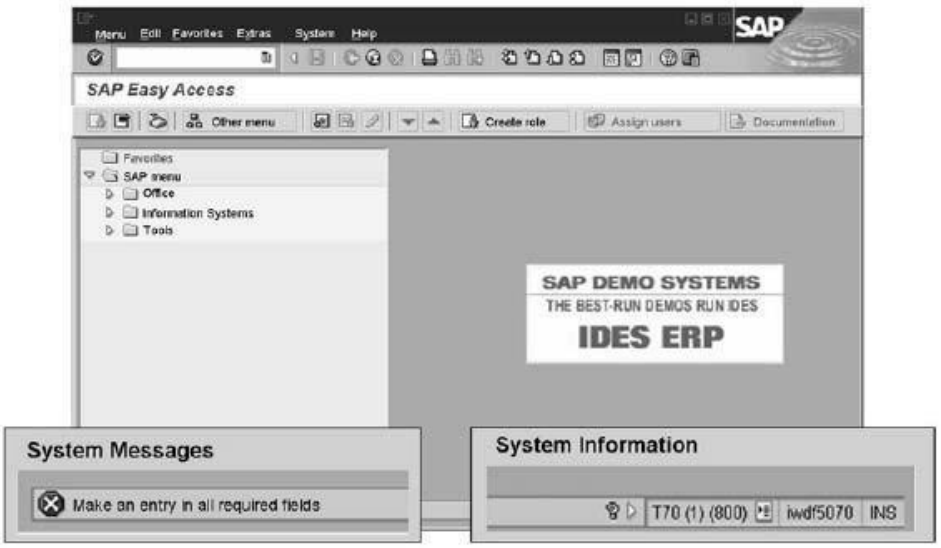


Figure 2-9: Status Bar

At the far left, the status bar:

- Identifies error messages
- Identifies other system messages

To hide the status fields, choose the arrow to the left of the fields.

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To display the following system information, choose each in the first status field:

- System
- Client
- User
- Program
- Transaction
- Response time

The second status field displays the server to which you are connected. The third status field specifies your data entry mode. By choosing this field, you can toggle between the insert (INS) and overwrite (OVR) modes.

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Exercise 2-2: Navigating in the SAP System

Exercise Objectives

After completing this exercise, you will be able to:

- Locate specific folders in the SAP Easy Access menu
- Navigate the SAP Easy Access menu to locate a specific transaction
- Initiate transactions using transaction codes

Business Example

As a new user working on a SAP system, you need to locate specific transactions in the system.

Task 1:
Locate a variety of transactions by navigating the SAP Easy Access menu.

1. What are the names of the transactions that are located under the folder *Order in Sales and Distribution*? Record your results in the following table.

2. What are the names of the transactions that are located under the *Posting* folder in the general ledger? Record your answers in the following table.

Task 2:
You have found that transaction codes provide an easy way to navigate directly to a transaction. Try out a few transaction codes.

1. Start this exercise in the *SAP Easy Access* screen and try out these transaction codes without returning to the *SAP Easy Access* screen. Record your results in the space provided.

Field	Transaction Name
Transaction	
Transaction	
Transaction	
Transaction	

2.

Hint: In case you do log out, please refer to Exercise 1 (Logging In) for instructions on how to log back in to the system.

Entry	Result
su3	
sm04	
/nsm04	
/nend	

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3. You want to display a list of users who are logged on to the system. First use the SAP standard menu to do this. Start with the Tools menu.

4. Display the transaction code for this transaction using the System status menu. Record your result.

5. Return to the *SAP Easy Access* screen and use the transaction code to initiate the transaction to display the user overview, which provides a list of users who are logged on to the system.

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Solution 2-2: Navigating in the SAP System

Task 1:
Locate a variety of transactions by navigating the *SAP Easy Access* menu.

1. What are the names of the transactions that are located under the folder *Order in Sales and Distribution*? Record your results in the following table.

Field	Transaction Name
Transaction	
Transaction	
Transaction	
Transaction	

a) From the *SAP Easy Access* menu, choose the triangle to the left of *SAP menu*

b) Choose the triangle to the left of *Logistics*.

c) Choose the triangle to the left of *Sales and Distribution.*

d) Choose the triangle to the left of *Sales*.

e) Choose the triangle to the left of *Order*.

f) Record your results.

Field	Transaction Name
Transaction	Create
Transaction	Change
Transaction	Display
Transaction	Create Using Part Load Lift Orders

2. What are the names of the transactions that are located under the *Posting* folder in the general ledger? Record your answers in the following table.

a) From the *SAP Easy Access* menu, choose the triangle to the left of *Accounting*.

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b) Choose the triangle to the left of *Financial Accounting*.

c) Choose the triangle to the left of *General Ledger*.

d) Choose the triangle to the left of *Posting*.

e) Record your results

Field	Transaction Name
Transaction	Enter G/L Account Posting
Transaction	General Posting
Transaction	Edit or Park G/L document
Transaction	General Document Parking
Transaction	Post with Clearing
Transaction	Incoming Payments
Transaction	Outgoing Payments
Transaction	Cash Journal Posting
Transaction	Valuate Foreign Currency

Task 2:
You have found that transaction codes provide an easy way to navigate directly to a transaction. Try out a few transaction codes.

1. Start this exercise in the SAP Easy Access screen and try out these transaction codes without returning to the SAP Easy Access screen. Record your results in the space provided.



Hint: In case you do log out, please refer to Exercise 1 (Logging In) for instructions on how to log back in to the system.

Entry	Result
su3	
sm04	
/nsm04	
/nend	

a) Your activities should have resulted in the following.

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Entry	Result
`su3`	Initiates the screen for maintaining your own user settings.
`sm04`	Does not initiate a transaction. A transaction can only be started directly from the *SAP Easy Access* screen unless you use a prefix.
`/nsm04`	Initiates the user overview successfully. `/n` first ends the active transaction and then initiates the specified transaction.
`/nend`	A log off confirmation pop-up window appears. You could now exit the system.

2. You want to display a list of users who are logged on to the system. First use the SAP standard menu to do this. Start with the Tools menu.

   a) From the *SAP Easy Access* menu, choose *Tools* → *Administration* → *Monitor* → *System Monitoring* → *User Overview*.

3. Display the transaction code for this transaction using the System status menu. Record your result.

   a) From the Menu bar, choose *System* → *Status*.

   b) Locate the transaction code, which is **sm04**.

4. Return to the SAP Easy Access screen and use the transaction code to initiate the transaction to display the user overview, which provides a list of users who are logged on to the system.

   a) Enter **sm04** in the command field.

   b) Choose  *Enter*. The user overview displays.

   c) Choose  *Exit* to exit the screen to the *SAP Easy Access* menu.

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Exercise 2-3: Creating Favorites Using the Menu

Exercise Objectives

After completing this exercise, you will be able to:

- Navigate to a transaction you would like to save as a favorite
- Use the menu bar to create and store a favorite transaction

Business Example

You have specific transactions, files, or Web sites that you access frequently, so you want to add them to your *Favorites* folder. This will enable you to quickly and easily access these transactions without having to navigate the standard or role-based menus.

Task:
Create a variety of favorite transactions that will appear in the *Favorites* menu on your *SAP Easy Access* screen.

1. Create a favorite for the transaction to post an incoming payment in accounts receivable. This is transaction code F-28.

2. Create a favorite for the transaction to display a customer (centrally) in sales and distribution. This is transaction code XD03.

3. Create a favorite for the transaction to maintain master data in human resources. This is transaction code PA30.

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Solution 2-3: Creating Favorites Using the Menu

Task:
Create a variety of favorite transactions that will appear in the *Favorites* menu on your *SAP Easy Access* screen.

1. Create a favorite for the transaction to post an incoming payment in accounts receivable. This is transaction code F-28.

   a) From the *SAP Easy Access* menu, choose *Accounting* → *Financial Accounting* → *Account Receivable* → *Document Entry*.

   b) Choose *Incoming Payments*.



Caution: Do not double-click *Incoming Payment*. You simply want to highlight the menu item, not initiate the transaction..

   c) From the Menu bar, choose *Favorites* → *Add*.



Hint: This menu path is at the top of your window. You can also use  Add to Favorites

.

2. Create a favorite for the transaction to display a customer (centrally) in sales and distribution. This is transaction code XD03.

   a) From the *SAP Easy Access* menu, choose *Logistics* → *Sales and Distribution* → *Master Data* → *Business Partners* → *Customer* → *Display*.

   b) Choose *Complete*.



Caution: Do not double-click *Incoming Payment*. You simply want to highlight the menu item, not initiate the transaction..

   c) From the Menu bar, choose *Favorites* → *Add.*



Hint: This menu path is at the top of your window. You can also use  Add to Favorites

3. Create a favorite for the transaction to maintain master data in human resources. This is transaction code PA30.

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a) From the *SAP Easy Access* menu, choose *Human Resources* → *Personnel Management* → *Administration* → *HR Master Data*.

b) Choose *Maintain*.



Caution: Do not double-click *Incoming Payment*. You simply want to highlight the menu item, not initiate the transaction..

c) From the Menu bar, choose *Favorites* → *Add*.



Hint: This menu path is at the top of your window. You can also use  Add to Favorites

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Lesson Summary

You should now be able to:

- Describe the layout of the SAP Easy Access screen
- List and use the three navigation methods to initiate a transaction in the SAP system
- Differentiate between the SAP standard menu and the role-based user menu
- Describe the favorites feature and add a transaction to your Favorites menu

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Lesson: Using Help

Lesson Overview

While working in the system, you may encounter questions such as what values are available for a specific field, what is the meaning of a field, or what procedure to use to complete a transaction? In this lesson, we will introduce the various types of online help available in the system and develop an understanding of how to search for information.

Lesson Objectives

After completing this lesson, you will be able to:

- List and describe the forms of help in the SAP system
- Search for information and obtain help using the different help methods in the SAP system

Business Example

You are in the process of entering new data into the system. You encounter a field that you have never used before. You need to find out what type of data you need to provide, and if there are possible values that already exist for that field.

Help Features

The SAP system provides comprehensive online help. You can display the help from any screen in the system. You can always request help using the Help menu or using the relevant icon. The Help menu contains the following options:

Application help

Application help displays comprehensive help for the current application. Selecting this menu option in the initial screen displays help on getting started with SAP.

SAP Library

All online documentation can be found here.

Glossary

You can search for definitions of terms in the glossary.

Release notes

This displays notes that describe functional changes that occur between SAP system releases.

SAPNet

This enables you to log on to SAPNet.

Feedback

Feedback enables you to send a message to the SAPNet front end, the SAP service system.

Settings

Settings enable you to select settings for help.

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Figure 2-10: Getting Help

Field Help

Use F1 for help on fields, menus, functions, and messages. F1 help also provides technical information on the relevant field, including, for example, the parameter ID, which you can use to assign values to the field for your user.

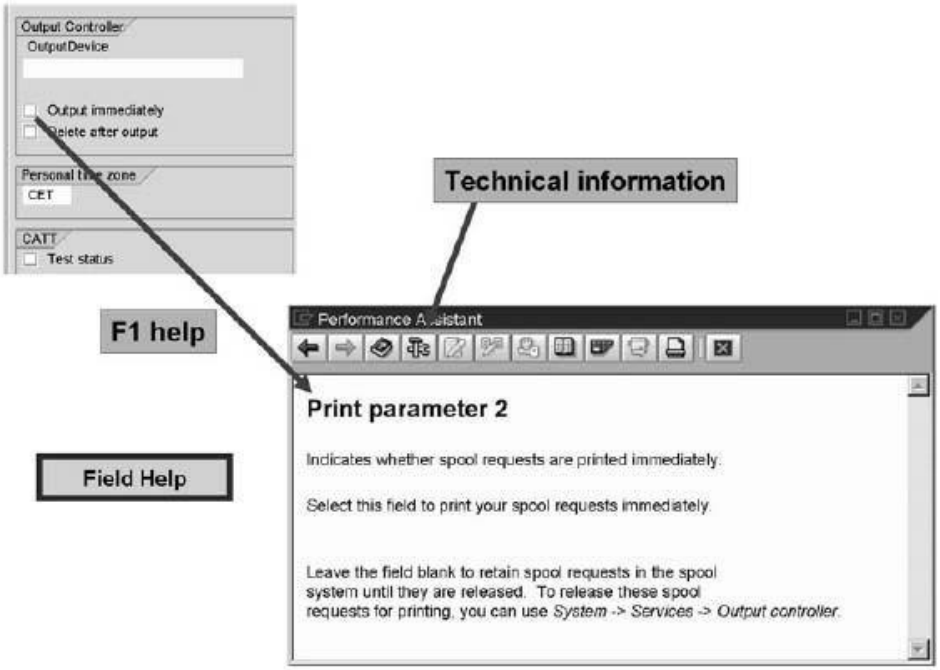


Figure 2-11: Field Help: F1

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Use F4 for information about what values can be entered. You can access F4 help for a selected field using the button immediately to the right of that field. If input fields are marked with a small check mark icon, then you can only continue in that application by entering a permitted value.

You can flag many fields in an application to make them either required entry fields or optional entry fields. You can also hide fields using transaction or screen variants, or Customizing.



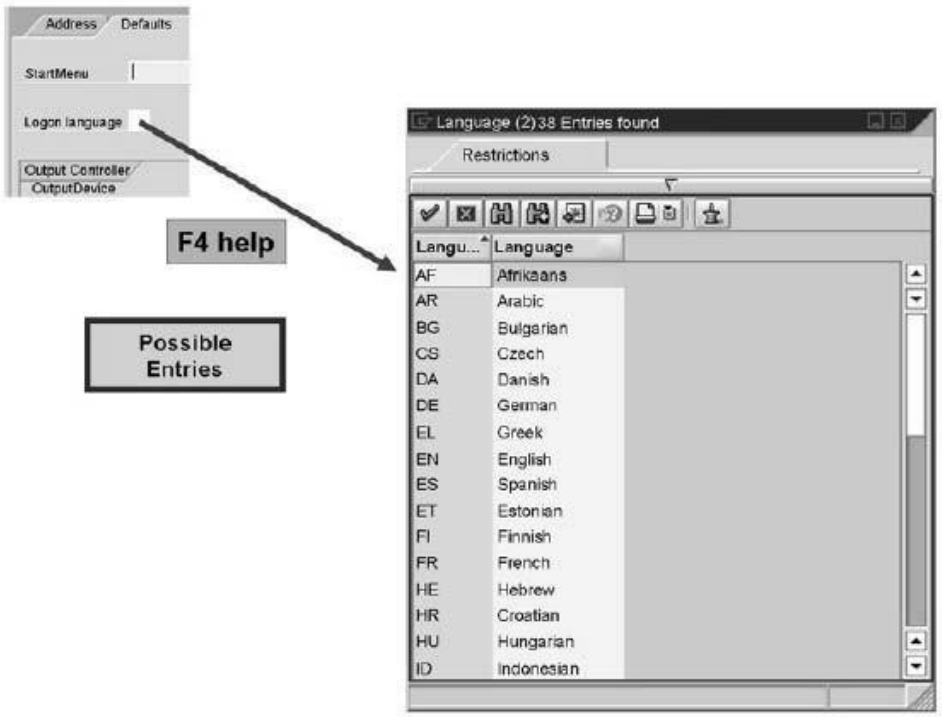


Figure 2-12: Field Search: F4

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Exercise 2-4: Using Help Features

Exercise Objectives

After completing this exercise, you will be able to:

- Answer questions using the standard help features in an SAP system

Business Example

As you complete your day-to-day work, you will encounter times when you may not know what information is being requested in a certain field, or the possible values that are available for the field. In addition, you may find times when you would like to learn more about a transaction or specific functionality in the system. You need to rely on the various help features in the system to assist you with these tasks.

Task:
You are a buyer for you company. You want to preset the value for the purchasing organization so that when you display vendor information, the value of your purchasing organization defaults in the field.

1. From the *SAP Easy Access* menu, navigate to the vendor display by choosing *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Vendor* → *Central* → *Display*. Locate the parameter ID for the *Purchasing Organization*. Record the parameter ID.



Hint: You can also use transaction code XK03 to display the vendor.

2. Find the possible values for the purchasing organization. You have been told that you are in purchasing organization 1000. Confirm that this purchasing organization is valid.

3. Set your the value for the purchasing organization in your user profile using the *System* menu.

4. Confirm that the value for the purchasing organization defaults to 1000.

5. Take a moment to review the procedure for displaying vendor information.

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Solution 2-4: Using Help Features

Task:
You are a buyer for you company. You want to preset the value for the purchasing organization so that when you display vendor information, the value of your purchasing organization defaults in the field.

1. From the *SAP Easy Access* menu, navigate to the vendor display by choosing *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Vendor* → *Central* → *Display*. Locate the parameter ID for the *Purchasing Organization*. Record the parameter ID.



Hint: You can also use transaction code XK03 to display the vendor.

   a) Place your cursor in the *Purch. organization* field.
   b) Press the **F1** key.
   c) Choose *Technical Information*.
   d) Locate the parameter ID, which should be **EKO**.

2. Find the possible values for the purchasing organization. You have been told that you are in purchasing organization 1000. Confirm that this purchasing organization is valid.

   a) Close the field help and technical information windows.
   b) Place your cursor in the *Purch. organization* field.
   c) Press the **F4** key.
   d) The *Restrict value range* window appears, enabling you to restrict your search. For this exercise, we will search all values.
   e) Choose *Start search*.
   f) Confirm that purchasing organization *1000* is a valid entry for this field.

3. Set your the value for the purchasing organization in your user profile using the *System* menu.

   a) From the Menu bar, choose *System* → *User profile* → *Own data*.
   b) Choose the *Parameters* tab.
   c) Enter **EKO** in the *Parameters* field.
   d) Enter **1000** in the **Values** field.
   e) Choose Enter.

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f) Your entry is added to the list of parameters in alphabetical order. In addition, the text field for the EKO parameter now reads "*Purchasing Organization*".

g) Choose  *Save*.

4. Confirm that the value for the purchasing organization defaults to 1000.

   a) Enter transaction *XK03* in the command field.

   b) Confirm that *1000* is the default value in the *Purch. organization* field.

5. Take a moment to review the procedure for displaying vendor information.

   a) From the Menu bar, choose *Help* → *Application help*.

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Lesson Summary

You should now be able to:

- List and describe the forms of help in the SAP system
- Search for information and obtain help using the different help methods in the SAP system

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Unit Summary

You should now be able to:

- Create a new logon entry in the SAP Logon window
- Log on to any SAP system
- Create multiple active sessions
- Personalize your user interface
- Describe the layout of the SAP Easy Access screen
- List and use the three navigation methods to initiate a transaction in the SAP system
- Differentiate between the SAP standard menu and the role-based user menu
- Describe the favorites feature and add a transaction to your Favorites menu
- List and describe the forms of help in the SAP system
- Search for information and obtain help using the different help methods in the SAP system

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Test Your Knowledge

1. You can only have one SAP system session open at a time.
Determine whether this statement is true or false.

   ☐ True
   ☐ False

2. Which of the following is not part of the information required to log on to the SAP system?
Choose the correct answer(s).

   ☐ A Enter a specific client number
   ☐ B Enter your user ID
   ☐ C Enter your password
   ☐ D Customize your settings

3. What menus are standard on all SAP screens?
Choose the correct answer(s).

   ☐ A System
   ☐ B Help
   ☐ C Both A and B
   ☐ D None of the above

4. Which of the following provides general information on the SAP system and transaction or task on which you are working?
Choose the correct answer(s).

   ☐ A Status bar
   ☐ B Menu path
   ☐ C Role bar
   ☐ D None of the above

5. In the SAP Easy Access menu, you can create a favorites list containing:
Choose the correct answer(s).

   ☐ A Web addresses
   ☐ B Transactions
   ☐ C Links to files
   ☐ D All of the above

6. Select all of the following entries that are valid in the command field. If you are uncertain, try them on the system before you select the correct answers.
Choose the correct answer(s).

   ☐ A /nend
   ☐ B /nex
   ☐ C ?sm04
   ☐ D /nsm04
   ☐ E sm04

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7. You are about to use a transaction that you have never used before, and you have already navigated to the transaction. You would like to learn more about the transaction and see the procedure for completing it. Which of the following forms of help would provide the information for which you are looking in the most efficient manner possible?
Choose the correct answer(s).

☐ A F1
☐ B F4
☐ C Application help
☐ D SAP Library
☐ E Glossary
☐ F Release Notes

8. List and describe three different types of online help that are available in the SAP system.

1._____

2._____

3._____

9. You would like to preset a value for a field that you have to enter frequently. To do this, you need the parameter ID. Which help function will you use to locate the parameter ID when you are on the field?
Choose the correct answer(s).

☐ A F1
☐ B F4
☐ C System help
☐ D F11
☐ E Application help

10. Application help, which is available through the Help menu, is context-sensitive. This means that it will link you directly to the help for whatever application area of the system in which you are currently working.
Determine whether this statement is true or false.

☐ True
☐ False

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Answers

1. You can only have one SAP system session open at a time.

   Answer: False

   You can create up to 6 sessions. Each session is independent of the others.

2. Which of the following is not part of the information required to log on to the SAP system?

   Answer: D

   You do not customize your settings until you are already logged on to the SAP system.

3. What menus are standard on all SAP screens?

   Answer: C

   The System menu contains functions that affect the system as a whole, such as Create session, User profile, and Log off. The Help menu provides various forms of online help.

4. Which of the following provides general information on the SAP system and transaction or task on which you are working?

   Answer: A

   The status bar contains information on system messages, as well as system information such as client, user, transaction codes, and response time.

5. In the SAP Easy Access menu, you can create a favorites list containing:

   Answer: D

   Favorites can consist of Web links, standard and customer transaction codes, and links to other files such as Microsoft Word documents or PowerPoint files.

6. Select all of the following entries that are valid in the command field. If you are uncertain, try them on the system before you select the correct answers.

   Answer: E

   You can enter any valid transaction code directly on the SAP Easy Access screen. If you are in another screen, you need to enter /n in front of the transaction code for the transaction code to work. /nend and /nex are two different log off options. ? sm04 is not a valid entry.

7. You are about to use a transaction that you have never used before, and you have already navigated to the transaction. You would like to learn more about the transaction and see the procedure for completing it. Which of the following forms of help would provide the information for which you are looking in the most efficient manner possible?

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Answer: C

Although you could locate the information in the SAP Library, the most efficient method is the application help because it is context-sensitive. Here you will find comprehensive information about the application.

8. List and describe three different types of online help that are available in the SAP system.

Answer: Following are the types of system-level help that are available in the SAP system:

Application help
Application help displays comprehensive help for the current application. Selecting this menu option in the initial screen displays help on getting started with SAP.

SAP Library
All online documentation can be found here.

Glossary
You can search for definitions of terms here.

Release notes
This displays notes that describe functional changes that occur between SAP system releases.

SAPNet
This enables you to log on to SAPNet.

Feedback
Feedback enables you to send a message to the SAPNet front end, the SAP service system.

Settings
Settings enable you to select settings for help.

F1
F1 is field-level help that provides information about the field.

F4
F4 is field-level help that provides a list of field values or an option to search for the information in the case of an extensive list.

9. You would like to preset a value for a field that you have to enter frequently. To do this, you need the parameter ID. Which help function will you use to locate the parameter ID when you are on the field?

Answer: A

F1 provides help on the purpose of a specific field, and also provides technical information for the field. Here you will find the parameter ID for the field in question.

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10. Application help, which is available through the Help menu, is context-sensitive. This means that it will link you directly to the help for whatever application area of the system in which you are currently working.

    Answer: True

    This is true. Context-sensitive application help makes it easier for you to locate assistance with specific applications.

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Unit 3

System-wide Concepts

Unit Overview

This unit will introduce you to some system-wide concepts of SAP software. We will also introduce IDES, the SAP model company.

Unit Objectives

After completing this unit, you will be able to:

- State the purpose of an organizational element in the SAP system
- Explain the purpose of master data in the SAP system
- Explain the purpose of transactions in SAP training
- Explain the use of IDES

Unit Contents

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Lesson: System-Wide Concepts

Lesson Overview

This lesson focuses on the system-wide concepts that underlie the SAP system. These concepts, organizational elements, master data, and transactions, are the basic elements designed and utilized to represent a company's enterprise structure and business processes within the SAP system. Following are brief descriptions of the concepts that will be discussed in more detail in this lesson.

Organizational Elements

A company's enterprise structure is mapped to SAP applications using organizational elements.

Master Data

Created centrally and available to all applications and all authorized users, master data also has an organizational aspect because its information is organized into views that are assigned to organizational elements.

Transactions

Transactions are application programs that execute business processes in the SAP system. Examples include create sales order, change customer master, or display a sales order's list report.

Lesson Objectives

After completing this lesson, you will be able to:

- State the purpose of an organizational element in the SAP system
- Explain the purpose of master data in the SAP system
- Explain the purpose of transactions in SAP training
- Explain the use of IDES

Business Example

Processes within a company generally take place across departmental boundaries. In global companies, these processes take place across national and company boundaries. The long-term success of IDES AG, is dependent on collaboration with business partners and a global outlook. IDES wants new orders from customers entered into the SAP system with minimal data entry and maximum data accuracy. IDES must also have a record of all transactions.

Organizational Elements

Client

The client is the highest-level element of all organizational elements; it represents the enterprise/headquarters group.

Company Code

The company code is a legal independent accounting unit representing the central organizational element of financial accounting. The company code also

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represents the tax law (national) view of the company, the fiscal calendar, the local currency, and the tax reporting requirements.

Plant

A plant can manufacture product, distribute product, or provide a service; it is the central organizational unit of production.

Storage Location

Material stocks in Inventory Management can be differentiated within one plant according to storage location.

Sales organization

The sales organization is the central organizational element in sales order management that controls the terms of sale to the customer.

Distribution Channel

Distribution channels can be used to define how different products reach consumers, for example, wholesale.

Organizational Unit

Organizational units describe the various business units that exist in an enterprise. Often units are loosely defined as functional or regional departments.

Position

Positions are the individual employee assignments in the enterprise.

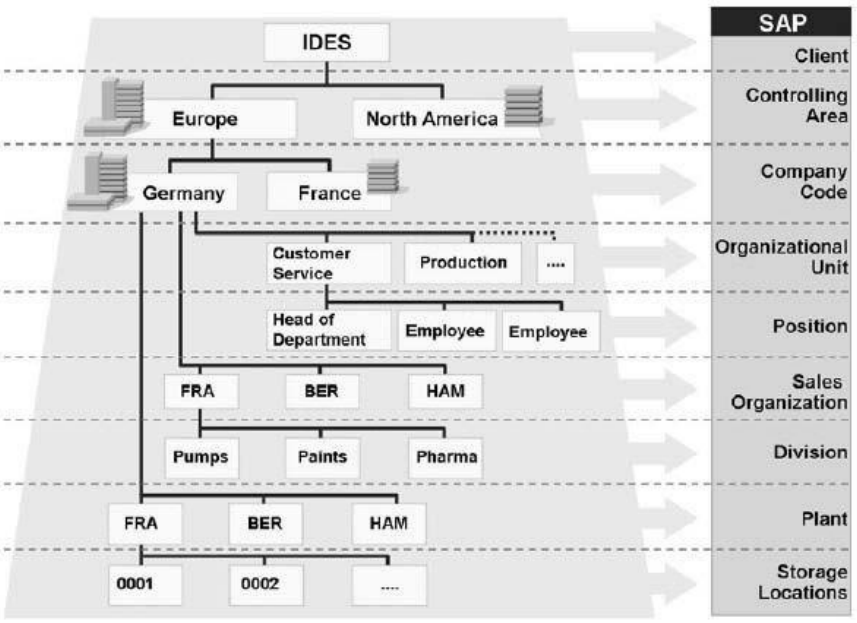


Figure 3-1: Organization Structure: Terminology

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IDES

IDES (International Demonstration and Educational System) is an international company dependent upon collaborations with external business partners and a global outlook.

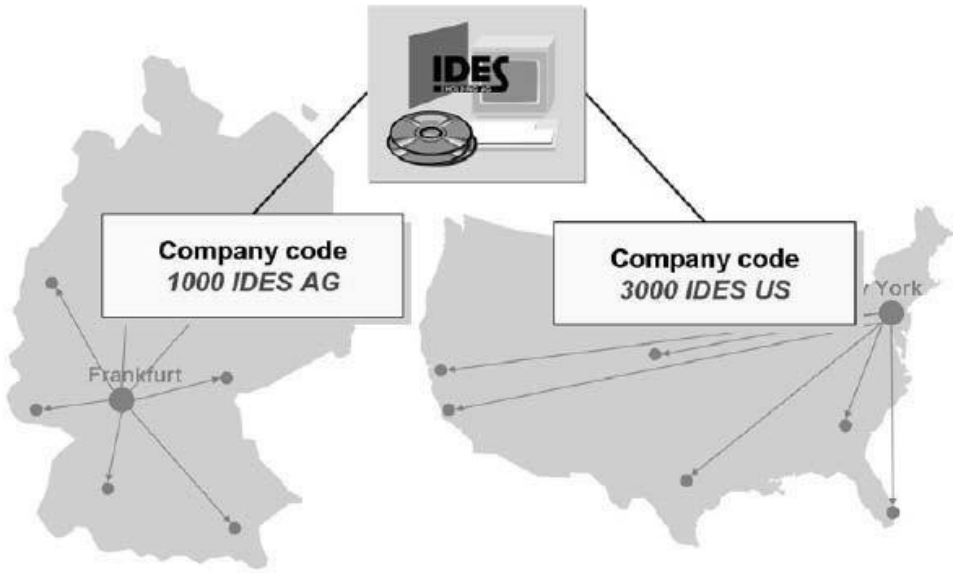


Figure 3-2: IDES Holding Company

IDES AG is a manufacturing company. It operates worldwide and has a number of subsidiaries. This company's processes are using during this training course to demonstrate the solutions provided by SAP.

As a model company, IDES has a large number of business branches and branch-specific subsidiaries. Business processes are fully set up and include all core areas, such as purchasing, sales, marketing, and manufacturing.

The scenario for the IDES is described in detail below.

As an international company, IDES has several holdings and requires the ability to report to shareholders on an international bases. Management's goal over the next year is to increase profits. Costing analysis reports, cash management reports, and overhead cost reports are to be captured to a business intelligence system for management review.

IDES AG produces many products. Products are manufactured at a number of production locations worldwide. Global planning ensures that deliveries are made from the nearest distribution center.

Customers and interested parties have access to information about IDES products, accessories, and services on the IDES company's home page. A user-friendly interface and a product search function make it easy for customers to create purchase requests.

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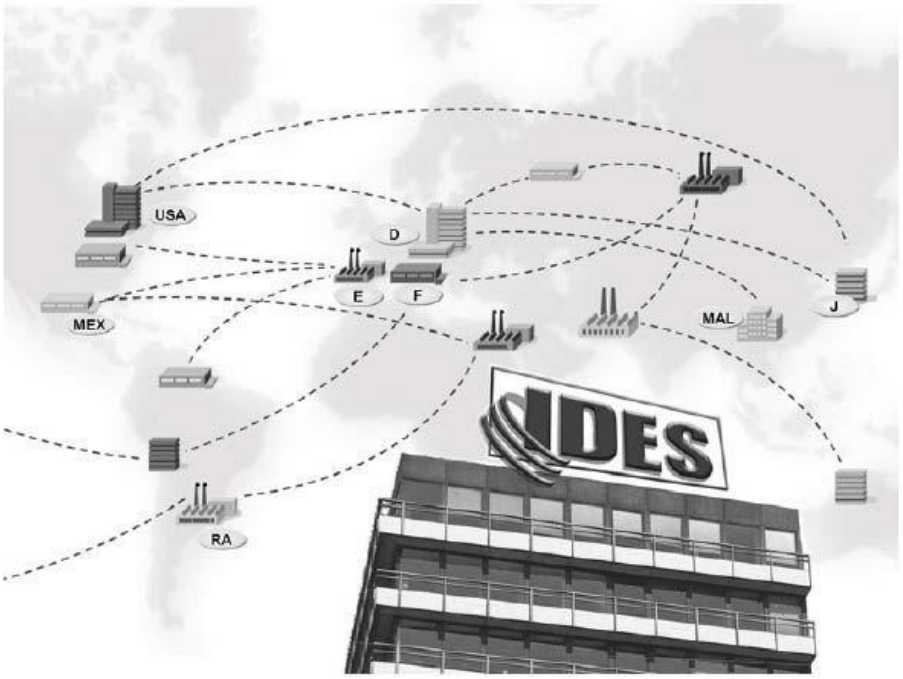


Figure 3-3: IDES AG

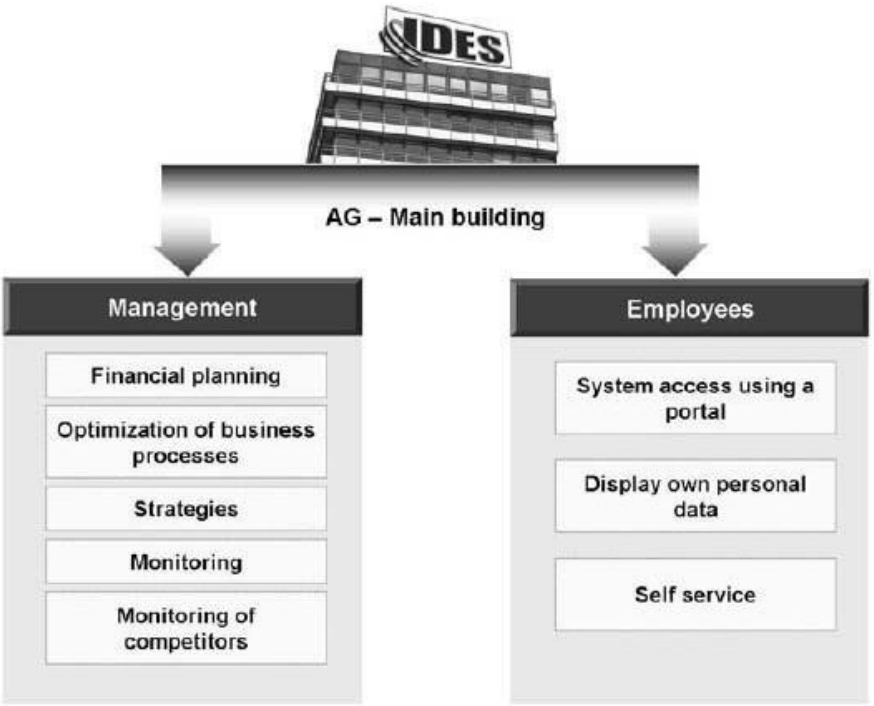


Figure 3-4: Accounting

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IDES employees can access personnel records from an Internet portal and make changes to their benefits, as well as buy office supplies and assets billable to their cost centers.

System-Wide Master Data Concepts

In SAP, master data is created centrally and available to all applications and all authorized users. Centrally stored master data means data records are always consistent, up-to-date, and free of redundancy. Master data also has an organizational aspect because its information is organized into views that are assigned to organizational elements. The three-part structure of master records makes it possible to flexibly depict the various organizational structures of an operation.

Integrating all of the corresponding data (such as customer or material) into one single database object means that the problem of data redundancy is not an issue and data integrity is enhanced. All areas can use the stored data, including sales, purchasing, inventory management, materials planning, invoice verification, finance, and human resources.

Customer master

A customer master contains key information that defines the business relationship between a company and its customer. Company code data controls the posting procedure and subsequent processing, such as payments and dunning. Sales organization data provides information on customers for support execution of such business processes as entering sales orders, shipping, billing, and processing payment. The customer master's "three-part structure" is represented by:

1. **General Data**: This data is equally relevant to every company code and every sales organization within a company.
2. **Data for Company Codes**: This data reflects company-specific agreements with the customer.
3. **Data for Sales**: This data has different characteristics for a company's sales organizations and channels.

The layout of customer master records also leaves room for special requirements.

Material Master

The material master contains all of the key information a company needs to manage a material within its organization. The material master defines, among other things, how a product is sold, manufactured, purchased, inventoried, accounted, and costed. The information in the material master is grouped into views that are organized by business function.



Note: The majority of the views in a material master are at plant level.

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Figure 3-5: Master Data: Customer Master

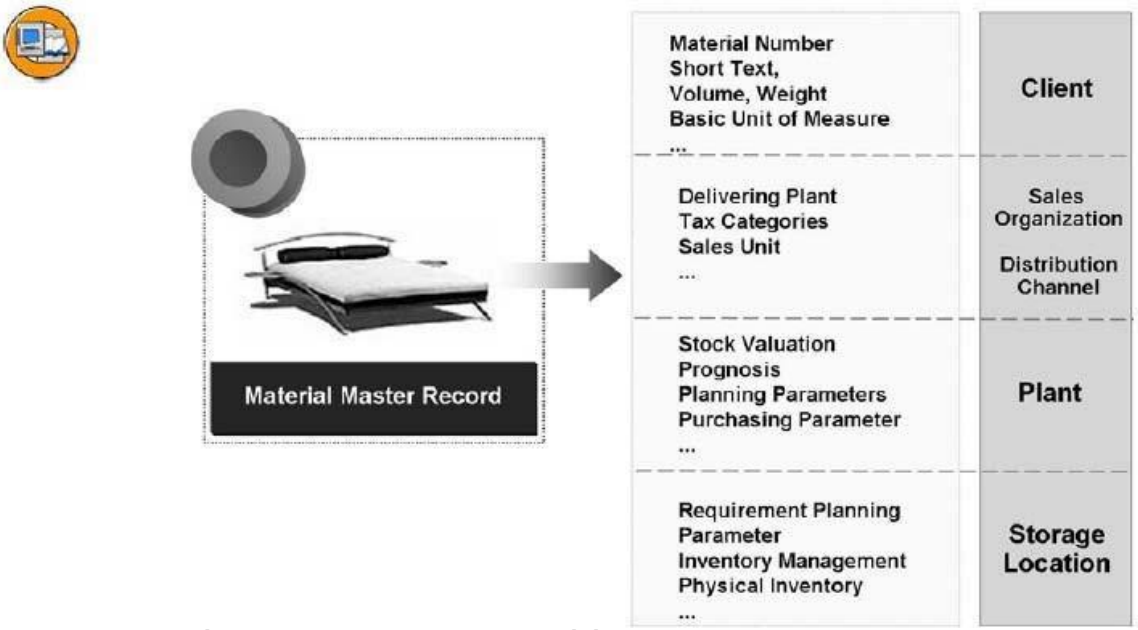


Figure 3-6: Master Data: Material Master

Personnel File

Personnel files are master data records used primarily mySAP ERP Human Capital Management. These master records follow the same basic three-part structure, as do other master records.

The organizational elements used by mySAP HCM are unique and, as a group, they are referred to as Organizational Management.

The functions of Organizational Management enable you to quickly and efficiently map your current organizational and reporting structure with its organizational objects - organizational units, jobs, positions, and tasks.

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Organizational Units describe the various business units that exist in your enterprise. Multiple organizational units and their relationships form the organizational structure. Organizational units can be loosely defined as functional or regional departments, or as project groups, depending on the type of organization.



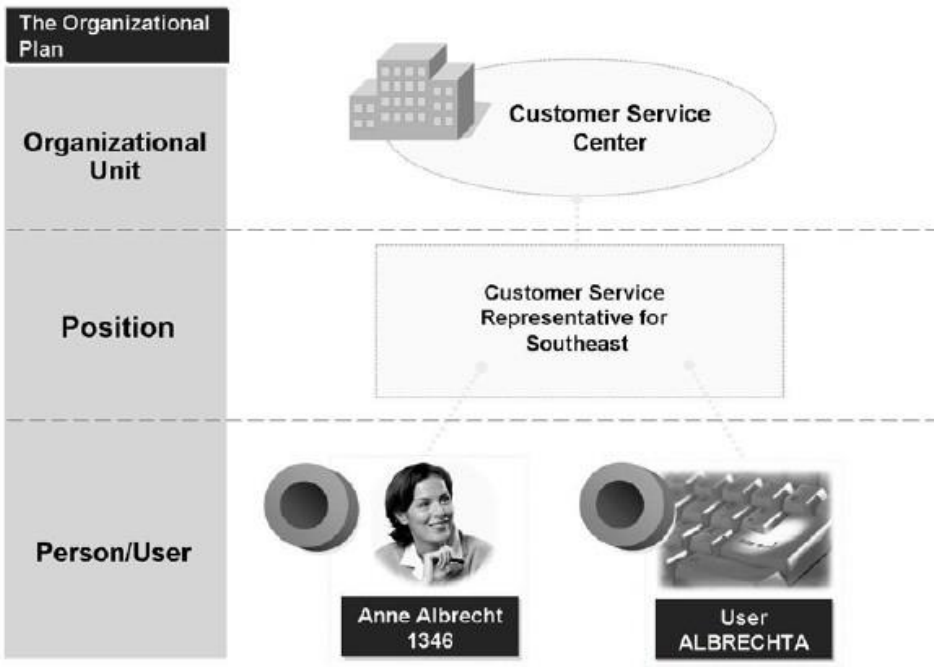


Figure 3-7: Master Data: Personnel Record

Jobs

Jobs serve as descriptions, or templates, that apply to several positions with similar requirements, tasks, or other characteristics.

Positions

Positions are the individual employee assignments in the enterprise. Persons occupy positions. A position inherits a job's characteristics, but you can also define additional characteristics specific to that position.

Whereas positions are concrete and can be occupied by holders (for example, administrative assistant in the marketing department), jobs are general classifications of functions in an organization (for example, administrative assistant), that are defined by the characteristics assigned to them. Job descriptions apply to several different positions with similar characteristics.

Persons

Persons hold positions within the organizational structure. Persons represent employees in your company.

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Transactions

Transactions are application programs that execute business processes in the SAP system. Whenever possible, master data is copied during transaction processing, thus avoiding re-entry of data. For example, when executing the transaction Create Sales Order, the user must enter the customer master number; this copy is in all of the relevant customer information. Likewise, once the material master numbers are entered for the items being ordered, the relevant material data will be copied into the sales order.

In addition, when performing each transaction, applicable organizational elements must be entered. For example, by specifying the sales organization information, the appropriate sales group is given credit for the sales activity; similarly, the designation of the plant/storage location determines product sourcing.

Whenever a transaction is executed in the system, a document is created. That document, a data record of the transaction, contains all of the relevant predefined information from the master data and organizational elements.

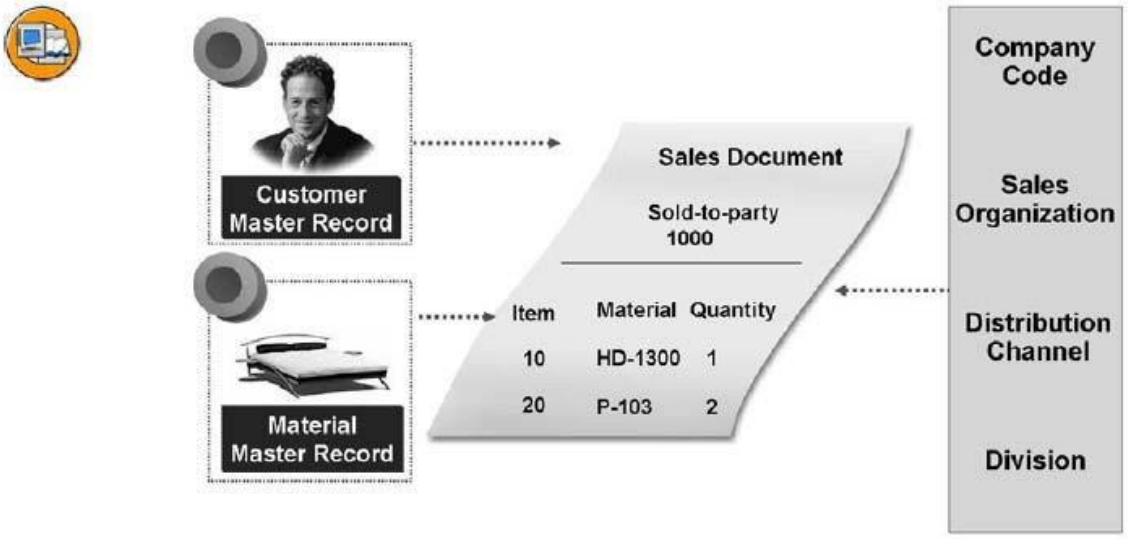


Figure 3-8: Transactions

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Exercise 3-1: Display and Change a Customer Master

Exercise Objectives

After completing this exercise, you will be able to:

- Display a customer master record
- Locate organizational information contained within a customer master record

Business Example

As a customer service manager, you periodically need to view and maintain customer information. This information could be located in various places in the customer record.

Task:
Locate a customer master record. Within the master record views find information related to the organization areas of. general data, sales, and company code.

1. Using the information provided in the table, display the customer master record.

Field	Data
Customer	`Rohrer##` (Rohrer AG Gr.##)
Company Code	`1000` (IDES AG)
Sales Organization	`1000` (Germany Frankfurt)
Distribution Channel	`10` (Final Customer Sales)
Division	`00` (Cross-division)

2. Locate the following **General Data**.

Field	Data
Street/House number	
City	
Search Term	

3. Locate the following **Company Code Data**.

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Hint: You will need to choose the Company Code Data icon from the application toolbar.

Field	Data
Recon.account	

4. Locate the following **Sales Area Data**.



Hint: You will need to choose the Sales Area Data icon from the application toolbar.

Field	Data
Shipping conditions	
Terms of payment	

5. Using the information provided in the table, change the following information in customer master record.

View	Field	Data
General Data/Address tab	Language	English
Sales Area Data/ Shipping tab	Shipping Condition	10 (Immediately)

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Solution 3-1: Display and Change a Customer Master

Task:
Locate a customer master record. Within the master record views find information related to the organization areas of. general data, sales, and company code.

1. Using the information provided in the table, display the customer master record.

Field	Data
Customer	`Rohrer##` (Rohrer AG Gr.##)
Company Code	`1000` (IDES AG)
Sales Organization	`1000` (Germany Frankfurt)
Distribution Channel	`10` (Final Customer Sales)
Division	`00` (Cross-division)

   a) From the *SAP Easy Access* menu, choose *Logistics* → *Sales and Distribution* →*Master Data* → *Business Partners* → *Customer* → *Display*.

   b) Double-click Complete.

   c) Enter *Customer*: **Rohrer##.**

   d) Enter *Company Code*: **1000**.

   e) Enter *Sales Organization*: **1000**.

   f) Enter *Distribution Channel*: **10**.

   g) Enter *Division*: **00**.

   h) Choose *Enter*.

2. Locate the following **General Data**.

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Field	Data
Street/House number	
City	
Search Term	

a) Choose the *General Data* icon.

b) Choose the *Address* tab.

c) Record the Street name in the table provided below: **Waldstrasse 86 – 90**.

d) Record the *City* in the table provided above: **Berlin**.

e) Record the *Search term* in the table provided below: **SAP01**.

3. Locate the following **Company Code Data**.



Hint: You will need to choose the Company Code Data icon from the application toolbar.

Field	Data
Recon.account	

a) Choose the *Company Code* data icon.

b) Choose the *Account management* tab.

c) Record the *Recon. Account* in the table provided below: **140000**

4. Locate the following S**ales Area Data**.



Hint: You will need to choose the Sales Area Data icon from the application toolbar.

Field	Data
Shipping conditions	
Terms of payment	

a) Choose the *Sales Area Data* icon.

b) Choose the *Shipping* tab.

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c) Record the *Shipping conditions* in the table provided below: **02 (standard)**.

d) Choose the *Billing document* tab.

e) Record the *Terms of payment* in the table provided below: **ZB01**.

f) Choose  *Exit*.

5. Using the information provided in the table, change the following information in customer master record.

View	**Field**	**Data**
General Data/Address tab	Language	**English**
Sales Area Data/ Shipping tab	Shipping Condition	**10** Immediately

a) From the *SAP Easy Access* menu, choose *Logistics* → *Sales and Distribution* →*Master Data* → *Business Partners* → *Customer* → *Change*.

b) Double-click  Complete.

c) Enter *Customer*: **Rohrer##.**

d) Enter *Company Code*: **1000**.

e) Enter *Sales Organization*: **1000**.

f) Enter *Distribution Channel*: **10**.

g) Enter *Division*: **00**.

h) Choose  *Enter*.

i) Change the *Language* field in **General Data** to **English**

j) Change the *Shipping Condition* field in **Sales Area Data** / **Shipping** tab to **10 (immediately).**

k) Choose  *Save.*

You will receive a system message that the customer master record has been created.

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Exercise 3-2: Display a Material Master

Exercise Objectives

After completing this exercise, you will be able to:

- Display a material master record
- Locate various organizational and field-level information contained within the material master

Business Example

As a new employee at your company, you need to become familiar with the materials in your company's system.

Task:
Locate various organizational and field-level information contained within the material master record.

1. Using the information provided in the table, display the material master record.



Hint: You will be required to enter or select information in several screens before you can access the material record.

Field	Data
Material	578
View	Basic Data 1
View	Sales Org.Data 1
View	Plant Stock
Plant	1200 Dresden
Sales Organization	1000 Germany Frankfurt
Distr. Channel	10 Final customer sales

2. As a new user you need to locate the specific *Field* information listed in the table below. Confirm the data by entering the information in the Data column of the table provided.



Hint: The data is located on several tabs. The tab names are provided in the table listed below under the *View* column header.

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View	Field	Data
Basic data 1	*Material Description*	
Basic data 1	*Base Unit of measure*	
Basic data 1	*Net weight*	
Basic data 1	*Material group*	
Sales Org Data 1	*Division*	
Sales Org Data 1	*Delivering plant*	
Plant Stock	*Plant*	
Plant Stock	*Unrestr.-use stock (plant stocks in the current period)*	

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Solution 3-2: Display a Material Master

Task:
Locate various organizational and field-level information contained within the material master record.

1. Using the information provided in the table, display the material master record.



Hint: You will be required to enter or select information in several screens before you can access the material record

Field	Data
Material	578
View	Basic Data 1
View	Sales Org.Data 1
View	Plant Stock
Plant	1200 Dresden
Sales Organization	1000 Germany Frankfurt
Distr. Channel	10 Final customer sales

a) From the *SAP Easy Access* menu, choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display*.

b) Choose  *Display Current*.

c) Enter *Material*: **578**.

d) Choose *Select view(s)*.

e) Select the *Basic Data 1* view.

f) Select the *Sales: Sales Org. Data 1* view.

g) Select *the Plant Stock* view.

h) Choose  *Continue / Enter*.

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Hint: A new dialog box appears requesting organizational elements.

i) Enter *Plant*: **1200**.

j) Enter *Sales org.*: **1000**.

k) Enter *Distr. channel*: **10**.

l) Choose *Continue / Enter*.



Hint: The material master record now displays. You should be on the *Basic data 1* tab**.**

.

2. As a new user you need to locate the specific Field information listed in the table below. Confirm the data by entering the information in the Data column of the table provided.



Hint: The data is located on several tabs. The tab names are provided in the table listed below under the *View* column header.

View	Field	Data
Basic data 1	*Material Description*	
Basic data 1	*Base Unit of measure*	
Basic data 1	*Net weight*	
Basic data 1	*Material group*	
Sales Org Data 1	*Division*	
Sales Org Data 1	*Delivering plant*	
Plant Stock	*Plant*	
Plant Stock	*Unrestr.-use stock (plant stocks in the current period)*	

a) Record the *Description* in the table provided above: **Sunny Sunny**.

b) Record the *Base unit of measure* in the table provided above: **PC**.

c) Record the *Net Weight* in the table provided above: **16.800 kg**.

d) Record the *Material group* in the table provided above: **00207**.

e) Choose *Enter*.

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Hint: You are now viewing the *Sales Org Data 1* tab.

f) Record the *Division* in the table provided above: **07 High Tech**

g) Record the *Delivering Plan*t in the table provided above: **1200**

h) Choose  *Enter*.



Hint: You are now viewing the *Plant stock* tab

.

i) Record the *Plant* in the table provided above: **1200**.

j) Record the (plant stocks in the current period) *Unrestr.-use stock* in the table provided above

k) Choose  *Exit*.

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Exercise 3-3: Creating a New Material Master Record

Exercise Objectives

After completing this exercise, you will be able to:

- Create a new material master record

Business Example

Your company has developed a new product and you need to create a material master record to store the critical parameters necessary to manage this item in your organization.

Task

In this exercise, you will create a new material master record using the data specified below. You will navigate to three different views and enter the data before saving the material master record.

1. Creating a material master record requires that you enter the industry sector, material type, views, and plant information relevant for the type of material master record you are trying to create. Using the information specified below, enter the data for the initial material master creation screens.

Field	**Data**
Material	T-MM##
Industry Sector	Mechanical Engineering
Material Type	Trading Goods
View	Basic Data 1
View	Sales: Sales Org. Data 1
View	Sales: General/Plant Data
View	Purchasing
View	MRP 1
View	MRP 2
View	MRP 3
View	General Plant Data/Storage I
View	Accounting I
Plant	1000
Storage Location	0001
Sales Organization	1000
Distribution Channel	10

2. You need to navigate through the three different views and enter the data specified below.

View	**Field**	**Data**
Basic Data 1	*Description*	**Printer ##**
Basic Data 1	*Base Unit of Measure*	**PC**
Basic Data 1	*Material Group*	**001**
Basic Data 1	*Gross Weight*	**9 kg**
Basic Data 1	*Net Weight*	**7 kg**
Sales: Sales Org 1	*Delivering Plant*	**1000**

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Sales: Sales Org 1	*Tax Classification*	**1**
Sales: Sales Org 1 - Condition	*Scale Quantity*	**1**
Sales: Sales Org 1 - Condition	*Amount*	**EUR 355**
Sales: General/Plant Data	*Trans. Grp*	**0001**
Sales: General/Plant Data	*LoadingGrp*	**0001**
Purchasing	*Purchasing Group*	**B##**
MRP 1	*MRP Type*	**PD**
MRP 1	*MRP Controller*	**000**
MRP 1	*Lot Size*	**EX**
MRP 2	*Plnd delivery time*	**2 days**
MRP 2	*SchedMargin key*	**000**
MRP 3	*Availability Check*	**02**
Accounting 1	*Price Control*	**V**
Accounting 1	*Moving price*	**EUR 125**

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Solution 3-3: Creating a New Material Master Record

Task
In this exercise, you will create a new material master record using the data specified below. You will navigate to three different views and enter the data before saving the material master record.

1. Creating a material master record requires that you enter the industry sector, material type, views, and plant information relevant for the type of material master record you are trying to create. Using the information specified below, enter the data for the initial material master creation screens.

Field	Data
Material	T-MM##
Industry Sector	Mechanical Engineering
Material Type	Trading Goods
View	Basic Data 1
View	Sales: Sales Org. Data 1
View	Sales: General/Plant Data
View	Purchasing
View	MRP 1
View	MRP 2
View	MRP 3
View	General Plant Data/Storage I
View	Accounting I
Plant	1000
Storage Location	0001
Sales Organization	1000
Distribution Channel	10

a) From the *SAP Easy Access* menu choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Create (General).*

b) Choose *Immediately*.

c) Enter *Material*: **T-MM##.**

Hint: ## — Refers to the student group number assigned in class.

d) Enter *Industry sector*: **Mechanical engineering**.

e) Enter *Material type*: **Trading Goods**.

f) Choose *Select view(s).*

g) Select the *Basic Data 1* view

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h) Select the *Sales: Sales Org. Data 1* view

i) Select the *Sales: General/Plant Data* view

j) Select the *Purchasing* view.

k) Select the *MRP 1* view

l) Select the *MRP 2* view

m) Select the *MRP 3* view

n) Select the *General Plant Data/Storage I* view.

o) Select the *Accounting I* view.

p) Choose ✔ *Continue/Enter*.

q) Enter *Plant*: **1000**.

r) Enter Storage location: **0001**.

s) Enter *Sales Org*: **1000**

t) Enter *Distr Channel*: **10**

u) Choose ✔ Continue/Enter.

The material master record displays. You should be on the *Basic Data 1* tab

2. You need to navigate through the three different views and enter the data specified below.

View	**Field**	**Data**
Basic Data 1	*Description*	**Printer ##**
Basic Data 1	*Base Unit of Measure*	**PC**
Basic Data 1	*Material Group*	**001**
Basic Data 1	*Gross Weight*	**9 kg**
Basic Data 1	*Net Weight*	**7 kg**
Sales: Sales Org 1	*Delivering Plant*	**1000**
Sales: Sales Org 1	*Tax Classification*	**1**
Sales: Sales Org 1 - Condition	*Scale Quantity*	**1**
Sales: Sales Org 1 - Condition	*Amount*	**EUR 355**
Sales: General/Plant Data	*Trans. Grp*	**0001**
Sales: General/Plant Data	*LoadingGrp*	**0001**
Purchasing	*Purchasing Group*	**B##**

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MRP 1	*MRP Type*	**PD**
MRP 1	*MRP Controller*	**000**
MRP 1	*Lot Size*	**EX**
MRP 2	*Plnd delivery time*	**2 days**
MRP 2	*SchedMargin key*	**000**
MRP 3	*Availability Check*	**02**
Accounting 1	*Price Control*	**V**
Accounting 1	*Moving price*	**EUR 125**

a) Enter *Description*: **Printer ##.**

b) Enter *Base unit of measure*: **PC (pieces).**

c) Enter *Material group*: **001.**

d) Enter *Gross weight***: 9 kg.**

e) Enter *Net weight*: **7 kg**

f) Enter *Delivering Plant:* **1000.**

g) Enter *Tax Classification:* **1.**

h) Click the *Condition* button in the *Sales: Sales Org 1* view.

i) Enter *Scale Quantity*: **1**.

j) Enter *Amount*: **355** EUR**.**

k) Click  *Save*. Press  *OK* if dialog box appears. You are now in the *Sales: General/Plant* view.

l) Enter *Trans. Grp:* **0001.**

m) Enter *LoadingGrp:* **0001.**

n) Enter *Purchasing Group***: B##.**

o) Enter *MRP Type:* ***PD***.

p) Enter *MRP Controller:* **000**

q) Enter *Lot Size:* **EX.**

r) Enter *Plnd delivery time:* ***2 days***.

s) Enter *SchedMargin key:* **000.**

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t) Enter *Availability Check:* **02.**

u) Enter *Price Control:* **V.**

v) Enter *Moving price:* ***125*** *EUR.*

w) Choose  *Save.*

You will receive a system message that the new material master record has been created.

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Lesson Summary

You should now be able to:

- State the purpose of an organizational element in the SAP system
- Explain the purpose of master data in the SAP system
- Explain the purpose of transactions in SAP training
- Explain the use of IDES

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Unit Summary

You should now be able to:

- State the purpose of an organizational element in the SAP system
- Explain the purpose of master data in the SAP system
- Explain the purpose of transactions in SAP training
- Explain the use of IDES

Related Information

- For related Glossary links refer to:
  http://help.sap.com/content/additional/Glossary

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Test Your Knowledge

1. Organizational elements define a company's enterprise structure within the SAP system either for legal and/or business-related purposes.
Determine whether this statement is true or false.

   □ True
   □ False

2. Which of the following are examples of organizational elements?
Choose the correct answer(s).

   □ A Company Code
   □ B Client
   □ C Plant
   □ D All of the above
   □ E None of the above

3. Which of the following is a true statement about master data?
Choose the correct answer(s).

   □ A Created centrally and available to all applications and all authorized users
   □ B Decreases data redundancy
   □ C Organized into views that are assigned to organizational elements
   □ D All of the above

4. Name the two types of master data discussed in this lesson.
Choose the correct answer(s).

   □ A Plant and customer
   □ B Material and customer
   □ C Material and storage location
   □ D None of the above

5. Which of the following is a true statement about customer master data?
Choose the correct answer(s).

   □ A Contains key information that defines the business relationship between a company and its customer
   □ B Contains material-specific parameters that support execution of business processes
   □ C Must be created for each company that plans to sell to that customer
   □ D None of the above

6. Transactions are application programs that execute business processes in the SAP system.
Determine whether this statement is true or false.

   □ True
   □ False

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7. What is created in the system each time a transaction is executed?
Choose the correct answer(s).

- □ A Report
- □ B Log
- □ C Document
- □ D Inventory
- □ E None of the above

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Answers

1. Organizational elements define a company's enterprise structure within the SAP system either for legal and/or business-related purposes.

   Answer: True

   A company's enterprise structure is mapped to the SAP applications using organizational elements. Organizational elements are the mechanism for defining a company's enterprise structure within the SAP system either for legal and/or business-related purposes.

2. Which of the following are examples of organizational elements?

   Answer: D

   Organizational elements include legal company entities, plants, storage locations, sales offices, and profit centers, and may be assigned to a single application (such as sales organization is assigned to sales order management), or to several applications (such as plant to procurement and production planning).

3. Which of the following is a true statement about master data?

   Answer: D

   Integrating all of the corresponding data (such as customer and material) into one single database object means that the problem of data redundancy is not an issue and data integrity is enhanced. All areas can use the stored data, including sales, purchasing, inventory management, materials planning, invoice verification, and so on.

4. Name the two types of master data discussed in this lesson.

   Answer: B

   A customer master contains key information that defines the business relationship between a company and its customer. A material master contains all of the key information a company needs to manage a material within its organization.

5. Which of the following is a true statement about customer master data?

   Answer: A

   The customer master contains key information that defines the business relationship between a company and its customer. These customer-specific parameters support execution of business processes.

6. Transactions are application programs that execute business processes in the SAP system.

   Answer: True

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Transactions are application programs that execute business processes in the SAP system. Whenever possible, master data is copied during transaction processing, thus avoiding re-entry of data.

7. What is created in the system each time a transaction is executed?

Answer: C

Whenever a transaction is executed in the system, a document is created. This document provides a data record of the transaction and contains all of the relevant predefined information from the master data and organizational elements.

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Unit 4

Logistics

Unit Overview

This unit will provide you with an overview of business processes in two logistics module, Procurement and Order Fulfillment, covered by the mySAP Business Suite.

Unit Objectives

After completing this unit, you will be able to:

- Discuss the various key operational processes in Procurement and Order Fulfillment the integration between various key operational processes
- Carry out the tasks associated with sales order management
- Explain how SAP within mySAP ERP support the key processes in Procurement
- Explain how SAP within mySAP ERP support the key processes in Sales Order Management

Unit Contents

Lesson: Procurement… 4-2
Exercise 4-1: Create a Purchase Order for a Stock Material. 4-9
Exercise 4-2: Create a Goods Receipt by Referencing a Purchase Order….. 4-12
Exercise 4-3: Post an Invoice Using Logistics Invoice Verification 4-15
Lesson: Sales Order Management… 4-23
Exercise 4-4: Create a Sales Order… 4-31
Exercise 4-5: Create a Delivery 4-34
Exercise 4-6: Create a Sales Order Billing Document…. 4-37
Lesson: Production. 4-41
Exercise 4-7: Display a Bill of Material. 4-59
Exercise 4-8: Display a Stock/Requirements List. 4-63
Exercise 4-9: Create and Confirm a Production Order. 4-65
Test Your Knowledge…. 4-72

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Lesson: Procurement

Lesson Overview

In this lesson you will gain an understanding of the Procurement processes and how Procurement is integrated within other solutions.

Lesson Objectives

After completing this lesson, you will be able to:

- Outline the tasks associated within the procurement cycle
- Explain how SAP within mySAP ERP supports the key processes in Procurement

Business Example

Your company, IDES, needs materials for their production processes. Materials are procured directly for stock. IDES employees can procure consumable materials directly from online catalogs.

Procurement Process Overview

Procurement in mySAP ERP covers not only traditional processes such as requisitioning, purchase order management, and invoice verification, but also catalog-based self-service requisitioning for maintenance, repair, and operations (MRO) materials and services.

This catalog integration is expanded to maintenance operations and project management.

Procurement in mySAP ERP improves procurement processes by facilitating plan-driven and ad hoc purchasing, complete inventory management, and intelligent reporting on all procurement activities. In addition to providing supplier relationship management tools, mySAP ERP enables supplier selection and qualification, contract negotiations, bid invitations, and vendor evaluation. Support for process variant optimization allows individual categories of material or services to be procured in the most appropriate way; for example, the subcontracting process supports the delivery of components required by outsourced manufacturing steps, and procurement through invoicing plans helps improve rental and leasing processes.

The basic Procurement (or Purchase to Pay) cycle for a service or material consists of the following phases:

Determination of Requirements

Material requirements are identified either in the user departments or via materials planning and control. You can enter purchase requisitions yourself or they can be generated automatically by the materials planning and control system.



Note: This can cover both MRP and the demand-based approach to inventory control. The regular checking of stock levels of materials defined by master records, use of the order-point method, and forecasting on the

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basis of past usage are important aspects of inventory control..

Source Determination
mySAP ERP helps you identify potential sources of supply based on past orders and existing longer-term purchase agreements. This speeds the process of creating requests for quotation (RFQs), which can be sent to vendors electronically via EDI, if desired.

Vendor Selection and Comparison of Quotations
The system is capable of simulating pricing scenarios, allowing you to compare a number of different quotations. Rejection letters can be sent automatically.

Purchase Order Creation
The purchase order adopts information from the requisition and the quotation to help you create a purchase order. As with purchase requisitions, you can generate purchase orders yourself or have the system generate them automatically. Vendor scheduling agreements and contracts (in the SAP system, types of long-term purchase agreement) are also supported.



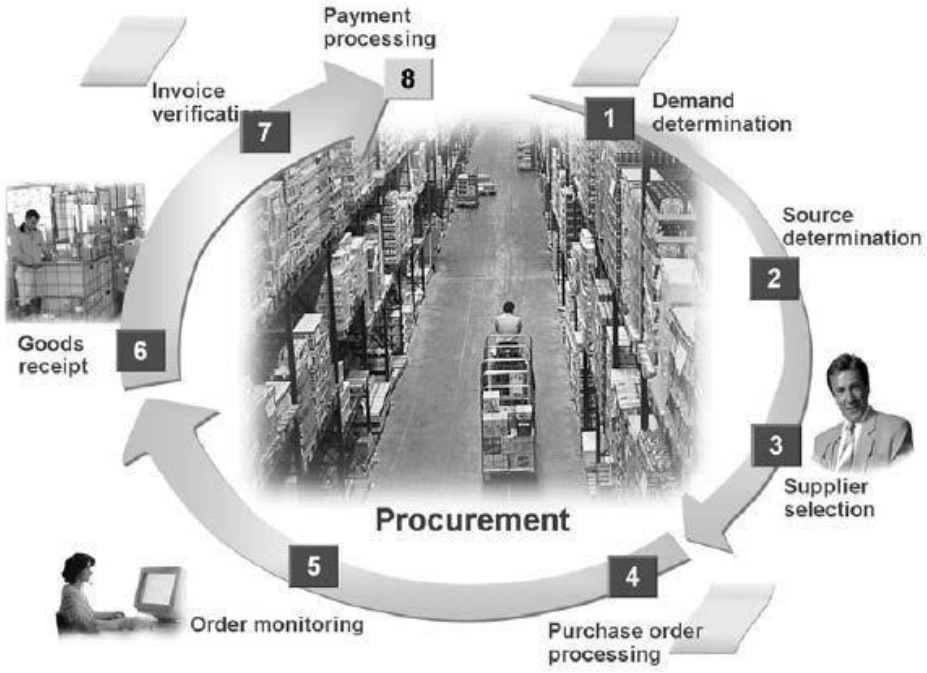


Figure 4-1: Procurement

Purchase Order Follow-Up
The system checks the reminder periods you have specified and, if necessary, automatically prints reminders or expediters at the predefined intervals. The system also provides you with an up-to-date status of all purchase requisitions, quotations, and purchase orders.

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Goods Receiving and Inventory Management
Goods receiving personnel can confirm the receipt of goods simply by entering the purchase order number. By specifying permissible tolerances, buyers can limit over- and under-deliveries of ordered goods.

Invoice Verification
The system supports the checking and matching of invoices. The accounts payable clerk is notified of quantity and price variances because the system has access to purchase order and goods receipt data. This speeds the process of auditing and clearing invoices for payment.

Purchase Orders

A purchase order is a formal request to a vendor to supply certain goods or services under the stated conditions.

You can create purchase orders without reference, or with reference to a purchase requisition, a request for quotation, or another purchase order.

When you enter the purchase order data, the system suggests default values. For example, the system suggests the ordering address, as well as the terms of payment and freight (incoterms) from the vendor master record. If you have maintained a material master for a given material in the SAP system, the system suggests the material short text or the material group, for example. If a purchasing info record already exists in the system, the system copies a price proposal to the purchase order.

You can either send the purchase order to a vendor or carry out a stock transport order in another plant belonging to your company or group. With a stock transport order, you can take into account the associated freight costs in the purchase order.

Self-Service Procurement

Self-Service Procurement allows employees to create and manage their own requisitions. It relieves your purchasing department of this administrative burden while making the procurement process both faster and more responsive.

Providing catalogs of the most frequently ordered materials ensures that employees can easily manage their own purchase orders in accordance with your organization's rules.

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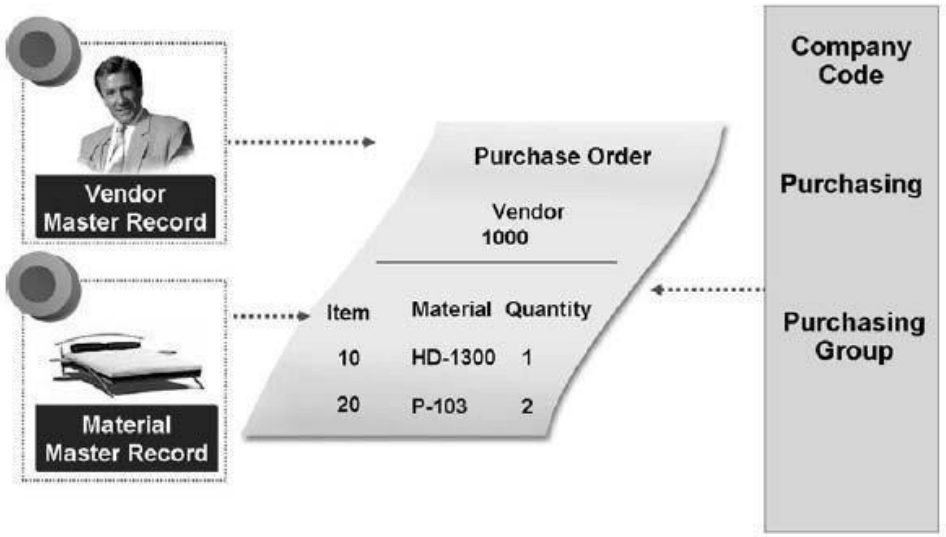


Figure 4-2: Purchase Order



Figure 4-3: Self-Service Procurement

Self-Service Requisitioning means purchasing non-strategic goods, that is, goods not directly linked to the value chain (often called MRO: maintenance, repair, and operations items). This includes, for example, office materials, work clothes, and IT equipment.

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Inventory Management

Posting a goods receipt to stock with reference to a purchase order has a number of advantages for you, including:

- The goods receiving point can check whether the delivery is the same as the purchase orders data, that is, whether the goods that were ordered have been delivered.
- The system suggests data from the purchase order when you enter the goods receipt (for example, items and quantities). This makes it easier to enter the goods receipt and check over-deliveries and under-deliveries when goods arrive.
- The purchase order history is automatically updated as a result of the deliveries. The purchasing department can send a reminder about late deliveries.
- When you post a goods receipt to the warehouse, the system creates a material document containing information such as the material delivered and the quantity delivered. The system also records the storage location for the materials you place into stock in the plant.
- In transactions relevant for material valuation, the system creates at least one accounting document that records the effects of the goods movement on the value of the stock.

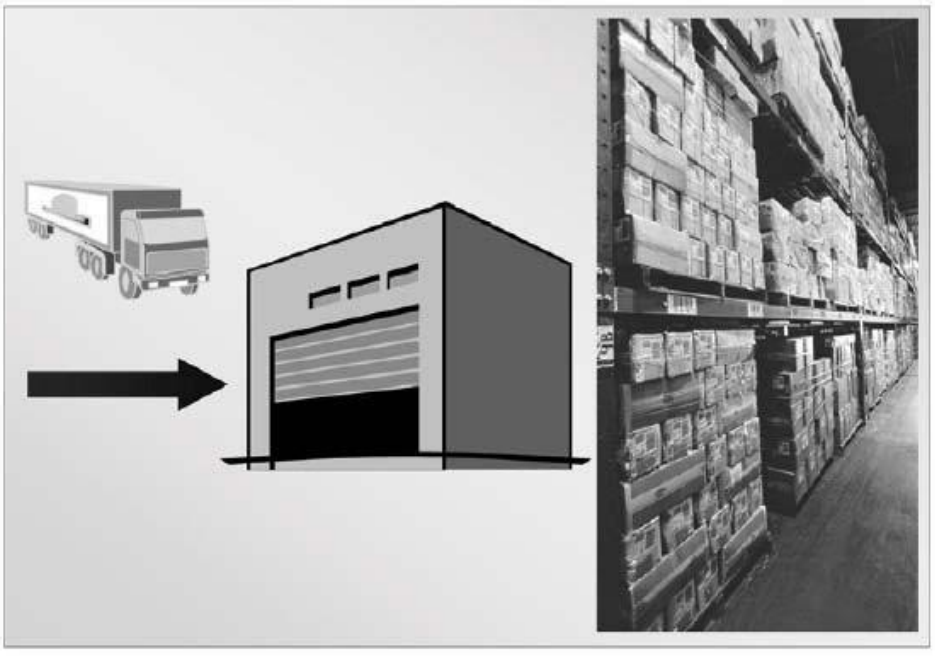


Figure 4-4: Goods Receipt

Invoice Verification

The procurement process is concluded by the invoice verification process, during which invoices and credit memos are entered and the contents and prices are checked for accuracy. However, payment and evaluation of invoices is not part of invoice

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verification; the appropriate information for these tasks passes on to other departments. Invoice verification, therefore, creates a link between Procurement and Accounting.

When you enter an invoice with reference to a purchase order, the system suggests data from the purchase order and the goods receipts for the purchase order (for example, vendor, material, quantity still to be invoiced, terms of payment, and so on).

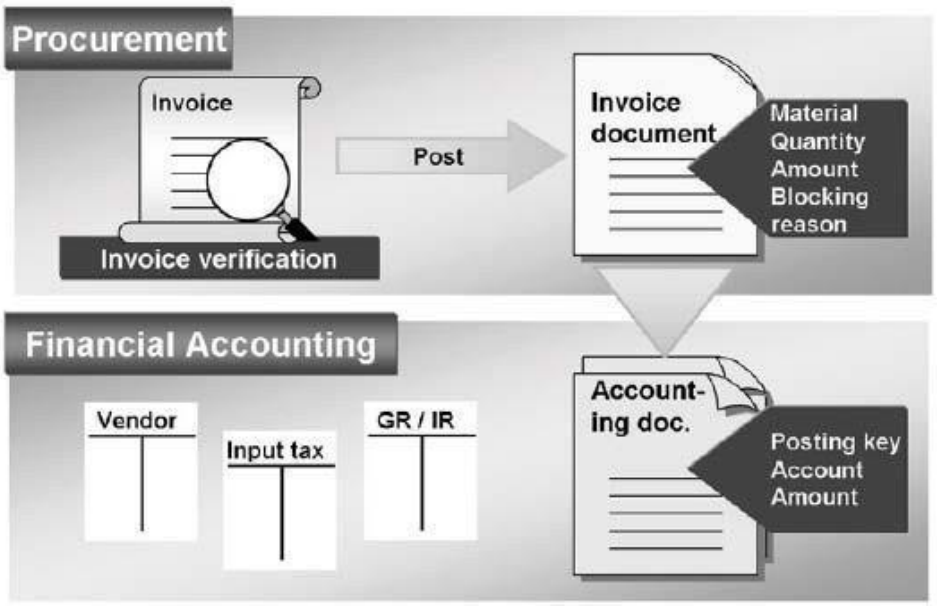


Figure 4-5: Invoice Verification

If there are discrepancies between the purchase order or goods receipt and the invoice, the system warns the user and, depending on the system configuration, blocks the invoice for payment.

The posting of the invoice completes the invoice verification process. The system updates the purchase order history and Financial Accounting initiates payment for the open invoice items.

Messages

You can issue all purchasing documents as messages. Each time you create an RFQ, purchase order, contract, or scheduling agreement, the system can create a message from the document affected. This message is then placed in the message queue. The message queue contains all messages that have not yet been transferred to the vendors. To issue the message (by printing, e-mail, fax, or EDI) from the message queue, you have the following options:

- Issue immediately: The system issues the message directly from the queue, in other words, as soon as you save the document.
- Issue later: Either you schedule a background job that processes the message queue in determined intervals, or you start the issue directly from the purchasing menu. As a rule, you issue the messages using the background

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job and start the issue manually only as an exception (such as for rush orders).

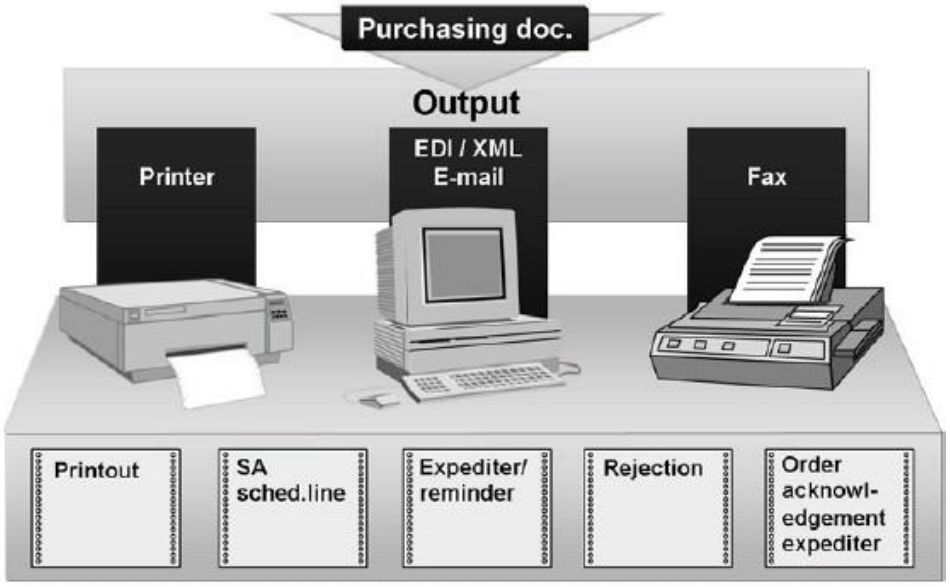


Figure 4-6: Messages

For the message issue, you can specify which header texts and item-based texts the system issues. The header text is printed at the top of the purchase order and contains general information. Item texts describe a purchase order item in more detail. You can also include and issue standard texts. In the ordering transaction, you can display a document on your screen before printing it.

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Exercise 4-1: Create a Purchase Order for a Stock Material

Exercise Objectives

After completing this exercise, you will be able to:

- Create a purchase order for a stock material

Business Example

As a buyer, you have been asked by the sales department to purchase 10 slugs for spiral casing for stock. To procure the material, you need to create a purchase order that can be forwarded to the vendor.

Task:

Create a purchase order for a stock material.

1. Using the data provided in the table, create a purchase order for a stock material. Record the purchase order.

Field	**Data**
Vendor	**Baltus*-##** (Baltus AG Gr.##)
Purchasing organization	**1000** (IDES Deutschland)
Purchasing group	**B##** (SAP01 GR.##)
Company Code	**1000** IDES AG
Material	**T-MM*-##** (Create in exercise 3-3)
PO Quantity	**10**
Plant	**1000** (Dresden)
Storage Location	**0001**
Purchase Order Number	

2. Display the purchase order.

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Solution 4-1: Create a Purchase Order for a Stock Material

Task:
Create a purchase order for a stock material.

1. Using the data provided in the table, create a purchase order for a stock material. Record the purchase order.

Field	Data
Vendor	**Baltus*-##** (Baltus AG Gr.##)
Purchasing organization	**1000** (IDES Deutschland)
Purchasing group	**B##** (SAP01 GR.##)
Company Code	**1000** IDES AG
Material	**T-MM*-##** (Create in exercise 3-3)
PO Quantity	**10**
Plant	**1000** (Dresden)
Storage Location	**0001**
Purchase Order Number	

a) From the *SAP Easy Access* menu, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create*.

b) Choose  *Vendor / Supplying Plant Known.*

c) Enter *Vendor*: **Baltus*-## (Baltus AG Gr.##).**



Hint: If you do not see the details in the header of the purchase order, choose  *Expand header* to expand the header area.

d) Select the *Org. data tab*.



Note: The *Org.data* tab should be the system default, so a user selection should not be required.

e) Enter *Purchasing org.*: **1000**.

f) Enter *Purch. group*: **B##.**

g) Enter *Company Code*: **1000**.

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h) Choose *Enter*.



Hint: If you do not see the details in the item area of the purchase order, choose *Expand items* to expand the item area.

i) Enter *Material*: **T-MM*-##**.

j) Enter *PO quantity*: **10**.

k) Enter *Plant*: **1000**.

l) Enter *stor. loc*: **0001**.

m) Choose *Enter*.

n) Choose *Save*.

You receive a system message that a purchase order was created. Record your purchase order number in the table provided.

Note: **Do not** return to the *SAP Easy Access* menu tree.

2. Display the purchase order.

a) Choose *Purchase order* → *other purchase order*.

Note: Your purchase order number will default, so a user entry is not required.

b) From within the dialog box, choose *other document*. Your purchase order will be displayed.

c) Choose *Exit* to exit the screen and return to the *SAP Easy Access* menu.

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Exercise 4-2: Create a Goods Receipt by Referencing a Purchase Order

Exercise Objectives

After completing this exercise, you will be able to:

- Enter a goods receipt with reference to a purchase order
- View the material document created by the good receipt

Business Example

You have received the shipment for the 10 pieces you ordered. Enter a goods receipt to stock for the order.

Task:

Enter a goods receipt to stock by referencing a purchase order and view the documents created by the receipt.

1. Using the data provided in the table, enter a goods receipt with reference to a purchase order. Record the material document.

Field	Data
Purchase order	**<the previous Exercise>**
Material	**T-MM*-##**
Quantity	**10**
Plant	**1000** (Hamburg)
Storage Location	**0001**
Material Document Number	

2. Display the material document.



Hint: You can display the material documents from the same transaction that you use to post goods issue (MIGO) by changing the pull-down default from *Goods Receipt* to *Display*.

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Solution 4-2: Create a Goods Receipt by Referencing a Purchase Order

Task:
Enter a goods receipt to stock by referencing a purchase order and view the documents created by the receipt.

1. Using the data provided in the table, enter a goods receipt with reference to a purchase order.

Field	Data
Purchase order	**<the previous Exercise>**
Material	**T-MM*-##**
Quantity	**10**
Plant	**1000** (Hamburg)
Storage Location	**0001**
Material Document Number	

a) From *the SAP Easy Access* menu, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Receipt* → *For Purchase Order*.

b) Choose  *GR for Purchase Order* (MIGO).

c) Enter *Purchase order*: <**purchase order number created in the previous exercise**>.



Hint: If you did not record your purchase order number, you may search for your purchase order number by choosing the binoculars icon and searching on the *Material* field using the material number **T-MM*-##.**

d) Choose  *Execute* or press **ENTER**.

e) Choose the *Where* tab. Verify that the *Plant* is **1000** and that the *Storage location* is **0001**

f) Check *Item* **OK**.

g) Choose  *Post* to post the goods receipt. You will receive a system message that a material document has been posted.



Hint: **Do not** return the to the SAP Easy Access menu.

2. Display the material document.



Hint: You can display the material documents from the same transaction that you use to post goods issue (MIGO) by changing the pull-down default from *Goods Receipt* to *Display*.

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a) Choose  *Display*.

b) Choose  *Execute*.

c) Choose  *Exit* to exit the screen and return to the *SAP Easy Access* menu.

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Exercise 4-3: Post an Invoice Using Logistics Invoice Verification

Exercise Objectives

After completing this exercise, you will be able to:

- Post a vendor's invoice

Business Example

Your vendor invoices you for the delivery of the 10 spiral casing slugs. You need to post the vendor's invoice.

Task:

Post the vendor's invoice for the 10 spiral casing slugs.

1. Using the data provided in the table, post an invoice. Record the invoice document.

Field	Data
Invoice date	`<current date>`
Reference	`234##`
Amount	
Tax Amount	
Purchase Order	`<PO created earlier>`
Invoice document	

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Solution 4-3: Post an Invoice Using Logistics Invoice Verification

Task:
Post the vendor's invoice for the 10 spiral casing slugs.

1. Using the data provided in the table, post an invoice. Record the invoice document.

Field	Data
Invoice date	<current date>
Reference	234##
Amount	
Tax Amount	
Purchase Order	<PO created earlier>
Invoice document	

a) From the *SAP Easy Access* menu, choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Document Entry*.

b) Choose  *Enter Invoice*.

c) Enter *Invoice date*: **<current date>.**

d) Enter *Reference*: **234##.**

e) Enter the *Purchase order* **<from the Previous Exercise>** in the Purchase *Order/Scheduling Agreement* field located on the *PO reference* tab.



Hint: To locate the purchase order number, use the F4 search option. You can search for the number by vendor. Select your PO number (45000*****) and copy**.**

f) Mark the Calculate tax box. The system will calculate the tax based on the sales tax code (in this case 16%)

g) Enter the total balance that the company must pay.



Hint: The total amount information (including tax) can be found on the upper right corner of the transaction. If the amount entered is correct, the balance must be 0.

h) Choose *Enter*.

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Hint: The invoice may be posted if the balance indicator is green. If the balance indicator is red or yellow, please contact your instructor.

i) Choose *Post*

j) Choose *Exit* to exit the screen and return to the *SAP Easy Access* menu

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Lesson Summary

You should now be able to:

- Outline the tasks associated within the procurement cycle
- Explain how SAP within mySAP ERP supports the key processes in Procurement

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Test Your Knowledge

1. What is the highest organizational unit?
   Choose the correct answer(s).

   ☐ A Company Code
   ☐ B Client
   ☐ C Storage Location
   ☐ D Plant
   ☐ E Purchasing Organization

2. A Purchasing Organization is the organizational unit responsible for negotiating pricing conditions with your suppliers.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

3. What type of master records can be used during the procurement process?
   Choose the correct answer(s).

   ☐ A Material Master
   ☐ B Vendor Master
   ☐ C Purchasing Information Record
   ☐ D Service Master
   ☐ E All of the above

4. Which of the following department views may be part of a material master record?
   Choose the correct answer(s).

   ☐ A Accounting
   ☐ B Purchasing
   ☐ C MRP
   ☐ D Sales
   ☐ E All of the above

5. A single material master record will be created even if more than one department uses this item.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

6. Which of the following are integration points with the Materials Management module?
   Choose the correct answer(s).

   ☐ A Dynamic availability checking during sales order entry (SD)
   ☐ B Staging of material components for production orders (PP)
   ☐ C Update to GL account for direct consumption upon goods' receipt entry (CO)
   ☐ D Notification of payment due sent to Accounts Payable upon goods' receipt entry (FI)

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☐ E None of the above
☐ F All of the above

7. What is the basic procurement process in SAP Materials Management?
Choose the correct answer(s).

☐ A Inquiry, sales order, purchase order, delivery
☐ B Purchase requisition, purchase order, goods' receipt, invoice receipt
☐ C Sales order, production order, purchase order
☐ D Goods receipt, purchase order, invoice receipt, vendor master

8. From which master data can information default into a purchase order?
Choose the correct answer(s).

☐ A Material Master
☐ B Customer Master
☐ C Purchase Requisition
☐ D Vendor Master
☐ E A&D
☐ F A&C&D

9. You can create a purchase order for a vendor or another plant within your organization. What do you call a purchase order sent to another plant?
Choose the correct answer(s).

☐ A Purchase Requisition
☐ B Accounting Document
☐ C Stock Transport Order
☐ D Production Order

10. When you enter an invoice with reference to a purchase order, the system suggests data from the purchase order and the goods receipts.
Determine whether this statement is true or false.

☐ True
☐ False

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Answers

1. What is the highest organizational unit?

   Answer: B

   Client is the highest organizational unit in all of the SAP application areas. A client is a self-contained unit in the SAP system with separate master records and its own set of tables.

2. A Purchasing Organization is the organizational unit responsible for negotiating pricing conditions with your suppliers.

   Answer: True

   A Purchasing organization negotiates purchasing conditions for plants to which it has been assigned. A Purchasing group is a buyer or group of buyers who are responsible for specific purchasing operational tasks.

3. What type of master records can be used during the procurement process?

   Answer: A, B, C, D, E

   All master records can be a source of data during the procurement process. This minimizes data entry by copying the data from existing master records as default values into the purchasing documents.

4. Which of the following department views may be part of a material master record?

   Answer: A, B, C, D, E

   The material master contains all of the key information a company needs to manage a material within its organization. The material master defines among other things how a product is sold, manufactured, purchased, inventoried, accounted, and costed. The information in the material master is grouped into views that are organized by business function.

5. A single material master record will be created even if more than one department uses this item.

   Answer: True

   The SAP system is designed so multiple departments share the same material master record.

6. Which of the following are integration points with the Materials Management module?

   Answer: A, B, C, D, F

   The Materials Management module has numerous integration points with the other SAP modules and is considered an integral part to any SAP system landscape.

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7. What is the basic procurement process in SAP Materials Management?

   Answer: B

   In the SAP Materials Management module, the standard flow of transactions in the basic procurement process is as follows: Purchase requisition processing → Purchase order processing → Goods' receipt entry → Invoice receipt entry.

8. From which master data can information default into a purchase order?

   Answer: E

   Data from the material master and vendor master can default into a purchase order. A purchase requisition is not a type of master data.

9. You can create a purchase order for a vendor or another plant within your organization. What do you call a purchase order sent to another plant?

   Answer: C

   A stock transport order is a purchase order sent by one internal plant to another.

10. When you enter an invoice with reference to a purchase order, the system suggests data from the purchase order and the goods receipts.

    Answer: True

    An advantage of entering an invoice with reference to a purchase order is that the system suggests this data, thereby eliminating the need to re-enter the data.

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Lesson: Sales Order Management

Lesson Overview

In this lesson you will gain an understanding of the Sales Order processes and how Sales Order Management is integrated within other solutions.

Lesson Objectives

After completing this lesson, you will be able to:

- Outline the tasks associated with sales order management
- Explain how SAP within mySAP ERP supports the key processes in sales order management

Business Example

Your company, IDES, is selling products to various customers. Timely handling and delivery of sales orders is key to their business success.

Sales Order Process Overview

mySAP ERP provides superior insight into sales back-office processes, including: inquiries, quotations, order generation, contract, and billing cycle management. Businesses benefit from a complete overview of the customer life cycle, including order status, billing, payment, and credit management. In addition to the back-office features, mySAP ERP also supports Internet sales, sales entered through mobile devices such as handhelds, and basic call center functionality.

The Sales Order Processing (or order to cash) scenario describes the complete process, starting with pre-sales activities, moving to the creation of the sales order, continuing with the sales order fulfillment, and ending with the invoicing of the sales order and the parallel process of the creation of the posting in financial accounting.

The basic sales order processing cycle for a service or material consists of the following phases:

Pre-Sales Activities

Pre-sales activities can be inquiries or quotations entered in the system. These can then be used as reference during the creation of a sales order.

Sales Order Creation and Availability Check

The sales order can adopt information from the pre-sales documents (a quotation or an inquiry). Sales scheduling agreements or sales contracts (long-term sales agreements) can also be created with reference to a sales order and are supported by the sales process steps.

During the creation of the sales order, the availability of the material can be checked to confirm the customer's requested delivery date.

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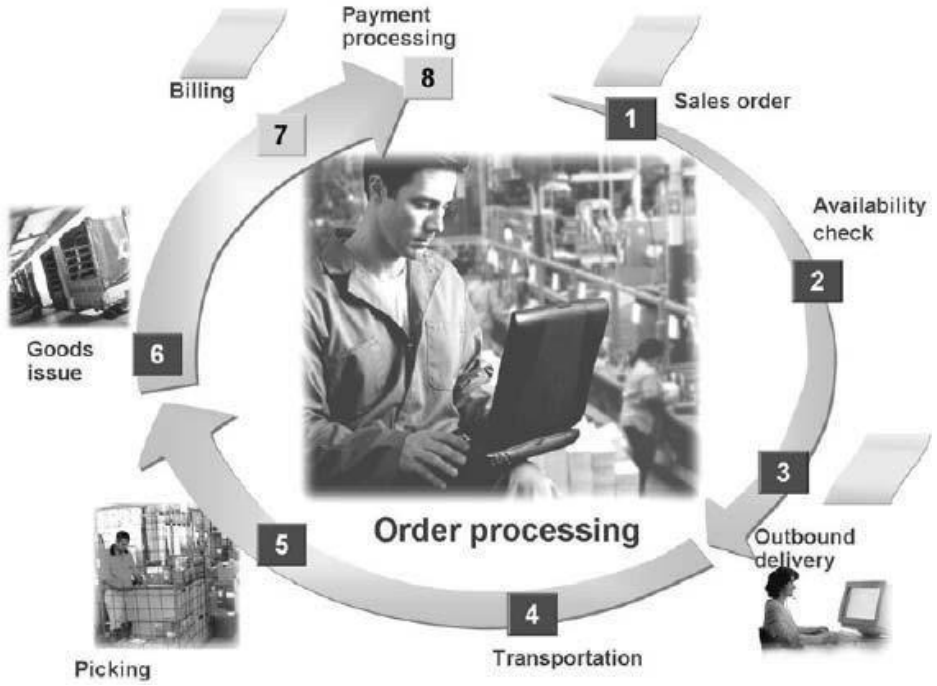


Figure 4-7: Sales Order Management

Delivery and Goods Issue
An outbound delivery is the basis for a process when the goods are physically moved as well as for the posting of the goods issue. Picking can be fulfilled through the use of the Warehouse Management system and transportation can be planned and carried out.

Billing
As the final step in the sales process, an invoice is issued, which must also be reflected in accounting.

Sales Order

During sales order creation, the system can carry out basic functions:

- Monitoring sales transaction
- Checking for availability
- Transferring requirements to material requirements planning (MRP)
- Scheduling delivery
- Calculating pricing and taxes
- Checking credit limits
- Creating printed or electronically transmitted documents

Depending on how the system is configured, these basic functions may be completely automated or may require some manual processing. The data resulting from these basic functions (for example, shipping dates, confirmed quantities, prices, and discounts) is stored in the sales document. The resulting data can be displayed by a user and, in some cases during subsequent processing, manually changed by the user.

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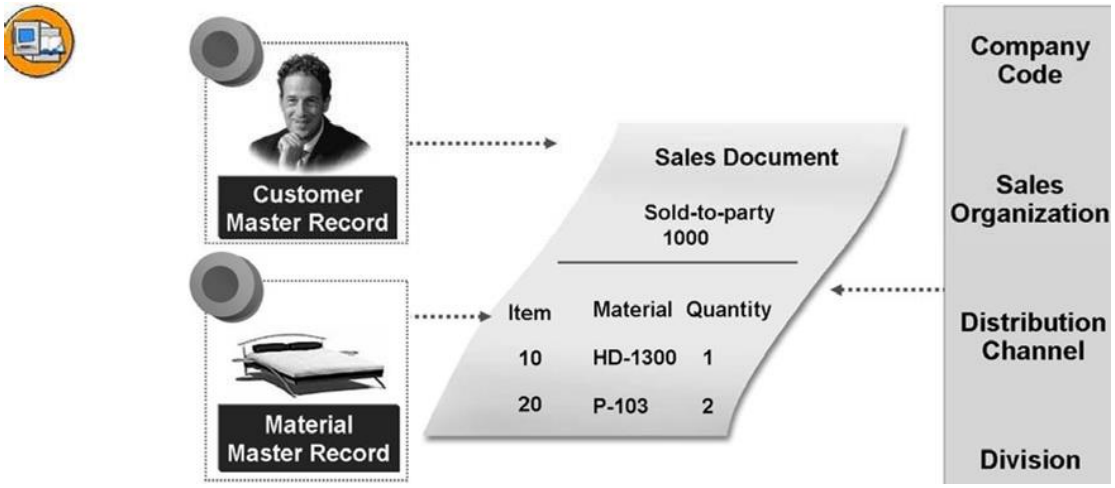


Figure 4-8: Sales Order

Delivery

Shipping is an important part of the logistics chain.

In shipping processing, all delivery procedure decisions can be made at the start of the process by:

- Taking into account general business agreements with your customer
- Recording special material requests
- Defining shipping conditions in the sales order

The result is an efficient and largely automatic shipping process in which manual changes are necessary only under certain circumstances.

Shipping Functions

The shipping module supports the following functions, which include but are not limited to:

- Deadline monitoring for reference documents due for shipment (sales orders and purchase orders, for instance)
- Creating and processing outbound deliveries
- Packing deliveries
- Information support for transportation planning
- Supporting foreign trade requirements
- Printing and transmitting shipping documents
- Processing goods issue
- Deliveries currently in process
- Activities that are still to be carried out
- Identifying possible bottlenecks

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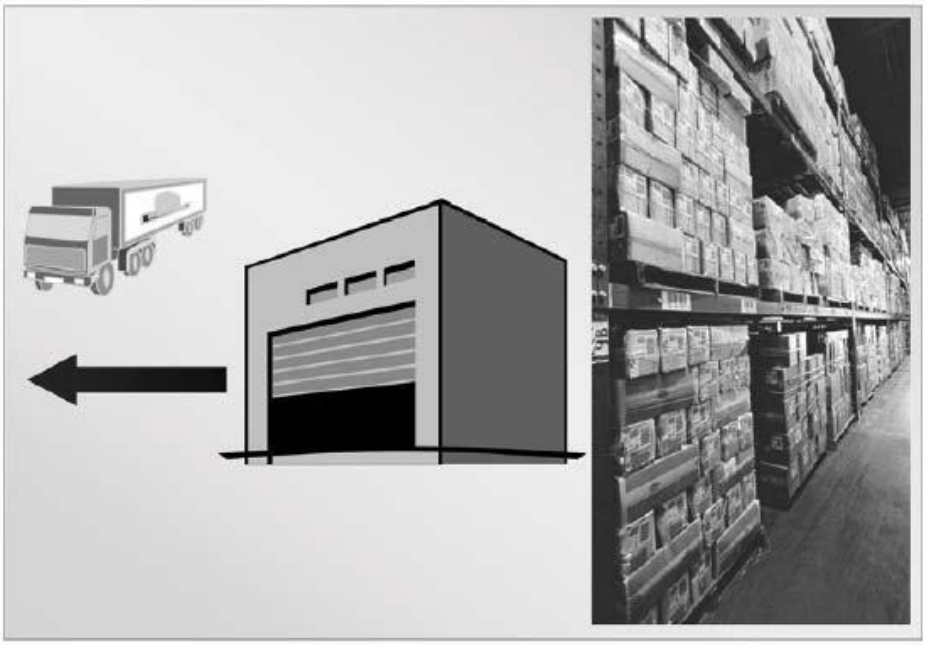


Figure 4-9: Delivery and Goods Issue

The most commonly used document used to support delivery processed is the Outbound Delivery document. In its role as central object of the goods issue process, outbound delivery supports all shipping activities, including picking, packing, transportation, and goods issue. During the outbound delivery process, shipping-planning information is recorded, status of shipping activities is monitored, and data accumulated during shipping processing is documented. When the outbound delivery is created, the shipping activities, such as picking or delivery scheduling, are initiated, and data that is generated during shipping processing is included in the delivery.

Range of Functions
An outbound delivery can be created as follows:

- With reference to a sales order
- With reference to a stock transport order
- With reference to a subcontract order
- With reference to a project
- Without any reference

Depending on your requirements, you can create outbound deliveries automatically or manually using worklists . You can make agreements with your customers for complete and partial deliveries and for order combinations. Outbound deliveries can be combined to form a single group of deliveries.

A variety of warehouse and sales overview reports allow you to monitor created outbound deliveries and outstanding sales activities.

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Picking the Delivery
The picking process involves taking goods from a storage location and staging the goods in a picking area where the goods will be prepared for shipping.

Picking Functions
System settings will allow picking to be carried out:

- Automatically (during outbound delivery creation)
- Routinely (at certain times)
- Manually (via an employee request)

A picking status is recorded in each delivery item for the purpose of scheduling and monitoring. This status indicates where the item is in the picking procedure.
In the system standard settings, it is a prerequisite for a goods issue to be posted before the item is considered relevant for picking. Therefore, a delivery quantity must equal a picking quantity in the outbound delivery.

The Warehouse Management system (WM) is fully integrated in the Logistics Execution System (LES). For example, you can create a Warehouse Management transfer order directly from the outbound delivery. The current status of the Warehouse Management process can also be monitored from the delivery or from the sales order.

Goods Issue Posting Functions
The outbound delivery forms the basis of goods issue posting. The data required for goods issue posting is copied from the outbound delivery into the goods issue document, which cannot be changed manually. Any changes must be made in the outbound delivery itself. After goods issue is posted for an outbound delivery, the scope for changing the delivery document becomes very limited. This prevents any discrepancies between the goods issue document and the outbound delivery. In this way, you can be sure that the goods issue document is an accurate reflection of the outbound delivery.

When you post goods issue for an outbound delivery, the following functions are carried out:

1. Warehouse stock of the material is reduced by the delivery quantity
2. Value changes are posted to the balance sheet account in inventory accounting
3. Requirements are reduced by the delivery quantity
4. The serial number status is updated
5. Goods issue posting is automatically recorded in the document flow
6. Stock determination is executed for the vendor's consignment stock
7. A worklist for the proof of delivery is generated

You can post goods issues in the following ways:

- Automatically (during outbound delivery creation)
- Routinely (at certain times)
- Manually (via an employee request)

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Billing
Billing represents the final processing stage for a business transaction in sales order processing. Information on billing is available at every stage of order processing and delivery processing.

Billing functions include:

- Creation of invoices based on deliveries or services
- Issue of credit and debit memos and pro forma invoices
- Canceling billing transactions
- Comprehensive pricing functions
- Issue rebates
- Transfer billing data to financial accounting

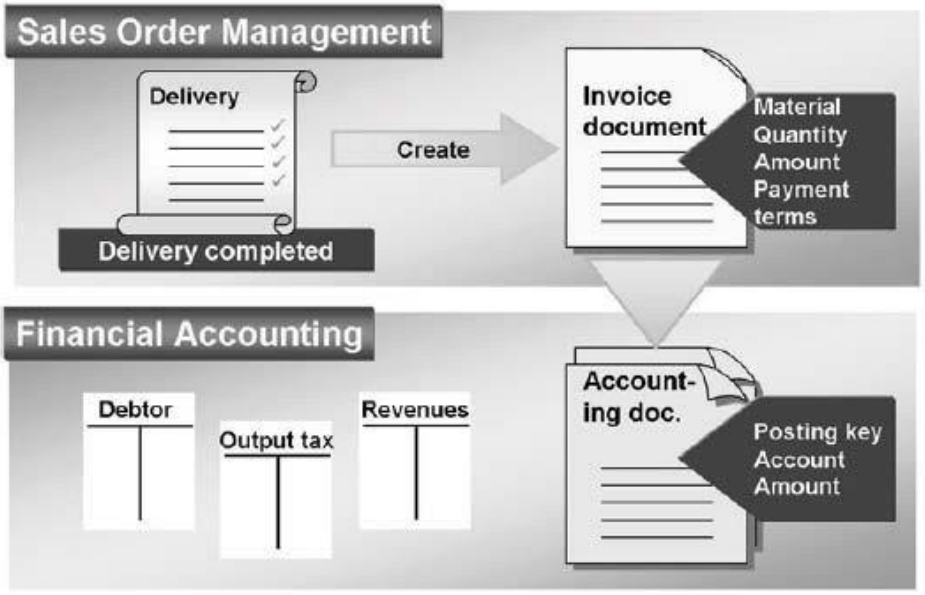


Figure 4-10: Billing

Like all parts of sales order processing in mySAP ERP, billing is integrated into the organizational structures. Thus, you can assign the billing transactions a specific sales organization, a distribution channel, and a division. Because billing has an interface to financial accounting, the organizational structures of the accounting department (the company codes as well as the sales organizations assigned to the company codes) are important.

During a billing processing it is possible for you to create, change, and delete billing documents.

It is possible to create billing documents:

- With reference to a sales order document
- With reference to a delivery document
- With reference to external transactions

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- By having the system automatically process a billing due list as a background task
- By manually processing from a worklist
- By creating a billing document explicitly
- By combining several sales order documents into a collective billing document
- By billing one or more sales order documents with several billing documents (this is called an invoice split)
- By creating an individual billing document for every sales document

Billing and Financial Accounting
The system automatically posts the amounts to the appropriate accounts by means of account determination.

Costs and revenue can be posted to the following accounts:

- Customer accounts receivable
- General ledger (for example, a cash clearing account)
- Revenue
- Sales deductions
- Accruals (for rebate agreements)
- Accrual account
- Accrual clearing account

Document Flow
The sales documents you create are individual documents, but they can also form part of a chain of interrelated documents. For example, you may record a customer's telephone inquiry in the system. The customer next requests a quotation, which you then create by referring to the inquiry.

The customer later places an order on the basis of the quotation and you create a sales order with reference to the quotation. You ship the goods and bill the customer. All of these separate documents reference one another through document flow.

After delivery of the goods, the customer claims credit for some damaged goods and you create a free-of-charge delivery with reference to the sales order. The entire chain of documents – the inquiry, the quotation, the sales order, the delivery, the invoice, and the subsequent delivery free of charge – creates a document flow, or history. The flow of data from one document into another reduces manual activity and makes problem resolution easier.

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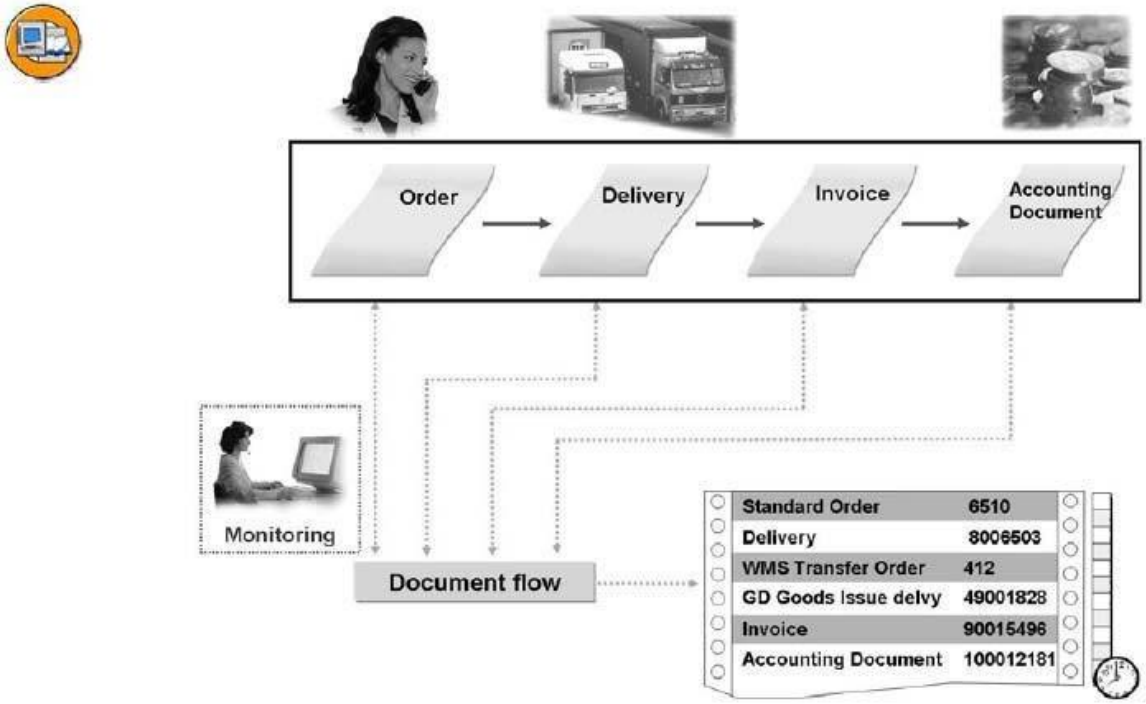


Figure 4-11: Document Flow

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Exercise 4-4: Create a Sales Order (by copying a Sales Quotation)

Exercise Objectives

After completing this exercise, you will be able to:

- Create a sales order

Business Example

A customer has faxed a sales order and it is your job, as a customer service representative, to enter the order into your system.

Task:

Create a sales order.

1. Using the information provided in the table, create a standard order.

Field	Data
Order Type	`OR` (Standard order)
Sales organization	`1000` (Germany Frankfurt)
Distribution channel	`10` (Final customer sales)
Division	`00` (Cross-division)

2. Using the information provided in the table, continue creating the order. Record the sales order document.

Field	Data
Sold-to party	**Rohrer*-##** (Rohrer AG Gr.##)
Purch. Order no.	**Group-##**
Req. deliv.date	**<Today + 1 weeek>**
Material	**T-MM*-##** **<from Exercise 3-3>**
Order Quantity	**10**
Sales Order number	

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Solution 4-4: Create a Sales Order (by copying a Sales Quotation)

Task:
Create a sales order.

1. Using the information provided in the table, create a standard order.

Field	Data
Order Type	OR (Standard order)
Sales organization	1000 (Germany Frankfurt)
Distribution channel	10 (Final customer sales)
Division	00 (Cross-division)

   a) From the *SAP Easy Access* menu, choose *Logistics* → *Sales and Distribution* → *Sales* → *Order*.

   b) Choose *Create*.

   c) Enter *Order Type*: **OR**.

   d) Enter *Sales Organization*: **1000**.

   e) Enter *Distribution Channel*: **10**.

   f) Enter *Division*: **00**.

   g) Choose *Enter*.

2. Using the information provided in the table, continue creating the order. Record the sales order document.

Field	Data
Sold-to party	**Rohrer*-##** (Rohrer AG Gr.##)
Purch. Order no.	**Group-##**
Req. deliv.date	**<Today + 1 weeek>**
Material	**T-MM*-##** <from Exercise 3-3>

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Order Quantity	**10**
Sales Order number	

a) Enter *Sold-to party*: **Rohrer*-##.**

b) Enter *Purch. Order no.*: **Group-##.**

c) Choose *Enter*.



Hint: Make sure you are on the Sales tab on the order entry screen

d) Enter *Req. deliv date*: <**Today + 1 week**>.

e) Enter *Material*: **T-MM*-##**.

f) Enter *Order quantity*: **10**.

g) Choose *Enter*.



Hint: If an information dialog box appears, choose Enter to confirm that you have read the information.

h) Choose *Save* and record the document number in the table provided.



Hint: The system displays a message that the sales order has been saved with the sales document number. This number appears on the status bar on the bottom left-hand corner of the order window.

i) Choose *Exit* to exit the screen and return to the *SAP Easy Access* menu.

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Exercise 4-5: Create a Delivery

Exercise Objectives

After completing this exercise, you will be able to:

- Create a delivery document with reference
- Post the inventory goods issue with reference
- View Document Flow

Business Example

You have been notified that your customer's order is ready to ship.

Task:

Create a delivery document with reference to your customer's order. Post the delivery document in the system. Verify that the shipping documents were processed by using the sales document flow.



Note: This exercise uses the sales order number created in the previous exercise.

1. Using the information provided in the table, create a delivery document. Record the delivery document number.

Field	Data
Order	**<Sales order number created in the previous exercise>** If necessary, this order number can be found by searching for *Purchase order no.* Group-##
Shipping point	**1000** (Shipping Point Hamburg)
Selection Date	**<Today + 1 week>**
Delivery	

2. Post the goods issue for the delivery and view the document flow. Record your findings in the table provided.

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Solution 4-5: Create a Delivery

Task:
Create a delivery document with reference to your customer's order. Post the delivery document in the system. Verify that the shipping documents were processed by using the sales document flow.



Note: This exercise uses the sales order number created in the previous exercise The sales order number should default.

1. Using the information provided in the table, create a delivery document. Record the delivery document number.

Field	Data
Order	**<Sales order number created in the previous exercise>** If necessary, this order number can be found by searching for *Purchase order no.* Group-##
Shipping point	**1000** (Shipping Point Hamburg)
Selection Date	**<Today + 1 week>**
Delivery	

a) From the *SAP Easy Access* menu, choose *Logistics* → *Sales and Distribution* → *Shipping and Transportation* → *Outbound delivery* → *Create* → *Single Document*.

b) Choose *With Reference to Sales Order*.

c) Enter *Shipping point*: **1000**.

d) Enter *Selection date*: **<Today + 1 week>**.

e) If needed, enter the *Order*: **<use the sales order number created earlier>.**



Note: The sales order number should default.



Hint: You can locate the sales order number in the system by using the matchcode F4 to search for the sales order by the Purchase order no.: Group -##.

f) Choose *Enter*.

g) Choose *Save*. Record the delivery document number in the table provided.

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2. Post the goods issue for the delivery and view the document flow. Record your findings in the table provided.

   a) From the *SAP Easy Access* menu, choose *Logistics* → *Sales and Distribution* → *Shipping and Transportation* → *Outbound delivery* → *Change* → Single Document.

   b) Choose 

Post goods issue.

    **Hint:** The delivery document number should default
   .

   c) Choose the Post goods issue icon from the application toolbar.

    **Hint**: The document will be saved and the posting performed. This is indicated by the message in the message status bar.

    **Hint**: Do not back out of the *Change Outbound Delivery* screen!

   d) Choose  *Document flow*. Record the documents in the table provided above.

   e) Choose  *Exit* to exit the screen.

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Exercise 4-6: Create a Sales Order Billing Document

Exercise Objectives

After completing this exercise, you will be able to:

- Create a billing document with reference

Business Example

The customer received the ordered materials. Bill your customer by sending him an invoice.

Task:

Create a billing document. Verify that the billing document was created by using the sales document flow.

1. Using the outbound delivery document created in the previous exercise, create a billing document.
2. Display the document flow and record your findings in the table provided.

Document	Document number	Status
Standard order		
Delivery		
Invoice		
Accounting Document		

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Solution 4-6: Create a Sales Order Billing Document

Task:
Create a billing document. Verify that the billing document was created by using the sales document flow..

1. Using the outbound delivery document created in the previous exercise, create a billing document.

   a) From the *SAP Easy Access* menu, choose *Logistics* → *Sales and Distribution* → *Billing* → *Billing Document*.

   b) Choose *Create*.

   c) Check the *Document number*.

   Hint: Your delivery document number should default so a user entry is not required.

   d) Choose *Save*.

   Hint: The document will be saved and the posting performed. This is indicated by the message in the message status bar.

   e) Choose *Exit* to exit the screen and return to the *SAP Easy Access* menu.

2. Display the document flow and record your findings in the table provided.

Document	Document number	Status
Standard order		
Delivery		
Invoice		
Accounting Document		

   a) From the *SAP Easy Access* menu, choose *Logistics* → *Sales and Distribution* → *Billing* → *Billing Document*.

   b) Choose *Display*.

   Hint: Your delivery document number should default, so a user entry is not required.

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Hint: You do not have to enter the document to view the document flow.

c) Choose  *Document flow* from the Application toolbar. Record your findings in the table provided.

d) Choose  *Exit* to exit the screen and return to the *SAP Easy Access* menu.

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Lesson Summary

You should now be able to:

- Outline the tasks associated with sales order management
- Explain how SAP within mySAP ERP supports the key processes in sales order management

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Lesson: Production

160 Lesson Duration: 60 Minutes

Lesson Overview

In this lesson you will gain an understanding of production processes and how production is integrated within other solutions.



Lesson Objectives

After completing this lesson, you will be able to:

- Outline the tasks associated with production planning and manufacturing execution
- Explain how mySAP ERP supports key processes in production



This lesson is about the production planning and manufacturing process in mySAP ERP. Instructor demos include: Running MRP creating,confirming, and settling a production order.

Business Example

Your company, IDES, has several production locations distributed all around the world. Depending on the material production complexity, multiple production steps are necessary to produce the finished products.

Production

With support for all manufacturing strategies for businesses in the discrete process and consumer products industries, mySAP ERP helps enterprises manage the full range of manufacturing activities, from planning to execution and analysis, in a single, end-to-end system. mySAP ERP delivers all elements of a customer-oriented manufacturing management system and is fully compatible with Just-in-Time (JIT) and Kanban methodologies.

By combining information from a variety of business processes (including planning, cost accounting, Human Capital Management, materials management, Warehouse Management, plant maintenance, and quality management), mySAP ERP supports the development and execution of efficient production plans and ensures that accurate, comprehensive information is available at any time to those who need it. Businesses can share manufacturing information across the enterprise and supply network to coordinate production processes and promote cooperation. In addition, data from plant process control and data-collection systems can be incorporated as well, enhancing decision making by including accurate production data.

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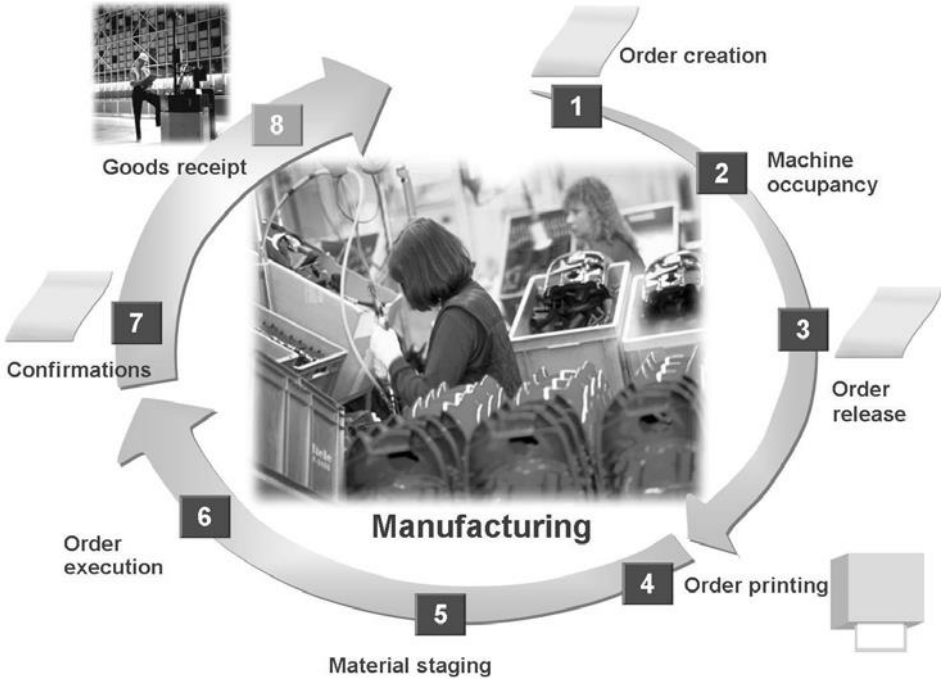


Figure 58: Production

Manufacturing and production in mySAP ERP, in cooperation with all other integrated SAP applications, does much more than just facilitate efficient production. It establishes critical links between sales, production planning, and the factory floor. SAP integrates your supply chain processes to make the enterprise as competitive as possible. It integrates seamless with external real-time process control and laboratory information systems. This represents a significant advancement for information systems in the repetitive manufacturing and process industries. SAP offers full integration between its project planning, material requirements planning (MRP), and shop floor control system modules. Standard interfaces link SAP to external CAD, product data management, and plant data collection systems. Therefore, mySAP ERP is also the state-of-the-art manufacturing system for discrete manufacturers and engineering-to-order companies.

Planning Process Overview

Multiple forecasting models and strategies can assist you in making the best choice. Models are selected through the system using built-in intelligence, while mySAP ERP continuously checks the validity of the model. You can incorporate the impact of events, such as marketing promotions and seasonal influences, into the forecasts. You can even override individual values of past demands and forecasts. Full integration within mySAP ERP makes periodic forecast revisions easy. You can break down forecast demands from the planning level to the level of the individual product. Rough-cut capacity planning at the planning level provides

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a reality check of resource bottlenecks. Forecasts are easily transferred to Demand Management and Master Production Scheduling (MPS), where they can be offset by incoming sales orders. You can also add unexpected demands any time.





Figure 59: Production Planning

This section provides a high level overview of the manufacturing planning and execution process in SAP. Briefly explain that the planning process uses forecasts and customer demand to create production and procurement schedules for finished products and component materials. The overall manufacturing planning and execution process is as follows:

Sales and Operations Planning (SOP):

Generates sales plans and/or production plans using forecast values and requirements from the sales information system and costing/profitability analysis as inputs for determining requirements. Requirements are reflected in the system as planned quantities of a product over a given period of time and are not necessarily created on the basis of a customer requirement.

Demand Management:

Connects forecasting functionality with production scheduling. Also determines requirement quantities and dates for finished products and assemblies based on the plans from SOP.

Master Production Scheduling (MPS):

Allows for critical resources to be planned with extra attention. MPS is an optional step in the planning process.

Materials Requirements Planning (MRP):

Detailed planning of replenishment schedules for required components. The output of MRP is either a planned order or a purchase requisition.

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Manufacturing Execution:

Includes several steps: creation and release of a production order, goods issues of components, confirmation of production activity, and goods receipts of the finished goods.

Order Settlement:

Allocation of costs from the production order to another object (ex. sales order, cost center, scrap account, etc.).

There is no demo or exercise for planning.

Planning is generally divided into several steps. These steps may be executed independent of each other, or they may collaborate.

Sales and Operations Planning

Sales and Operations Planning (SOP) generates sales plans and production plans using forecast values and requirements from the Sales Information System and costing/profitability analysis as inputs for determining requirements. The requirements are reflected in the system as planned quantities of a product over a given period of time, and are not necessarily created on the basis of a customer requirement.

Demand Management

In Demand Management forecasting, functionality is connected with production scheduling. Requirement quantities and dates for finished products and assemblies based on the plans from SOP are determined.

Master Production Scheduling

Master Production Scheduling (MPS) allows for critical resources or top-level items to be planned with extra attention. This procedure ensures that the instabilities in planning are kept to a minimum. MPS is an optional step in the planning process.

Material Requirements Planning

Material Requirements Planning (MRP) is the detailed planning of replenishment schedules for required components. The output of MRP is either a planned order or a purchase requisition.



To make the lesson not too complicate there is no real demo of planning included. To create a demand for production the material R-F100 is set to Make-to-order production (by CATT). After creating a sales order you can do a MRP run and subsequently create a production order.



Hint: It is recommended to have two sessions, one for the Stock/Requirements List, one for the rest of the transactions.

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If you still think that this is too extensive, you can use material R-F130 (or any R-F1xx which is above what you need for your students) and show a demo which corresponds to the exercise.



Demonstration: Create a Sales Document

Purpose

In order to create a production demand a sales order is needed.

System Data

System: Your training system
Client: Your client
Fser ID: Your user ID
Password: Your password
Set up instructions: No special setup is necessary

1. Choose *Logistics* ➢ *Sales and Distribution* ➢ *Sales* ➢ *Order* ➢ *Create*
2. ’sing the data specified below, create a sales order.

Field	Data
Order type	**Standard Order** (OR)
Sales Organization	**1000** (Germany Frankfurt)
Distribution channel	**10** (Final customer sales)
Division	**00** (Cross-division)
Sold-to party	**Rohrer00** (Rohrer AG Gr.00)
Purchase order number.	**Production**
Requested delivery date	**Today + 1 month**
Material	**R-F100** (Pump)
Order Quantity	**10**

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3. Choose *Save*

Demonstration: Display the StocklRequirements List

Purpose

Display the Stock/Requirements List to show the required quantity.

System Data

System: Your training system
Client: Your client
Fser ID: Your user ID
Password: Your password
Set up instructions: No special setup is necessary

1. Choose *Logistics* ➢ *Production* ➢ *MRP* ➢ *Evaluations* ➢ *Stock/Requirements List*
2. Enter *Material*: **`R-F100`** and *Plant*: **`1000`**.
3. Press *Enter* or choose *Continue*.
4. Highlight the sales order you created and the resulting customer stock which needs to be built up.

Demonstration: Run the MRP process

Purpose

Run the Material Requirements Planning program to create a planned order.

System Data

System: Your training system
Client: Your client
Fser ID: Your user ID
Password: Your password
Set up instructions: No special setup is necessary

1. Choose *Logistics* ➢ *Production* ➢ *MRP* ➢ *Planning* ➢ *Single-Item, Multi-Level*
2. 'sing the data specified below, start the MRP run.

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Field	Data
Material	**R-F100**
MRP area	**1000**
Plant	**1000**

The rest of the entries you can leave as they are (they are written below just for continuity).

Field	Data
Processing key	**NETCH**
Create purchase req.	**2**
Delivery schedules	**3**
Create MRP list	**1**
Planning mode	**1**
Scheduling	**1**

Leave the *Process control parameters* unchecked.

3. Press *Enter*or choose *Continue*.

Hint: You have to confirm the input parameters by pressing *Enter* again.You can use this to explain to the students how to continue with a warning message. But the students will not do an MRP run in their exercise, so you can also cut it short.

The MRP results screen, which will appear at the end of the run, summarizes the proposals created by the MRP program.

4. Explain the results briefly. Why are there 5 different materials–

Demonstration: Display Bill of Material

Purpose

Explain the reason and result of the Multi-Level MRP run by showing the Bill of Material for T-F100.

System Data

System: Your training system
Client: Your client

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Manufacturing Execution:

Includes several steps: creation and release of a production order, goods issues of components, confirmation of production activity, and goods receipts of the finished goods.

Order Settlement:

Allocation of costs from the production order to another object (ex. sales order, cost center, scrap account, etc.).

There is no demo or exercise for planning.

Planning is generally divided into several steps. These steps may be executed independent of each other, or they may collaborate.

Sales and Operations Planning

Sales and Operations Planning (SOP) generates sales plans and production plans using forecast values and requirements from the Sales Information System and costing/profitability analysis as inputs for determining requirements. The requirements are reflected in the system as planned quantities of a product over a given period of time, and are not necessarily created on the basis of a customer requirement.

Demand Management

In Demand Management forecasting, functionality is connected with production scheduling. Requirement quantities and dates for finished products and assemblies based on the plans from SOP are determined.

Master Production Scheduling

Master Production Scheduling (MPS) allows for critical resources or top-level items to be planned with extra attention. This procedure ensures that the instabilities in planning are kept to a minimum. MPS is an optional step in the planning process.

Material Requirements Planning

Material Requirements Planning (MRP) is the detailed planning of replenishment schedules for required components. The output of MRP is either a planned order or a purchase requisition.



To make the lesson not too complicate there is no real demo of planning included. To create a demand for production the material R-F100 is set to Make-to-order production (by CATT). After creating a sales order you can do a MRP run and subsequently create a production order.



Hint: It is recommended to have two sessions, one for the Stock/Requirements List, one for the rest of the transactions.

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Briefly explain the result.

Note: You might want to explain that in the further process we do not take care about the requirements for the materials in the BOM. We can still produce the final product, as the first step of the routing (material staging) is not controlled in our demo and the exercise.

Execution



This section introduces the participants to the functionality and contents of a production order in the SAP system. The production order contains information like production dates and quantities, components required and production costs.

The production order is the central data object in shop floor control and manufacturing execution. The production order contains all data relevant to production objectives, material components, required resources, and costs. A normal production order covers the demand for a single material or product, but you can also produce multiple products jointly in one production order (co-products) and distribute incurred costs between the different products. In a production order, you can also specify external operations that are to be processed in an outside workshop. If you need to carry out a rework, you can create a separate rework order that is directly assigned to the primary production order. Alternatively, you can insert specific rework operations into an existing order.

Production orders are usually created from planned orders. The complete process includes several steps:

- Creation and release of a production order
- Goods issues of components
- Confirmation of production activity
- Goods receipts of the finished goods

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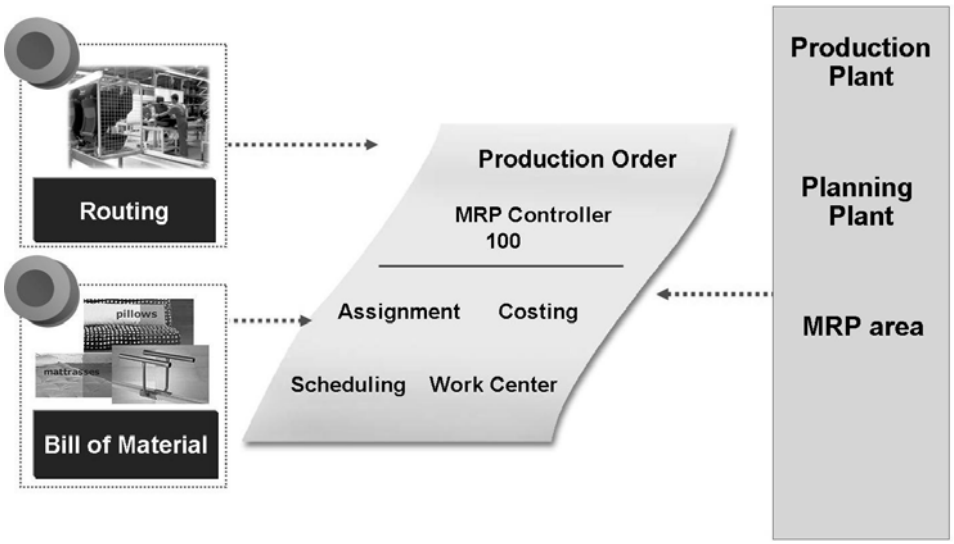


Figure 60: Production Order

You must release a production order before you can process it. Once you have set the order status to Released, you can print shop floor papers, issue materials from stock, and confirm operations. Before you release a production order, you have to make sure that sufficient manufacturing capacity is available. You can use the Graphic Planning Table to get an overview of your short-term orders and release production orders.

When you release a production order, you can set up the system to check the availability of components and production resources or tools. You can even specify the type of availability check to be carried out (Available-to-Promise (ATP) calculation) per order type. For example, you can work with either dynamic or static availability checking. When you customize your system, you can specify whether an order can be released even though it may have missing parts or production resources. You can either release production orders individually, order by order, or you can release them as a group, when the order start dates reach the release horizon. You can release all orders within a collective order in one step, or you can set up the system so that production orders are released as soon as they are created. You can release production orders operation by operation, if, for example, operation times are rather long and work center assignment for an operation is only carried out after the previous operation has finished (for example, at a components plant in the aircraft industry or during assembly of precision instruments).

Order Confirmation and Goods Receipt

This section discusses the different types of order confirmations, as well as the handling of the goods receipts (GR) for the manufactured goods. Explain that production order confirmations record internal activities carried out for the order. A confirmation can record the following: quantity produced by operation,

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personnel, production dates, goods movements and amount of activity (i.e. labor hours). A confirmation can reduce capacity on the work center, update costs, and/or automatically trigger the GR of the manufactured goods.

You confirm production order operations to deliver feedback to sales order processing and shop floor planning. Completion confirmations collect important data, such as quantities produced, scrap, production times, and completion dates. Completion confirmations clear capacity loads and collect data for production cost controlling. Confirmed labor can be transferred to mySAP ERP Human Capital Management.

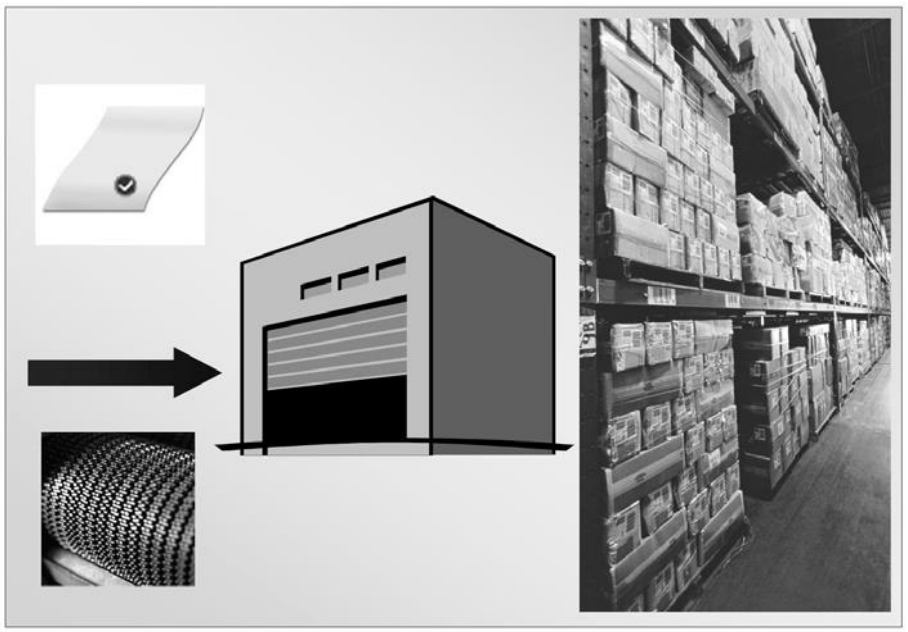


Figure 61: Confirmation and Goods Receipt

Completion Confirmations

The following types of completion confirmations are possible:

Milestone completion confirmations

The system confirms all preceding operations, including sub-operations, up to the previous milestone. mySAP ERP bases confirmations on reported quantities (yield plus scrap) and standard times.

Standard completion confirmations

The operations are confirmed using target values.

Normal completion confirmations

You conduct individual completion confirmations, seeing target values as defaults. The system allows you to overwrite all input values so you can report variances in the production process.

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Collective completion confirmations

The system displays a fast entry screen where you can enter multiple operations to confirm.

Completion confirmations at order header level

Orders can be confirmed at order header level, which can drive the automatic backflush of material consumption for all operations, if you so choose.

With mySAP ERP, you can confirm production orders operation by operation. But if you work in a lean, process-oriented production environment, confirmation of a milestone operation at the end of a production order can be sufficient. You also have the option of confirming production orders at order header level, which works like a milestone confirmation at the end of the order. You confirm either upon receiving the product in the finished products warehouse, or at the ramp just before delivery to your customer. If you create the necessary organizational requirements, you can confirm all operations and backflush materials with a single confirmation transaction.

Goods Receipt

Goods receipts to stock can be automatically posted when you confirm the last operation (or any other operation specified) in a production order. Alternatively, you can report them in a separate transaction. You can process goods receipts for partial deliveries from production by posting them directly to available stock or to quality inspection stock. You can also process goods receipts from co-products and by-products. Goods receipt processing generates a credit posting to the production order that corresponds to the value of the product quantity based on its standard price. mySAP ERP debits the value in the General Ledger (G/L) to the stock account for finished products and credits it to a specific revenue account, which represents the value of goods produced. You assign the G/L accounts when you set up the system.



Demonstration: Create and Confirm a Production order

Purpose

Create a production order for the planned order from the MRP run.

System Data

System:	Your training system
Client:	Your client
Fser ID:	Your user ID
Password:	Your password
Set up instructions:	No special setup is necessary

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1. Choose *Logistics* ➢ *Production* ➢ *Production Control* ➢ *Order* ➢ *Create* ➢ *From Planned Order*
2. Enter the planned order you have created in the MRP run and press *Enter*.

Hint: You can also use the Stock/Requirements List and convert the planned order directly. Show the details of the planned order by choosing *Details of Element* or double clicking on the element. Then choose the button *Convert planned order to production order*.

3. Choose *release order*.
4. Choose *Save*

Demonstration: Optional: Display the Routing

Purpose

Show the routing to explain what was used for the production order.

System Data

System:	Your training system
Client:	Your client
Fser ID:	Your user ID
Password:	Your password
Set up instructions:	No special setup is necessary

1. Choose *Logistics* ➢ *Production* ➢ *Master Data* ➢ *Routings* ➢ *Routings* ➢ *Standard Routings* ➢ *Display*
2. Enter *Material*: `R-F100`, *Plant*: `1000`. Press *Enter* or choose
3. Explain the Routing briefly.

Demonstration: Optional: Display the StocklRequirements List

Purpose

You can display again the Stock/Requirements List to show the production order.

System Data

System:	Your training system

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Client:	Your client
Fser ID:	Your user ID
Password:	Your password
Set up instructions:	No special setup is necessary

1. Choose *Logistics* ➢ *Production* ➢ *MRP* ➢ *Evaluations* ➢ *Stock/Reqmts List*

   Note: In case you work with two sessions or you have created the production order out of the Stock/Requiments List, just choose *Refresh* and continue with Step 4

2. Enter *Material*: **`R-F100`** and *Plant*: **`1000`**.
3. Press *Enter* or choose *Continue*.
4. Highlight the production order.

Demonstration: Confirmation and Goods Receipt

Purpose

Confirm the production order and post the goods receipt at the same time.

System Data

System:	Your training system
Client:	Your client
Fser ID:	Your user ID
Password:	Your password
Set up instructions:	No special setup is necessary

1. Choose *Logistics* ➢ *Production* ➢ *Production Control* ➢ *Confirmation* ➢ *Enter* ➢ *For Order*
2. Enter the production order you have created and choose *Enter*.
3. Choose *Save* to confirm the production order and to save the goods receipt.

Demonstration: Optional: Display the StocklRequirements List

Purpose

You can display again the Stock/Requirements List to show the customer stock.

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System Data

System:	Your training system
Client:	Your client
Fser ID:	Your user ID
Password:	Your password
Set up instructions:	No special setup is necessary

1. Choose *Logistics* ➢ *Production* ➢ *MRP* ➢ *Evaluations* ➢ *Stock/Reqmts List*



Note: In case you work with two sessions or you have created the production order out of the Stock/Requiments List, just choose *Refresh* and continue with Step 4

2. Enter *Material*: **R-F100** and *Plant*: **1000**.
3. Press *Enter* or choose *Continue*.
4. Highlight the customer stock.

Settlement



Explain that settlement of a production order means the actual costs incurred for the order are settled (posted) to one or more receiver cost-objects (for example, to the account for the material produced or to a sales order). Offsetting entries are generated automatically to credit the production order: Emphasize that there is a significant amount of production cost data collected by the system. Point out that within a production order, you can view all of the plan versus actual costs detailed by cost element. In addition, standard reporting functionality is available for analyzing the cost data by product and/or product group.

Order settlement for a production order means clearing the differences between the actual costs incurred and the credits that the order received from goods receipts. Order settlement demonstrates the close integration between Production and Management Accounting in mySAP ERP. Normally, a production order is settled when it is completed or before month-end closing. During settlement, you can post cost variances to one or more cost objects. For example, you can post variances due to excessive scrap to a scrap cost collector, and variances due to poor performance to a productivity problem cost collector. Alternatively, you can simply post the entire variance to inventory. The system posts an entry to the G/L price variance account when you work with standard costing.

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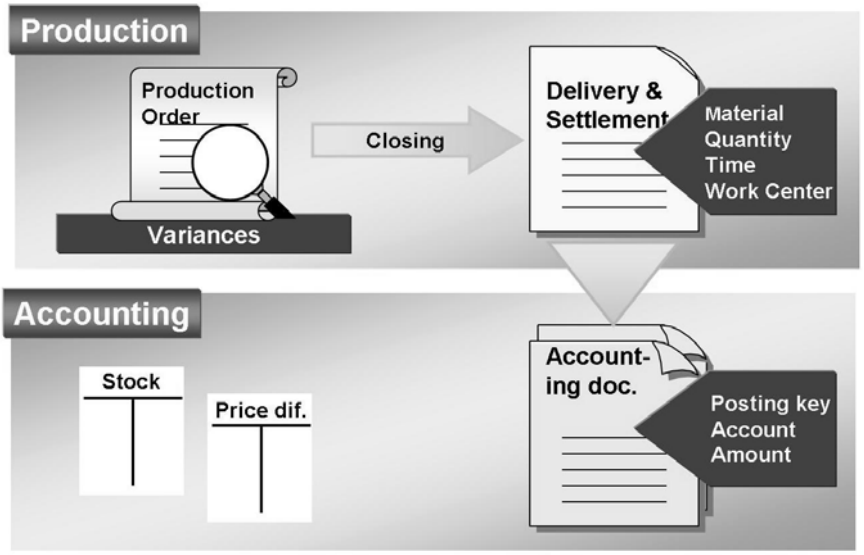


Figure 62: Settlement

You can analyze production costs at product level, for example, with the online variance reports. These reports show planned costs for the order, actual incurred costs, and calculated variances. The reports also show detailed costs per cost element. You can also select a report showing the corresponding quantities.

You can interactively analyze the variances and use a drilldown technique to display individual cost allocations. You can access every single cost allocation item, including information about dates, quantity, and origin of the allocation transaction. You can use other standard reports that compare standard cost estimates for products with current production orders or production cost collectors. You can also define production order hierarchies, where you summarize orders for the same product or for product groups. The full power and flexibility of mySAP ERP Financials is available for analyzing production costs.

Demonstration: Settlement

Purpose

Settle the production order to show the integration into financial accounting and management accounting.

System Data

System:	Your training system
Client:	Your client
Fser ID:	Your user ID
Password:	Your password
Set up instructions:	No special setup is necessary

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1. Choose *Logistics* > *Production* > *Production Control* > *Period-End Closing* > *Settlement* > *Individual Processing*



Hint: You might have to set the controlling area. If the pop-up comes up enter *Controlling Area*: **`1000`**.

2. Enter*Production Order*: **`<your production order>`**, *Settlement period*: **`<Actual month>`** (as digit), *Fiscal Year*: **`<Actual year>`**. *Processing type* should be **`Automatic`**. Remove the flag for *Test Run*



Note: Of course you can as well first run a test run to show this functionality.

3. Choose  *Execute*.
4. Choose  *Details List* to show the settled values. You can then use the button *Accounting Documents* to show more details (if you feel obliged to).

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167

Exercise 4-7: Display a Bill of Material

Exercise Duration: 10 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- View a bill of material
- View the components of a bill of material

Business Example

You need to review a multilevel bill of material to see how many components make up the finished product.

System Data

System: System
Client: Client
Fser ID: ’ser ID
Password: Password

CATT: none
Set up instructions: none

Task:

View the bill of material (BOM) for a material and display its components.

1. ’sing the information provided in the table, display the bill of material.

Field	Data
Material	**R-F*1##** (Pump)
Plant	**1000** (Hamburg)
BOM usage	**1** (Production)

2. How many component materials make up the **R-F*1##** material, excluding any documentation– Record the components in the table.

Continued on next page

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Components

3. How many component materials are there for the component material **R-B1##**– Record the components in the table.

ComponentsSAP01: Fundamentals

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Solution 4-7: Display a Bill of Material

Task:

View the bill of material (BOM) for a material and display its components.

1. ’sing the information provided in the table, display the bill of material.

Field	Data
Material	**R-F*1##** (Pump)
Plant	**1000** (Hamburg)
BOM usage	**1** (Production)

a) From the *SAP Easy Access* menu, choose *Logistics* → *Production* → *Master Data* → *Bills of Material* → *Bill of Material* → *Material BOM*.

b) Choose *Display*.

c) Enter *Material*: **R-F*1##**.

d) Enter *Plant*: **1000**.

e) Enter *BOM usage*: **1**.

f) Choose *Enter*.

The bill of material displays, showing the **R-F*1##** material components.

2. How many component materials make up the **R-F*1##** material, excluding any documentation– Record the components in the table.

Components

a) Five components make up material **R-F1*##**. Record the components in the table.

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3. How many component materials are there for the component material **R-B1##**– Record the components in the table.

Components

a) Select component R-B1## by selecting the box to the left of the material or by placing the cursor on the line.

b) Choose *Extras* → *Display assembly*.

A display assembly dialog box appears.

c) Choose *Continue*.

The component's bill of material now displays.

There are **three** component materials for component material **R-B*1##**. Record the components in the provided table.

d) Choose *Exit* to return to the *SAP Easy Access* menu.

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171

Exercise 4-8: Display a StocklRequire-ments List

Exercise Duration: 15 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Display a Stock/Requirements List
- Navigate within the various areas of the Stock/Requirements List

Business Example

You are responsible to monitor stock levels from production.

System Data

System: System
Client: Client
Fser ID: ’ser ID
Password: Password

CATT: none
Set up instructions: none

Task:

You have determined that the Stock/Requirements List will enable you to monitor the production process and display production-related information. Display the Stock/Requirements List.

1. ’sing the information provided in the table, view the stock/requirements list.

Material	**R-F*1##**
Plant	**1000**(Hamburg)

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Solution 4-8: Display a Stock/Requirements List

Task:

You have determined that the Stock/Requirements List will enable you to monitor the production process and display production-related information. Display the Stock/Requirements List.

1. Using the information provided in the table, view the stock/requirements list.

Material	**R-F*1##**
Plant	**1000**(Hamburg)

a) From the *SAP Easy Access* menu, choose *Logistics* → *Production* → *Shop Floor Control* → *Information System*.

b) Choose *Stock/Requirements List*.

c) Enter *Material*: **R-F1##**.

d) Enter *Plant*: **1000**.

e) Choose *Continue*.

At the present time, no requirements exist for the material.

Hint: Do not back out of the Stock/Requirements List.

Choose *Exit* **twice** to leave the Stock/Requirements List and return to the *SAP Easy Access* menu.

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173

Exercise 4-9: Create and Confirm a Production Order

Exercise Duration: 30 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Create a production order
- Confirm a production order
- Display the Stock/Requirements List to confirm production processes

Business Example

Your department handles the requests from other departments to produce products.

System Data

System: System
Client: Client
Fser ID: ’ser ID
Password: Password

CATT: none
Set up instructions: none

Task:

You have been asked to place a production order for 10 pumps. When the production of the pumps has been completed, you have to place the pumps into stock by confirming the production order.

Display the Stock/Requirements List to confirm each of the requested production process.

1. ’sing the information provided in the table, create a **PP01** production order.

   Record the production order.

Field	Data
Material	`R-F*1##` (Pump)
Plant	`1000` (Hamburg)

Continued on next page

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Field	Data
Qty	`10`
Finish	`<Today + 2 weeks>`
Production Order	

2. Access the Stock/Requirements List to display the production order.
3. Confirm the production order.
4. Record the available quantity from the Stock/Requirements List.

Available qty	

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Solution 4-9: Create and Confirm a Production Order

Task:

You have been asked to place a production order for 10 pumps. When the production of the pumps has been completed, you have to place the pumps into stock by confirming the production order.

Display the Stock/Requirements List to confirm each of the requested production process.

1. ’sing the information provided in the table, create a **PP01** production order.

   Record the production order.

Field	**Data**
Material	**R-F*1##** (Pump)
Plant	**1000** (Hamburg)

Continued on next page

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Field	Data
Qty	`10`
Finish	`<Today + 2 weeks>`
Production Order	

a) From the *SAP Easy Access* menu,choose *Logistics* → *Production* → *Shop Floor Control* → *Order* → *Create*.

b) Choose *With Material*.

c) Enter *Material*: `R-F*1##`.

d) Enter *Plant*: `1000`.

Hint: The order type PP01 will default, so a user entry is not required.

e) Choose *Enter*.

f) On the *General* tab in the Quantities area, enter `10` in the *Total quant* field.

g) On the *General* tab in the Dates area, enter `<Today + two weeks>` in the *Finish* field.

h) From the application toolbar: choose *Release Order*.

i) Choose *Save*.

j) Record your production order in the space provided in the table above.

k) Choose *Exit* to exit the screen and return to the *SAP Easy Access* menu.

Continued on next page

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2. Access the Stock/Requirements List to display the production order.

   a) From the *SAP Easy Access* menu, choose *Logistics* → *Production* → *Shop Floor Control* → *Information System*.

   b) Choose *Stock/Requirements List*.

   c) Enter *Material*: **R-F*1##**.

   d) Enter *Plant*: **1000**.

   Note: The *MRP Area* will default so an user entry is not required.

   e) Choose *Enter*.

   f) Choose *Details of element*.

   g) From within the dialog box, choose *Display Element* to display the production order.

   h) Choose *Exit* **twice** to leave the Stock/Requirements List and return to the *SAP Easy Access* menu.

3. Confirm the production order.

   a) From the *SAP Easy Access* menu, choose *Logistics* → *Production* → *Shop Floor Control* → *Confirmation* → *Enter*.

   b) Choose *For Order*.

   c) Enter the **<Production order>** number from the previous step.

   d) Choose *Enter*.

   e) Choose *Final Confirmtn* to make the final confirmation of the production order.

   Note: The quantity will auto default in the *Yield to conf.* field, so a user entry is not required.

   f) Choose *Save*.

4. Record the available quantity from the Stock/Requirements List.

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Available qty	

a) From the *SAP Easy Access* menu, choose *Logistics* → *Production* → *Shop Floor Control* → *Information System*.

b) Choose *Stock/Requirements List*.

c) Enter *Material*: **R-F1##**.

d) Enter *Plant*: **1000**.

Note: The *MRP Area* will default, so an user entry is not required

e) Choose *Enter*.

f) Record the *Available qty* in the space provided

g) Choose *Exit* to leave the stock/Requirements List and return to the*SAP Easy Access* menu.

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Lesson Summary

You should now be able to:

- Outline the tasks associated with production planning and manufacturing execution
- Explain how mySAP ERP supports key processes in production

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Test Your Knowledge

1. A shipping point is a location within a warehouse or plant where employees process deliveries.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

2. What three organizational elements form a Sales Area?
   Choose the correct answer(s).

   ☐ A Distribution Channel
   ☐ B Shipping Point
   ☐ C Division
   ☐ D Sales Organization
   ☐ E Plant

3. Customer master records are not stored centrally. When you have a new customer, you need to create a customer master Accounts Receivable in Financial Accounting and one for Sales Order Processing in Sales and Distribution.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

4. The customer master record consists of what three specific areas of data?
   Choose the correct answer(s).

   ☐ A Purchasing
   ☐ B Sales
   ☐ C General
   ☐ D Accounting
   ☐ E Production

5. Sales and Distribution integrates with the following modules:
   Choose the correct answer(s).

   ☐ A Materials Management
   ☐ B Financial Accounting
   ☐ C Production
   ☐ D Project Systems
   ☐ E All of the above

6. Which of the following is the correct sales and distribution process?
   Choose the correct answer(s).

   ☐ A Picking, Sales Order, Goods Issue, Billing, Delivery
   ☐ B Sales Order, Picking, Goods Issue, Billing, Delivery
   ☐ C Sales Order, Delivery, Picking, Goods Issue, Billing
   ☐ D Goods Issue, Picking, Sales Order, Delivery, Billing

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☐ E None of the above

7. What three activities can be done with a delivery document?
Choose the correct answer(s).

☐ A Picking
☐ B Debit Memo
☐ C Packing
☐ D Credit Memo
☐ E Goods Issue

8. When you do a Post Goods Issue on a delivery document, an accounting document is created in Financial Accounting.
Determine whether this statement is true or false.

☐ True
☐ False

9. A billing document can be created from what two different type of documents?
Choose the correct answer(s).

☐ A Inquiry
☐ B Sales Order
☐ C Quotation
☐ D Rebate List
☐ E Delivery
☐ F Both B and E

10. Document flow only shows the status of the order document.
Determine whether this statement is true or false.

☐ True
☐ False

11. During the creation of the billing document, an accounting document is created in Financial Accounting, thus creating an accounts receivable.
Determine whether this statement is true or false.

☐ True
☐ False

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Answers

1. A shipping point is a location within a warehouse or plant where employees process deliveries.

   Answer: True

   In SAP R/3, a specific shipping point is assigned to each delivery.

2. What three organizational elements form a Sales Area?

   Answer: A, C, D

   Sales organization, distribution channel, and division make up a Sales Area.

3. Customer master records are not stored centrally. When you have a new customer, you need to create a customer master Accounts Receivable in Financial Accounting and one for Sales Order Processing in Sales and Distribution.

   Answer: False

   Because the customer master records are stored centrally and can be accessed by both accounting and sales, you do not have to reenter data.

4. The customer master record consists of what three specific areas of data?

   Answer: B, C, D

   General, Sales and Accounting make up the customer master record
   .
5. Sales and Distribution integrates with the following modules:

   Answer: E

   Sales and Distribution integrates with Materials Management, Financial Accounting, Production, and Project Systems.

6. Which of the following is the correct sales and distribution process?

   Answer: C

   The sales order must be created first, followed by the delivery document, picking, posting goods issue, and finally, billing.

7. What three activities can be done with a delivery document?
   Answer: A, C, E

   From a delivery document, you can pick, pack, and post goods issue.

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8. When you do a Post Goods Issue on a delivery document, an accounting document is created in Financial Accounting.

   Answer: True

   Posting goods issue in Sales and Distribution causes an accounting document to be created in Financial Accounting. This records the financial impact of goods leaving your premises.

9. A billing document can be created from what two different type of documents?

   Answer: F

   A billing document can only be created from a sales order or delivery. Inquiry and Quotation documents and rebate lists in the standard system are not billable since no goods or services have been rendered.

10. Document flow only shows the status of the order document.

    Answer: False

    Document flow can show the status of any document that is listed in document flow. By choosing the document and choosing the status action, you can view a variety of information statuses about the document.

11. During the creation of the billing document, an accounting document is created in Financial Accounting, thus creating accounts receivable.

    Answer: True

    As soon as the billing document is created, it is automatically passed to Financial Accounting and the appropriate entries made to the general ledger accounts.

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Unit 5

SAP R/3 Accounting: Financial and Management Accounting

Unit Overview

In this unit, you will look at two key functional areas within the mySAP Financials solution: Financial Accounting and Management Accounting.

Financial Accounting focuses on the legal, external view of a corporation's financial statements. Adherence to standards is mandatory in the production of these reports. Key modules include Accounts Payable, Accounts Receivable, General Ledger, and Asset Accounting.

Management Accounting is concerned with the internal view of a corporations financial statements and other performance measurement tools. Management Accounting or Controlling as it is called in SAP, has various tools available to the management team so they can produce reports that track progress and results on an internal basis. Some key components include Cost Center Accounting, Profit Center Accounting, and Internal Orders.
In the first two lessons, participants become familiar with some of the components of Financial Accounting. Activities include the execution of a report, and the payment of a vendor invoice. The third lesson takes a look at Controlling in SAP Student activities include the creation of a cost center and the execution of a cost center report.

Unit Objectives

After completing this unit, you will be able to:

- Differentiate between organizational elements and master data
- Illustrate the integration between Financial Accounting and other SAP module
- Describe how to view a chart of accounts
- Explain how SAP supports the key processes in financial accounting
- Describe how to create a payment, view a general ledger transaction, and view a bank balance
- Define organizational elements and master data in relation to mySAP Financials' Management Accounting: Controlling and Enterprise Controlling
- Define the components of Controlling and Enterprise controlling
- Illustrate the integration between Controlling and other SAP application component areas

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- Create a cost center master record
- View a cost center report

Unit Contents

Lesson: Accounting Foundation… 5-3
Lesson: Financial Accounting… 5-14
Exercise 5-1: Displaying Information on an Account from the Chart of Accounts… 5-19
Exercise 5-2: Viewing a Vendors Open Items and Processing an Outgoing Payment for an Item 5-21
Exercise 5-3: Viewing a Customers Open Items and Processing an Incoming Payment for an Item 5-24
Lesson: Management Accounting… 5-29
Exercise 5-4: Creating a Basic Cost Center… 5-43
Exercise 5-5: Processing a Vendor's Invoice and Viewing a Cost Center Report… 5-46
Test Your Knowledge… 5-51

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Lesson: Accounting Foundation

Lesson Overview

Today, globalization and diversification force structural changes in organizations throughout the world, making economic processes more complex. These processes are also made more dynamic through product and process innovation and use of the information highway. All of this requires more coordination and control with increasingly shorter response times. Timely decisions must be based on a continuous supply of current information.
SAP R/3 provides an integrated solution that includes business applications for all company areas.

Lesson Objectives

After completing this lesson, you will be able to:

- Differentiate between organizational elements and master data
- Illustrate the integration between Financial Accounting and other SAP module areas and systems
- Describe how to view a chart of accounts

Business Example

As a business process analyst, you are responsible for mapping your business processes to SAP Financial Accounting system. You will need to understand the foundation elements in order to understand how data flows with SAP Financial Accounting.

SAP R/3 Accounting System

The accounting system with its various sub-units is a critical part of the SAP solution. The integration of the various aspects of accounting with each other and with logistics and human resources applications becomes a management tool for all company departments. Interfaces with the logistics chain from procurement to sales allow the optimization of operational processes. The efficiency of this kind of solution is increased by including cross-company business processes with customers, suppliers, or financial institutions.

Besides providing accounting data, the accounting system must concentrate primarily on processing operational data for strategic company decisions. Documentation and administration functions are generally performed automatically and in the background.

For international companies, SAP R/3 offers flexible software that can be used in different countries. The system meets the needs of the major industrial nations of the world with its multilingual approach, flexible currency handling, and country-specific functions for taxes, reporting, and payment transactions. SAP R/3 provides all the necessary functions for developing a uniform accounting system that can be consolidated across international borders.

The SAP R/3 Accounting System consists of several components:

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Financial Accounting (FI) includes:
- G/L Accounting
- Accounts Payable and Accounts Receivable
- Asset Accounting

Corporate Finance Management (CFM) includes:
- Corporate Finance Management (planning, analysis, decision support, financial transactions, payments, and risk capabilities in various group environment)
- Treasury Management (cash, stocks, bonds, and derivatives) Enterprise Controlling includes:
- EIS (Executive Information System)
- Profit Center Accounting
- Legal Consolidation
- Planning

Profitability and Sales Accounting includes:
- Profitability Analysis

Product Cost Controlling includes:
- Product Cost Planning
- Cost Object Controlling

Overhead Cost Controlling includes:
- Cost centers
- Internal orders
- Activity-Based Costing

Investment Management (IM): Allows company-wide planning of capital investment programs and control of individual capital investment measures

Project Management: Allows efficient planning, cost-sensitive control, and target-oriented implementation of projects with comprehensive integration with Controlling and Logistics.

These components provide the basis for performing operational transactions and meet the requirements of decision-based reporting for each application area.

As the central integration element in SAP R/3 FI, the general ledger offers a broad range of features for external accounting. With its open, integrated data flow and user-friendly interface, the general ledger meets the requirements of a modern, worldwide accounting system while simplifying the financial decision-making process. The integrated general ledger provides access to your company's key figures for company-wide business processes.

Following international legal accounting requirements (IAS, GAAP, GOB), you post items to the general ledger using different charts of accounts and different currencies. These functions are carried out in both a centralized environment with uniform technology and in distributed systems. The flexible reporting feature with multiple

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financial statement versions provides clear and customized views of relevant data with the desired level of summarization.

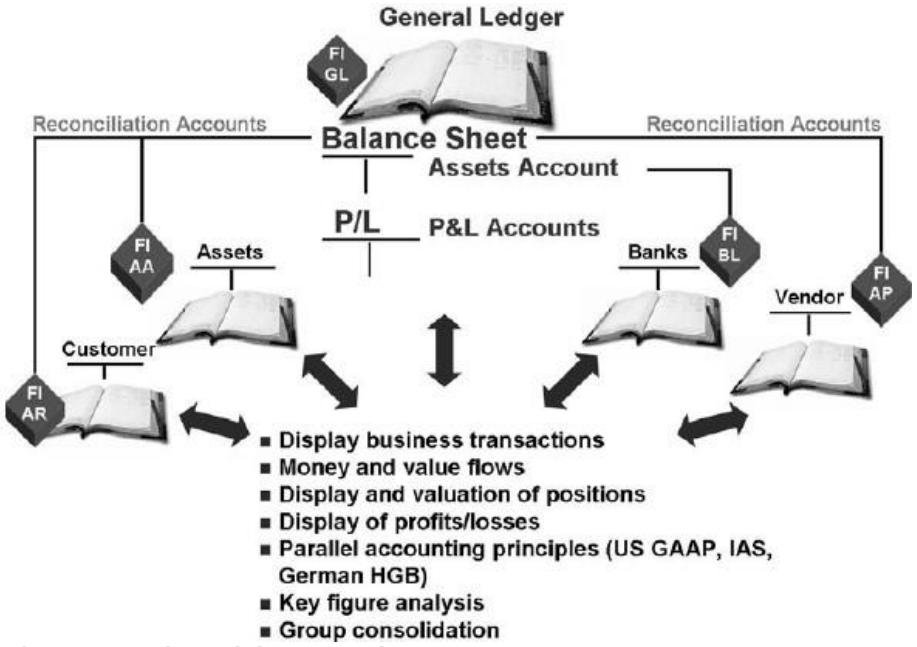


Figure 5-1: Financial Accounting

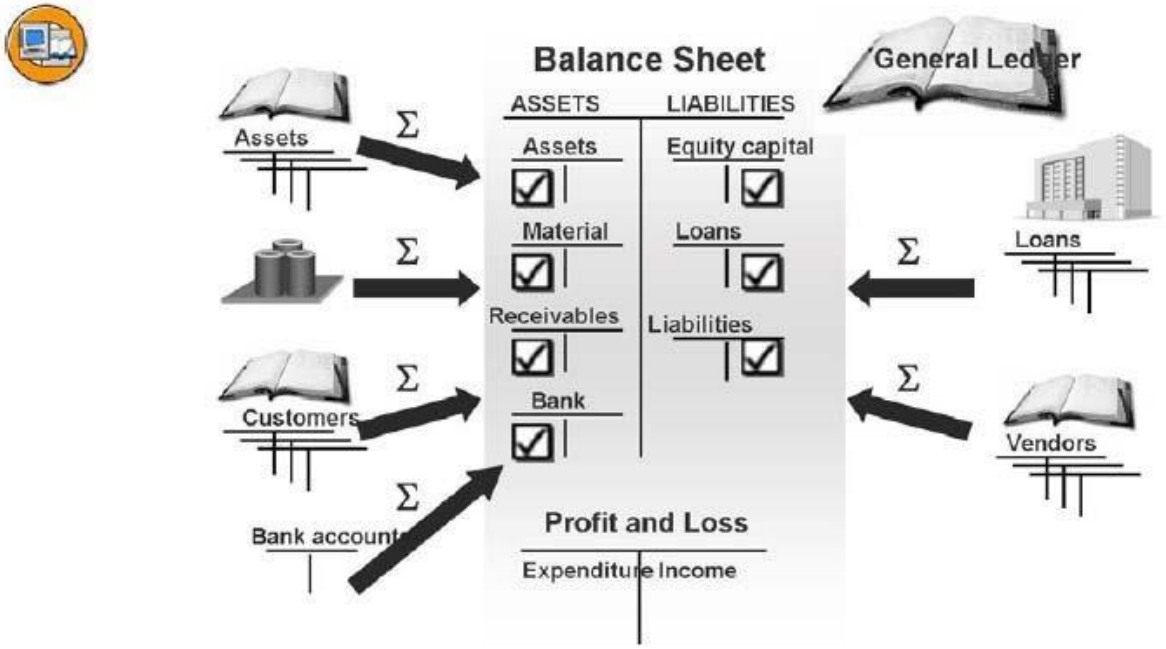


Figure 5-2: Balance Sheet & Profit and Loss Statement

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Organizational Elements

An effective accounting system includes more than ledgers, accounts, and documents. Organizational structure is also an essential component. Structure establishes the parameters for corporate, tax, and management requirements.

Assigning all relevant business transactions to these organizational units by using explicit or implicit account assignment updates the ledgers (the traditional Anglo-American management accounting method can also be followed using the SAP R/3 FI-SL system). The SAP R/3 FI-SL system also conveys actual values for the integrated controlling objects (cost center, order, cost object, profit center) contained in SAP R/3's Controlling (CO) application. The depiction of current corporate structure and future strategies has a bearing on how you use the organizational terms in SAP's accounting system:

- Corporate group
- Company
- Company code
- Business area
- Functional area
- Profit center

In the simplest case, a company that operates as a single company at national level and has no substantial internal reporting requirements is represented as a company code. In more complex corporate structures, the SAP R/3 systems scaling function is used to either separate or integrate company components. This leads to two general company concepts - centralized and decentralized.

Company:

This represents a legally autonomous entity, composed of one or more company codes.

Company code:

This represents the tax law (national) view of the company. Fiscal calendar, local currency, and tax reporting requirements determine the design of the complete and reconciled tracking system. In the context of a company, the company code can also represent a foreign operation that carries inventory.

Business area:

This helps depict internal structures for external segment reporting. You use the business area to analyze selected balance sheet items and profit and loss statements for product divisions or regional structures.

Functional area:

This area displays the profit and loss statement according to cost-of-sales accounting. This is in comparison to period accounting, which differs depending on the request. Through the grouping of functional areas (such as administration and manufacturing), cost-of-sales accounting shows what company costs were incurred for, and displays business expenses for the operation.

Profit center (Management Accounting):

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With its flexible design, this controlling term is used to depict internal areas of responsibility. The objects of a company's operating readiness are assigned to profit centers. These objects include cost centers, assets, materials, and those that measure performance (such as production and customer orders). Consequently, areas of responsibility are more detailed than can be captured by just using the business areas.

Chart of Accounts

The FI component offers a flexible method for setting up a general ledger to meet various goals concerning legal issues, value flow, and classification of postings. The chart of accounts is a classification system defined by accounting to record values or value flows. Moreover, the chart of accounts ensures a correct rendering of accounts.

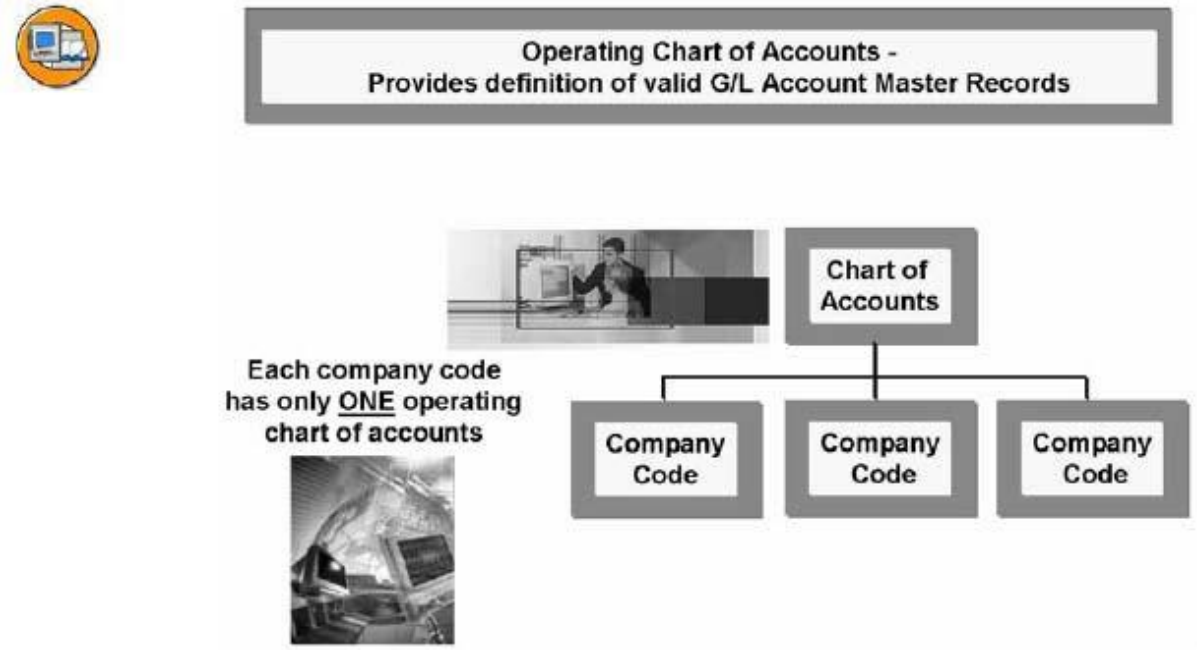


Figure 5-3: Chart of Accounts

The chart of accounts can be represented in the SAP system as one of three functions:

As an operational chart of accounts:

The operational chart of accounts contains the accounts currently used in day-to-day transactions with the system. It allows uniform, company-wide classification of business transactions. Financial accounting and cost accounting work with the same chart of accounts.

As a local chart of accounts:

The local chart of accounts contains the accounts that are necessary to fulfill legal requirements. The posting data can be represented based on country-specific, predefined classification criteria. The items in this chart of accounts are derived from the operational chart of accounts.

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As a group chart of accounts:

The group chart of accounts contains all accounts that apply throughout the corporate group. The posting data can be processed or represented based on the requirements of external group accounting. The items in this chart of accounts are derived from the operational chart of accounts. The ability to define different charts of accounts permits flexible evaluation. Posting data can be processed on multiple levels in the company hierarchy. Daily document postings are posted from the operational chart of accounts using account numbers. Alternately, you can also perform evaluations for a specific country. This allows you to standardize operations within a corporate group without ignoring external evaluation requirements.

Customer Master-Accounts Receivable

A customer master record contains all the information that a company needs for its business relations with a customer. This data controls the posting procedure and subsequent processing, such as payments and dunning. Customer master records also provide information on customers for the accounting and sales departments. Customer data records are centrally stored in the system. This means that the data record is always consistent, up-to-date, and free of redundancy. The customer master record is characterized by the following features:

- Provides an overview of all of a customer's data at any time
- Allows flexible access to the data
- Forms the data base that controls automatic dunning and automatic payment transactions

The layout of customer master records also leaves room for special requirements. The account number of an alternative payer can also be entered in the customer master record. Debit memos and refunds by bank transfer are determined by different payer bank data. If dunning notices are not to be sent to the customer from whom the receivable is due, a different dunning recipient can be indicated. If an affiliated company is invoiced, this must be reflected in a group consolidation. All sales achieved through business transactions within the group must be eliminated (elimination of IC sales). To do this, the group's uniform company ID must be entered in the master record. The uniform company ID is transferred to the document upon posting.

The three-part structure of master records makes it possible to flexibly depict the various organizational structures of an operation:

1. **General Data**: This data is equally relevant to every company code and every sales organization within a company.
2. **Data for Company Codes**: This data reflects the company-specific agreements with the customer.
3. **Data for Sales**: This data has different characteristics for a company's sales organizations and channels.

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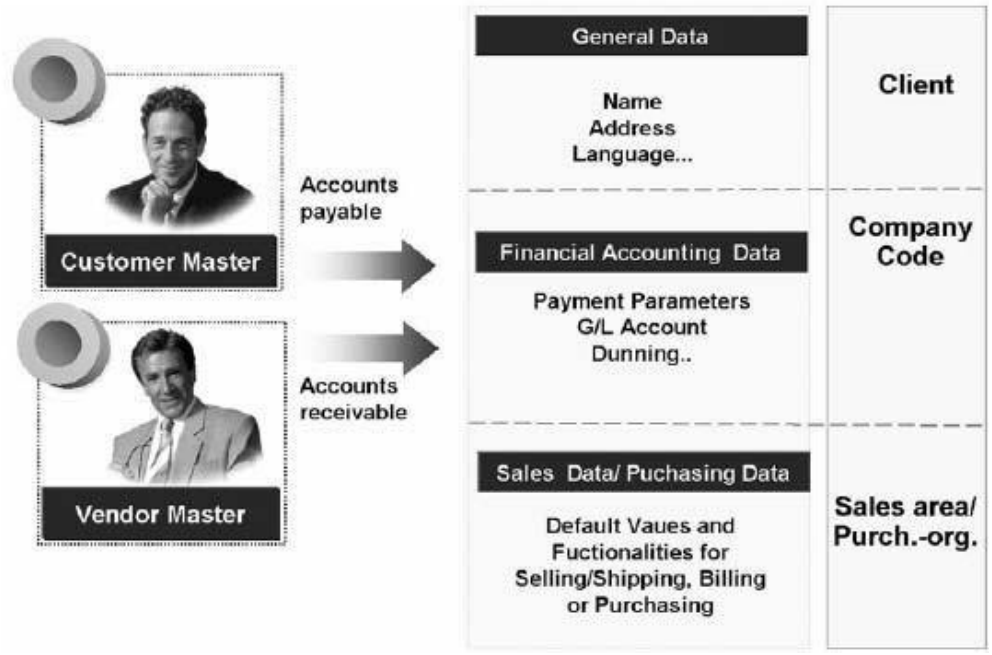


Figure 5-4: Customer and Vendor Master

Vendor Master-Accounts Payable

The vendor master record contains all the information a company needs for its business relationships with vendors. This data controls the posting transaction as well as the processing of posting data. Both the accounting and purchasing departments use the master record for this purpose. Vendor master records are centrally stored in the system. This ensures that data is always consistent, up-to-date and without duplication. The vendor master record provides the following:

- Overview of all data for a given vendor.
- Flexible data access.
- Baseline data used to control payment transactions and to represent business processes (preliminary invoice posting). In addition, the vendor master record's flexible design is well suited for special needs.

Vendor master records are also used to represent divisions of labor that differ from one vendor branch to the next. Accounting and incoming payment functions can be centrally combined for vendors with several branch offices who have autonomous selling authority. By linking a branch account with a head office account, each posting to the branch account is automatically posted to the head office. The branch account number is stored in the document allowing you to perform analyses and maintain correspondence both centrally and locally. You can indicate an account number for an alternative payee in the vendor record. Payments are made to the address indicated or through the bank details for this vendor account. Any credit balances with affiliated companies must be considered when performing eliminations for corporate group consolidation. Accordingly, you must enter a unique company number in the vendor master record. When postings are made, this number is incorporated into the document and is available for consolidation purposes.

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General data includes address and telecommunications data (telephone, facsimile and telex information), general vendor information (corporate group, industry branch) as well as bank details.

Company code data includes company-specific policies concerning payment transactions, dunning procedures, and correspondence information. This data includes the agreed upon payment terms and the method of payment (by check, wire transfer, or bill of exchange). In addition, entering the reconciliation account (payables) creates a link to the general ledger. The transaction figures for this general ledger account are automatically updated when postings are made to the vendor account.

Purchasing organization data includes inquiry, order, and invoice verification information. This data is only needed if you make use of the SAP systems purchasing functions. This data can be added or amended any time you want.

Asset Management

Increasing automation makes planning and monitoring of fixed assets for external and internal accounting purposes ever more important. In addition to pure accounting and balance sheet preparation, there are extensive requirements for controlling and maintenance monitoring.

Furthermore, you must be able to determine easily and precisely the ever more complex requirements of group accounting on both national and international levels. These various requirements are defined in the chart of depreciation. Here you can represent various valuation methods in a number of depreciation areas for commercial balance sheets, tax requirements, controlling purposes, corporate policies, and other free valuations. You can carry out these activities in domestic or in foreign currencies. A variety of country-specific valuation plans and depreciation keys are delivered with the system.

Asset classes support the structuring and classification of fixed assets. Central default values, such as classification criteria, depreciation keys and useful life, data on the valuation of net assets, insurance-related data, and much more are stored with the asset class. When assets are inventoried, this class is simply copied. Even if assets are extensive and complex, the system guarantees a clear and well thought-out classification of the fixed assets. This offers advantages with respect to valuation reliability and asset-specific evaluation.

The class concept is supplemented by the definition of individual validation and replacement rules. The rules permit complex checks for logical and organizational consistency of the entries during master data maintenance or posting. In the integrated system, this concept even makes it feasible for buyers or accounts payable managers to create asset master records whenever they need them rather than having to wait for confirmation from asset accounting. Even in the asset class, you distinguish between essential asset types, such as assets under construction, low-value economic units, leased assets, and assets that are to be capitalized normally. For the vertical classification of complex economic units, there are group assets, asset super-numbers, as well as main asset numbers and asset sub-numbers. While the

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main capitalization is carried on the main asset number, the sub-number is used to represent special interchangeable components or subsequent expansions of the asset. If several master records are to be combined for a common depreciation calculation, a group asset is formed. The asset super-number is used in reporting to add up any desired number of asset master records. Regardless of the process sequence used to capitalize the assets, the integrated system supports all conceivable transactions, including:

- Asset acquisition preceded by a purchase order generated in SAP R/3 purchasing and followed by the receipt of the goods and the invoice
- Asset acquisition without a purchase order based on a vendor invoice
- Asset acquisition through in-house production of a capital investment project or a capital investment order

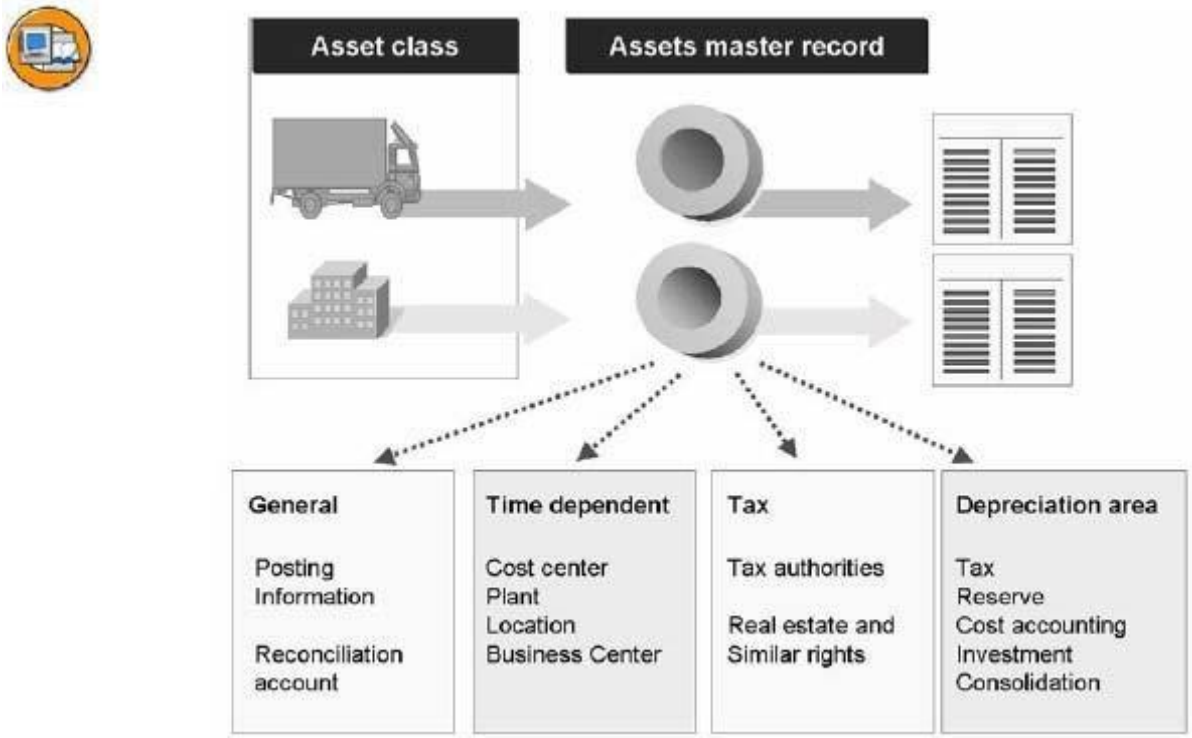


Figure 5-5: Asset Accounting

This integrated system makes it possible to eliminate the expense that is generally associated with posting asset acquisitions in asset accounting. The capitalization values of the assets are automatically provided by the integrated applications (accounts payable, purchasing/ inventory management, job order settlement or project settlement). Analogously, for asset retirement, SAP offers close integration with accounts receivable, which automatically determines the profit or loss generated by the sale, from sales revenue data. Accounts receivable then posts this amount to the profit and loss statement and to cost accounting, if desired.

Account Balances

A line item display provides an overview of the open, cleared, and parked items from an account. You determine which information about the individual line items is to be

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displayed on the screen. However, you can also change the view after the list of items has been processed. Various sort options (by assignment, document number, or clearing data) allow you to interactively select, vary, and total the required document on the screen. Search and summarization functions are available on the initial screen as well, so it is not necessary to display all items. Line item display functions are available for:

- An account in a company code
- An account group in a group of company codes (worklist)

You can switch from the line item list to the document display at any time. A line item list can also be exported and processed further using a spreadsheet. The line item list can be filed in SAP office and sent to the relevant accounting clerk. You can file as a PC file or you can store it directly in Microsoft Excel format and then process it in Excel.

Whenever documents are posted to an account, the system automatically updates the account balance. For G/L accounts with line item display, the system also indicates which items from a document are posted to the account. You can display the account balance and depending on the account attribute the line items for each account.

The account balance offers an overview of transaction figures for each period by debits and credits. Possible differentiating criteria include account number, company code, fiscal year, business area, and currency. You can also display a graphic representation of account balances. For there, you can branch directly to the line item display. Worklists for several accounts can also be created.

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Lesson Summary

You should now be able to:

- Differentiate between organizational elements and master data
- Illustrate the integration between Financial Accounting and other SAP module areas and systems
- Describe how to view a chart of accounts

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Lesson: Financial Accounting

Lesson Overview

Each transaction relevant to posting must be entered in the originating area of the company in compliance with all applicable posting rules. The precise, reliable, and complete recording and entering of all required data is only possible at the point of data origin. This data priority means that both the originating and responsible areas of all company entities are monitored.

Lesson Objectives

After completing this lesson, you will be able to:

- Explain how SAP supports the key processes in financial accounting
- Describe how to create a payment, view a general ledger transaction, and view a bank balance

Business Example

As a accounting clerk for your company, you need to understand where the information originates to better understand how to further process the information.

General Ledger

General Ledger postings may be the result of:

- Operational transactions (for example, issue of goods causes material issue posting) if the SAP Materials Management (MM) system is active and integrated
- Posting transactions in subsidiary ledgers (asset acquisition in fixed assets) if the SAP Asset Accounting (FI-AA) system is active and integrated
- Transactions originally assigned to the general ledger, if the General Ledger (FI-GL) system is active

At the same time, interrelationships with Controlling and its components can be taken into account. The extent and type of the integrated systems used determine how entries, account assignments, and updates are processed for business transactions. The important factor is that the posting documents, together with the original data and account assignments from the operative transactions, are simultaneously reflected in the general ledger through subsidiary ledgers.

Subsidiary ledgers are completely and comprehensively integrated with G/L accounting on the following levels:

- Master data
- Transaction data
- Reporting

Integration of master data comprises the shared chart of accounts and all account assignment elements of the subsidiary ledgers including cost accounting. Master data parameters can be shared. Data can be mutually verified for correctness and validity. The integration of posting data is reflected in:

- The central document database as a uniform storage space for transaction data memory

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- The corresponding line items of subledger accounting with original data and account assignment for the central documents

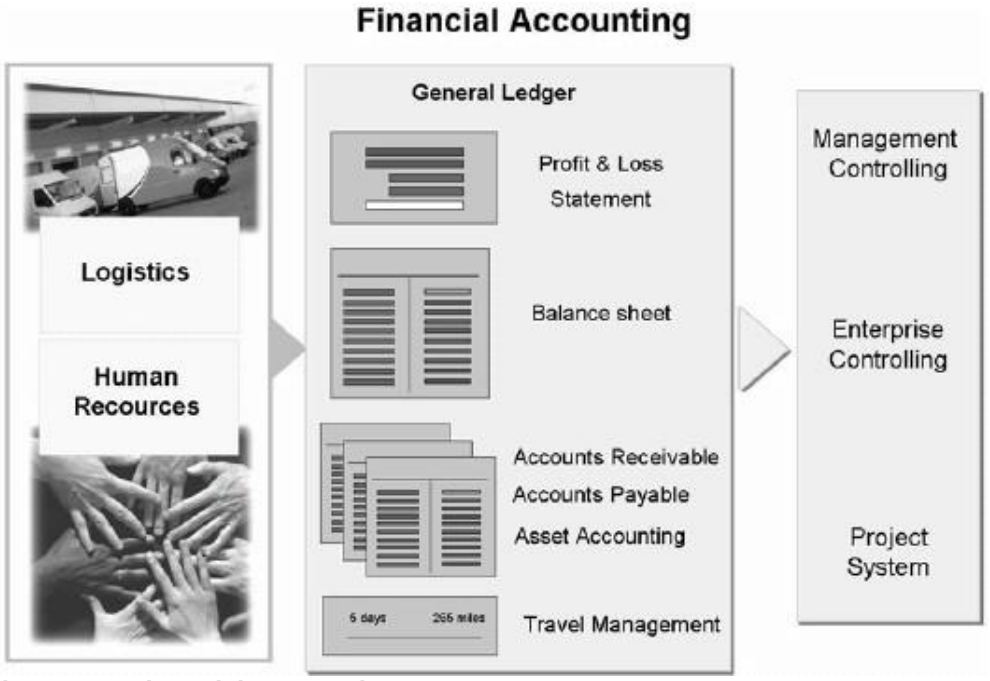


Figure 5-6: Financial Accounting Process

A shared database means:

- Non-redundant data creation and maintenance
- Documentation and review system that can be clearly verified at any time
- Complete access to all applications
- Reporting and information system that can be fully customized

Data integration is evident since all document flows for a business transaction are linked by transferring the predefined account assignment terms. That all subsidiary ledgers can be integrated is an important consideration. This integration is also the crucial advantage of complete data integration at individual transaction level. Each business transaction that is automatically updated and updates all affected operational evaluations. The automatic transfer of data ensures an up-to-date and networked accounting and controlling system.

Accounts Receivable

The FI Accounts Receivable component is responsible for monitoring and controlling customer accounts within SAP R/3's Financial Accounting component. Account analyses, alarm reports, due date lists, and a flexible dunning system all make it easier to keep track of open items. Associated correspondence can be adapted to the needs of each firm. This also applies to payment notices, balance confirmations, and account statements. Incoming payments can be assigned to due receivables using either the convenient entry functions or automatic data transfer. The payment program automates the debit memo process as well as payments. Interfaces to both

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Sales and Distribution and Cash Management, as well as customer-specific perspectives in the financial statements, link the financial and management accounting aspects of a transaction. Consequently, credit management, liquidity planning, and contribution margin accounting are always provided with current and reconciled information.

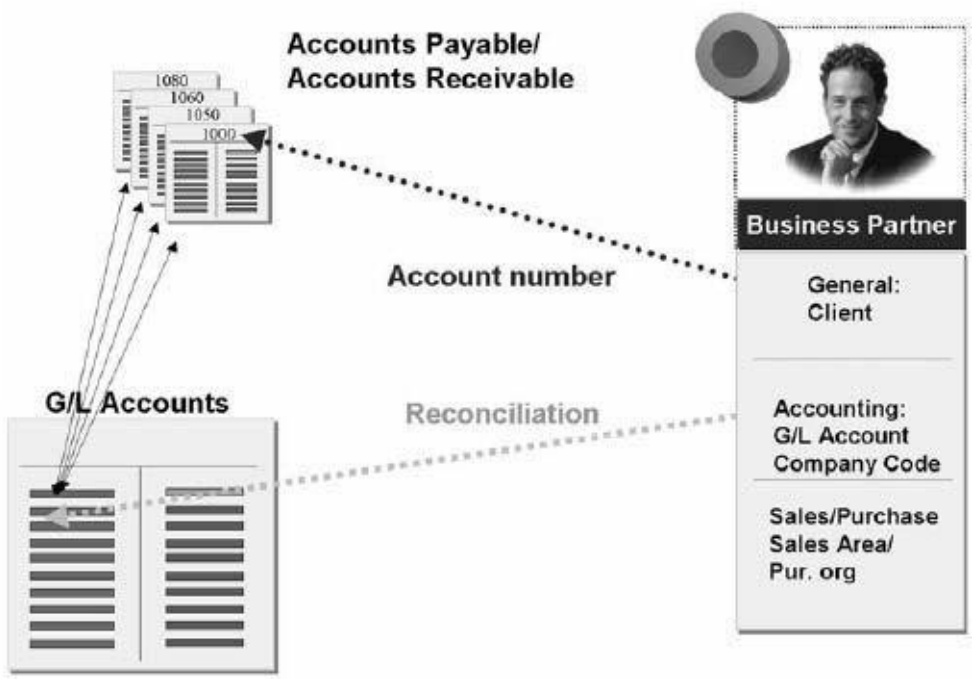


Figure 5-7: Accounts Receivable

Accounts Payable

SAP R/3's FI Accounts Payable component manages accounting data for all vendors. It is also an integral component of the acquisition process. It serves as an important information source for the purchasing department regarding delivery, invoicing, and payment values. Payments are made so that maximum advantage is taken of available discounts, using either standard written forms or electronic means (such as EDIFACT or EDI). The system supports all international methods of payment. To track open items, the system provides account analyses, due date forecasts, and risk assessments (for example, for foreign currencies). Balance audit trails, account balances, and journals document transactions in Accounts Payable.

Accounting Documents

Accounting documents are the result of a posting in Financial Accounting. There are two types of documents:

- Original documents
- Processing documents

Examples of original documents:

- Receipts

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- Invoices
- Checks
- Bank statements

Examples of processing documents:

- Accounting documents
- Sample documents
- Recurring entry documents

The accounting document represents the original document in the system. The other processing documents can be used to simplify document entry. The document remains as a connecting unit in the system until it is archived.

You can only check whether postings are correct in the compact journal and general ledger by means of documents. Every posting must therefore have a document.

A document consists of a document header and at least two line items. The line items contain information about an item. This includes an amount, an account number, the credit or debit assignment, and additional details specific to the transaction being posted.

Documents are the link between the business transaction and the posting in accounting. Only complete documents can be posted. A document is complete when its debit and credit items balance to zero. You must enter the minimum account assignments designated by the system: For example, document date, posting date, document type, posting key, account number, and amount. Data must also be entered in all other fields that were defined as required fields when making system settings.

Payments

When you enter documents, the system checks whether the minimum account assignments have been made, for example, document date, posting date, document type, posting key, account number, and amount. If you enter a key that is not defined in the system, the system issues an error message. You have to correct your entry before you can enter any more documents. These checks prevent incorrect, inconsistent, or incomplete entries from being made.

To be able to post the document, the debits and credits must balance to zero. This updates the account balances. If the debits do not equal the credits, you can hold the document, or park it until it is complete, without updating G/L account balances.

Travel Management and Expense Reimbursement

Trips cost time and money - not only for the person travelling, but for everyone involved in the planning, approving, verifying, and accounting of trips. Today, travel management is expected to support all of the business processes involved with a business trip in one single procedure. In addition to travel accounting and the subsequent processes in Financial Accounting and Payroll Accounting, this also includes, to a great extent, travel planning. SAP R/3 Travel Management gives you a flexible, high-performance tool with which you can:

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- Plan trips
- Book travel services (flights, hotels, rental cars) via a global distribution system (currently, AMADEUS)
- Approve trips via SAP Business Workflow
- Record trip data
- Determine and valuate reimbursement amounts according to statutory and enterprise-specific provisions
- Account for travel expenses according to specified statutory provisions

The data and results produced by SAP R/3 Travel Management can be applied in numerous business processes. You can:

- Use this data to post travel expenses to SAP R/3 Financial Accounting and to clear them in SAP R/3 Controlling according to the allocation-by-cause principle
- Profit from this data in SAP R/3 Payroll Accounting when calculating the taxes on travel expenses
- Use trip data reporting results as a basis for negotiating special conditions with travel service providers

Payment and Transfer to Payroll Accounting

Payment of expenses can be accomplished via Financial Accounting, Payroll Accounting, or data medium exchange (DME) with credit institutions. Whether travel expenses are paid via payroll accounting in your company or not, the results are transferred to payroll accounting if there are additional amounts for taxation. SAP R/3 Travel Management then triggers the transfer of travel expense accounting results.

The goal of this process is the complete and integrated administration of travel expenses from travel planning to correct taxation in Payroll (HR), correct posting in Financial Accounting (FI), and clearing in Controlling (CO) or Funds Management (FM).

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Exercise 5-1: Displaying Information on an Account from the Chart of Accounts

Exercise Objectives

After completing this exercise, you will be able to:

- Display a chart of accounts
- View specific details about an account Business Example

You need to display a P&L statement account within a chart of accounts and view the detailed information about that account.

Task

Display a list of accounts. From the list, view a specific account and the details for the account.

1. Display chart of accounts.

Chart of accounts	**INT**

2. Locate a specific account and view the detailed information about the account.

G/L account no.	**160000**
Description of Acct.	
P&L statement account or balance sheet account?	

3. Is this a balance sheet account or P&L statement account?

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Solution 5-1: Displaying Information on an Account from the Chart of Accounts

Task
Display a list of accounts. From the list, view a specific account and the details for the account.

1. Display chart of accounts.

Chart of accounts	INT

   a) Choose *Accounting* → *Financial Accounting* → *General Ledger* → *Information System* → *General Ledger Reports* → *Master Data* → *Chart of Accounts*.

   b) Choose SAP Minimal Variant.

   c) Enter *Chart of accounts*: **INT.**

   d) Choose *Execute*.

2. Locate a specific account and view the detailed information about the account.

G/L account no.	160000
Description of Acct.	
P&L statement account or balance sheet account?	

   a) Enter *GL account no.*: **160000**

   b) Choose *Display*.

   c) The description of account is: **Trade Payables-domestic**.

3. Is this a balance sheet account or P&L statement account?

   a) Choose *More Data*.

   b) Choose *Enter*.

   c) G/L account **160000** is a **Balance sheet**.

   d) Choose *Exit*.

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Exercise 5-2: Viewing a Vendors Open Items and Processing an Outgoing Payment for an Item

Exercise Objectives

After completing this exercise, you will be able to:

- View a vendor's open accounts payable
- Process a payment for an overdue document Business Example

As an accounts payable clerk, you need to view a vendor's open accounts payable, locate documents that are overdue for payment, and process the payment.

Task

View a vendor's open accounts payable and locate a document that is overdue for payment. Process a payment for the overdue document.

1. View the vendor's open account payables with the information provided.

Field	Data
Vendor account	`Baltus##`
Company code	`1000`
Normal items	`Checked`

2. Record the document number and the amount in local currency.

Field	Value
Doc. no.	
Amount in doc. curr.	

3. Post payment for the invoice you posted earlier, using the information provided below.

Field	Data
Document date	`<today's date>`
Company code	`1000`
Posting date	`<today's date>`
Currency/rate	`EUR`
Bank data: Account	`113100`
Bank data: Amount	`From above step 2`
Open item selection: Account	`Baltus##`
Document number (radio button)	`choose`
Document number	`<from step 2>`

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Solution 5-2: Viewing a Vendors Open Items and Processing an Outgoing Payment for an Item

Task
View a vendor's open accounts payable and locate a document that is overdue for payment. Process a payment for the overdue document.

1. View the vendor's open account payables with the information provided.

Field	Data
Vendor account	`Baltus##`
Company code	`1000`
Normal items	`Checked`

   a) Choose *Accounting* → *Financial Accounting* → *Account Payable* → *Account*.

   b) Choose *Display/ change line items*.

   c) Enter the information from the table above.

   d) Choose *Execute*.

   No item appears overdue. The invoice previously posted is due.

2. Record the document number and the amount in local currency.

Field	Value
Doc. no.	
Amount in doc. curr.	

   a) Record the document number and the amount in the local currency of the document.

3. Post payment for the invoice you posted earlier, using the information provided below.

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Field	Data
Document date	<today's date>
Company code	1000
Posting date	<today's date>
Currency/rate	EUR
Bank data: Account	113100
Bank data: Amount	From above step 2
Open item selection: Account	Baltus##
Document number (radio button)	choose
Document number	<from step 2>

a) Choose *Accounting* → *Financial Accounting* → *Account Payable* → *Document entry* → *Outgoing payment*.

b) Choose *Post*.

c) Enter the information from the table above.

d) Choose *Additional selections document number*.

e) Choose *Process open items*.



Hint: You can activate and deactivate items and discounts by choosing activate and deactivate. The posting *difference* should be **0**.

f) Enter *Document number (from) Amount* from **<Overdue line item in step 2>.**

g) Choose *Process open items*.

h) Choose *Post*.

i) Record the accounting document number that displays at the bottom left of your screen after you post your document.

j) Choose *Exit*.

k) Choose *Yes* if asked, "Do you want to exit editing?"

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Exercise 5-3: Viewing a Customers Open Items and Processing an Incoming Payment for an Item

Exercise Objectives

After completing this exercise, you will be able to:

- View a vendor's open accounts payable
- Process a payment for an overdue document

Business Example

As an accounts receivable clerk, you need to view a vendor's open accounts receivable, locate documents, and process the incoming check.

Task

You will view a customer's open accounts payable and locate a document you created earlier.

1. View the customer's open account payables with the information provided.

Field	Data
Customer account	`Rohrer##`
Company code	`1000`
Normal items	`Checked`

2. Note the document number.

Field	Value
Doc. no.	
Amount in doc. curr.	

3. Process an incoming check.

Field	Data
Posting date	`<today's date>`
Currency/rate	`EUR`
Bank data: Account	`113100`
Bank data: Amount	`<from step 2>`
Open item selection: Account	`Rohrer##`
Document number (radio button)	`Choose`
Document number	`<from step 2>`

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4. Display the document flow and note the overall status.

Document	Document number	Status
Standard Order		
Delivery		
Invoice		
Accounting Document		

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Solution 5-3: Viewing a Customers Open Items and Processing an Incoming Payment for an Item

Task
You will view a customer's open accounts payable and locate a document you created earlier.

1. View the customer's open account payables with the information provided.

Field	Data
Customer account	`Rohrer##`
Company code	`1000`
Normal items	`Checked`

   a) Choose *Accounting* → *Financial Accounting* → *Account Receivable* → *Account.*

   b) Choose *Display/ change line items*.

   c) Enter the information from the table above.

   d) Choose Execute.

2. Note the document number.

Field	Value
Doc. no.	
Amount in doc. curr.	

   a) Record the *document number*: <**System Generated**>.

   b) Record the amount, in local currency, of the document that is overdue:<**System Generated**>.

3. Process an incoming check.

   a) Choose *Accounting* → *Financial Accounting* → *Account Receivable* → *Document entry*.

   b) Choose *Incoming payment.*

   c) Choose *Additional selections document number*.

   d) Choose *Process open items*.

   e) Enter *Document number (from) Overdue line*: <**item in step 2**>

   f) Choose *Process open items*.

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Hint: The document you would like to pay displays. Notice that at the bottom right of the window, the **Not assigned value** is zero, indicating that the payment you are entering matches the document you are trying to clear. You can save the document at this point. You cannot save a document if the assigned value is not zero. You can activate and deactivate items and cash discounts on that list choosing  activate and  deactivate.

g) Choose  *Post*.

h) Record the document number.

4. Display the document flow and note the overall status.

Document	Document number	Status
Standard Order		
Delivery		
Invoice		
Accounting Document		

a) Choose *Logistics* → *Sales and Distribution* → *Billing* → *Billing Document*

b) Choose  *Display*.



Note: The document number is displayed.

c) Choose  *Document flow*.

d) Result:

Document	Document number	Status
Standard Order	<system generated>	**Completed**
Delivery	<system generated>	**Completed**
Invoice	<system generated>	**Completed**
Accounting Document	<system generated>	**Cleared**

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Lesson Summary

You should now be able to:

- Explain how SAP supports the key processes in financial accounting
- Describe how to create a payment, view a general ledger transaction, and view a bank balance

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Lesson: Management Accounting

Lesson Overview

This lesson lays a foundation for understanding the mySAP Financials Management Accounting processes by providing an overview of the Controlling (CO) and Enterprise Controlling (EC) application components, including organizational elements and master data.
Additionally, the lesson introduces the capabilities of Controlling and Enterprise Controlling, how these tools can address various industry and individual management accounting needs, and the key integration points with other SAP application areas.

Lesson Objectives

After completing this lesson, you will be able to:

- Define organizational elements and master data in relation to mySAP Financials' Management Accounting: Controlling and Enterprise Controlling
- Define the components of Controlling and Enterprise controlling
- Illustrate the integration between Controlling and other SAP application component areas
- Create a cost center master record
- View a cost center report

Business Example

As a department manager, you need to understand how department revenue and expenses are accounted for and measured. You need to become familiar with the different tools available to address internal management reporting and accounting needs, so that you can map your enterprise structure to the appropriate mySAP Financials Controlling application components. Additionally, you have been given the task of creating a cost center master record and reviewing results on a cost center report.

FI and CO: Standards versus Flexibility

The mySAP Financials application component Controlling (CO) contains all accounting functions necessary for effective controlling. If an organization divides accounting into internal and external viewpoints, CO represents the internal accounting perspective because it provides information for managers—those who are inside an organization and are charged with directing and controlling its operations. CO includes cost and revenue accounting. Together with the Enterprise Controlling (EC) application components Profit Center Accounting (EC-PCA) and Consolidation (EC-CS), CO covers all aspects of managerial accounting. It offers a broad selection of functional tools that can be used to provide managerial accounting information without being limited to legal requirements.

Financial statements required for external reporting purposes (for example, balance sheet and P&L statement) are created in FI. These external reporting requirements are

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typically established by general accounting standards like GAAP or IAS, as well as by various legal requirements mandated by regulatory authorities.
The internal accounting perspective of an organization is not governed by formal standards, and therefore can vary by industry, or for that matter, by individual enterprise. The broad selection of functional tools in CO provides the flexibility needed to satisfy managerial accounting information and reporting requirements.





Figure 5-7: FI and CO : Standards versus Flexibility

Components of Management Accounting

The mySAP Financials key functional area: Management Accounting is comprised of application components in the Controlling (CO) and Enterprise Controlling (EC) areas. Controlling provides you with information for management decision-making. It facilitates coordination, monitoring, and optimization of all processes in an organization. This involves recording both the consumption of production factors and the services provided by an organization.

As well as documenting actual events, the main task of controlling is planning. You can determine variances by comparing actual data with plan data. These variance calculations enable you to control business flows.

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Income statements, such as contribution margin accounting, are used to control the cost efficiency of individual areas of an organization, as well as the entire organization.

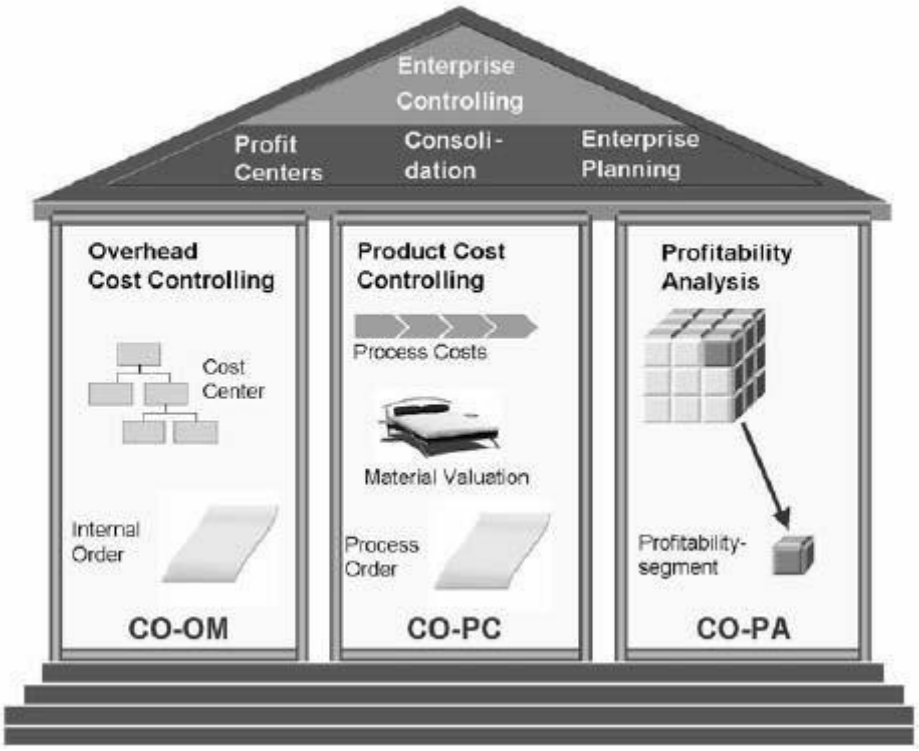


Figure 5-8: The Components of Controlling

mySAP Financials' Controlling (CO) and Financial Accounting (FI) are independent components in the SAP system. The data flow between the two components takes place on a regular basis. Therefore, all cost relevant data flows automatically to Controlling from Financial Accounting. At the same time, the system assigns the costs and revenues to different CO account assignment objects, such as cost centers, business processes, projects or orders. The relevant accounts in Financial Accounting are managed in Controlling as cost elements or revenue elements. This enables you to compare and reconcile the values from Controlling and Financial Accounting.

The components of CO and EC include the following key capabilities: Key Controlling capabilities:

Cost Center Accounting

You use Cost Center Accounting for controlling purposes within your organization. It is useful for a source-related assignment of overhead costs to the location where they occurred.

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Internal Orders

You use internal orders to collect and control costs according to the job that incurred the costs. You can assign budgets for these jobs, which the system monitors, to ensure that the budgets are not exceeded.

Activity-Based Costing

Activity-Based Costing analyzes cross-departmental business processes. The goals of the whole organization and the optimization of business flows are prioritized.

Product Cost Controlling

Product Cost Controlling calculates the costs that occur during manufacture of a product, or provision of a service. It enables you to calculate the minimum price at which a product can be profitably marketed.

Profitability Analysis

Profitability Analysis analyzes the profit or loss of an organization by individual market segments. The system allocates the corresponding costs to the revenues for each market segment. Profitability Analysis provides a basis for decision-making, for example, for price determination, customer selection, conditioning, and for choosing the distribution channel.

Key Enterprise Controlling capabilities:

Profit Center Accounting

Profit Center Accounting evaluates the profit or loss of individual, independent areas within an organization. These areas are responsible for their costs and revenues. Profit Center Accounting is a statistical accounting component in the SAP system. This means that it takes place on a statistical basis at the same time as true accounting. In addition to costs and revenues, you can display key figures, such as, return on investment, working capital or cash flow on a profit center.

Consolidation

Enterprise Controlling Consolidation (EC-CS) provides the ability to consolidate financial data for both external (legal) and internal (profit center) accounting perspectives. Automated functionality includes currency translation, inter-unit elimination and consolidation of investments.

Master Data

The mySAP Financials Controlling application carries out cost and revenue element accounting in a single Controlling Area only, the primary organizational element of Controlling. The Controlling Area forms a framework within which CO processes cost and revenue element transactions and all CO documents. Depending on organizational requirements, the controlling area can consist of one or more company codes. The assignment of multiple company codes to a controlling area can be used to support centralized cost accounting for an entire organization.

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Cost and revenue element accounting records and groups the costs incurred during a particular settlement period. This is not so much cost accounting, as it is the organized recording that is its basis in mySAP Controlling.

Postings relevant to cost accounting contain the cost or revenue elements involved and specify the locations and reasons for the costs. To provide this information, which also allocates costs successively to their profitability segments, the R/3 System uses Controlling objects for account assignment, including cost centers, orders, projects, business processes, and various cost objects such as sales orders.

These controlling objects form the master data of CO, and may or may not be maintained by an organization depending on its managerial accounting needs. The values illustrated by the objects are divided into cost and revenue elements, which correspond to accounts in the Financial Accounting component.

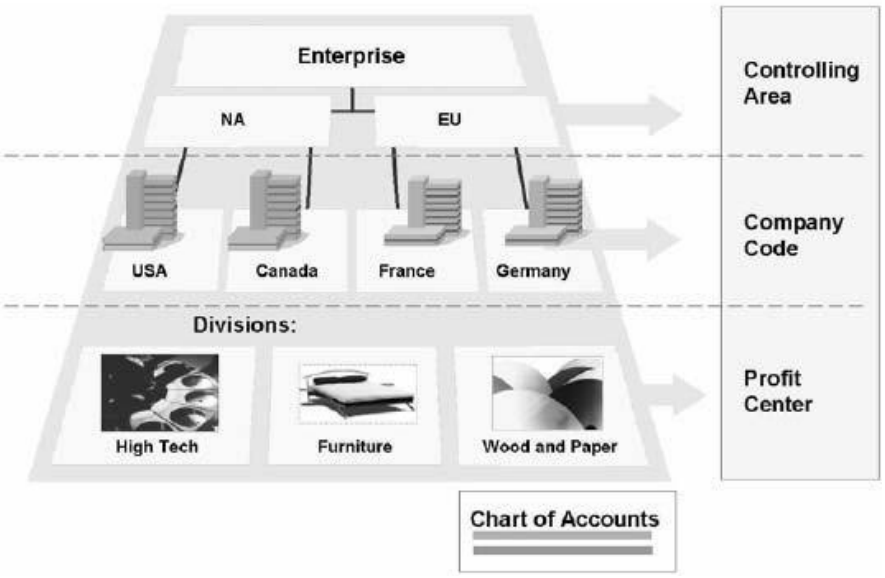


Figure 5-7: Organizational Elements in Controlling

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The **controlling area** represents a closed system used for cost accounting purposes within an organization. A controlling area may include one or more company codes that may use different currencies. All company codes in the same controlling area must use the same operational chart of accounts and fiscal year. All internal allocations refer exclusively to objects in the same controlling area.

Overhead Cost Controlling

Overhead in planning, monitoring, control, and coordination in such areas as research and development, procurement, work scheduling, and maintenance is gaining more importance. Companies have applied traditional cost accounting approaches to direct cost areas and to extract out the maximum savings, but the full extent of cost savings in areas of overhead have been untapped and the opportunities untouched until now.

The mySAP Financials Overhead Cost Controlling (CO-OM) component helps you plan, allocate, control, and monitor overhead in your organization. By planning in overhead areas, you can develop standards that allow you to control costs and valuate internal activities. You can assign overhead to the cost centers where it occurred or to the activities that generated the overhead. Controlling offers numerous tools for additional cost allocation, allowing you to easily and accurately assign costs based on their true origins and to treat them as direct costs.

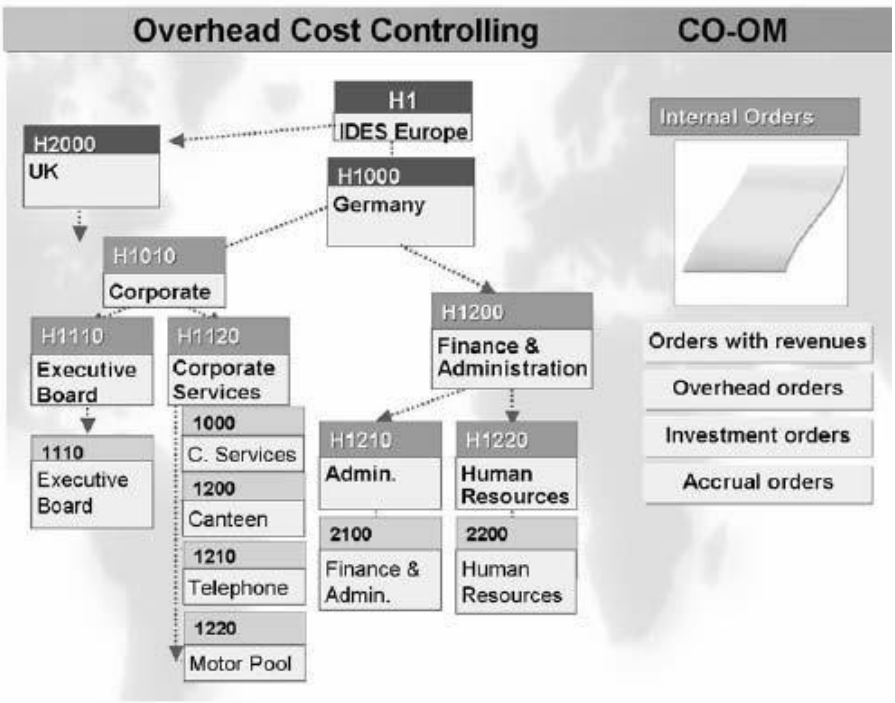


Figure 5-8: Overhead Cost Controlling

Cost Center Accounting

The Cost Center Accounting component determines where costs appear in the organization. You thereby assign costs to their organizational subareas. By recording and allocating costs, you not only make cost controlling possible, you also lay

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important groundwork for other Controlling components, such as Cost Object Controlling.

Cost centers are organizational subareas that you can treat as independent account assignment objects in cost accounting. You should structure cost centers so that they represent areas of responsibility, meaning that a given person manages the costs within that subarea. In the SAP R/3, cost accounting takes place within a defined controlling area. You must assign each cost center to a single controlling area. In addition, in order to reconcile external and internal accounting, you must assign each cost center to a company code. For later analysis, you can also assign the cost centers to a business area and a profit center.

In addition, you store important control data for planned calculations, actual calculations, and the Information System in the cost center. The Controlling application uses this information to control planning and posting on cost centers, for example, or whether the cost center allows commitments and posting of statistical revenues. You can define time-based dependencies for cost centers. For example, you can allow a cost center to change company codes from one fiscal year to the next. The SAP R/3 logs all changes to master data.

You can combine cost centers in cost center groups, which you can then combine into cost center hierarchies that reflect the decision-making, responsibility, and control areas in the organization. Individual cost centers are at the lowest level of the hierarchy. The SAP R/3 requires at least one cost center hierarchy per controlling area, holding all cost centers in the organization; the standard hierarchy. In addition, you can define as many alternative cost center groups as required, based on any necessary functional or organizational requirements. Cost center groups produce evaluations based on given responsibility areas in addition to transactions in planning and internal cost allocation.

Internal Order

Internal orders are normally used to plan, collect, and settle the costs of internal jobs and tasks. The SAP R/3 enables you to monitor your internal orders throughout their entire life cycle; from initial creation, through the planning and posting of all the actual costs, to the final settlement and archiving.

Order management within a company usually differentiates between sales-oriented orders, and internal orders. Sales-oriented orders (production or sales orders) are intended mainly for the logistical control of input factors and sales activities. Internal orders are categorized as either:

- Standard orders used only for monitoring objects in Cost Accounting (such as, advertising or trade fair orders), or
- Productive orders that are value-added, that is, orders that can be capitalized (such as in-house construction of an assembly line). These orders can be used to assist in decision-making, such as when you need to decide between in- house production and external procurement.

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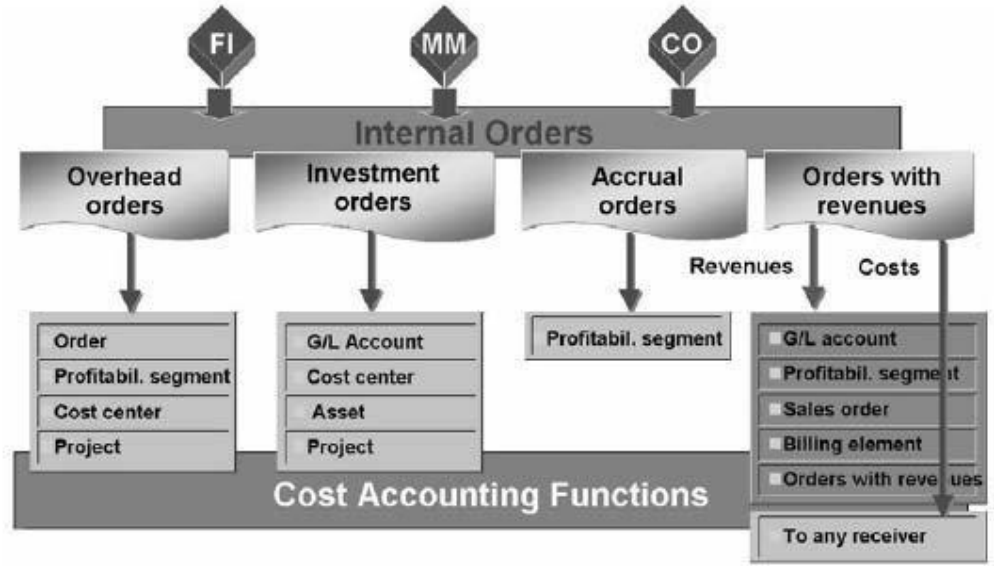


Figure 5-9: Internal Orders

Activity-Based Costing

Activity-Based Costing (ABC) is a relatively new cost accounting method used by some companies to monitor costs by business process rather than cost centers. The goal of ABC is to determine the cost of performing a business process. This process cost can then be analyzed at the product or customer level by determining how much of the process was used or consumed by an ABC cost object, such as a product. Costs that were previously hidden in various overhead expenses can now be clearly identified and addressed. Cost Center costs are allocated to business processes to determine process costs. Once the cost of a process has been determined, that cost is allocated based on resource drivers to ABC cost objects.

Product Cost Controlling

Product Cost Controlling is part of mySAP Financial's Controlling application component and is a tool for managing costs related to the manufacturing process and the rendering of services. Product Cost Controlling uses information from the Overhead Cost Controlling components to calculate such costs as labor, machine, or factory overhead, and provides information to Profitability Analysis so that tool can calculate contribution margins.

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Product Cost Controlling includes the following tools:

- Product Cost Planning
- Cost Object Controlling
- Actual Costing
- Information System

Product Cost Controlling can help you:

- Plan your product costs accurately
- Compare alternative cost estimates to optimize your business decisions
- Monitor your product costs in every stage of the manufacturing process
- Carry out detailed variance analysis on each order, product, and product group
- Calculate actual costs by period
- Put alternative values on your inventory for balance sheet purposes
- Answer recurring questions on the cost of goods manufactured by plant, product group, product, or order
- Answer one-of questions about the cost of goods manufactured



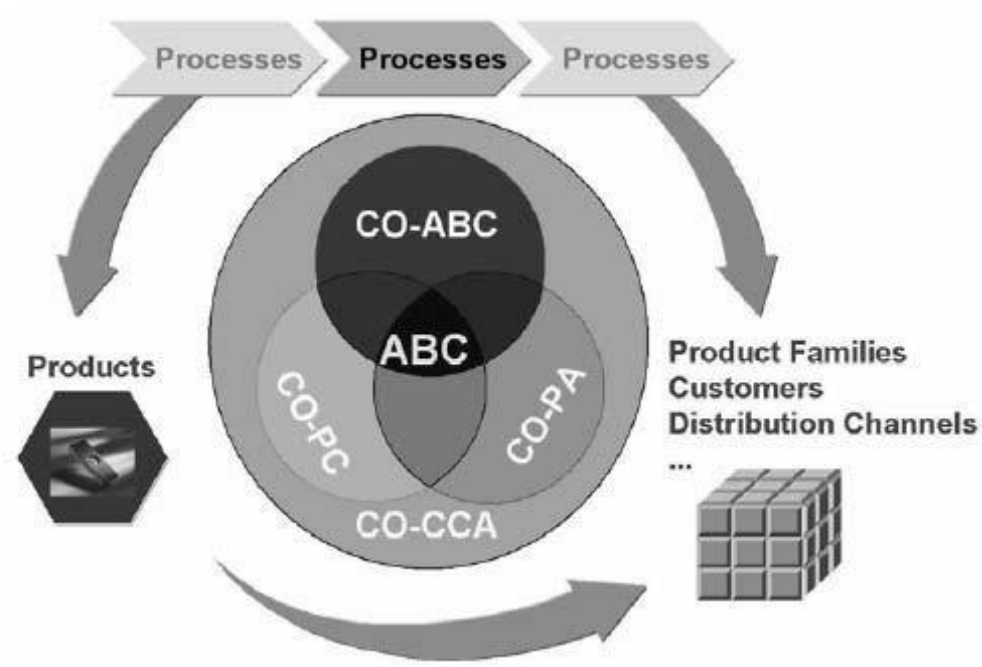


Figure 5-10: Activity-Based Costing

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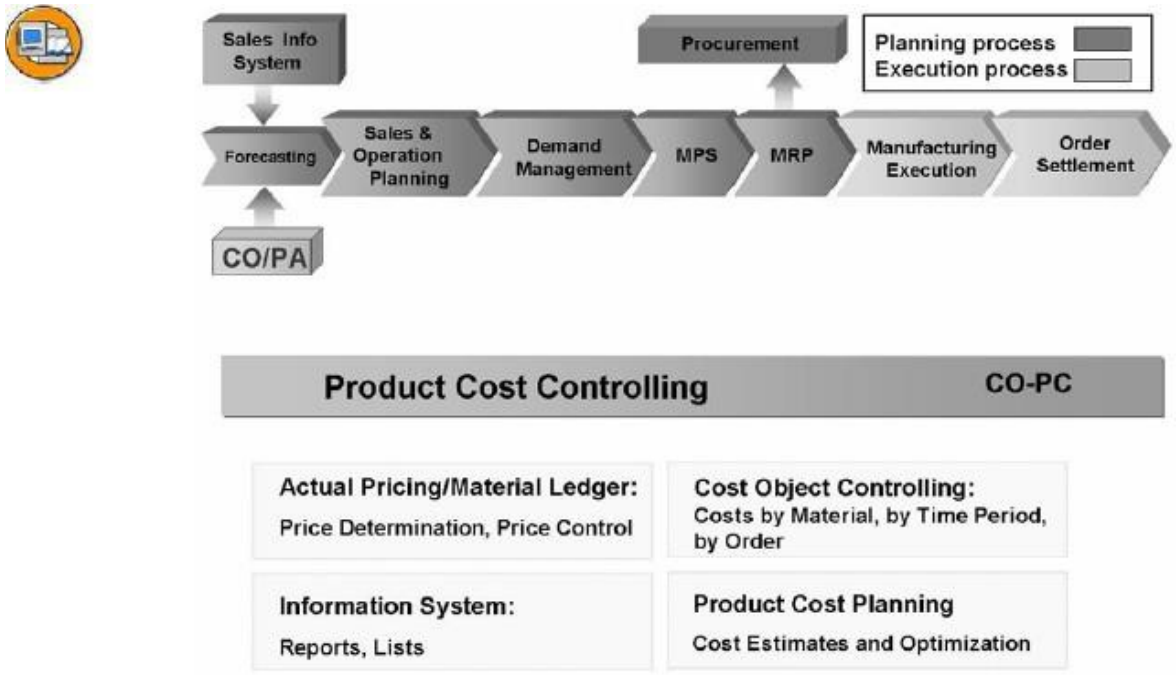


Figure 5-11: Product Cost Controlling (CO-PC)

Profitability Management

Today, many companies apply the principle of decentralized management. This lets you reduce the complexity of the entire company by creating autonomous units. It also reflects a management philosophy that transfers more responsibility to the individual employee (management by delegation, job enrichment, job enlargement).

mySAP Financials provides you with two tools for evaluating profitability in such a decentralized environment:

Profitability Analysis (CO-PA)

Profitability Analysis (CO-PA) provides you with an external view of your profitability. Profitability Analysis allows you to monitor and analyze the contribution of your market segments and units, structured according to products, customers, orders, and summarizations of these and other user-defined characteristics. The aim of CO-PA is to provide your sales, marketing, planning, and management organizations with decision-support from a market-oriented viewpoint.

Profit Center Accounting (EC-PCA)

Enterprise Controlling's Profit Center Accounting (EC-PCA) provides you with an internal view of your profitability. EC-PCA makes it possible to evaluate the operating profit of different areas or units within your enterprise.

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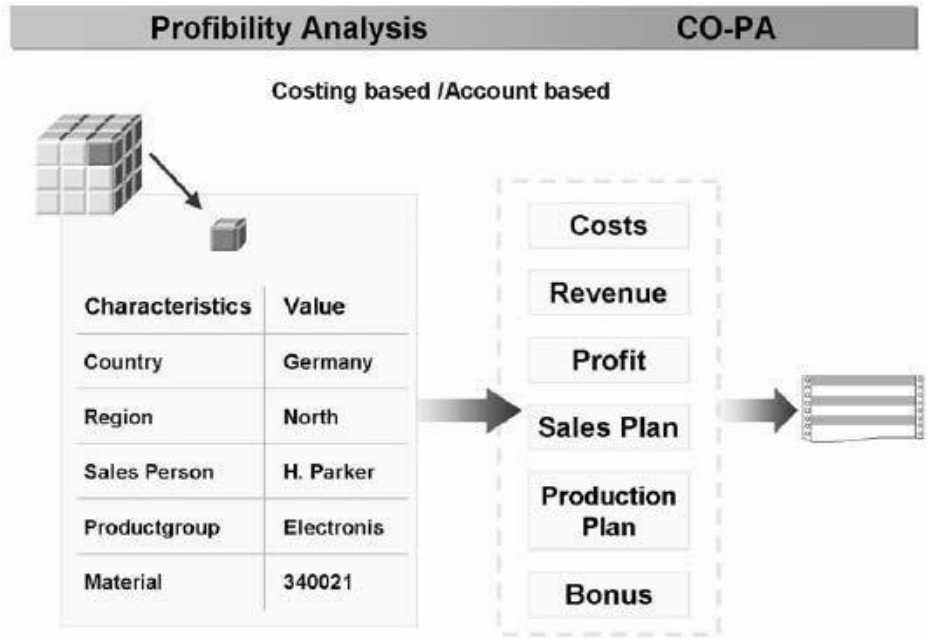


Figure 5-12: Profitability Analysis (CO-PA)

The essential characteristic of a profit center is that it is responsible for its own balance of costs and revenues. This distinguishes it from a cost center, which merely reflects where capacity costs originate. You can structure profit centers according to region (branch offices, plants), function (production, sales) or product (product ranges, divisions). It is possible to transfer key balance sheet items to Profit Center Accounting, allowing you to analyze additional key figures by profit center (return on investment, working capital, cash flow). An essential goal in the design of Profit Center Accounting was to require you to intervene as little as possible in posting and allocation transactions at the operational level. All the relevant data is transferred automatically to the profit center without you having to make any additional entries. The profit center is not an independent account assignment object, but rather derived from existing objects.

Posting in Controlling

When an FI document is created that posts to an expense (or revenue) account for which a corresponding primary cost element was created in CO, and a valid controlling object (such as a cost center or internal order) is identified for the expense/revenue line item, a controlling document is also created.

This CO document with its own unique number contains the following details:

- Controlling object posted to
- The cost element used
- The amount
- The date

When a primary cost is initially posted into CO, it is treated as a one-sided journal entry, unlike a traditional balanced financial accounting journal entry.

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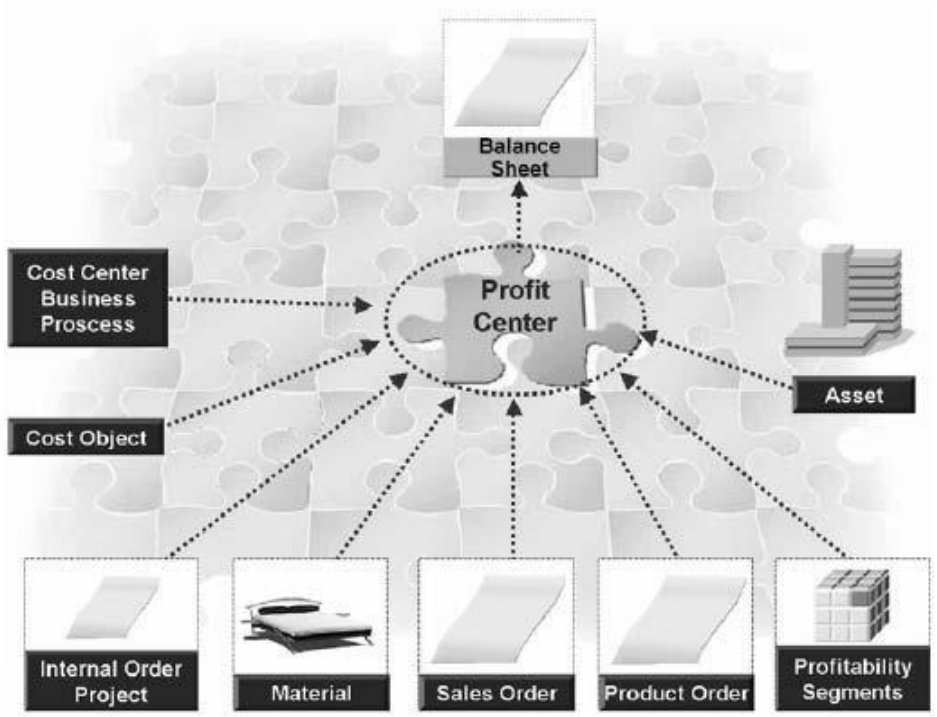


Figure 5-13: Profit Center Accounting (EC-PCA)

Note: As any subsequent cost movements occur within CO, the transactions creating these cost flows are balanced entries. When a cost is moved from one controlling object to another, such as from one cost center to another, the sending object is credited, and the receiving object is debited for the same amount

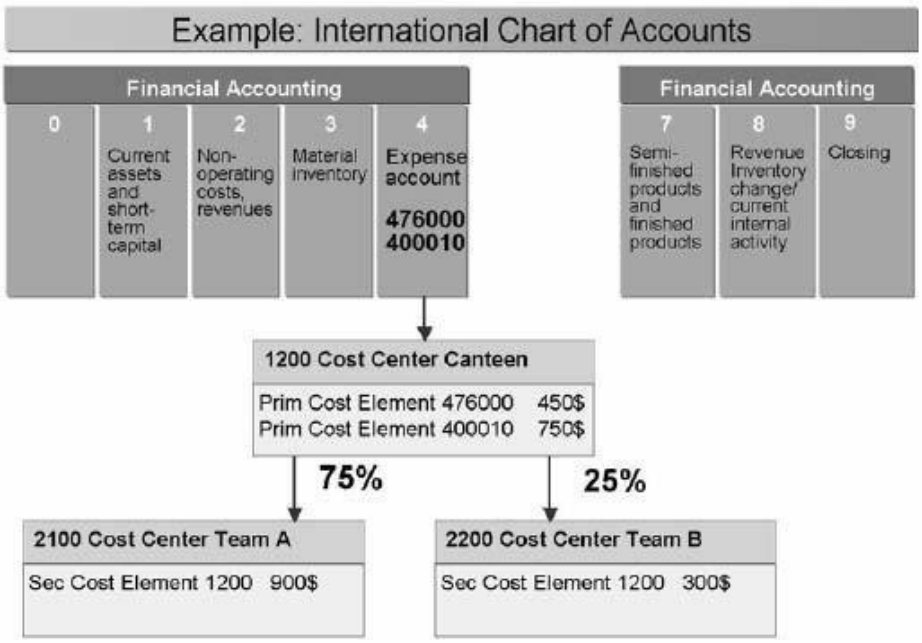


Figure 5-14: Cost Elements

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Integration

All important transactions in the Controlling application appear in separate Controlling documents (or CO documents). You can access the original document, such as one from Financial Accounting, if a causal relationship exists between the documents. For example, if you assign a fixed asset to a cost center, SAP R/3 creates an automatic account assignment to the cost center for the relevant postings in the Asset Accounting component. This minimizes data entry effort. In the integrated SAP R/3 system, you can transfer data to Cost Center Accounting from the following application components:

Financial Accounting (FI)

Asset Accounting (FI-AA)

Materials Management (MM)

Material Consumption

Production Planning (PP)

Personnel Administration and Payroll (PA)

Other SAP R/3 application components generate data that has a direct impact on CO. For example, when non-stock consumable items are purchased, an expense is posted to the G/L. At the same time, the expense is posted as a cost to the cost center (or other object in CO) for which the items have been purchased. That cost center's costs may later be passed on as overhead to another cost center, a cost object, or other object in CO.

The Financial Accounting application area of SAP R/3 is a primary source of data for Controlling. Typically, expense postings to the General Ledger result in cost postings to CO. These expense postings to the G/L could be manual journal entries, or initiated through accounts payable postings, or through depreciation postings from Asset Accounting (FI-AA), or from other SAP R/3 application components.

Revenue postings to the G/L would also typically generate postings in CO/ EC to CO-PA and/or Profit Center Accounting.

Both expense and revenue postings from FI must specify an object in CO that will receive the cost or revenue data.

The Logistics area of SAP R/3 also has numerous integration points with Controlling. In the inventory area of Materials Management, a goods issue transaction can create a cost posting in CO to whichever object is specified (for example, cost center, production order, internal order). Looking from the other direction, CO can cause a posting to inventory (in MM) resulting from the delivery of finished goods from production. In addition, product cost estimates created in CO can update price fields in material master records. Finally, the creation of purchase orders in MM can

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generate commitment postings within CO. (Commitments are not costs; they represent an outstanding obligation to purchase something from a vendor).

The Production Planning (PP) area of Logistics also works very closely with Controlling. Bills of Material (BOMs) and routings, which are created in PP, can be utilized in Product Cost Controlling in CO. In addition, PP production orders are one form of cost object utilized to track and control production costs in Cost Object Controlling.

Sales and Distribution (SD) is a primary source of revenue postings to CO/ EC via billing documents. An SD sales order can also be used in conjunction with a make-to-order production scenario in CO to track both costs and revenues, and to evaluate the profitability of fulfilling the order.

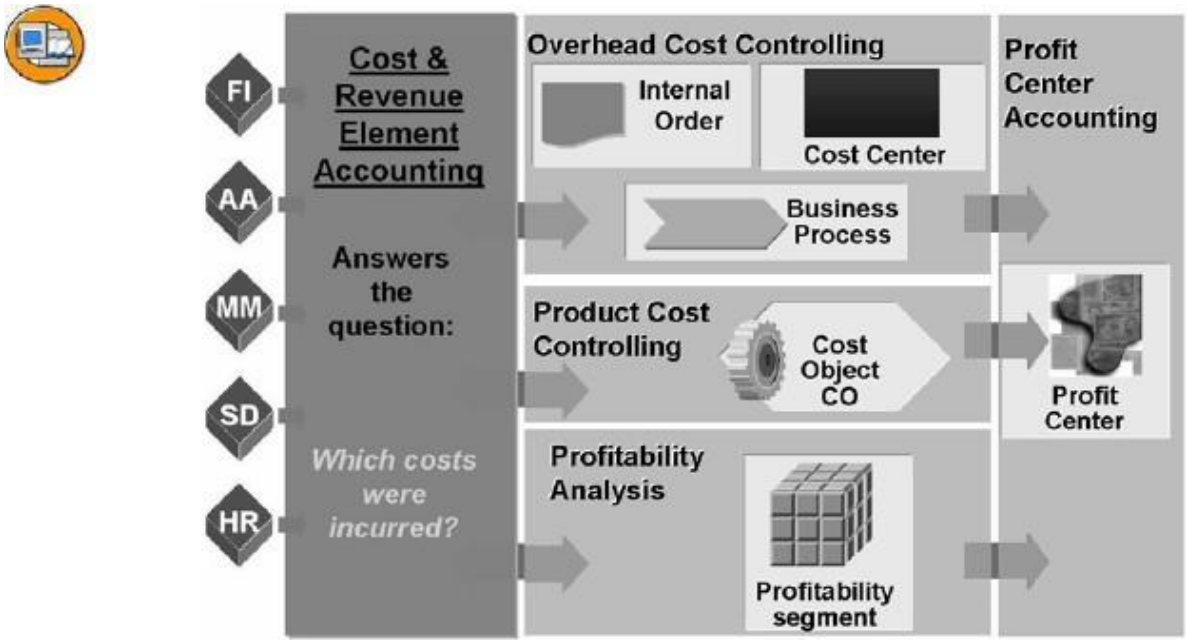


Figure 5-15: Cost and Revenue Element Accounting

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Exercise 5-4: Creating a Basic Cost Center

Exercise Objectives

After completing this exercise, you will be able to:

- Create a basic cost center

Business Example

You have just created a new area in your company for customer service. You would like to keep track of the costs associated with this area. You will need to create a new cost center to capture these costs.

Task

In this exercise, you will create a cost center in the CO Europe controlling area 1, and the German subsidiary company code 1000. This will be an internal service cost center.

1. Create the initial cost center information with the data provided.

Field	Data
Cost Center	SAP01-##
Valid From	01 January, <current year>
Valid To	31 December, <current year>

2. Enter the details of the new cost center with the following data.

Field	Data
Name	Group ##
Description	Cost Center ##
Person Responsible	<your name>
Cost center category	H
Hierarchy area	H9500 (Training)
Company code	1000
Business area	9900
Profit Center	1400

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Solution 5-4: Creating a Basic Cost Center

Task
In this exercise, you will create a cost center in the CO Europe controlling area 1, and the German subsidiary company code 1000. This will be an internal service cost center.

1. Create the initial cost center information with the data provided.

Field	Data
Cost Center	SAP01-##
Valid From	01 January, <current year>
Valid To	31 December, <current year>

a) From the *SAP Easy Access* menu, choose *Accounting* → *Controlling* → *Cost Center Accounting* → *Master Data* → *Cost Center* → *Individual Processing.*

b) Choose *Create*.

c) Enter *Controlling area*: **1000**.

d) Choose *Enter*.

e) Enter *Cost center*:**SAP01-##**.

f) Enter Valid From: **01 January, <current year>**.

g) Enter Valid To: **31 December, <current year>**.

Note: Choose master data.

2. Enter the details of the new cost center with the following data.

Field	Data
Name	Group ##
Description	Cost Center ##
Person Responsible	<your name>
Cost center category	H
Hierarchy area	H9500 (Training)
Company code	1000
Business area	9900
Profit Center	1400

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a) Choose *Master Data*.

b) Choose the *Basic data* tab.

c) Enter the data from the table above.

d) Choose  *Save*. The Save message appears in lower left corner of screen.

e) Choose  *Exit* three times to exit the screens.

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Exercise 5-5: Processing a Vendor's Invoice and Viewing a Cost Center Report

Exercise Objectives

After completing this exercise, you will be able to:

- View a cost center report for a specific cost center
- Process an incoming invoice

Business Example

Your company ordered services for a cost center.

Task

View a cost center report to find the actual costs for a cost center.

1. Enter a vendor invoice using the information in the table below.

Field	Data
Vendor	200 (SMP GmbH)
Invoice date	<today's date>
Amount	11600 EUR
Tax amount	1600 EUR
G/L account	476000
Amount in Doc. curr.	*
Cost center	SAP01-##

2. Execute the actual/plan/variance report for a cost center and locate the value for operating supplies.

Field	Value
Controlling area	1000
Fiscal Year:	<current year>
From period	01
To period	12
Plan version	0
Or value(s)	SAP01-##
Cost element	

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Solution 5-5: Processing a Vendor's Invoice and Viewing a Cost Center Report

Task
View a cost center report to find the actual costs for a cost center.

1. Enter a vendor invoice using the information in the table below.

Field	Data
Vendor	200 (SMP GmbH)
Invoice date	<today's date>
Amount	11600 EUR
Tax amount	1600 EUR
G/L account	476000
Amount in Doc. curr.	*
Cost center	SAP01-##

   a) From the *SAP Easy Access* menu, choose *Accounting* → *Financial Accounting* → *Accounts Payable* → *Document entry*.

   b) Choose  *Invoice*.

   c) Enter the information from the table above.

   d) Choose  *Save*.

2. Execute the actual/plan/variance report for a cost center and locate the value for operating supplies.

Field	Value
Controlling area	1000
Fiscal Year:	<current year>
From period	01
To period	12
Plan version	0
Or value(s)	SAP01-##
Cost element	

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a) From the *SAP Easy Access* menu, choose *Accounting* → *Controlling* → *Cost Center Accounting* → *Information System* → *Reports for Cost Center Accounting* → *Plan/Actual Comparisons*.

b) Choose *Cost Centers: Actual/Plan/Variance.*

c) Enter the data from the table above.

d) Enter *Or Value(s):* **SAP 01- ##.**

Hint: Make sure this value is in the first *Or value(s)* field.

e) Choose *Execute*.

f) Record **476000 Office supplies**.

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Lesson Summary

You should now be able to:

- Define organizational elements and master data in relation to mySAP Financials' Management Accounting: Controlling and Enterprise Controlling
- Define the components of Controlling and Enterprise controlling
- Illustrate the integration between Controlling and other SAP application component areas
- Create a cost center master record
- View a cost center report

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Unit Summary

You should now be able to:

- Differentiate between organizational elements and master data
- Illustrate the integration between Financial Accounting and other SAP module areas and systems
- Describe how to view a chart of accounts
- Explain how SAP supports the key processes in financial accounting
- Describe how to create a payment, view a general ledger transaction, and view a bank balance
- Define organizational elements and master data in relation to mySAP Financials' Management Accounting: Controlling and Enterprise Controlling
- Define the components of Controlling and Enterprise controlling
- Illustrate the integration between Controlling and other SAP application component areas
- Create a cost center master record
- View a cost center report

Related Information

For more detailed information about SAP courses, please visit http://www.sap.com/education and navigate to the appropriate country education site.

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Test Your Knowledge

1. The main components within Financial Accounting are General Ledger, Accounts Receivable, Accounts Payable, Asset Accounting, and Consolidation.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

2. Company Code Level is the organizational unit at which your legal Accounts are produced.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

3. How many Company Codes can be assigned to a Chart of Accounts?
   Choose the correct answer(s).

   ☐ A Only one
   ☐ B None
   ☐ C More than one
   ☐ D All of the above
   ☐ E None of the above

4. In Financial Accounting, the Business Areas Organizational unit allows cross-company code reporting.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

5. At what stage in the sales process are accounting documents produced?
   Choose the correct answer(s).

   ☐ A Goods Issue
   ☐ B Delivery Creation
   ☐ C Inquiry
   ☐ D All of the above

6. Which logistics posting will not update the liquidity forecast in the Cash Management module?
   Choose the correct answer(s).

   ☐ A Sales orders
   ☐ B Purchase requisitions
   ☐ C Purchase orders
   ☐ D All of the above

7. Which of these is not an option for processing payments?
   Choose the correct answer(s).

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- ☐ A Batch input
- ☐ B Manually
- ☐ C Automatically
- ☐ D All of the above

8. Bank Accounts in SAP are uniquely identified by Account ID and House Bank.
Determine whether this statement is true or false.

- ☐ True
- ☐ False

9. Which of the following are not major components of Controlling in SAP R/3?
Choose the correct answer(s).

- ☐ A Cost and Revenue Element Accounting
- ☐ B Overhead Cost Controlling
- ☐ C Product Cost Controlling
- ☐ D Profitability Management
- ☐ E Cost Analysis

10. What is the primary organizational element in Controlling?
Choose the correct answer(s).

- ☐ A Cost Center
- ☐ B Profitability Management
- ☐ C Controlling Area
- ☐ D Company Code

11. Which of the following is an incorrect statement regarding internal orders?
Choose the correct answer(s).

- ☐ A There are four general categories of internal order: overhead orders, investment orders, accrual orders, and orders with revenue.
- ☐ B An overhead order might be used to track the costs of a unique event, such as a convention or trade fair.
- ☐ C An overhead order might be used to create a correcting entry for a balance sheet posting.
- ☐ D The internal orders component offers functionality for planning costs as well as monitoring actual costs.

12. Which of the following is a true statement?
Choose the correct answer(s).

- ☐ A CO integrates will all other application components of SAP R/3 except for SD (Sales and Distribution).
- ☐ B A goods issue transaction in MM cannot create a cost posting in CO.
- ☐ C Revenue postings to the General Ledger are irrelevant to CO, and there is no resulting integration of revenue data between FI and CO.
- ☐ D The Financial Accounting application area of SAP R/3 is a primary source of data for Controlling.

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Answers

1. The main components within Financial Accounting are General Ledger, Accounts Receivable, Accounts Payable, Asset Accounting, and Consolidation.

   Answer: True

   General Ledger, Accounts Receivable, Accounts Payable, Asset Accounting, and Consolidation make up the main components within Financial Accounting.

2. Company Code Level is the organizational unit at which your legal Accounts are produced.

   Answer: True

   The Company Code Level is the Organizational unit at which your legal accounts are produced.

3. How many Company Codes can be assigned to a Chart of Accounts?

   Answer: C

   More than one Company Code can be assigned to a Chart of Accounts.

4. In Financial Accounting, the Business Areas Organizational unit allows cross-company code reporting.

   Answer: True

   The Business Areas Organizational unit allows cross-company code reporting in Financial Accounting.

5. At what stage in the sales process are accounting documents produced?

   Answer: A

   Accounting documents are produced at the Goods Issue stage in the sales process.

6. Which logistics posting will not update the liquidity forecast in the Cash Management module?

   Answer: C

   Purchase orders will not update the liquidity forecast in the Cash Management module.

7. Which of these is not an option for processing payments?

   Answer: A

   Batch input is not an option for processing payments.

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8. Bank Accounts in SAP are uniquely identified by Account ID and House Bank.

   Answer: True

   An Account ID and House Bank uniquely identify Bank Accounts in SAP.

9. Which of the following are not major components of Controlling in SAP R/3?

   Answer: E

   Cost and revenue element accounting organizes the recording and grouping of costs/ revenues. Overhead Cost Controlling consists of the key capabilities: Cost Center Accounting, Internal Orders and Activity-based Costing. Product Cost Controlling is a tool for the managing costs related to the manufacturing process and the rendering of services. Profitability management consists of the key capabilities: Profitability Analysis and Profit Center Accounting.

10. What is the primary organizational element in Controlling?

    Answer: C

    The Controlling Area is the primary organizational element in Controlling. The Company Code does have an important role in Controlling (through its link with a Controlling Area), but it is created in the Financial Accounting (FI) application component of SAP R/3, and is considered an FI organizational element.

11. Which of the following is an incorrect statement regarding internal orders?

    Answer: C

    Overhead orders would not be used to correct balance sheet postings.

12. Which of the following is a true statement?

    Answer: D

    Expense postings to the General Ledger in the FI module typically create cost postings in CO. CO also integrates with SD. Goods issue transactions in MM would typically create a cost posting in CO (and also an expense posting in FI). Revenue postings to the General Ledger in FI are directly relevant to the Profitability Management components of CO (Profitability Analysis and Profit Center Accounting); the revenue postings in FI would normally generate revenue postings to those components of CO.

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Unit 6

Human Capital Management

Unit Overview

Human Resources is an integral part of every organization. mySAP ERP Human Capital Management covers a broad list of functions, including recruiting and hiring employees, determining benefits and compensation, processing payroll, and many other areas. This unit introduces you to the basics of mySAP ERP Human Capital Management. The lessons provide you with some foundation information, and then look at some basic processes.

Unit Objectives

After completing this unit, you will be able to:

- Outline the tasks associated within Human Capital Management
- Explain how SAP within mySAP ERP Human Capital Management supports the key processes in Human Capital Management
- Differentiate between SAP HR organizational elements and master data x Describe an organizational plan and identify its organizational elements x Describe the Manager's Desktop and the functions it supports
- List the recruitment activities and functions that drive a successful recruitment plan
- Enter a new employee and establish key Master Data records for that employee
- Describe how personnel time is managed and evaluated in the Human Resources module
- Define how payroll is managed within an organization using the Human Resources component

Unit Contents

Lesson: Human Capital Management… 6-2
Exercise 6-1: Create an Organization Unit and Vacant 6-18
Exercise 6-2: Hiring a New Employee … 6-21
Exercise 6-3: Viewing and Employee …..... 6-23
Exercise 6-4: Assign employee's qualifications… 6-25
Test Your Knowledge… 6-29

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Lesson: Human Capital Management

Lesson Overview
In this lesson you will obtain an overview of the functions of the mySAP ERP Human Capital Management solution.

Lesson Objectives
After completing this lesson, you will be able to:
- Outline the tasks associated within Human Capital Management
- Explain how SAP within mySAP ERP Human Capital Management supports the key processes in Human Capital Management

Business Example
The human resources department of IDES is responsible for the recruitment and maintaining of new hires.

Human Capital Management Lesson Overview
To compete effectively, you need to align all corporate resources -- including employees -- with business objectives. You need to transform traditional human resources (HR) functions into a comprehensive program for human capital management (HCM). With mySAP ERP Human Capital Management (mySAP ERP HCM), you can maximize the value of your employees and align employee skills, activities, and incentives with business objectives and strategies. mySAP ERP HCM also provides the tools to manage, measure, and reward individual and team contributions.

In this lesson, you will learn about the basics of mySAP ERP Human Capital Management by examining a typical process with the related sub processes. We will focus on the integration options both within human capital management and within other areas.





Figure 6-1: mySAP Human Capital Management

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This lesson deals with the following elements of the mySAP ERP HCM solution:

- Organizational Management objects
- Applicant Data
- Personnel Management
- Personnel Development
- Training and Event Management
- Time Management
- Appraisals
- Payroll
- Personnel Cost Planning

The Organizational Plan

You can use Organizational Management to quickly and effectively map your organizational and reporting structure with the relevant organizational objects. You create an organizational plan, which is a comprehensive and dynamic model of the structural and personnel environment in your enterprise.



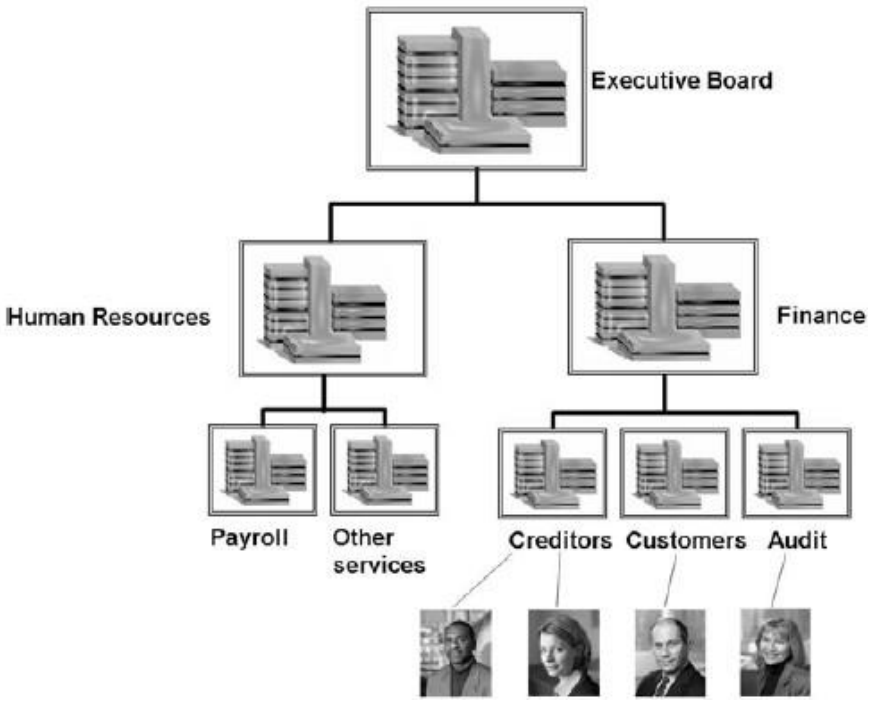


Figure 6-2: Organizational Management

Some of the key terms used in Organizational Management are:

Organizational units

Organizational units describe the various business units in your organization. Several organizational units, along with their relationships, make up the organizational structure. Organizational units can be divided according to functional or regional criteria, for example.

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Jobs

Jobs are general descriptions or templates that apply to several positions with comparable requirements, tasks, and characteristics.

Positions

Positions are the smallest organizational units of the organizational structure. They represent the distribution of tasks amongst individual employees in the organization. Positions are occupied by persons. A position inherits the tasks and requirements of the job from which it was defined. A job can also be assigned additional tasks that have to be carried out only by this one position. Whereas a position represents a particular post to be occupied by an employee in an organization (for example, secretary in the Purchasing South department), jobs are general classifications of functions in an organization (for example, secretary).

Persons

Persons occupy positions within the organizational structure. They represent the employees in your organization. The employee data itself is maintained in Personnel Management. By assigning occupants to positions, you specify which employees occupy which positions. This is usually part of the hiring or transfer process, which is represented in Personnel Administration. You can also make the assignments in Organizational Management instead.

Recruitment

You can use the Recruitment component to carry out the entire recruitment process from entering applicant data to staffing a position. This applies both to external applicants, that is, new hires, and to internal employees changing position. The staffing requirements are represented by vacancies. Vacancies are positions that need to be filled. If you have Recruitment integrated with Organizational Management, the vacancies are created or initiated by an internal transfer in Organizational Management. This means that vacant positions are the trigger for the recruitment process.

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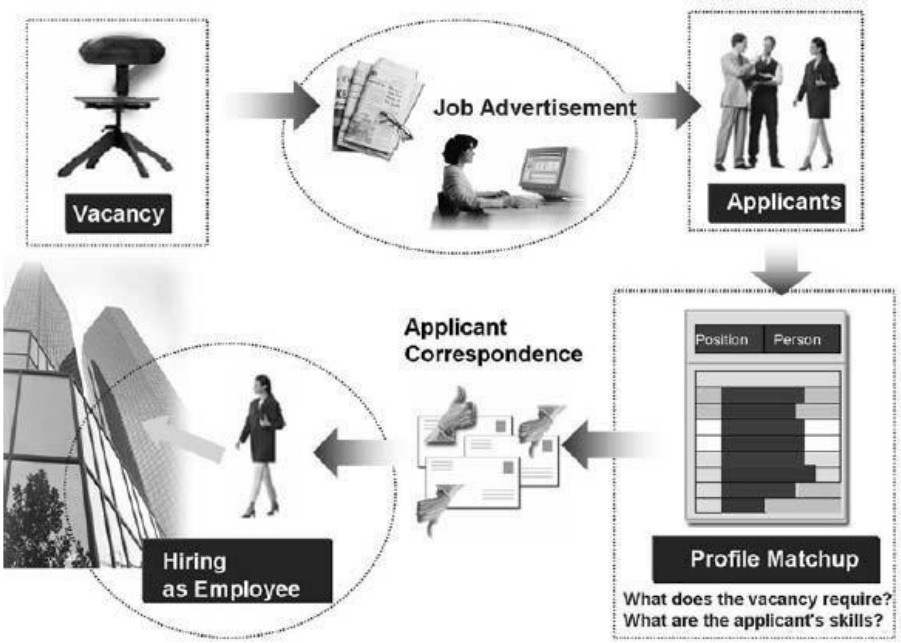


Figure 6-3: From Vacancy to Hiring

mySAP ERP HCM supports you in representing staffing requirements, advertising, managing and selecting applicants, and applicant correspondence. When you hire an applicant, you can transfer the applicant data you entered in Recruitment as employee data to Personnel Administration. External applicants and internal employees can use the Employment Opportunities self-service application to apply online and can check the status of their application using the Application Status service. Applicants can also make subsequent changes or additions to their applicant data.

A typical process in Recruitment may involve the following steps:

- The vacant positions are published in job advertisements.
- The applicants' data is entered in the system (name, address, qualifications, and so on).
- A complex selection process takes place, culminating in a decision being made.
- The employment contracts are generated for the applicants who are to be hired.
- The applicant data is transferred to HCM master data.

Recruitment in mySAP ERP HCM provides applicant actions to automate processes. For example, when you first enter applicant data, the system confirms receipt of the data by means of an applicant activity and a letter to the applicant. mySAP ERP HCM provides standard templates for correspondence with applicants. This relieves the HCM department of routine administrative tasks relating to applicant correspondence. The system provides various tools to support you in reaching a decision. For example, the applicant's short profile enables you to gain a quick overview of applicant data.

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Personnel Management

Integration between Recruitment and Personnel Administration enables the applicant data to be transferred as employee data, which you then have to supplement.

Employee data is stored in mySAP ERP HCM as infotype records. The data can be displayed, copied, corrected, and deleted.

Tab pages offer an intuitive way of selecting the required infotypes. HCM administrators can select the infotype they want to view or edit from the user-specific infotype menu (such as the Core Employee Info menu).
From a technical point of view, infotypes and their data structure reflect a set of related data records.

You can maintain infotypes in various ways:

- Single-screen maintenance (one infotype for one person)
- Personnel actions (sequence of infotypes for one person)
- Fast entry (one infotype for multiple persons)

One infotype is of central importance for employee data: the Organizational Assignment infotype. In this infotype, the employee is assigned to three important structures: the enterprise structure, the personnel structure, and the organizational plan.



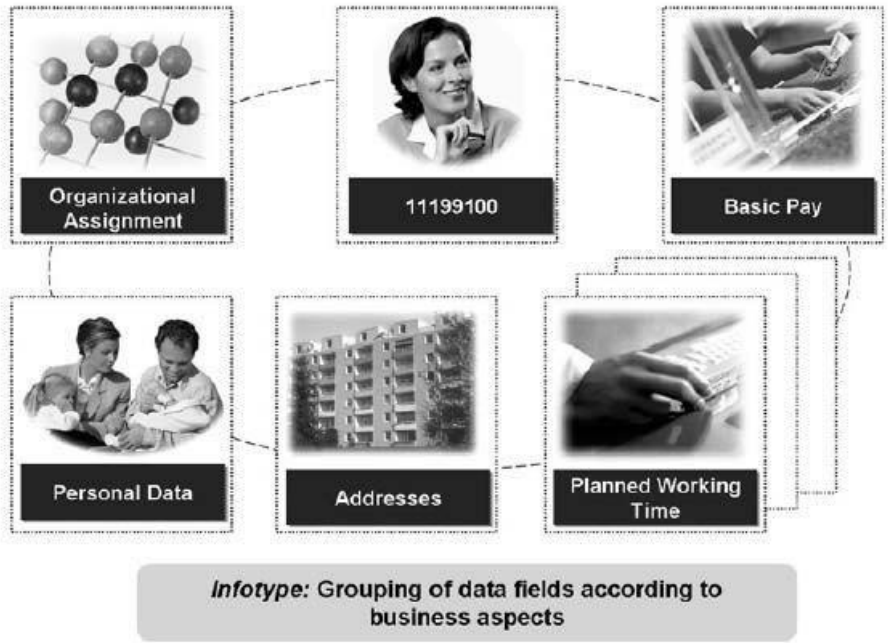


Figure 6-4: Infotypes

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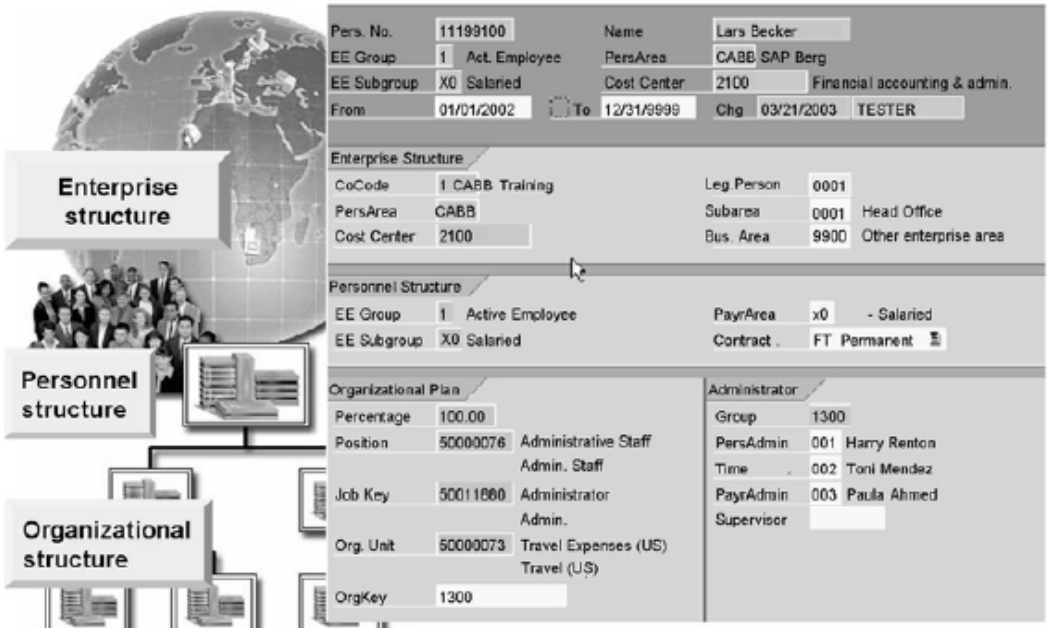


Figure 6-5: Human Capital Management Structures

You can use personnel actions for more complex situations that require you to maintain several infotypes. When you carry out a personnel action, the system proposes all relevant infotypes so that you can maintain them sequentially. When you hire an employee, for example, you have to enter all kinds of data in the system, including master data and data that is relevant for time management and payroll. You can use the Hiring action to carry out the process. In going through the Hiring action, you create a new personnel file, which consists of various infotype records (equivalent to pages of the personnel file).
The following is a list of some of the infotypes that are created when you hire an employee. You can change the number and sequence of the infotypes in the personnel action to suit your enterprise's requirements:

- Organizational Assignment
- Personal Data
- Addresses
- Planned Working Time
- Basic Pay
- Bank Details

When you carry out the Hiring action, a new HCM master data record, or personnel file, is created for the employee. Actions simplify data entry, because you do not have to access each infotype individually. If, when you are carrying out an action, you do not have all of the employee's information that you require, you can add the missing information at a later time to complete the action.

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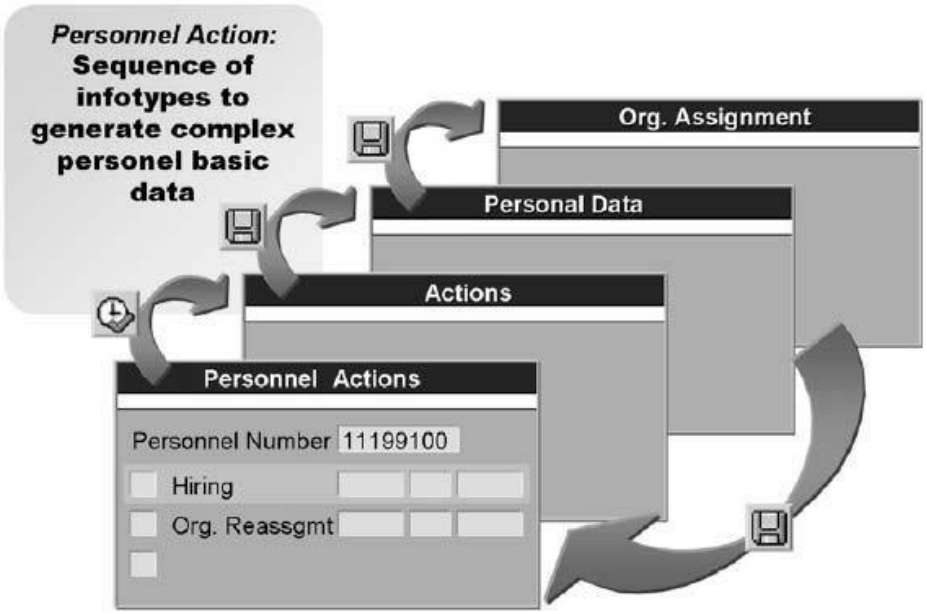


Figure 6-6: Personnel Actions

You can map all of an employee's employment relationships in various countries in the standard system. This is especially important for global enterprises. In mySAP ERP HCM, global employees are managed by linking each of an employee's personnel assignments to the person.

Personnel Development

In the Personnel Development component, you can plan and realize personnel development and further education and training for your employees, with integration with Training and Event Management.

The personnel development requirements result from a comparison of the requirements of the job and the employee's existing qualifications. The information required for the comparison is stored in profiles. Qualifying actions (such as trainee programs or participation in a sequence of courses) can be assigned to employees using development plans. Employees' performance and behavior can be appraised, the results of which provide information for employee development planning.

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Figure 6-7: Personnel Development

Training and Event Management

Training and Event Management is a highly integrated component that supports you in planning, executing, and managing your training courses and business events. Before you see the personnel development profile matchup used in the day-to-day business of booking a course, here is an explanation of the most important areas and processes in training and event management.

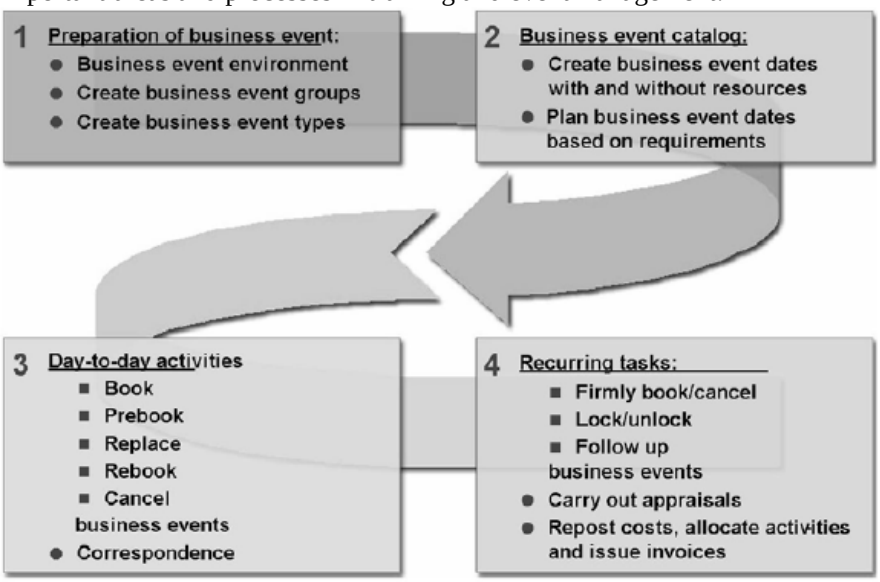


Figure 6-8: Processes in Training and Event Management

There are four main processes in Training and Event Management:

- **Business event preparation** encompasses all data you require when creating the business event catalog, such as the locations where training courses are held. The business event catalog is represented using a

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hierarchy that consists of business event groups (which are used to structure the catalog) and business event types.

- The **business event** catalog is then set up, that is, the dates for the events are planned and created in the system.
- Once dates are available, the **day-to-day activities** of booking, rebooking, or canceling business events for internal and external participants can take place. For each process, you can send an appropriate notification to participants. SAP provides templates, which you can change to suit your requirements.
- The fourth main process consists of the **recurring activities** that are closely linked to the day-to-day activities. After a course has taken place, the participants can write appraisals for it. In the case of internal participants, the newly acquired qualifications can be transferred to subprofiles in Personnel Development.

A high level of integration with other SAP components means that Training and Event Management is an ideal tool for constantly extending and updating your employees' knowledge. For example, the link with Personnel Development enables you to identify qualification deficits and react with targeted training programs in Training and Event Management. The link to the SAP Learning Solution enables you to combine traditional classroom training in Training and Event Management with Web-based learning methods that can be realized regardless of time and location.

To ensure that it is as intuitive as possible, Training and Event Management uses what are known as dynamic menus. These menus enable you to access the individual functions of the application directly via the objects in the business event catalog. You can right-click to access the most frequently used functions, such as the day-to-day activities in the dynamic attendance menu.



Figure 6-9: Training and Event Management

Day-to-day activities encompass functions related to bookings. Alternatively, you can use self-service applications to provide the most important functions

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concerning day-to-day activities. You can make the services available in the company intranet or the Internet. You can use various media (such as letter, fax, or e-mail) to notify attendees about each process. A correspondence history, which has a workflow connection, allows you to administer and monitor the correspondence.

Time Management

The Time Management component supports you in all processes that concern planning, recording, and valuating employees' attendance and absence times. We have just seen in Training and Event Management that an employee was booked onto a course. If you have Training and Event Management integrated with Time Management, the booking causes a time data record to be created as an attendance. If an employee who is booked on a course is absent, due to vacation for example, the system notifies you that the person is not available.

Information concerning employees' availability and the work performed by them is an important element in human resources. It is also used in other areas, such as Controlling and Logistics, and thereby influences company-wide decisions. Time Management offers flexible options for displaying and recording data. A special time evaluation program can evaluate master data and time data and update time accounts (such as a flextime account). Information about work performed is included in the calculation of the gross wage in Payroll. In addition, time data can be integrated with other areas of HCM (such as Training and Event Management) and in other components (such as activity allocation in Controlling).



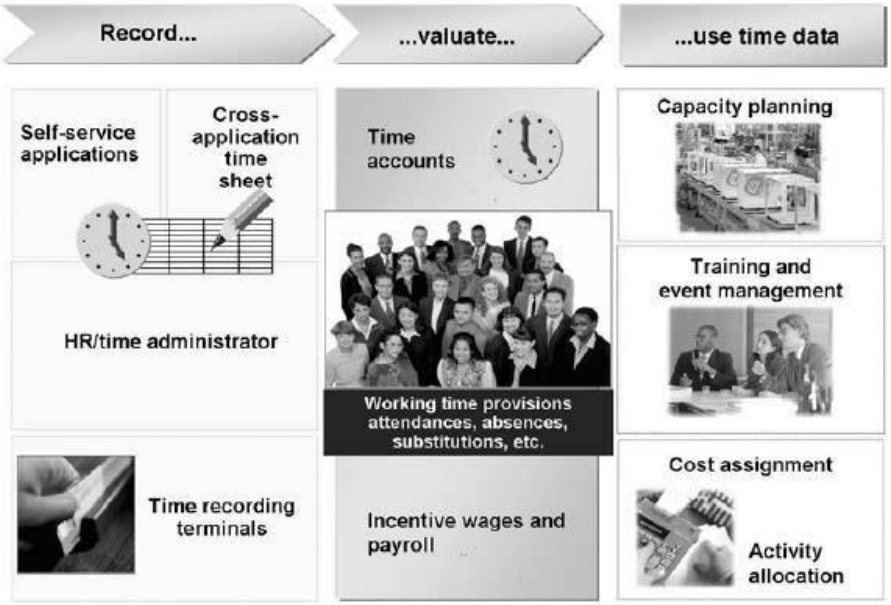


Figure 6-10: Time Management

There are various options available for recording time data such as hours worked, vacation, off-site work, or substitutions:

- Online by time administrators (using the Time Manager's Workplace, for example)
- Using front-end time recording systems

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- Using the mySAP ERP Cross-Application Time Sheet (CATS)
- Using Employee Self-Service applications (ESS)

Time data is stored in special time infotypes, in the same way as HR master data is stored. The Planned Working Time infotype is the central time management infotype. It contains the times when the employee is scheduled to work according to the work schedule assigned. The work schedule specifies when employees have to work and when they are permitted to have breaks. The work schedule also covers days off and public holidays.

Appraisals

The appraisal functionality in Personnel Development supports you with flexible appraisal processes that you can use to carry out standardized appraisals with the highest level of objectivity. This applies not only to traditional personnel appraisals, also to business event appraisals or even online employee or customer surveys using Internet or intranet services.

The phases of an appraisal can encompass all the usual steps in the appraisal process, such as planning, review, and execution, as well as evaluation of the appraisals submitted. In the appraisals catalog, you create reusable appraisal templates, which are then used to create employee-related appraisal documents.



Figure 6-11: Appraisals

In the appraisal documents, you can incorporate objective-setting agreements as planned specifications, to which you can add information either manually or by means of integration with other mySAP components:

- Integration with mySAP ERP HCM Personnel Development enables you to transfer requirements profiles from positions or qualifications from the qualifications catalog directly to your employees' individual objective-setting agreements.
- Integration with SAP Strategic Enterprise Management (SAP SEM) enables you to display the department goals derived from the higher-

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level corporate goals in the balanced scorecard and transfer relevant strategic goals directly to the object-setting agreements for your employees.

- Once the appraisal process is complete, you can use integrated, automated follow-on processes, such as updating the employee's qualification profile in Personnel Development, or adjusting his or her remuneration.
- Integration with Compensation Management enables you to automatically adopt default compensation adjustments.
- Integration with SAP Business Information Warehouse (SAP BW) enables you to compile special analyses of the appraisal results.

Payroll

Designed for global business, mySAP ERP HCM supports payroll functions and regulatory requirements for more than 50 countries.

In general terms, payroll is concerned with calculating each employee's remuneration for the work that he or she has performed. More specifically, it encompasses a multitude of processes, such as the creation of payroll results and salary statements, bank transfers, and payment by check. The processes include a number of follow-on activities, such as transferring the results to mySAP ERP Financials.

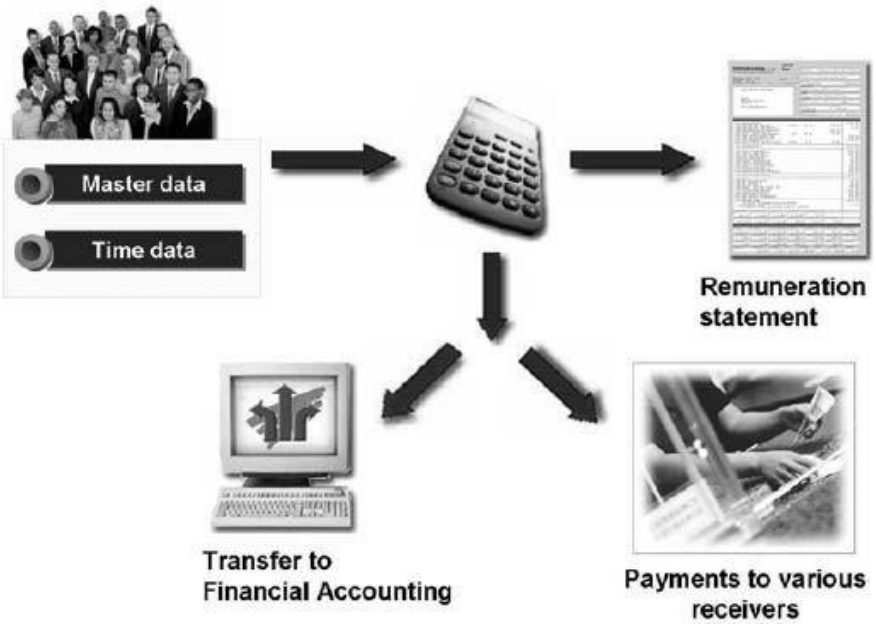


Figure 6-12: Payroll

An employees' remuneration is calculated in two main steps:

1. Grouping the remuneration elements, that is, the gross payroll
2. Legal and voluntary deductions, that is, the country-specific net payroll

An employee's remuneration comprises all payments and deductions that were determined for that employee during one payroll period. The payment and deductions are included in the remuneration calculation by means of various

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wage types. Payment is then made by bank transfer or check, for example, and the employee is sent notification in the form of the remuneration statement, or can view the information online using an Employee Self-Service application.

Personnel Cost Planning

Personnel Cost Planning and simulation can draw from a very wide data basis and can be integrated with other applications.

Personnel Cost Planning supports business processes that reach beyond the boundaries of departments and applications. Information about payment can be derived from various sources to create personnel cost plans. For example, the results of payroll can be used as a data source for Personnel Cost Planning. Planned payment data for the positions and jobs in Organizational Management can also be used as a data basis. Once the planning process has been executed, managers can make additional adjustments to the plan. They can make the adjustments by using a Web-based front end as a simple user interface for planning (a phase of the detailed planning).

Once a plan has been released, the data can be used for processes such as:

- Creating a training budget for Training and Event Management
- Transferring data to Controlling
- Extracting the cost projections for further analysis in the SAP Business Information Warehouse

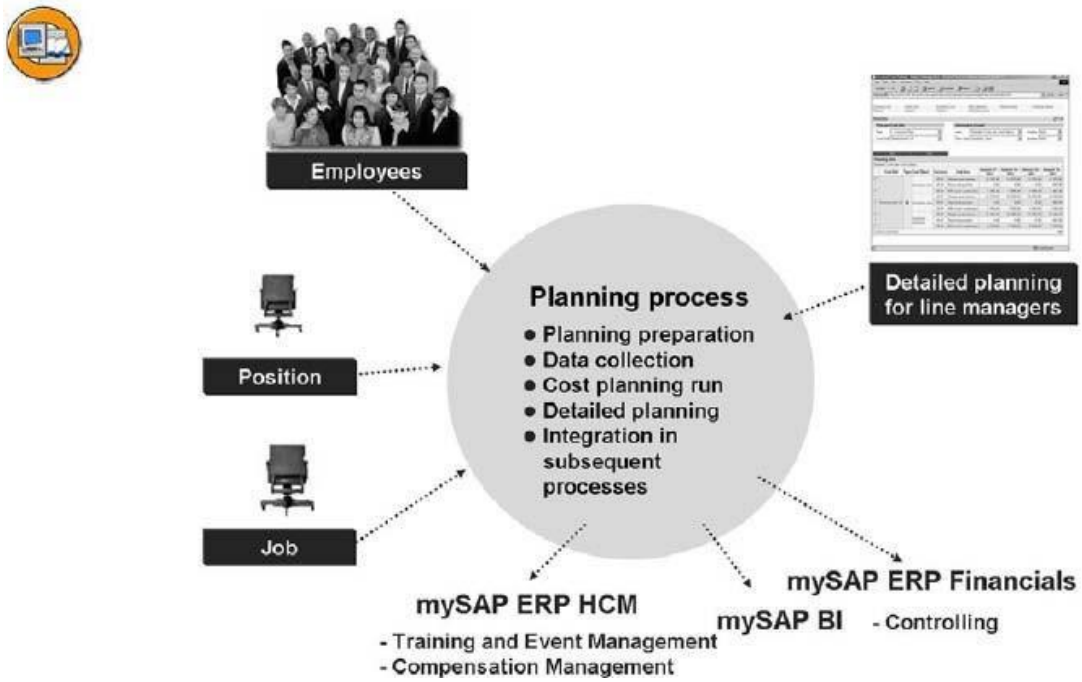


Figure 6-13: Personnel Cost Planning

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Exercise Data

Please see the following table for your own exercise data.
Note: Please refer * to your Batch No. and ## to your Group No.
Each of you should be assigned to one Batch No. and one Group No.

Batch/Class (*)	Group No. (##)	Personnel Number	Organization Unit	Position
1	00	1234100	SAP01-1-Gr.00	SAP Trainee-1-00
1	01	1234101	SAP01-1-Gr.01	SAP Trainee-1-01
1	02	1234102	SAP01-1-Gr.02	SAP Trainee-1-02
1	03	1234103	SAP01-1-Gr.03	SAP Trainee-1-03
1	04	1234104	SAP01-1-Gr.04	SAP Trainee-1-04
1	05	1234105	SAP01-1-Gr.05	SAP Trainee-1-05
1	06	1234106	SAP01-1-Gr.06	SAP Trainee-1-06
1	07	1234107	SAP01-1-Gr.07	SAP Trainee-1-07
1	08	1234108	SAP01-1-Gr.08	SAP Trainee-1-08
1	09	1234109	SAP01-1-Gr.09	SAP Trainee-1-09
1	10	1234110	SAP01-1-Gr.10	SAP Trainee-1-10
1	11	1234111	SAP01-1-Gr.11	SAP Trainee-1-11
1	12	1234112	SAP01-1-Gr.12	SAP Trainee-1-12
1	13	1234113	SAP01-1-Gr.13	SAP Trainee-1-13
1	14	1234114	SAP01-1-Gr.14	SAP Trainee-1-14
1	15	1234115	SAP01-1-Gr.15	SAP Trainee-1-15
1	16	1234116	SAP01-1-Gr.16	SAP Trainee-1-16
1	17	1234117	SAP01-1-Gr.17	SAP Trainee-1-17
1	18	1234118	SAP01-1-Gr.18	SAP Trainee-1-18
1	19	1234119	SAP01-1-Gr.19	SAP Trainee-1-19
1	20	1234120	SAP01-1-Gr.20	SAP Trainee-1-20
1	21	1234121	SAP01-1-Gr.21	SAP Trainee-1-21
1	22	1234122	SAP01-1-Gr.22	SAP Trainee-1-22
1	23	1234123	SAP01-1-Gr.23	SAP Trainee-1-23
1	24	1234124	SAP01-1-Gr.24	SAP Trainee-1-24
1	25	1234125	SAP01-1-Gr.25	SAP Trainee-1-25
1	26	1234126	SAP01-1-Gr.26	SAP Trainee-1-26
1	27	1234127	SAP01-1-Gr.27	SAP Trainee-1-27
1	28	1234128	SAP01-1-Gr.28	SAP Trainee-1-28
1	29	1234129	SAP01-1-Gr.29	SAP Trainee-1-29
1	30	1234130	SAP01-1-Gr.30	SAP Trainee-1-30
2	00	1234200	SAP01-2-Gr.00	SAP Trainee-1-00
2	01	1234201	SAP01-2-Gr.01	SAP Trainee-1-01
2	02	1234202	SAP01-2-Gr.02	SAP Trainee-1-02
2	03	1234203	SAP01-2-Gr.03	SAP Trainee-1-03
2	04	1234204	SAP01-2-Gr.04	SAP Trainee-1-04
2	05	1234205	SAP01-2-Gr.05	SAP Trainee-1-05
2	06	1234206	SAP01-2-Gr.06	SAP Trainee-1-06
2	07	1234207	SAP01-2-Gr.07	SAP Trainee-1-07
2	08	1234208	SAP01-2-Gr.08	SAP Trainee-1-08
2	09	1234209	SAP01-2-Gr.09	SAP Trainee-1-09

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Batch/Class (*)	Group No. (##)	Personnel Number	Organization Unit	Position
2	10	1234210	SAP01-2-Gr.10	SAP Trainee-1-10
2	11	1234211	SAP01-2-Gr.11	SAP Trainee-1-11
2	12	1234212	SAP01-2-Gr.12	SAP Trainee-1-12
2	13	1234213	SAP01-2-Gr.13	SAP Trainee-1-13
2	14	1234214	SAP01-2-Gr.14	SAP Trainee-1-14
2	15	1234215	SAP01-2-Gr.15	SAP Trainee-1-15
2	16	1234216	SAP01-2-Gr.16	SAP Trainee-1-16
2	17	1234217	SAP01-2-Gr.17	SAP Trainee-1-17
2	18	1234218	SAP01-2-Gr.18	SAP Trainee-1-18
2	19	1234219	SAP01-2-Gr.19	SAP Trainee-1-19
2	20	1234220	SAP01-2-Gr.20	SAP Trainee-1-20
2	21	1234221	SAP01-2-Gr.21	SAP Trainee-1-21
2	22	1234222	SAP01-2-Gr.22	SAP Trainee-1-22
2	23	1234223	SAP01-2-Gr.23	SAP Trainee-1-23
2	24	1234224	SAP01-2-Gr.24	SAP Trainee-1-24
2	25	1234225	SAP01-2-Gr.25	SAP Trainee-1-25
2	26	1234226	SAP01-2-Gr.26	SAP Trainee-1-26
2	27	1234227	SAP01-2-Gr.27	SAP Trainee-1-27
2	28	1234228	SAP01-2-Gr.28	SAP Trainee-1-28
2	29	1234229	SAP01-2-Gr.29	SAP Trainee-1-29
2	30	1234230	SAP01-2-Gr.30	SAP Trainee-1-30
3	00	1234300	SAP01-3-Gr.00	SAP Trainee-3-00
3	01	1234301	SAP01-3-Gr.01	SAP Trainee-3-01
3	02	1234302	SAP01-3-Gr.02	SAP Trainee-3-02
3	03	1234303	SAP01-3-Gr.03	SAP Trainee-3-03
3	04	1234304	SAP01-3-Gr.04	SAP Trainee-3-04
3	05	1234305	SAP01-3-Gr.05	SAP Trainee-3-05
3	06	1234306	SAP01-3-Gr.06	SAP Trainee-3-06
3	07	1234307	SAP01-3-Gr.07	SAP Trainee-3-07
3	08	1234308	SAP01-3-Gr.08	SAP Trainee-3-08
3	09	1234309	SAP01-3-Gr.09	SAP Trainee-3-09
3	10	1234310	SAP01-3-Gr.10	SAP Trainee-3-10
3	11	1234311	SAP01-3-Gr.11	SAP Trainee-3-11
3	12	1234312	SAP01-3-Gr.12	SAP Trainee-3-12
3	13	1234313	SAP01-3-Gr.13	SAP Trainee-3-13
3	14	1234314	SAP01-3-Gr.14	SAP Trainee-3-14
3	15	1234315	SAP01-3-Gr.15	SAP Trainee-3-15
3	16	1234316	SAP01-3-Gr.16	SAP Trainee-3-16
3	17	1234317	SAP01-3-Gr.17	SAP Trainee-3-17
3	18	1234318	SAP01-3-Gr.18	SAP Trainee-3-18
3	19	1234319	SAP01-3-Gr.19	SAP Trainee-3-19
3	20	1234320	SAP01-3-Gr.20	SAP Trainee-3-20
3	21	1234321	SAP01-3-Gr.21	SAP Trainee-3-21
3	22	1234322	SAP01-3-Gr.22	SAP Trainee-3-22
3	23	1234323	SAP01-3-Gr.23	SAP Trainee-3-23
3	24	1234324	SAP01-3-Gr.24	SAP Trainee-3-24

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Batch/Class (*)	Group No. (##)	Personnel Number	Organization Unit	Position
3	25	1234325	SAP01-3-Gr.25	SAP Trainee-3-25
3	26	1234326	SAP01-3-Gr.26	SAP Trainee-3-26
3	27	1234327	SAP01-3-Gr.27	SAP Trainee-3-27
3	28	1234328	SAP01-3-Gr.28	SAP Trainee-3-28
3	29	1234329	SAP01-3-Gr.29	SAP Trainee-3-29
3	30	1234330	SAP01-3-Gr.30	SAP Trainee-3-30
4	00	1234400	SAP01-4-Gr.00	SAP Trainee-4-00
4	01	1234401	SAP01-4-Gr.01	SAP Trainee-4-01
4	02	1234402	SAP01-4-Gr.02	SAP Trainee-4-02
4	03	1234403	SAP01-4-Gr.03	SAP Trainee-4-03
4	04	1234404	SAP01-4-Gr.04	SAP Trainee-4-04
4	05	1234405	SAP01-4-Gr.05	SAP Trainee-4-05
4	06	1234406	SAP01-4-Gr.06	SAP Trainee-4-06
4	07	1234407	SAP01-4-Gr.07	SAP Trainee-4-07
4	08	1234408	SAP01-4-Gr.08	SAP Trainee-4-08
4	09	1234409	SAP01-4-Gr.09	SAP Trainee-4-09
4	10	1234410	SAP01-4-Gr.10	SAP Trainee-4-10
4	11	1234411	SAP01-4-Gr.11	SAP Trainee-4-11
4	12	1234412	SAP01-4-Gr.12	SAP Trainee-4-12
4	13	1234413	SAP01-4-Gr.13	SAP Trainee-4-13
4	14	1234414	SAP01-4-Gr.14	SAP Trainee-4-14
4	15	1234415	SAP01-4-Gr.15	SAP Trainee-4-15
4	16	1234416	SAP01-4-Gr.16	SAP Trainee-4-16
4	17	1234417	SAP01-4-Gr.17	SAP Trainee-4-17
4	18	1234418	SAP01-4-Gr.18	SAP Trainee-4-18
4	19	1234419	SAP01-4-Gr.19	SAP Trainee-4-19
4	20	1234420	SAP01-4-Gr.20	SAP Trainee-4-20
4	21	1234421	SAP01-4-Gr.21	SAP Trainee-4-21
4	22	1234422	SAP01-4-Gr.22	SAP Trainee-4-22
4	23	1234423	SAP01-4-Gr.23	SAP Trainee-4-23
4	24	1234424	SAP01-4-Gr.24	SAP Trainee-4-24
4	25	1234425	SAP01-4-Gr.25	SAP Trainee-4-25
4	26	1234426	SAP01-4-Gr.26	SAP Trainee-4-26
4	27	1234427	SAP01-4-Gr.27	SAP Trainee-4-27
4	28	1234428	SAP01-4-Gr.28	SAP Trainee-4-28
4	29	1234429	SAP01-4-Gr.29	SAP Trainee-4-29
4	30	1234430	SAP01-4-Gr.30	SAP Trainee-4-30

Note: Please consult with your instructor for additional Batch and Group No.

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Exercise 6 – 1 : Create an Organization Unit and Vacant

Position Exercise Objectives

After completing this exercise, you will be able to:

- Use the Organization and Staffing interface to maintain your company's organizational plan Create new Organization Unit and a vacant position

Business Example

A new department and position are being created. These changes must be reflected in the Human Resources system.

See the Sample of Exercise Data Sheet for naming convention the Organization Unit and position assigned to your batch and your group. Replace ** with your batch number while ## with your group number.

Task:

At the beginning of the year, the year, you need to build a new department/organization unit.

a) Navigate to the Organization and Staffing Interface by following Human Resources → *Organization Management* → *Organizational Plan* → *Organization and Staffing* → *Create*. The new department must be valid from the beginning of the year until 31 December 9999.

b) The detail of new organization unit, position and job are as follows:

Org Unit	Position	Job
SAP01-**-Gr.##	SAP Trainee-**-##	Lead Trainee

c)= Batch no.
 # = Group no.

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Sample of Exercise Data

Please see the following table for sample of your exercise data.
Note: Please refer ** to your Batch No. and ## to your Group No.
Each of you should be assigned to one Batch No. and one Group No.
Please consult with your instructor.

Batch/Class	(**)	Group No. (##)	Personnel Number (1234**##)	Organization Unit (SAP01 -**- Gr.##)	Position (SAP Trainee-**-##)
A	01	00	12340100	SAP01-01-Gr.00	SAP Trainee-01-00
	01	01	12340101	SAP01-01-Gr.01	SAP Trainee-01-01
	01	02	12340102	SAP01-01-Gr.02	SAP Trainee-01-02
	01	03	12340103	SAP01-01-Gr.03	SAP Trainee-01-03
	01	04	12340104	SAP01-01-Gr.04	SAP Trainee-01-04
	01	05	12340105	SAP01-01-Gr.05	SAP Trainee-01-05
	01	06	12340106	SAP01-01-Gr.06	SAP Trainee-01-06
	01	07	12340107	SAP01-01-Gr.07	SAP Trainee-01-07
	01	08	12340108	SAP01-01-Gr.08	SAP Trainee-01-08
	01	09	12340109	SAP01-01-Gr.09	SAP Trainee-01-09
	01	10	12340110	SAP01-01-Gr.10	SAP Trainee-01-10
B	02	00	12340200	SAP01-02-Gr.00	SAP Trainee-02-00
	02	01	12340201	SAP01-02-Gr.01	SAP Trainee-02-01
	02	02	12340202	SAP01-02-Gr.02	SAP Trainee-02-02
	02	03	12340203	SAP01-02-Gr.03	SAP Trainee-02-03
	02	04	12340204	SAP01-02-Gr.04	SAP Trainee-02-04
	02	05	12340205	SAP01-02-Gr.05	SAP Trainee-02-05
	02	06	12340206	SAP01-02-Gr.06	SAP Trainee-02-06
	02	07	12340207	SAP01-02-Gr.07	SAP Trainee-02-07
	02	08	12340208	SAP01-02-Gr.08	SAP Trainee-02-08
	02	09	12340209	SAP01-02-Gr.09	SAP Trainee-02-09
	02	10	12340210	SAP01-02-Gr.10	SAP Trainee-02-10

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Solution 6 – 1 : Create an Organization Unit and Vacant Position

Task

You need to build a new department/organization unit.

a) Navigate to the Organization and Staffing Interface by following *Human Resources → Organization Management → Organizational Plan → Organization and Staffing → Create*. At the "Create Root Organizational Object" window, enter the date of the beginning of the year on the From field *01/01/XX (XX = current year)* and 31/12/9999 on the To field.

Navigate the Organization and Staffing Interface by following *Human Resources → Organization Management → Organizational Plan → Organization and Staffing → Create.* At the date and preview period enter *01/01/XX (XX = current year)* and *31/12/9999* and choose *Execute*.

b) Create a new organizational unit, called as *SAP01-*-Gr.##* (* is your batch number and ## is your group number)

In the Detail area now contains the entry for New Organizational unit
Change the short and long text to SAP-**-##/SAP01-**-Gr.##
Select Save.

c) Create position and job within the new organization unit that you have just created:

Org Unit	Position	Job
SAP01-**-Gr.##	SAP Trainee-**-##	Lead Trainee

d) = Batch no.; # = Group no.

Navigate to the new organization unit that you have just created; *SAP01-**-Gr.##* organization unit in the Overview area on the top right side of the display and select the organization unit.
Select the *Create* icon and select *Incorporates Position*
The Detail area now contains the entry for New Position. Change the short and long text to **Train-**-##** / **SAP Trainee-**-##** and save .
In the *Detail area* in the *Job* field enter *Lead*,* then *Enter.* Select the Lead Trainee job from the search results. Choose Save.

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Exercise 6-2: Hiring a New Employee

Exercise Objectives

After completing this exercise, you will be able to:

- Hire a newemployee

Business Example

- Candidate for a job posting has accepted a position with your company.
- New employee master data record needs to be created based on information contained in the employment application.

Task:

Create a new employee master record by performing the following exercise steps.

1. Hire a person in personnel area **1000** as an **active** employee (subgroup **DF)** with personnel number 1234*## on the first day of the current year**.**

Field	Information
Reason for action	**01 (Expansion)**
Position	**<SAP Trainee-*-##** in OrgUnit **SAP01-*-Gr.##>**
Last Name	**<your last name>**
First Name	**<your first name>**
Birthdate	**<your birthdate>**

2. On the *Create Organizational Assignment* screen, choose *Save*.

3. On the Create Personal Data screen, check the following information and information on Marital Status. Choose save.

Field	Information
Last Name	**<your last name>**
First Name	**<your first name>**
Birthdate	**<your birthdate>**
Marital Status	**Single**

4. On the *Create Address* screen, enter the following information and save.

Field	Information
Address Type	**Permanent Residence**
HouseNumber/Street	**<your street address>**
Postal Code/City	**<your postal code and city>**
Region	**<your state>**
Country Key	**<your country>**

5. On the Create Planned Working Time screen, enter the following information and save.
Field Information Work Schedule Rule NORM

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Field	Information
Work Schedule Rule	**NORM**

6. On the Create Basic Pay screen, enter the following information and save.

Field	Information
Pay Scale, Group	**E05**
Pay Scale Level	**01**

7. On the Bank Details screen, enter the following information and save.

Field	Information
Payment Method	**C**
Payment Currency	**EUR**

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Solution 6-2: Hiring a New Employee

Task
Create a new employee master record by performing the following exercise steps.

1. Hire a person in personnel area **1000** as an active employee (subgroup **DF**) with personnel number **1234*##.**

   a) From *the SAP Easy Access* menu, choose *Human Resources* → *Personnel Management* → *Administration* → *HR Master Data*.

   b) Choose *Personnel Actions*.

   c) Enter *Personnel Number* (**Please See Exercise Data Table**)

   d) Enter *From*: **<first day of the current year>.**

   e) For *Action type Hire*, enter **1000** in *Personnel area*; **1** in *EE group*; and **DF** in *Employee Subgroup*.

   f) Choose *Action type: Hiring.*

   g) Choose *Execute*.

2. On the *Create Actions* screen, enter the following information and save.

Field	Information
Reason for action	**01** (Expansion)
Position	**<SAP Trainee-*-##** in OrgUnit **SAP01-*-Gr.##>**

   a) Enter Reason for action: 01.

   b) *Search for the position **SAP Trainee-*-##** in* OrgUnit **SAP01-*-Gr.##** by structure. Choose **F4**, the *Structure search* tab, and choose OrgUnit **SAP01-*-Gr.##**

   c) OrgUnits SAP0 → **SAP01-*-Gr.##** and choose ***SAP Trainee-*-##***

   d) Choose *Save.*

3. On the *Create Organizational Assignment* screen, choose *save*.

   a) Choose *Save*.

4. On the Create Personal Data screen, check the following information and add the marital status. Choose save.

Field	Information
Last Name	**<your last name>**
First Name	**<your first name>**
Birthdate	**<your birthdate>**
Marital Status	**Single**

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a) Enter the data from the table above.

b) Choose *Save*.

5. On the Create Address screen, enter the following information and save.

Field	Information
Address Type	Permanent Residence
HouseNumber/Street	<your street address>
Postal Code/City	<your postal code and city>
Region	<your state>
Country Key	<your country>

a) Enter the data from the table above.

b) Choose *Save*.

6. On the *Create Planned Working Time* screen, enter the following information and save.

Field	Information
Work Schedule Rule	NORM

a) Enter *Work Schedule Rule*: **NORM**.

b) Choose *Save*.

7. On the *Create Basic Pay* screen, enter the following information and *save*.

Field	Information
Pay Scale, Group	E05
Pay Scale Level	01

a) Enter *Pay Scale Group*: **E05**.

b) *Enter Pay Scale Level*: **01**

c) Choose *Save*.

8. On the *Bank Details* screen, enter the following information and save.

Field	Information
Payment Method	C
Payment Currency	EUR

a) Enter *Payment Method*: **C**.

b) Enter *Payment Currency*: **EUR**

c) Choose *Save*.

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d) A dialog appears: "Data will be lost. Do you still want to exit the current screen?"

e) Choose *Yes*.

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Exercise 6-2: Viewing and Employee

Exercise Objectives

After completing this exercise, you will be able to:

- Display an employee's master data records
- Locate information contained in employee infotype records

Business Example

- As a human resource generalist, you need to navigate through an employee personnel file and verify master data.

Task

Display the employee and record the existing infotypes

1. Display employee 1234*## on the main screen. Locate the following information on the Display Actions screen and record the results.

2. Record the maintained infotypes (marked) on the *Core Employee Info* tab.

Infotypes	**Yes/No**
Actions	
Organizational Assignment	
Personal data	
Addresses	
Bank Details	
Family/Related Person	

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Solution 6-2: Viewing and Employee

Task
Display the employee and record the existing infotypes

1. Display employee 1234*## on the main screen. Locate the following information on the Display Actions screen and record the results.

   a) From *the SAP Easy Access* menu, choose *Human Resources* → *Personnel Management* → *Administration* → *HR Master Data*.

   b) Choose  *Display*.

   c) Enter *Personnel no.*: **1234*##** and choose screen.

2. Record the maintained infotypes (marked) on the Core Employee Info tab.

   Result

Infotypes	**Yes/No**
Actions	Yes
Organizational Assignment	Yes
Personal data	Yes
Addresses	Yes
Bank Details	Yes
Family/Related Person	No

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Exercise 6-4: Assign employee's qualifications

Exercise Objectives

After completing this exercise, you will be able to:

- Assign a person with qualifications

Business Example

As the personnel development administrator for your organization, you need to access information on personnel qualification..

Tasks

Assign employee's qualifications.

1. Assign qualification profile in Personnel Development as follows:

Qualification Group	Name	Proficiency
Language Capabilities	English	Fluent
Language Capabilities	French	Mediocre
Language Capabilities	Spanish	Basic Knowledge

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Solution 6-4: Assign employee's qualifications

Tasks
Assign employee's qualifications.

1. Assign qualification profile in Personnel Development as follows:

Qualification Group	Name	Proficiency
Language Capabilities	English	Fluent
Language Capabilities	French	Mediocre
Language Capabilities	Spanish	Basic Knowledge

a) From the *SAP Easy Access* menu, choose *Human Resources* → *Personnel Management* → *Personnel Development* → *Profile*.

b) Choose  *Change*.

c) In the upper-left section of the screen, choose *Person*.

d) Under *With name*, enter **1234*##.**

e) Choose *Enter* to continue.

f) Double-click the entry in the lower-left section of the screen.

g) Choose Create and enter the qualifications as defined on the table above.

h) Choose  *Save*.

i) Choose  *Exit* to exit the screen and return to the *SAP Easy Access* menu.

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Lesson Summary

You should now be able to:

- Outline the tasks associated within Human Capital Management
- Explain how SAP within mySAP ERP Human Capital Management supports the key processes in Human Capital Management
- Differentiate between SAP HR organizational elements and master data
- Describe an organizational plan and identify its organizational elements
- List the recruitment activities and functions that drive a successful recruitment plan
- Enter a new employee and establish key Master Data records for that employee
- Describe how personnel time is managed and evaluated in the Human Resources module
- Define how payroll is managed within an organization using the Human Resources component

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Unit Summary

You should now be able to:

- Outline the tasks associated within Human Capital Management
- Explain how SAP within mySAP ERP Human Capital Management supports the key processes in Human Capital Management
- Differentiate between SAP HR Organizational elements and master data
- Describe an organizational plan and identify its organizational emelements
- List the recruitment activities and functions that drive a successful recruitment plan
- Enter a new employee and establish key Master Data records for that employee
- Describe how personnel time is managed and evaluated in the Human Resources module
- Define how payroll is managed within an organization using the Human Resources component

Related Information

- For related Glossary links refer to: help.sap.com/content/additional/glossary

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Test Your Knowledge

1. The SAP Human Resources processes include:
Choose the correct answer(s).

- ☐ A Recruitment
- ☐ B Hiring
- ☐ C Personnel Cost Planning
- ☐ D Payroll Administration
- ☐ E All of the above

2. The SAP HR Organizational Plan typically represents an organizations
Choose the correct answer(s).

- ☐ A Procedural Model
- ☐ B Department Structure
- ☐ C Authorization Structure
- ☐ D Cost Center Allocation

3. A company's organizational plan may consist of all of the following SAP objects, except:
Choose the correct answer(s).

- ☐ A Position
- ☐ B Organizational Unit
- ☐ C Controlling Area
- ☐ D Person

4. Which of the following are SAP HR Recruitment functions?
Choose the correct answer(s).

- ☐ A Entry and maintenance of applicant data
- ☐ B Comparison of position requirements to applicants' qualifications
- ☐ C Correspondence - via standard, modifiable SAP documents
- ☐ D All of the above

5. What are the pages of the personnel file that make up an employee's Master Data record, that are created via a personnel action are called?
Choose the correct answer(s).

- ☐ A Actions
- ☐ B Data fields
- ☐ C Infotypes
- ☐ D None of the above

6. Which of the following methods are used by the SAP Time Management system for recording employees' absences and attendances?
Choose the correct answer(s).

- ☐ A SAP HR system entry by time administrators
- ☐ B SAP Cross-Application Time Sheet (CATS)
- ☐ C Employee Self-Service (ESS) applications

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Answers

1. The SAP Human Resources processes include:

   Answer: E

   HR processes include Training and Personnel Development, Management of Work Time, Compensation and Benefits, Travel Planning, and Employee Self-Services.

2. The SAP HR Organizational Plan typically represents an organizations

   Answer: B

   Typically, the organizational plan represents an organizations current department structure. Organizational units represent departments, collections of departments, or teams within departments.

3. A company's organizational plan may consist of all of the following SAP objects, except:

   Answer: C

   The Controlling Area is created by Finance and Controlling, and is not directly connected to the Organizational Plan. Note however, that Cost Centers may be applied to the Organizational Plan, and are affiliated with a Controlling Area.

4. Which of the following are SAP HR Recruitment functions?

   Answer: D

   All of the processes listed above are possible. Additionally, the applicants themselves may enter data via the Internet Application Component, and in cases where you decide to hire the applicant, you can transfer a copy of the applicant data from Recruitment to Personnel Administration, thus creating the new employee's personnel file.

5. What are the pages of the personnel file that make up an employee's Master Data record, that are created via a personnel action are called?

   Answer: C

   The HR system ships with hundreds of standard infotypes. Custom, user-defined infotypes may be created. Infotypes can be created via various personnel actions. They may be maintained individually.

6. Which of the following methods are used by the SAP Time Management system for recording employees' absences and attendances?

   Answer: E

   There are various ways to enter your time and attendance. The method used depends on your organization.

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- ☐ D Via customer systems with an interface to the SAP system
- ☐ E All of the abov

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Unit 7

mySAP Technology

Unit Overview

The mySAP.com e-business platform is supported by an open integration architecture that supports comprehensive and flexible e-business solutions. mySAP Technology is built on fundamental industry standards, such as HTTP and XML, to ensure openness and interoperability. Because effective e-business solutions are not one-size-fits-all, SAP has designed mySAP Technology as an open, flexible framework that provides standard interfaces for third-party products. This allows SAP to deliver e-business solutions tailored to the needs of customers and their business partners. This capability becomes increasingly important as heterogeneous organizations with different technology infrastructures come together in collaborative business relationships.

mySAP Technology affords SAP customers a coherent, scalable, and standards-based architecture that can handle the complete range of e-business and enterprise applications. Without an architectural framework that is designed for open integration, collaboration across enterprises and between business partners is cumbersome and close to impossible. Partial solutions built on proprietary architectures fail to provide the level of integration, scalability, and information integrity that mySAP.com solutions can deliver.

Unit Objectives

After completing this unit, you will be able to:

- Describe the multi-tier client / server concept
- Describe how SAP uses the client/ server concept
- Outline the function of a client, client/ server, and server in the software-oriented view of the SAP systems
- List the hardware system configurations
- Define the purpose of a client in terms of master, customizing, and application data
- Describe the features of a development system, a quality assurance system, and a production system, as well as how they form the stages for a live- system rollout
- Describe how business transactions relate to system applications
- Define the requirements for entering text in fields, as well as assigning attributes

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- Describe how tables are used to identify the semantic and technical characteristics of fields
- View the contents of a table in an SAP database
- Describe how tables are used to generate specific information

Unit Contents

Lesson: Client/Server Architecture 7-3
Exercise 7-1: Locating System Information 7-9
Lesson: The Database 7-12
Exercise 7-2: View A Table's Contents in the SAP Database 7-19
Test Your Knowledge 7-24

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Lesson: Client/Server Architecture

Lesson Overview

This lesson covers the concept of the client/server on which the SAP Systems are based. You will gain an overview of how a user request is processed. Is also contains a brief summary of the data structure and outlines the transport between systems.

Lesson Objectives

After completing this lesson, you will be able to:

- Describe the multi-tier client / server concept
- Describe how SAP uses the client/server concept
- Outline the function of a client, client/ server, and server in the software-oriented view of the SAP systems
- List the hardware system configurations
- Define the purpose of a client in terms of master, customizing, and application data
- Describe the features of a development system, a quality assurance system, and a production system, as well as how they form the stages for a live-system rollout

Business Example

In the course of implementing an SAP system, you need to establish how you are going to distribute the SAP system processes required among the available hardware. You need to transport objects you have developed yourself, SAP objects, and Customizing settings to other SAP systems.

Client/Server Architecture

There are basically two different kinds of views for the client/server configuration:

1. Hardware-oriented view: The term server refers to the central computer within a network that provides data, memory, and resources for the work stations and the clients.

2. Software-oriented view: A service in this view is a service provided by a software component. The service provider can be a work process or a group of processes. The same software component can be client to one work process and server to another.

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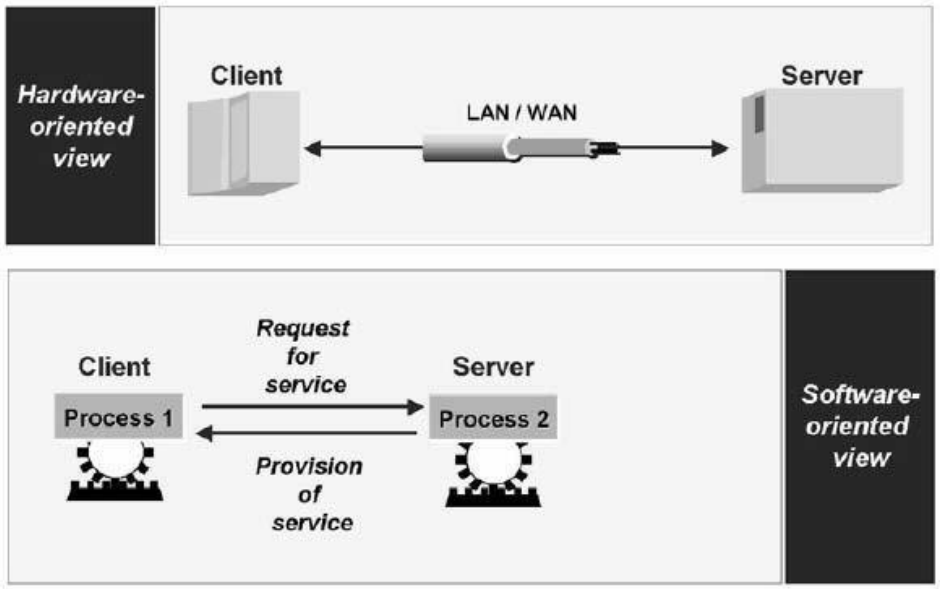


Figure 7-1: Server/client: Hardware Oriented View - Software Oriented View

Single-Level and Multilevel Configurations

The following processes are required for operating business application software:

- Presentation processes (for example, displaying screens, GUI)
- Application processes (for example, executing application programs)
- Database processes (for example, managing and organizing database data)

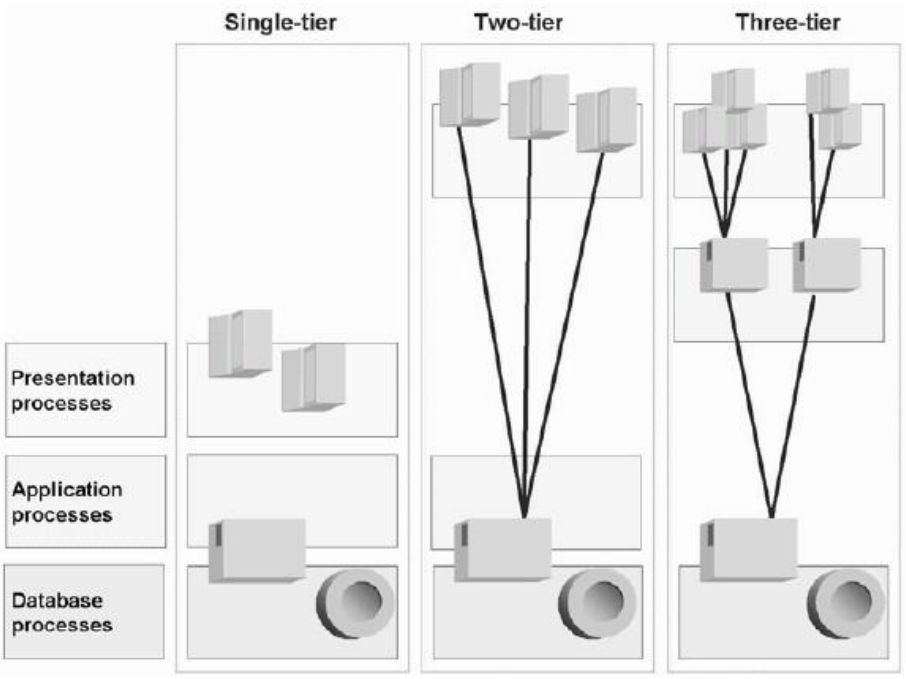


Figure 7-2: Client Server Basic Principles

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Configurations are either single-level or multi-level, depending on the number of computer layers used.

In a **single-tier configuration**, all tasks are performed by one computer. This is classic mainframe processing. This configuration is generally used for tests and demonstrations.

Two-tier configurations are usually implemented using special servers that are responsible solely for formatting the graphical interface (GUI). For example, many SAP users run SAP GUI processes on Window PCs. In this case, the database and the application processes run on the same computer. In this configuration, the number of users can be increased by maintaining the good performance and avoiding a substantial increase of costs. The load resulting from the presentation processes is distributed to the various front-end computers and does not influence the performance of the database. If the number of users exceeds a certain upper limit, the performance is strongly affected and additional hardware is necessary, for example, the distribution of application processes to several hosts.

In a **three-tier configuration**, each layer runs on its own host. This configuration is easily scalable. To optimize the performance in this configuration, additional user groups can be used. In these groups, only a minimum number of transactions are needed, for example, a group of buyers and a group of clerks. Each group is assigned to a certain server, for example, the server for the applications necessary for the purchase department, another for the sales department. Within the application layer, the performance is optimized.

In the mySAP.com environment, more complex client/server configurations consisting of more than three tires are both possible and implemented. Additional layers could be, for example, the Internet Transaction Server (ITS) as used for the solution mySAP SRM.

Processing of User Requests
For the processing of a user request, the software view is relevant. The request is processed on three levels: presentation, application, and database level.

The entries made by a user are received by the SAP presentation program, SAP GUI (SAP Graphical User Interface). It converts them into an internal format and sends them to the SAP Web Application Server (WAS) (software-oriented view). The central process on a SAP Web Application Server is the dispatcher. In association with the operating system, the dispatcher manages the resources for the application written in ABAP. The dispatchers main task includes the distribution of transaction load across work processes, the connection to the presentation layer, and the organization of the communication process.

The processing requests are first saved in request queues and processed according to a first in-first out principle (FIFO).

The dispatcher distributed the requests one after the other to the available work process. Data is actually processed in the work process, although the user, who created the request using the SAP GUI, is not always assigned the same work

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process. There is no fixed assignment of work process to users. The work process can also read data from the databank or write data onto the databank. In this case, the work process is server in one direction and client in the other.

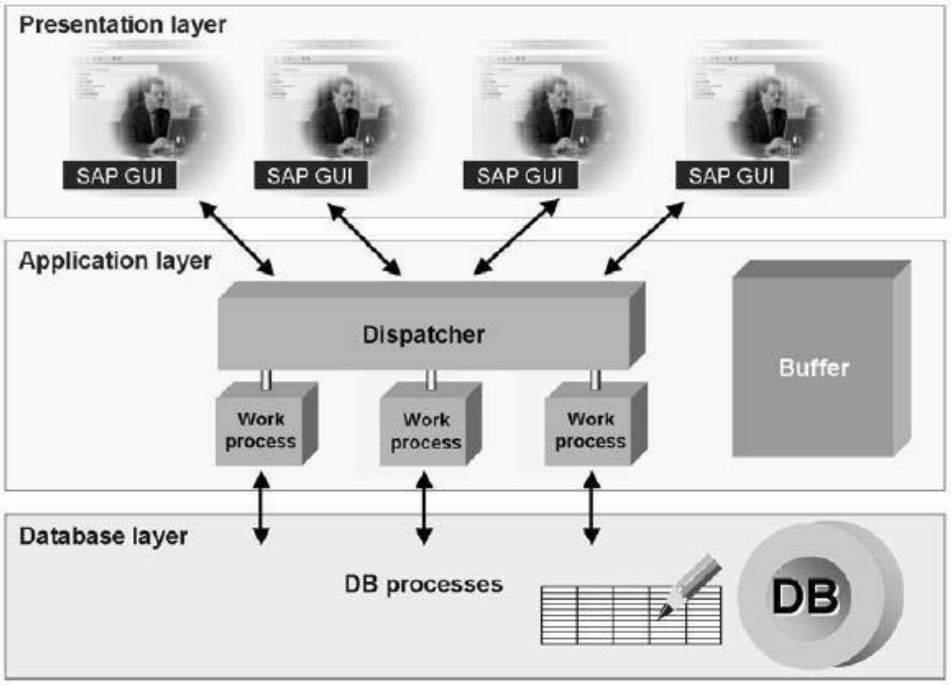


Figure 7-3: Software-Oriented View

Once the process is complete, the result from the work process is sent via dispatcher back to the SAP GUI. The interface interprets the data it receives, and with the front-end computers operating system, creates the output screen for the user.

Data Structure of SAP Systems

SAP systems are characterized by their unique data structure. Alongside the business settings (Customizing) that are only relevant to specific clients of an SAP system, every SAP system also always contains cross-application settings and objects.

You can differentiate between three data components in SAP systems:

The client

The client is a unit within an SAP system that it self-contained in terms of business, organization, and data. A client is characterized by having its own business data environment, its own master, and transaction data (for example, user, material master,...). This client data is known **as client-specific data**. Once logged on to one client, the user has no access to any other client-specific data.

Customizing settings

The customizing include organizational structures, parameters, and default values for SAP transactions. As you can see in the following figure, in addition to **client-specific settings**, there are also Customizing settings, which need to be set

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once. These **cross-client settings** include for example, public holiday calendar, or the system change options.

The Repository

The Repository, the central store for all ABAP Workbench development objects, is also cross-client. It contains all Dictionary objects (tables, data elements, domains,..), all ABAP programs, menus, and screens. **Any changes of objects in the repository apply to all clients**.

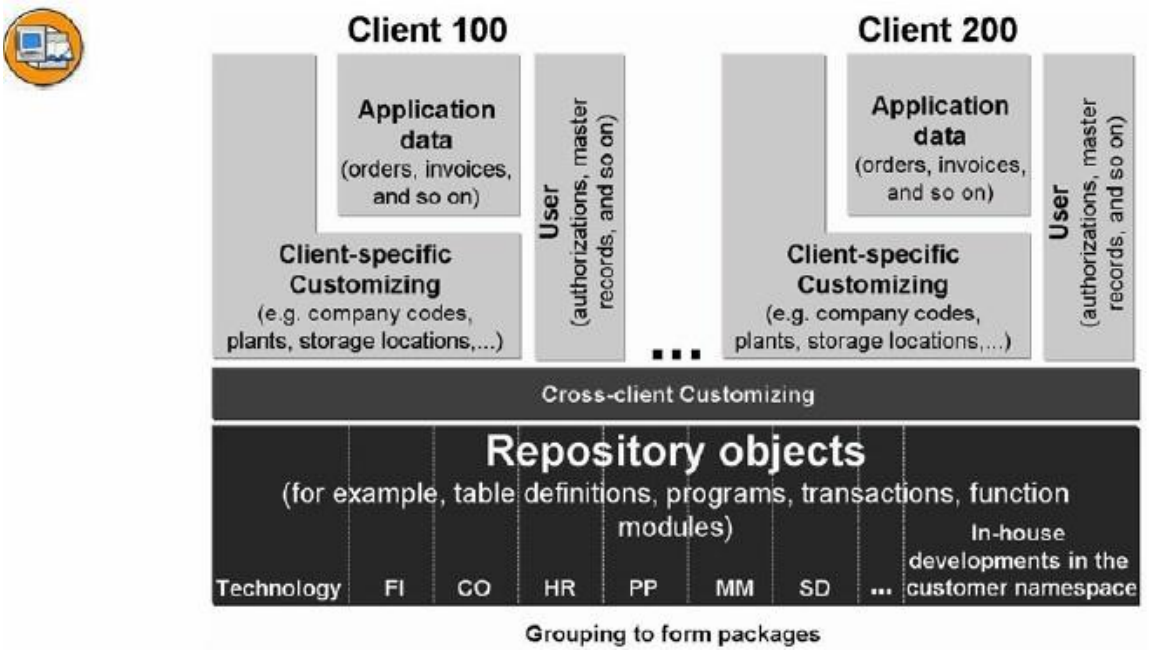


Figure 7-4: Clients

Landscape: Change Management

The SAP system software is standard business software that needs to be adapted to the company specific requirements not only when it is implemented. Upgrades or changes within the enterprise may require the change of actual customizing setting in a production system.

The Repository objects are cross-client available. Changing these objects for testing or quality check bears a high risk of data loss or inconsistencies.

To ensure system consistency, SAP recommends a **three-system landscape**. Each system contains a working client, and others as required, for example, copies of the working client for training. **You can set up several SAP systems on one license, although you may use one of these as a Production system.**

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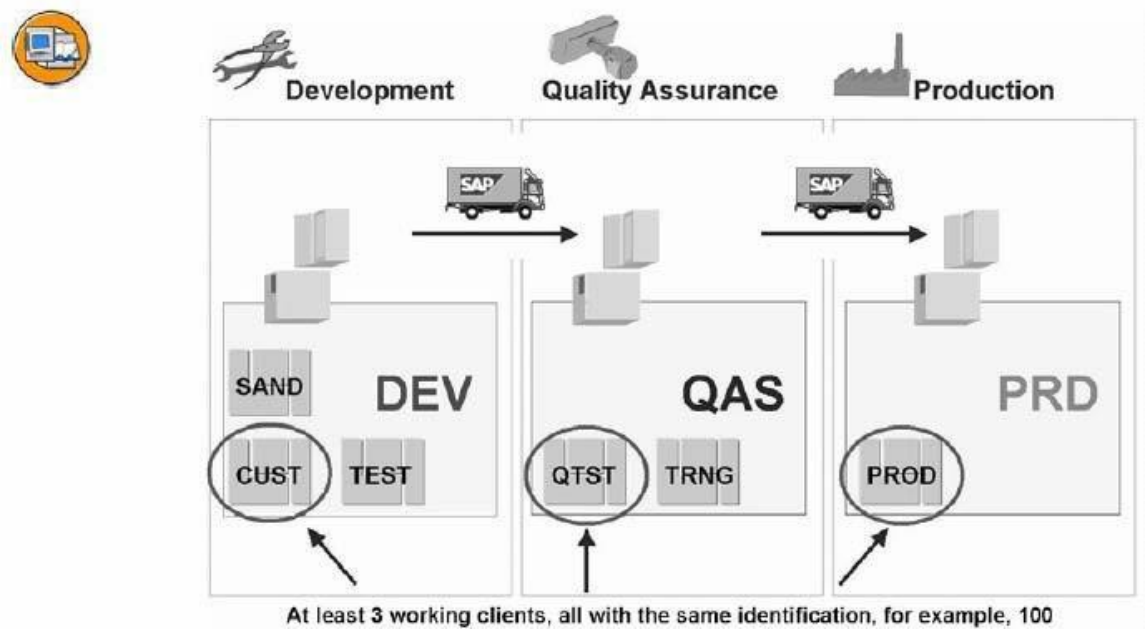


Figure 7-5: Change Management

A three-system landscape facilitates the following recommended process:

- Development of customer-specific programs as well as required customizing takes place in the **development system (DEV).**
- Developments and changes are transported to the **quality assurance system (QAS**) to be checked without influencing the production.
- The tested and approved objects are then transported to the test system, a copy of the production system. The final transport is into the **production system (PROD).**

The **Transport Organizer** logs changes to Repository objects and transports if requested. The same approach is used to log and transport Customizing settings as a Customizing request.

Changes to the SAP objects such as tables and table definitions are called **Modifications**. In case of an upgrade of the SAP System, Modifications need to be checked against the new upgraded repository. This time consuming process can be speeded up by using the **Modification Assistant**.

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Exercise 7-1: Locating System Information

Exercise Objectives

After completing this exercise, you will be able to:

- Locate information about the training system
- Identify the system structure

Business Example

Because you are having problems with your system environment, you have to call your internal help desk. The help desk requires that you have your user ID and client information ready when you call. You will need to verify this information in your SAP system.

Task

In this exercise, you will locate some system information to become better informed about your overall system structure.

1. Locate the following information about our system.

Field	Value
Client	
Component Version	
Server name	
System	
Host	

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Solution 7-1: Locating System Information

Task
In this exercise, you will locate some system information to become better informed about your overall system structure.

1. Locate the following information about our system.

Field	Value
Client	
Component Version	
Server name	
System	
Host	

a) *System* → *Status*. A window appears with a variety of system information.

b) Record *Client*.

c) Record *Component Version.*

d) Record *Server name*.

e) Record *System*.

f) Record *Host*.

g) Choose  *Continue/Enter*.

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Lesson Summary

You should now be able to:

- Describe the multi-tier client / server concept
- Describe how SAP uses the client/ server concept
- Outline the function of a client, client/ server, and server in the software-oriented view of the SAP systems
- List the hardware system configurations
- Define the purpose of a client in terms of master, customizing, and application data
- Describe the features of a development system, a quality assurance system, and a production system, as well as how they form the stages for a live-system rollout

Related Information

- For more information about the SAP Technology tools, refer to the SAP help portal at http://help.sap.com.

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Lesson: The Database

Lesson Overview

In this lesson, the term SAP Transaction is defined. You get a first insight into the central component of the ABAP Workbench, the ABAP dictionary, and see how you can display the previously created sales order in a table.

Lesson Objectives

After completing this lesson, you will be able to:

- Describe how business transactions relate to system applications
- Define the requirements for entering text in fields, as well as assigning attributes
- Describe how tables are used to identify the semantic and technical characteristics of fields
- View the contents of a table in an SAP database
- Describe how tables are used to generate specific information

Business Example

You have been asked by your supervisor to locate a specific SAP document and to find out the names of the SAP internal table. To accomplish this task, you need to become familiar with the basic system concepts before you can find the a specific document.

Transactions

Transactions are processing units grouped to provide specific functions. They have four principal characters, called the ACID concept:

Atomic

The transaction is either completely successful or remains without effect.

Consistent

The system status changes from one that is accurate and consistent in business terms to another that is also accurate and consistent in business terms.

Isolated

Changes made within a transaction can only be seen by another transaction after the transaction is finished: after the final confirmation (commit).

Durable

The results of a transaction are durable- they are permanently saved in the databank. Changing or erasing the data involves another transaction.

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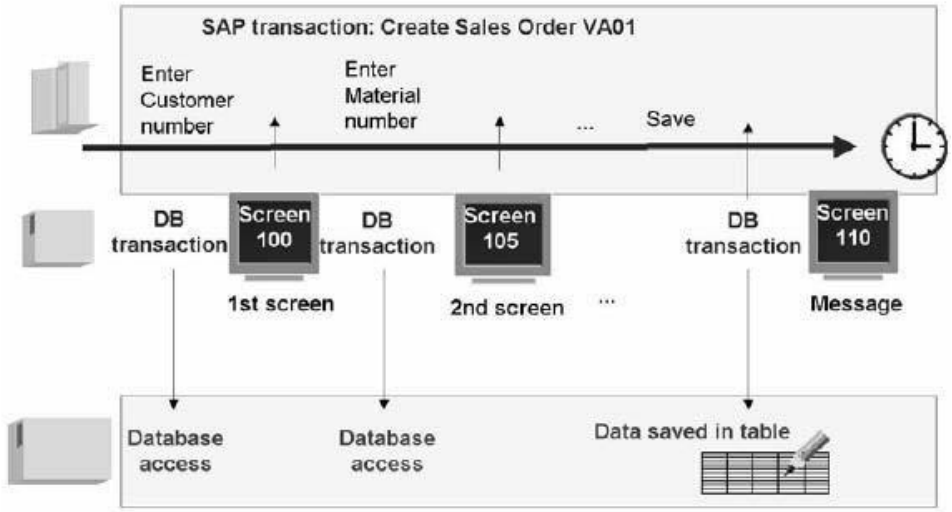


Figure 7-6: The Transaction

After a user accesses a transaction, SAP R/3 starts a query from the application level to the database level. The query is performed in SQL (Structured Query Language), the language compatible with most database systems. The scope of SQL enables the full functionality of the database system, including all vendor-specific enhancements, to be used. For example, the user enters the customer number in the transaction: create sales order. The databank transaction accesses the databank to read the demanded data from the relevant table. At the end of the DB transaction, the user can see the customer name and number display in the relevant screen elements.

ABAP Dictionary
The ABAP (**Advance Business Application Programming Language**) Dictionary contains the field definitions that are defined in the standard SAP system. While online, the system uses the definition of the table fields in the ABAP Dictionary to check the format of the user's field entries. The check on application level guarantees data consistency before the data is transferred to the database. All data and programs in the SAP system are stored in the database.

Field Definitions
The field is the smallest unit for representing business-related information. The required definitions for fields include, number of characters possible (length of the field), and type of characters (numeric, alphanumeric). In addition to basic field attributes, number intervals can also be defined for particular fields. This enables you to determine that only customer numbers within a predefined interval can be assigned to customers in a particular region, for example.

Field definitions are set in the ABAP Dictionary in the ABAP Workbench. For example, the client field is restricted to three numerical characters. This means that you can run a maximum of 999 clients in a SAP system. The basic objects for defining data in the ABAP Dictionary are tables, data elements, and domains. A data element is used for the semantic definition (field label) of a table field. A domain is used for the technical definition (field type, length) of a table field. A field is not an independent object but depends on tables. Fields can only be maintained within a table.

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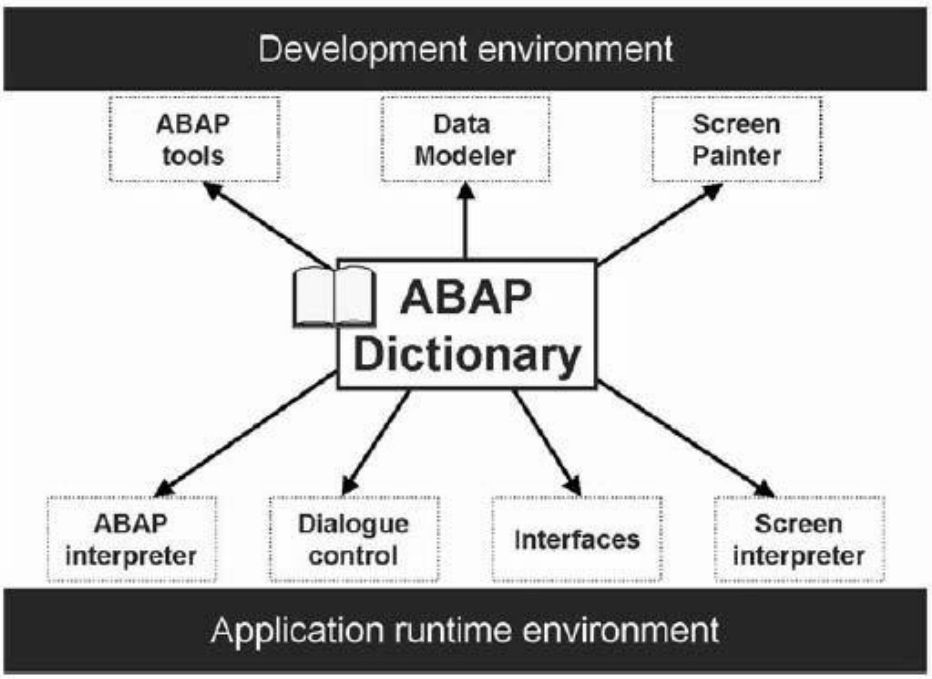


Figure 7-7: ABAP-Dictionary

Data Records in Tables
Fields in the same line form a data record. The fields in the line have a unique relationship (entity). The data record in the figure has a unique combination of related field values for the client, user, and so on, and the field values exist only once in the system.

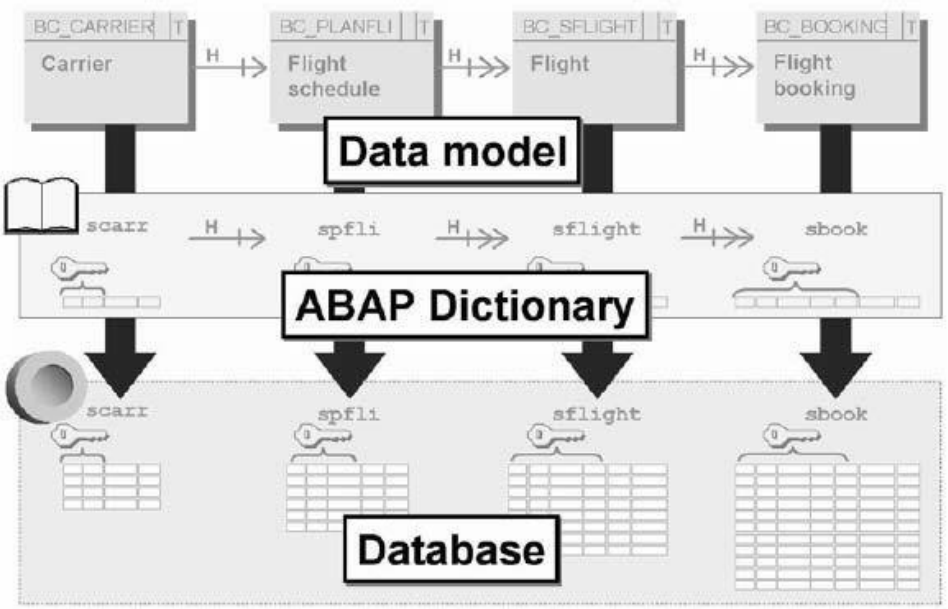


Figure 7-8: Field Definitions in the ABAP Dictionary

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Generating Information
When generating information, commands in the application program are used to read and process the data records from the tables. The field definitions stored in the ABAP Dictionary for the relevant fields, and their descriptions are taken into account. A new data record is created as the result of generating information.

For example, the transaction for creating a sales order in an enterprise controls the tables that store information on the customer, the materials to be delivered, and the current warehouse stock. Data on the order quantity is added to the information that already exists in the system. The newly created data record contains the existing information and the information added by the user as a result, and it links the information in a logical manner.
When a program is run merely to display data records that already exist in the system (that is, a report), no data records are stored for further processing unless the report is to be stored for documentation or reporting purposes.

SAP Business Objects
An SAP Business Object is the representation of a central business object in the real world, such as an employee, sales order, purchase requisition, purchase order, applicant, invoice, and so on. A business object is composed of tables related in a business context including the related application programs. The application programs are called methods of the business object. Attributes and methods are assigned to a business object.
Attributes are characteristics that specify the business object. The attributes can be modified by the methods that belong to the business object. Business objects are maintained by SAP in the Business Object Repository (BOR).



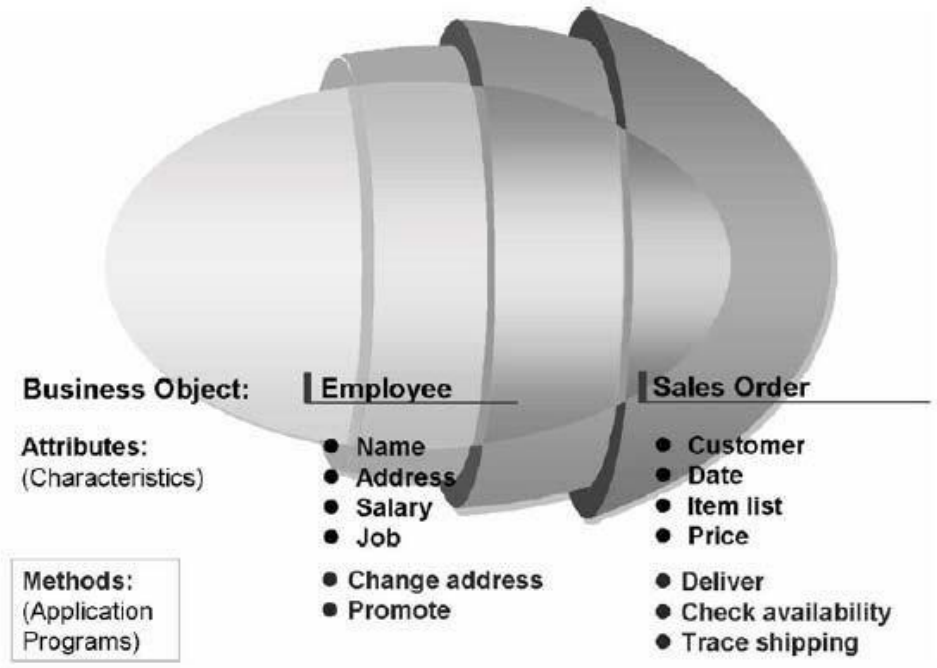


Figure 7-9: SAP Business Objects

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Generating Information in the Internet Business Framework
Business Objects make it possible for applications to share information both internally and externally. Business Application Programming Interface (BAPI) enables you to integrate external software into a SAP system or between SAP systems. Business Application Programming Interfaces are defined in the Business Object Repository (BOR) as methods applied to SAP business objects in order to perform specific business tasks. BAPIs are implemented and stored in the SAP system as RFC-enabled function modules in the Function Builder of the ABAP Workbench. The figure uses Business Framework terminology to demonstrate how information is processed. An external Sales Entry system can be integrated using the BAPI for Sales Orders. This BAPI allows the external system to call functions and applications programs of SAP business components, and use and change data in the SAP system accordingly.

SAP Business Framework
SAP created the Business Framework to allow the technical integration and exchange of business data among SAP components and between SAP and non-SAP components. The architecture resulting from the Business Framework is illustrated in the figure. The basic components of the Business Framework include:.

Business components
SAP business components provide autonomous business functions and consist of business objects. For example, the business object types Employee and Applicant are assigned to business component Human Resources. Business processes are either implemented within a business component or across several components (distributed business processes).

Business object types
The object-oriented structure of the SAP system is based on business object types. A single business object type represents one business fact. It encompasses the functions and the data of this fact.

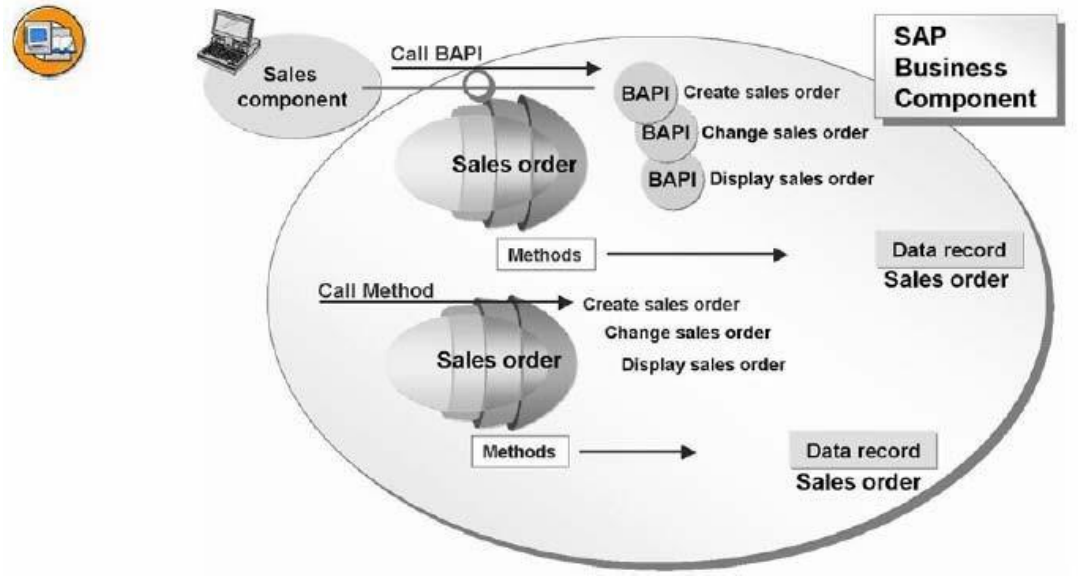


Figure 7-10: Generating Information in the Business Framework

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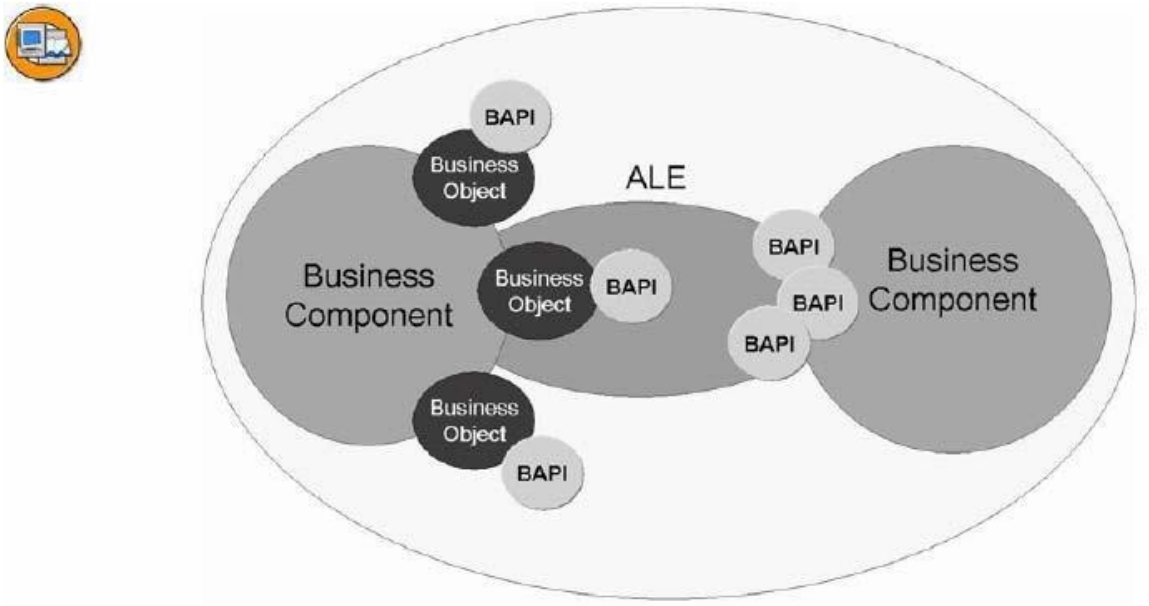


Figure 7-11: SAP Business Framework

BAPIs (The Business Application Programming Interfaces)

BAPIs allow object-oriented access to the SAP system through methods for the business object types. Together with the business object types, BAPIs define and document the interface standard at the business level.

Application Link Enabling (ALE)

The ALE integration service enables the technical integration of business processes that are carried out in different SAP and non-SAP systems. ALE integration service involves distributing business object types across the systems using the ALE distribution model.

Integration scenarios

The design of all relevant situations in the Business Framework is based on concrete scenarios. Integration scenarios describe how components, business object types, and BAPIs interact and integrate the systems by synchronizing business processes at a semantic level.

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Exercise 7-2: View A Table's Contents in the SAP Database

Exercise Objectives

After completing this exercise, you will be able to:

- View a database table and the contents of that table.

Business Example

Periodically, a system developer may need to locate information directly in the database rather than using an application.

Task

You will locate a table name where Sales and Distribution sales orders are stored. You will then use ABAP tools to locate and view details of the database table and record information about a specific document.

1. Locate the table where sales orders are stored.

2. View the contents of the table.

Field	Data
Maximum No. Hits	10
Net Value of the first document displayed in the contents of the *Sales Document* table	

3. Locate the first document in the table and the value of that document.
   .

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Solution 7-2: View A Table's Contents in the SAP Database

Task
You will locate a table name where Sales and Distribution sales orders are stored. You will then use ABAP tools to locate and view details of the database table and record information about a specific document.

1. Locate the table where sales orders are stored.

   a) From the *SAP Easy Access* menu, choose *Logistics* → *Sales and Distribution* → *Sales* → *Order*.

   b) Choose *Create*.

   c) Place your cursor in the *Order Type* field.

   d) Choose *(F1) Help*.

   e) Choose *Technical info*.

   f) The table name (transparent table) is **VBAK**.

   g) Choose *Close / Enter*.

   h) Choose *Close*

   i) Choose *Back*

   Hint: Once you have a table name, you can view the contents of a table.

2. View the contents of the table.

Field	Data
Maximum No. Hits	10
Net Value of the first document displayed in the contents of the *Sales Document* table	

   a) From the *SAP Easy Access* menu, choose *Tools* → *ABAP Workbench* → *Development*.

   b) Choose *ABAP Dictionary*.

   c) Enter *Database table*: **VBAK**.

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d) Choose *Display*.

e) Choose *Utilities* →*Table contents* → *Display*.



Hint: If a dialog box appears, "Choose field for selection", choose the following fields:

- ERNAM Created by
- ERDAT Created on
- AUDAT Document date

Choose  *Execute*.



Hint: The technical name of the field might display. To see the descriptive name, choose *Setting User Parameters*.

Choose *Field text* and choose *Transfer/Enter*..

f) Enter *Maximum no. hits*: **10**

g) Choose  *Execute*.



Hint: From the contents, you can view the details of a specific record in the database.

3. Locate the first document in the table and the value of that document.

a) Enter  in the box of the first item on the list of the documents..

b) Choose  Display.



Hint: The field names may appear as the technical name of the field not the descriptive name. To switch to the description name, choose *Settings* → *User Parameters*, choose *Field text*, and choose *Transfer*.

c) Choose  *Exit*.

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Lesson Summary

You should now be able to:

- Describe how business transactions relate to system applications
- Define the requirements for entering text in fields, as well as assigning attributes
- Describe how tables are used to identify the semantic and technical characteristics of fields
- View the contents of a table in an SAP database
- Describe how tables are used to generate specific information

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Unit Summary

You should now be able to:

- Describe the multi-tier client / server concept
- Describe how SAP uses the client/server concept
- Outline the function of a client, client/ server, and server in the software- oriented view of the SAP systems
- List the hardware system configurations
- Define the purpose of a client in terms of master, customizing, and application data
- Describe the features of a development system, a quality assurance system, and a production system, as well as how they form the stages for a live- system rollout
- Describe how business transactions relate to system applications
- Define the requirements for entering text in fields, as well as assigning attributes
- Describe how tables are used to identify the semantic and technical characteristics of fields
- View the contents of a table in an SAP database
- Describe how tables are used to generate specific information Related Information

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Test Your Knowledge

1. SAP Client Server architecture can be broken down into what three areas?
   Fill in the blanks to complete the sentence.

2. When implementing a change management systems landscape, the three systems you would use to accomplish the most efficient change management strategy are_____and_____and_____
   Fill in the blanks to complete the sentence.

3. Client is the same thing as database in an SAP system.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

4. A table is the smallest unit for representing business-related information.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

5. An_____is the representation of a central business object in the real world, such as an employee, sales order or purchase order.
   Fill in the blanks to complete the sentence.

6. Which of the following are not parts of the SAP Business Framework?
   Choose the correct answer(s).

   ☐ A Java
   ☐ B BAPI
   ☐ C ALE
   ☐ D Business Components

7. Fields consist of a_____ that defines the semantics (field label) of the field while_____defines the technical information about the fields such as field type and length.
   Fill in the blanks to complete the sentence.

8. BAPIs are used to allow only SAP systems to integrate with each other.
   Determine whether this statement is true or false.

   ☐ True
   ☐ False

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Answers

1. SAP Client Server architecture can be broken down into what three areas? Presentation, Application Database.

   Answer: Presentation, Application, Database

   The 3-tier architecture illustrates the traditional client server approach.

2. When implementing a change management systems landscape, the three systems you would use to accomplish the most efficient change management strategy are Development System and Quality Assurance or Test System and Production System.

   Answer: Development System, Quality Assurance or Test System, Production System.

   Like most implementations, the number systems and clients can vary but SAP recommends that you use the three systems to control change management.

3. Client is the same thing as database in an SAP system.

   Answer: False

   Clients exist in a database while a database could have more than one client.

4. A table is the smallest unit for representing business-related information.

   Answer: False

   A field represents the smallest business-related information. Fields make up a table in which data is stored in those fields organized in a table.

5. An SAP Business Object is the representation of a central business object in the real world, such as an employee, sales order or purchase order.

   Answer: SAP Business Object

   Business Objects do not define technical but more real work elements that you interact with on a day-to-day basis.

6. Which of the following are not parts of the SAP Business Framework?

   Answer: A

   Java is a programming language and not a part that defines the SAP Business Framework.

7. Fields consist of a Data Element that defines the semantics (field label) of the field while Domain defines the technical information about the fields such as field type and length.

   Answer: Data Element, Domain

   Fields, once defined, are used in table to store specific information.

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8. BAPIs are used to allow only SAP systems to integrate with each other.

   Answer: False

   BAPIs can be used to gain access to SAP and non-SAP systems. In the case of non-SAP systems, SAP provides the tools to create your own customer BAPIs

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