



- System R/3 TACO40 Controlling
- Release 4.6B
- September 2000
- Material nr.: 50037094

Copyright 2000 SAP AG. All rights reserved.

Neither this training manual nor any part thereof may be copied or reproduced in any form or by any means, or translated into another language, without the prior consent of SAP AG. The information contained in this document is subject to change and supplement without prior notice.

All rights reserved.

© SAP AG 1999

■ Trademarks:

- Microsoft ®, Windows ®, NT ®, PowerPoint ®, WinWord ®, Excel ®, Project ®, SQL-Server ®, Multimedia Viewer ®, Video for Windows ®, Internet Explorer ®, NetShow ®, and HTML Help ® are registered trademarks of Microsoft Corporation.
- Lotus ScreenCam ® is a registered trademark of Lotus Development Corporation.
- Vivo ® and VivoActive ® are registered trademarks of RealNetworks, Inc.
- ARIS Toolset ® is a registered Trademark of IDS Prof. Scheer GmbH, Saarbrücken
- Adobe ® and Acrobat ® are registered trademarks of Adobe Systems Inc.
- TouchSend Index ® is a registered trademark of TouchSend Corporation.
- Visio ® is a registered trademark of Visio Corporation.
- IBM ®, OS/2 ®, DB2/6000 ® and AIX ® are a registered trademark of IBM Corporation.
- Indeo ® is a registered trademark of Intel Corporation.
- Netscape Navigator ®, and Netscape Communicator ® are registered trademarks of Netscape Communications, Inc.
- OSF/Motif ® is a registered trademark of Open Software Foundation.
- ORACLE ® is a registered trademark of ORACLE Corporation, California, USA.
- INFORMIX ®-OnLine for SAP is a registered trademark of Informix Software Incorporated.
- UNIX ® and X/Open ® are registered trademarks of SCO Santa Cruz Operation.
- ADABAS ® is a registered trademark of Software AG

- The following are trademarks or registered trademarks of SAP AG; ABAP™, InterSAP, RIVA, R/2, R/3, R/3 Retail, SAP (Word), SAPaccess, SAPfile, SAPfind, SAPmail, SAPoffice, SAPscript, SAPtime, SAPtronic, SAP-EDI, SAP EarlyWatch, SAP ArchiveLink, SAP Business Workflow, and ALE/WEB. The SAP logo and all other SAP products, services, logos, or brand names included herein are also trademarks or registered trademarks of SAP AG.
- Other products, services, logos, or brand names included herein are trademarks or registered trademarks of their respective owners.

- **Participants**
 - **Member of the R/3 implementation team**
 - **Junior consultants (less than one year's SAP experience)**
- **Knowledge**
 - **Detailed knowledge of business processes in selected application areas**
 - **Basic knowledge of graphical user interfaces (GUI) such as Microsoft Windows**

- **Audience:**
 - Consultants from SAP Partners
 - Project team members from SAP Customers

- **Duration: 25 days**

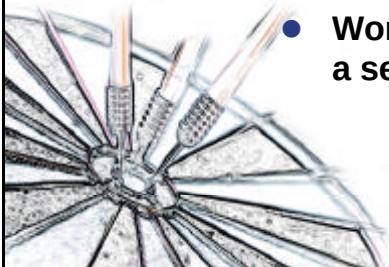


Contents:

- **Course Goals**
- **Section Overview**
- **Course Content**

This course will prepare you to:

- **Gain the basic knowledge and understanding of the R/3 system in order to effectively implement one of the following application areas:**
 - Accounting
 - Controlling
 - Sales and Distribution
 - Materials Management
 - Production and Production Planning
 - Human Resources
- **Experience some typical project issues**
- **Work as a project member under the guidance of a senior consultant**



Section **Partner Academy**

Section **SAP Overview**

Section **FI/CO Integration**

Section **Cost Center Accounting**

Section **Internal Orders**

Section **Schedule Manager**

Section **Basics of the Report Painter**

Section **ASAP**

Section **Product Cost Planning**

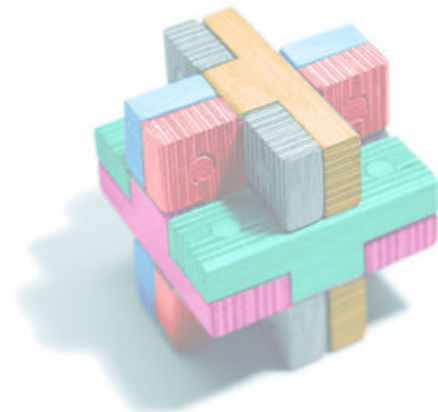
Section **Cost Object Controlling**

Section **Activity Based Costing**

Section **Profitability Analysis**

Section **Profit Center Accounting**

Section **SAP-Integration**



Unit **Introduction to SAP**

Unit **Basis**

Unit **SAP Services**

Unit **Co-operative Business
Scenarios**

Unit **mySAP.com**

Unit **Navigation**

Unit **System-wide Concepts**

Unit	Overview of FI/CO Integration
Unit	Information System
Unit	FI Case Company Organization
Unit	FI Customizing
Unit	Create Accounts
Unit	Daily Processing

Unit **Organizational Units**

Unit **Master Data**

Unit **Event Based Postings**

Unit **Periodic Allocations**

Unit **Planning**

Unit **Variance Analysis**

Unit	Overview
Unit	Master Data
Unit	Event Based Postings
Unit	Period-end Closing
Unit	Planning and Budgeting
Unit	Order Summarization

Unit	Schedule Manager
------	-------------------------

Unit	Basics of Report Painter
Unit	Structure of Report Painter
Unit	Using Reports in a Live System

Unit **ASAP Overview**

Unit **Implementation Roadmap**

Unit	Introduction
Unit	Material Costing with Quantity Structure
Unit	Costing Run
Unit	Other Costing Functions
Unit	Appendix

Unit	Introduction
Unit	Product Cost by Period
Unit	Product Cost by Order
Unit	Appendix
Unit	Information System

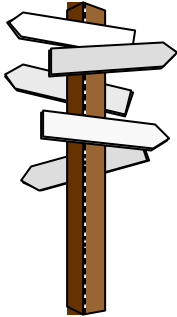
Unit	ABC in R/3
Unit	Basic Data and Structures
Unit	Planning
Unit	Actual Postings

Unit	Profitability Management
Unit	Structures
Unit	Master Data
Unit	Actual Data
Unit	Planning
Unit	Information System

Unit	Basic Settings
Unit	Actual Data
Unit	Planning
Unit	Information System
Unit	Appendix: Profitability Management

Unit **Integrated Planning Cycle**

- 
- A circular graphic with a green and orange color scheme. It features a stylized human head profile in the center, with a green brain area and orange lines radiating outwards. The background of the circle is a mix of green and orange segments.
- **Mission**
 - **Advantages of Partner Academy**
 - **Certified Consultants**
 - **Certification Areas**
 - **Becoming a Certified Consultant**
 - **Partner Academy Knowledge Path**
 - **Goals of different trainings offerings**



- **Train customers and new consultants in the features, functions and best use of SAP products to meet the customer's business goals based on a curriculum that is consistent world-wide**
- **Provide advanced training and continuing education for experienced consultants**
- **Provide and ensure a consistent skilled consulting base by certification and testing**
- **Support partners who train their own employees with the same curriculum**

- The TeamSAP Academy is an international institute of higher education in SAP applications and a unique organization. It is the most comprehensive training academy in the business software industry.
- Open to all SAP customers and partners, the Academy's mission is:
 1. Train new consultants in the features, functions and best use of SAP products to meet the customer's business goals.
 2. Provide continuing advanced training and continuing education for experienced consultants.
 3. Provide and ensure a consistent world-wide skilled consulting base through certification and testing.



- **Courses designed for customers and consultants**
- **Experienced trainers**
- **Exchange of experiences**
- **Integrated case study**
- **Certification opportunity directly after course**
- **Course topics correspond to certification topics**
- **Support for certified students**

- Topics for the evening sessions, especially, are selected with a consultant's interests and needs in mind.
- Consultants can build their network for further learning in the future.
- The case study is the major benefit of this Academy.
 - You must use all of the knowledge you gained and apply it to a realistic problem.
 - This reinforces the concepts better than just doing exercises on topics that were covered that same day.
 - No other course gives the opportunity to work closely with people from other applications.

- **Proven product knowledge**
- **Access to information**
 - SAPNet, mailings
- **Access to experience**
 - Workshops, exchange of experience
- **Contacts with developers**
 - Discussion forums



Quality control of consulting services
Assurance for customers

© SAP AG 1999

- Guarantees the quality of consulting services through tests and subsequent close contacts with certified consultants.
- Every certified consultant has an SAPNet ID and access to specific information via Internet.
- The Academy also offers special workshops for experienced consultants.
- Certified consultants can participate in special discussion forums via Internet, so that they can ask questions and make suggestions to the R/3 developers directly.
- SAP publishes the number of certified consultants of a partner in its partner database.
 - Customers are increasingly considering this information when selecting the partner.
 - SAP has begun a worldwide market initiative which clarifies the certification process for customers.

- **mySAP.com Application Components**

- Accounting
- Controlling
- Materials Management
- Production Planning
- Sales & Distribution
- Human Resources
- Project System
- Quality Management
- ABAP Programming
- PM/CS
- ASAP
- Business Warehouse
- mySAP.com Internet Sales with the Online Store
- mySAP.com Business-to-Business Procurement
- Advanced Planner and Optimizer

- **mySAP.com Industry Solutions**

- IS-Real Estate
- IS-Public Sector
- IS-Retail

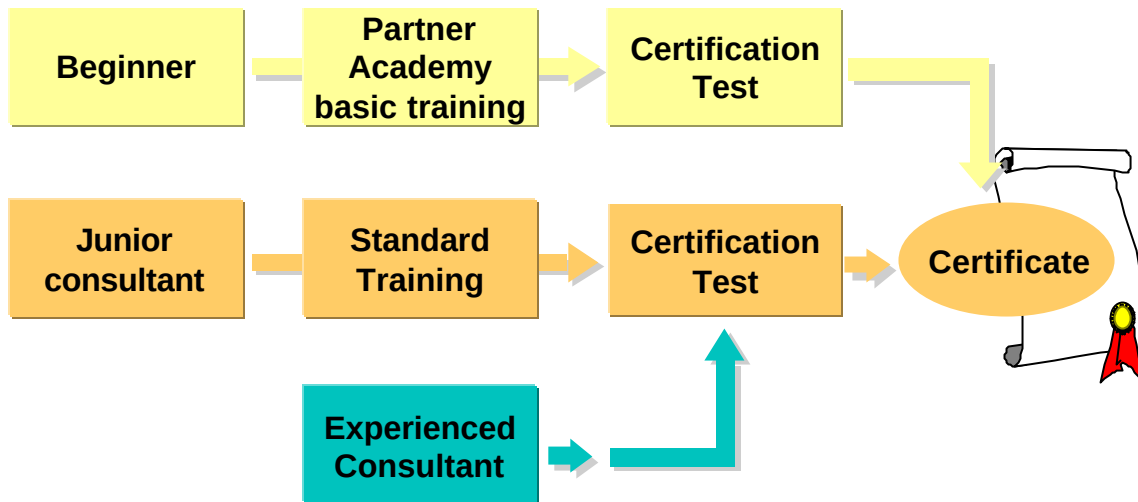


© SAP AG 1999

- Certification is person-specific and release-related.
- Certification is specific to a given application.
 - It can be acquired in different application fields.
- The certificate for technical consultants is operating system and database-specific.

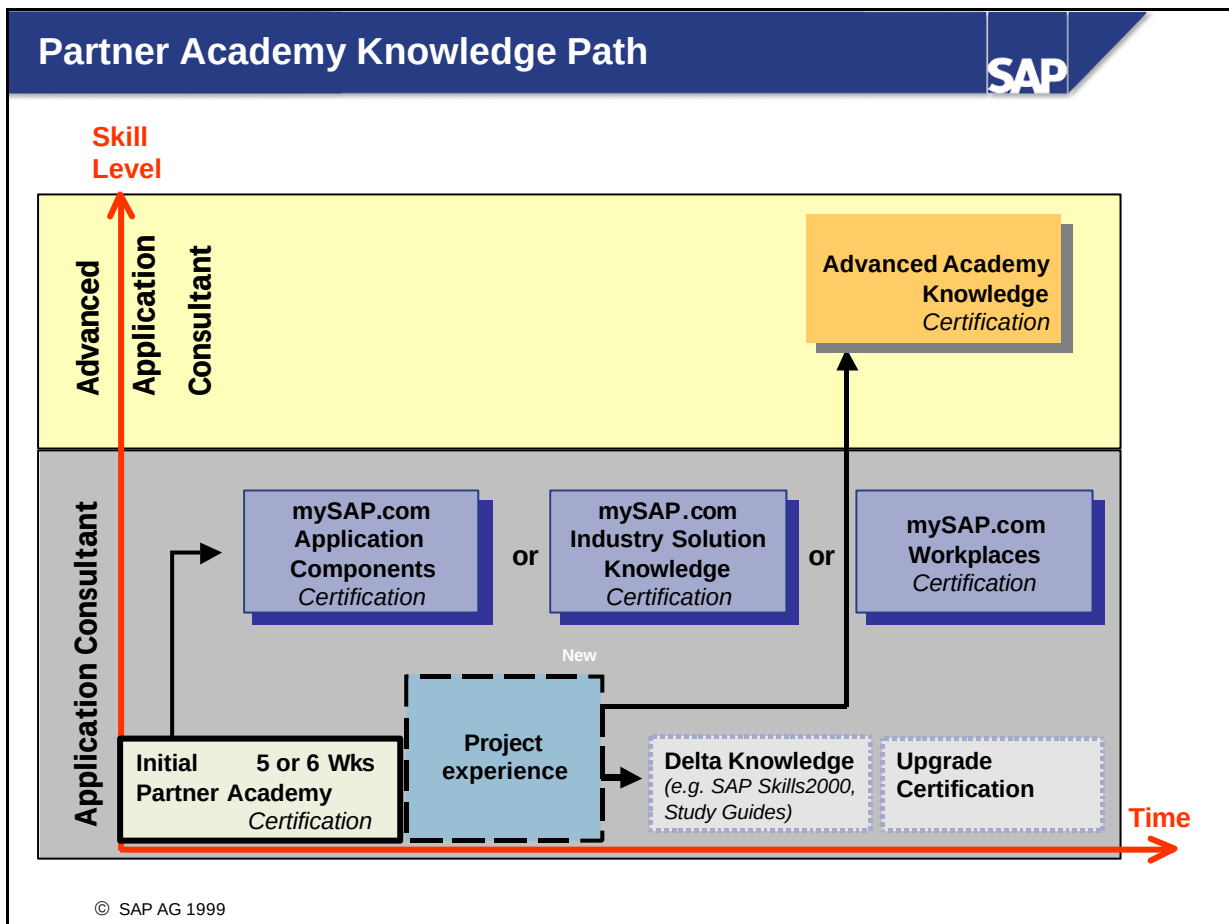
Becoming a Certified Consultant

SAP



© SAP AG 1999

- There are different ways you can acquire the essential knowledge of a certified consultant. In general, the same test will be used to test your knowledge.
- TeamSAP Academy offers a 5- or 6-week basic training worldwide to help you acquire the essential knowledge needed for the certificate.



- In addition to the certificate for SAP Consultants, we also offer an extended training program.
- After you have collected experience as a junior certified SAP consultant and visited further Level 3 courses and workshops, you can apply to do an in-depth course.
- This further certificate will enable you to take over project management and allow you to take part in the 'Expert Forums' that we offer.

Initial Training

- To gain a **basic knowledge** and understanding of the system for a particular application area in order to efficiently carry out implementations
- To learn about some typical **project issues**
- To understand the tools available for use in project implementations
- To be able to **work as a project team member** under the guidance of a senior consultant in the first phase of a project (first year)

Advanced Training

- To gain a **sound knowledge** and understanding of the system for a particular application area in order to efficiently direct/supervise implementations
- To understand some typical **integration issues** in implementations
- To apply knowledge of this particular application area in different customer scenarios
- To be able to **work as a senior consultant** in a project with limited complexity

- The Advanced Level demands expert knowledge in a special area.
 - It also requires practical experience of at least one year.



Unit **Introduction to SAP**

Unit **Basis**

Unit **SAP Services**

Unit **Co-operative Business
Scenarios**

Unit **mySAP.com**

Unit **Navigation**

Unit **System-wide Concepts**

Contents:

- SAP Organization
- Enjoy SAP





At the conclusion of this unit, you will be able to:

- **Briefly describe the SAP organization**
- **Discuss the Enjoy SAP initiative**





“SAP enables you to positively transform your company so that the maximum potential for your business and your people can be reached. We always strive for excellence to become your long-term partner and to provide the tools you need to improve your company’s value”.



- Global Research Network
- SAP Labs centers
- Service & Support centers

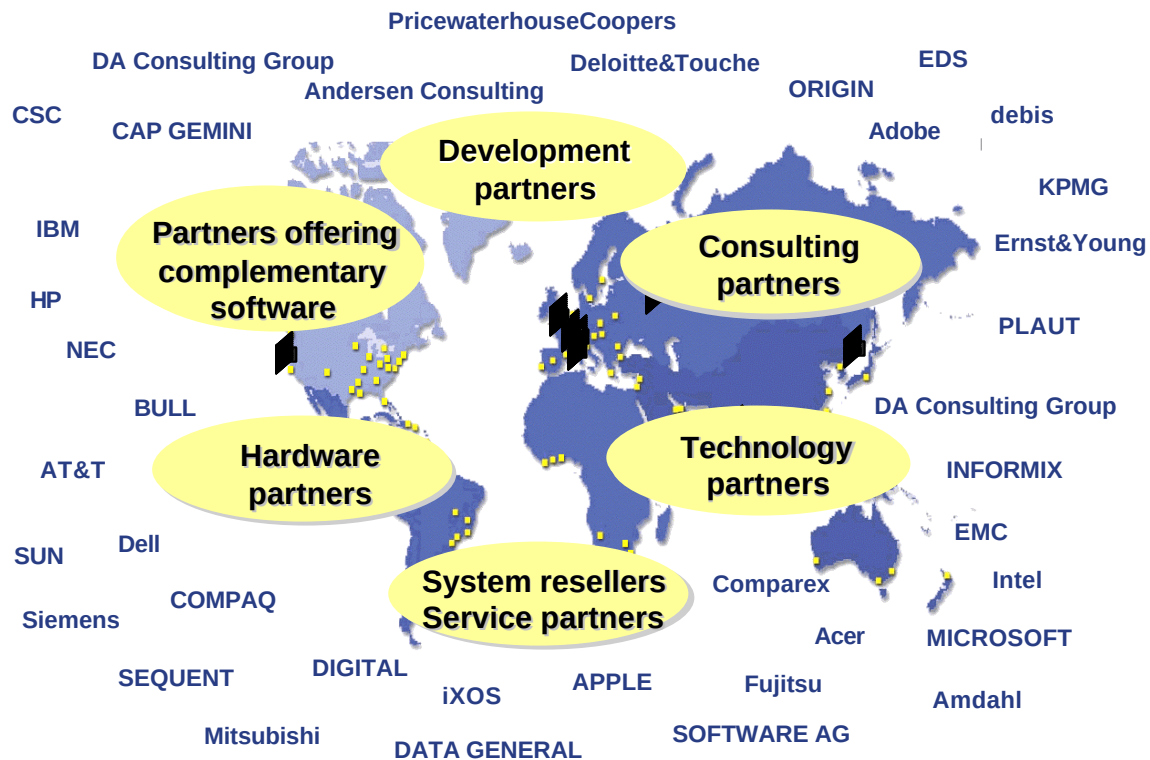


sap.com

<http://www.sap.com>

SAP Cooperation with Partners - A Selection

SAP





Solutions for

- All geographic regions
- 19 Comprehensive Industry Solutions
- All organizations regardless of size
- Solutions designed with enterprises and users in mind
- Scalable for your business
- Continuous technology evolution
- Constant value innovation
- The user is at the center
- Instantly usable applications



- **The goal**
 - Make SAP software easier to learn, tailor, and use
- **The way**
 - Listen to people (contest, user visits)
 - All SAP applications went back to the lab
 - ◆ New visual aesthetics
“Obvious at first glance”
 - ◆ New interaction
“High-speed user interaction”
 - ◆ New personal, role-based interface
“Streamlined to my needs”
 - Work with world-renowned design experts



Extend the Reach - Old R/3 Purchasing

SAP

Initial Screen

Create Purchase order - Initial Screen

Purchase order: Edit Header Item Environment System Help

Vendor: Order type:

Ref. to PReq: Ref. to contract:

Default data for items:

Item category: Acct. assignment cat.:

Delivery date: Plant:

Storage location: Material group:

Req. tracking number: Price date:

Vendor sub-range: Promotion:

☒ Acknowledgment reqd.

Header Data

Change Purchase order - Header Data

Purchase order: Edit Header Item Environment System Help

Purchase order: Vendor:

Order date: Language key:

Admin. fields:

Order date: Item interval:

Language key: Sub-item interval:

Company code: Document type:

Vendor: Johnson LTD

Terms of delivery and payment:

Payment terms: Currency:

Payment in: Days: %: Exch. rate:

Payment in: Days: %: Incoterms:

Payment in: Days net:

Reference data:

Quotation date: Quotation:

Your reference: Salesperson:

Our reference: Invoicing party:

Suppl. vendor:

Taxes:

City/State:

Item Overview

Display Purchase order - Item Overview

Purchase order: Edit Header Item Environment System Help

Purchase order: Vendor:

Order type: Order date:

Item: Material: Short text:

PO quantity: Deliv. date: Net price:

Item: Material: Short text:

PO quantity: Deliv. date: Net price:

Item: Material: Short text:

PO quantity: Deliv. date: Net price:

Item Details

Change Purchase order - Item 00010

Purchase order: Edit Header Item Environment System Help

Item: Material: Item cat.:

Material: Mail group: Plant:

Description: Stor. loc.:

Quantity and price:

Order quantity: PU:

Net order price: DEM: PU:

Qty. conversion: PU: PU:

Info rec. update: ☐

☒ Estimated price ☒ Print price

Deadline monitoring:

Delivery date: Reminder 1: ConfContK: ☒ Ackn. reqd.

Stat. del. date: Reminder 2: Acknowled. no:

GR proc. time: Reminder 3: TrackingNo:

Vend. mat.:

GR/IR control:

Underdel. tol.: % ☒ Unlimited ☒ Qual. imp. ☒ GR

Overdelv. tol.: % ☒ Unlimited ☒ Del. compl. ☒ GR non-val

Tax code: ☒ Final inv. ☒ IR

Shipping inst.: ☒ GR-based V

Extend the Reach - New R/3 Purchasing

SAP

Purchase order: Edit Data Environment System Help

Standard PO 4500006173 created by Greg Tielsch

Switch off document overview Messages

Standard PO 4500006173 Vendor: 000003700 Phoenix Supplier Document date: 26.04.1999

Delivery/invoice Conditions Texts Address Communications Additional data Org. data Status

Salesperson: Mr. Paves Your reference: 10
Telephone: 312.345.4704 Fax: Our reference: #
Language: EN

Item Overview

It.	Short text	PO quantity	U.	Deliv. date	Plnt.	Net price	Cur.	Per	OPUn	Matl group	Tracking to	Store loc.
10	HD Rear shock absorber	10	PC	06.05.1999	New York	108.91	USD	1	PC	Metal processing	808734	Warehouse 0801
20	Hexagon head screw M10	180	PC	06.05.1999	New York	0.40	USD	1	PC	Metal processing	321122	Warehouse 0801

Item Details

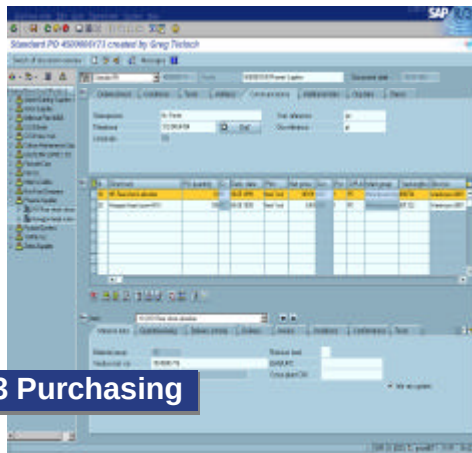
Item: 10 HD Rear shock absorber

Materials data Quantities/weight Delivery schedule Delivery Invoice Conditions Confirmations Texts

Material group: 000 Revision level:
Vendor mat. no.: 108-3608-775 Revision level:
Vendor sub-number: Cross-plant CM:
Batch:
☒ Info not update

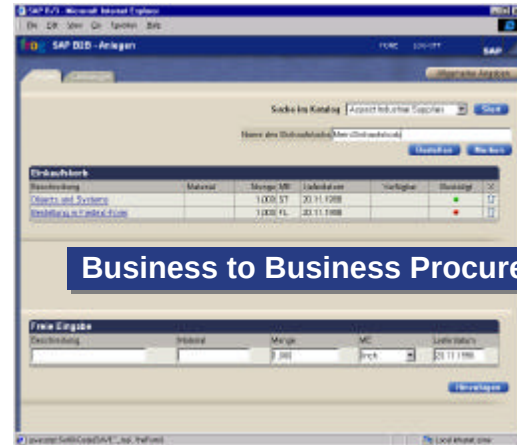
© SAP AG 1999

Professional Purchaser



R/3 Purchasing

Occasional Purchaser



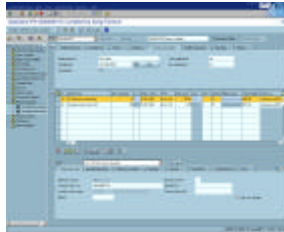
Business to Business Procurement

Extend the Reach - More Role-Specific Scenarios

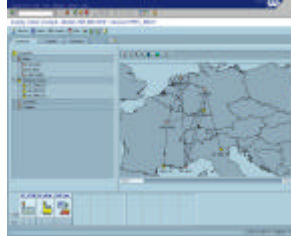
SAP

Professional User

R/3 Purchasing



Advanced Planner and Optimizer

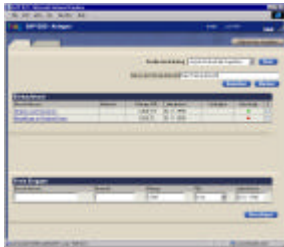


Strategic Enterprise Mgmt



Occasional User

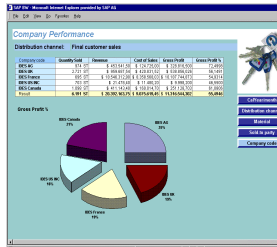
Business to Business Procurement



SAPNet

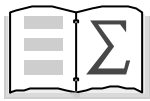


Information Warehouse



© SAP AG 1999

- Role-specific scenarios extend beyond R/3 and into SAP's New Dimensions.



You are now able to:

- **Briefly describe the SAP organization**
- **Discuss the Enjoy SAP initiative**



Contents:

- **SAP R/3 Basis Technology**
- **Business Framework Architecture**



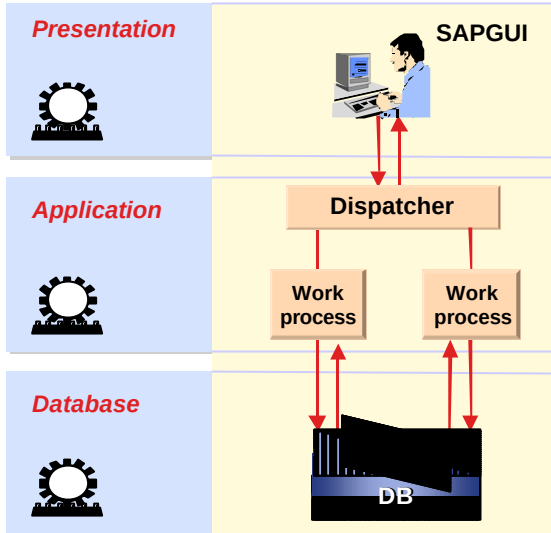


At the conclusion of this unit, you will be able to:

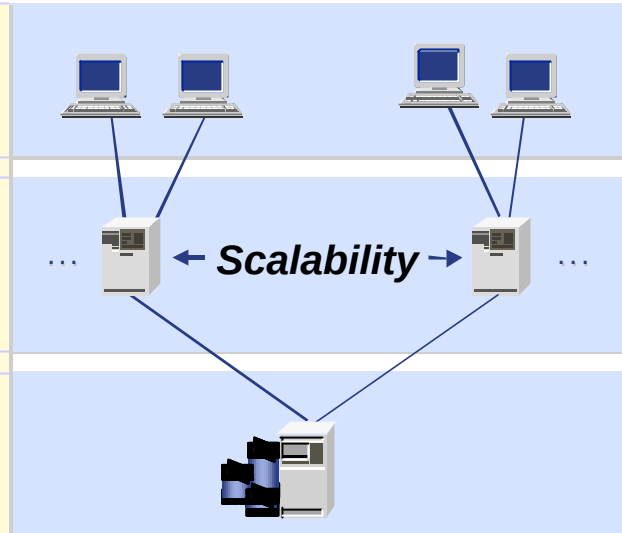
- **Describe the SAP R/3 Basis Technology**
- **Describe the Business Framework Architecture**



Software-Oriented View

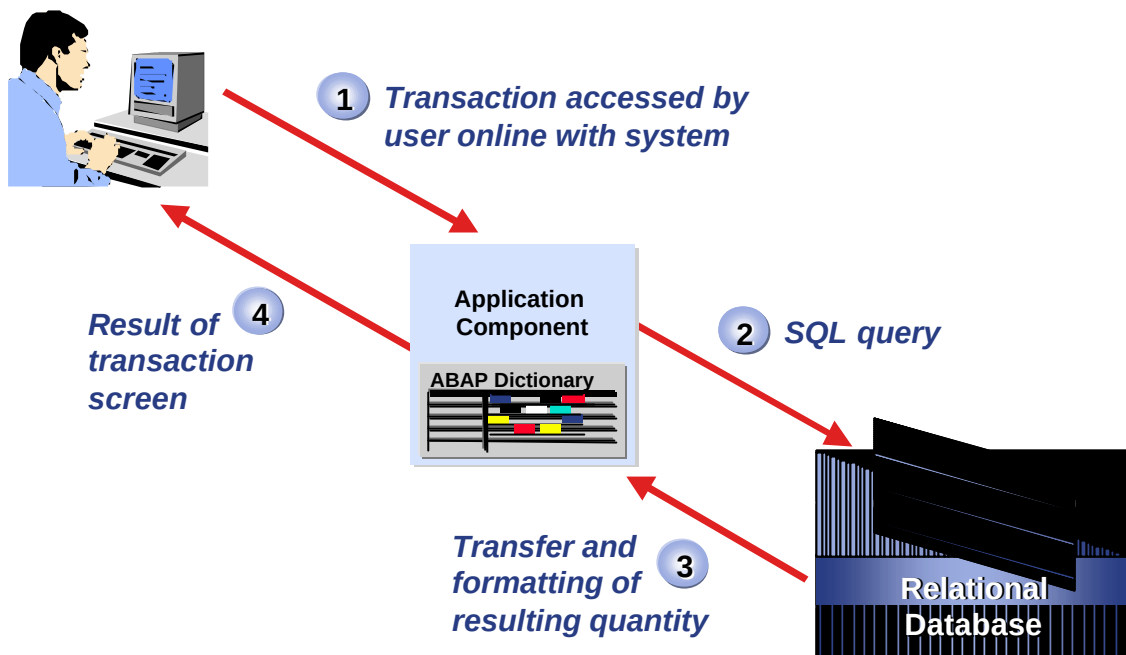


Hardware-Oriented View



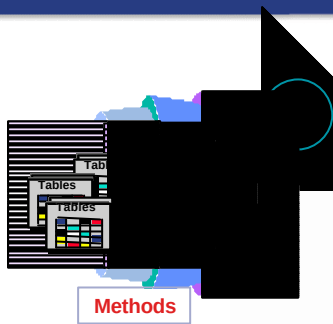
© SAP AG 1999

- The R/3 System architecture allows you to separate application from the presentation and the database. This is the prerequisite for distributing load onto several application servers in client/server configurations. Therefore, the system can be distributed, in hardware terms, at three different levels.
- This architecture means that the installed host service can be adjusted without any problems (**scalability**), especially where load profiles have changed as a result of increasing user numbers, or because additional components have been used. R/3 System scalability provides you with flexibility when choosing hardware and software.
- Examples of R/3 System scalability:
 - Brewery - 20 users
 - Small Telecom company - 415 users
 - Large Software Company - 2000 users
 - Oil & Gas Company - 2500 users
 - Large Engineering Company- 3200 users
 - Large Telecom Company- 5800 users



© SAP AG 1999

- An R/3 transaction is a sequence of dialog steps that are consistent in a business context and that belong together logically. When an R/3 transaction is executed, all individual dialog steps are performed and the data entered in the transaction is updated in the database. From the viewpoint of the database, this is a conversion from one consistent state to the next.
- After a user accesses a transaction, the R/3 System 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.
- 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 R/3 application level guarantees data consistency before the data is transferred to the database.
- All data and programs in the SAP R/3 System are stored in the database.



Business Object:

Attributes:
(Characteristics)

Methods:
(Application
Programs)

Employee

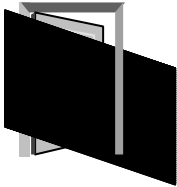
- Name
- Address
- Salary
- Job
- Change address
- Promote

Sales Order

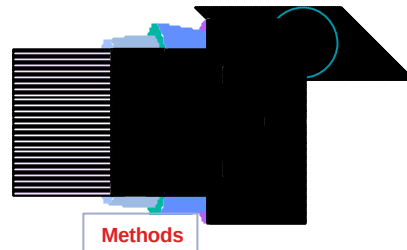
- Customer
- Date
- Item list
- Price
- Deliver
- Check availability
- Trace shipping

- 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 that are 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).

Business Application Programming Interface

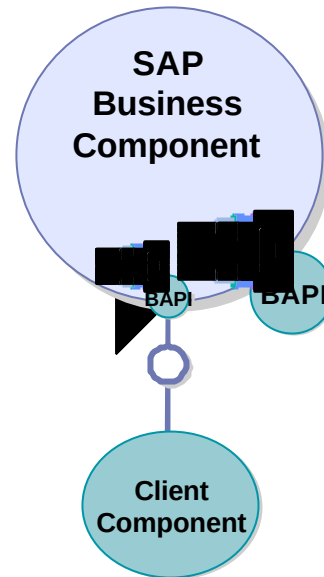


- A BAPI is a well-defined **interface** providing access to processes and data of **business** application systems.



- BAPIs offer a stable, standardized interface for integrating third-party applications and components in the Business Framework. The interfaces are defined within the SAP initiative with customers, partners, and leading standardization organizations.
- A BAPI is basically an entry gate to the R/3 System, while R/3 offers access to business data and processes.
- A business object in the Business Object Repository (BOR) can have many methods from which one or several are implemented as BAPIs. (Recall that a “method” is an operation that can be performed on a Business Object that provides access to the object data..)
- Some BAPI functions:
 - Create objects
 - Display attributes of objects
 - Change attributes of object
- A BAPI is assigned to one and only one business object.

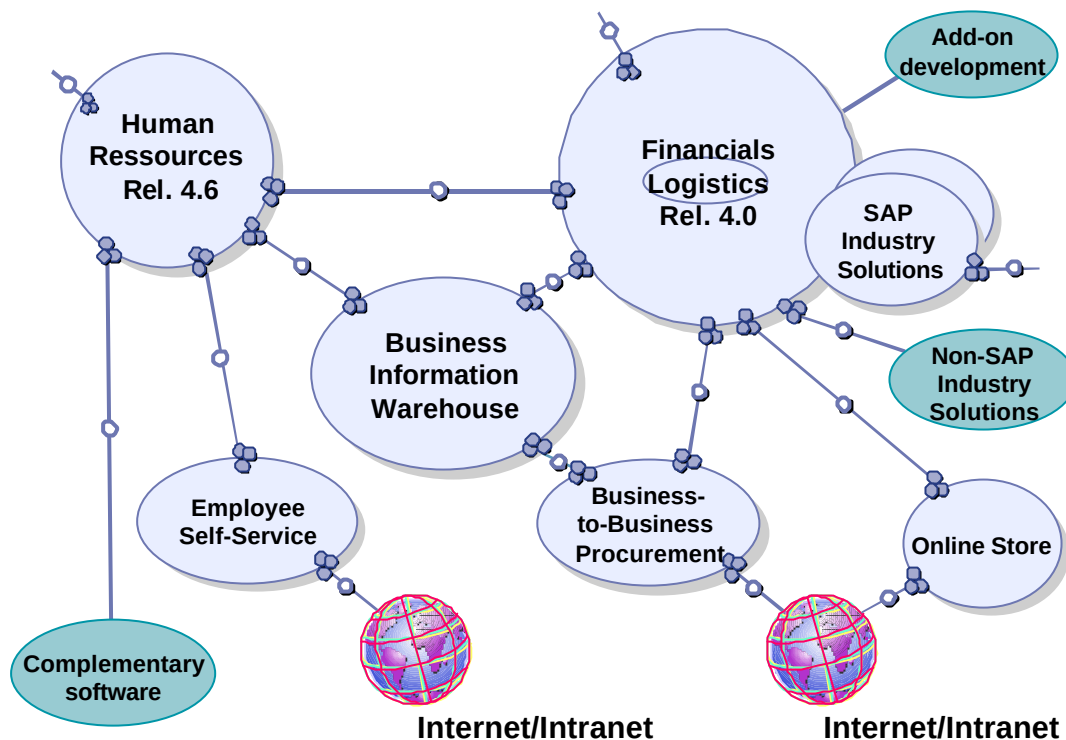
- **SAP Business Components**
(such as SAP FI/LO or SAP HR)
- **Business Objects**
(such as a Sales Order)
- **BAPIs**
(such as Create Sales Order)
- **Client Components**
(such as a sales component running on a laptop external to an R/3 System)



- The Business Framework portrays the R/3 System as a family of products made up of separate, integrated components.
- The Business Framework Architecture works using business components, that is, configurable software modules, and it offers enterprises a flexible business infrastructure. This means that enterprise software can react quickly to new business demands, and can be changed or enhanced simply without disturbing the flow of business. Business components interact in the Business Framework Architecture via open BAPIs.
- The Business Framework Architecture is the strategic product architecture of the R/3 System.

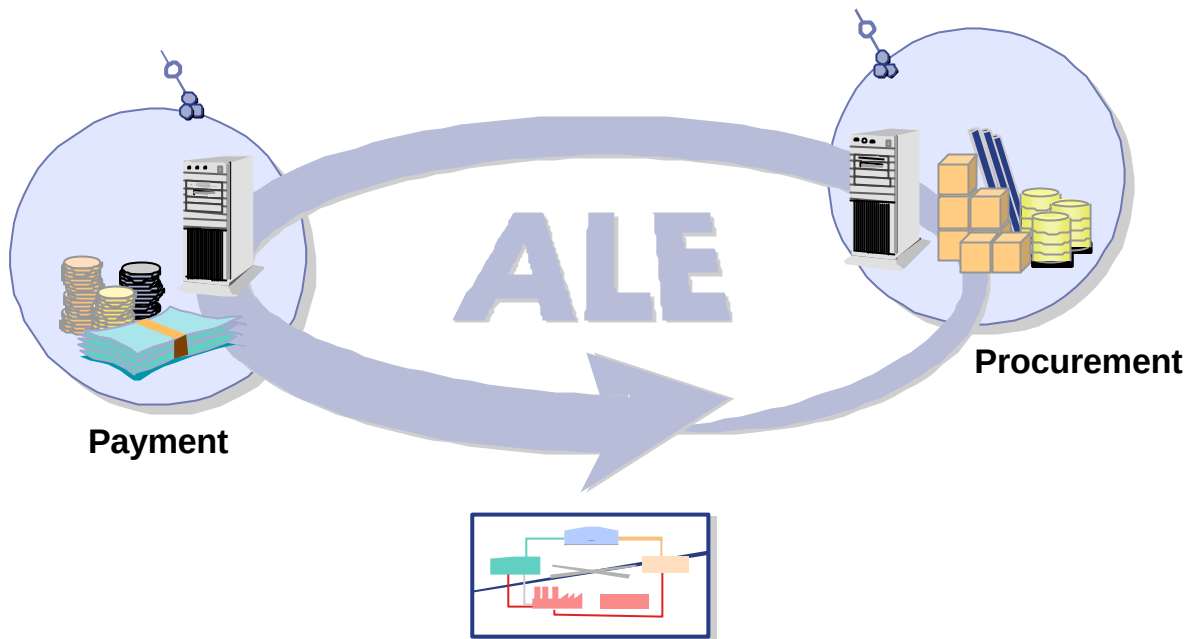
The SAP Business Framework

SAP



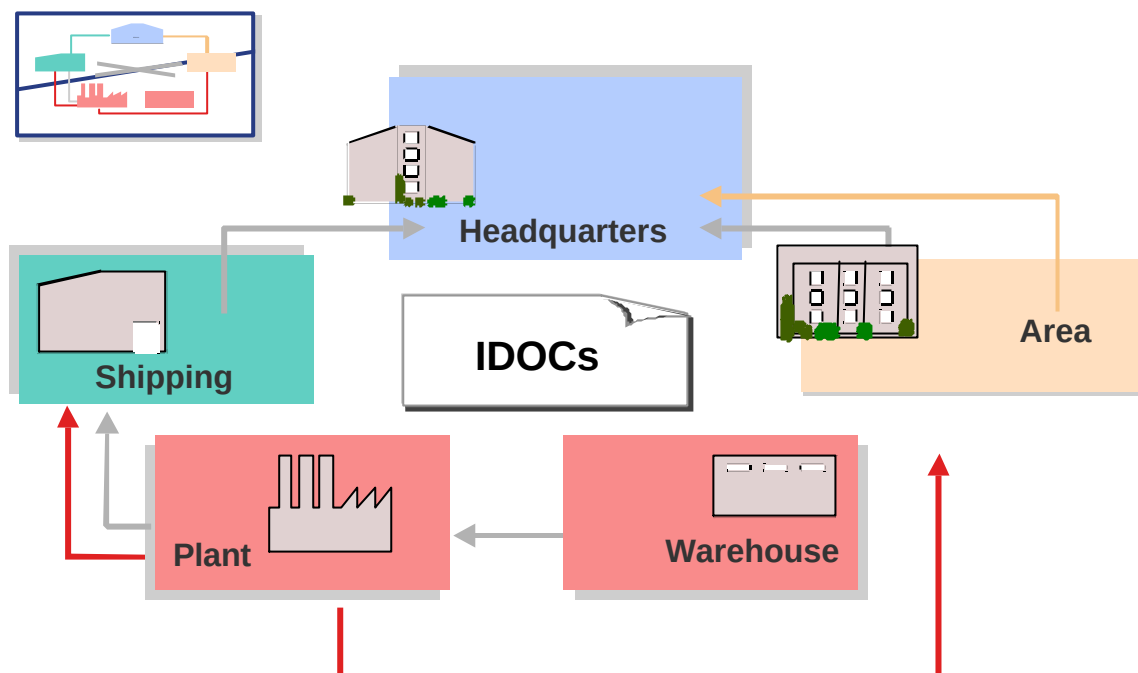
© SAP AG 1999

- Using the Business Framework technology, SAP provides its customers with a platform to configure and connect business processes and information flows across all components of the Business Framework, and also across physically-separated application components.
- The benefits of the Business Framework Architecture include the ability to easily change and configure dynamically business processes independently of usual releases, easy integration of Internet and Intranet components in their business processes, simple connection between R/3 and third-party software, customers' own developments and evolutionary implementation of the latest technology, and separate upgrade of components without interrupting the business operation.

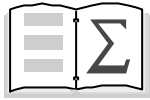


© SAP AG 1999

- Business processes can be distributed using ALE.
- ALE is used to distribute data, master data and transaction data across different systems.
- The ALE concept always relates to an enterprise structure with areas that have central tasks and areas with tasks that are decentralized.



- It may be practical for organizations to use separate application systems so that application components can be installed and operated on decentralized systems that are technically independent of each other.
- The ALE concept supports the implementation and operation of distributed SAP applications. It is based on business-controlled messaging with consistent data storage on loosely coupled systems. The applications are integrated through the message exchange, not via a central database.
- To implement a distributed, yet integrated system, the customer must specify in a logical model, which applications are to run on which systems and how the applications are to exchange data with each other.
- On the technical side, the data exchange is carried out via IDocs (intermediate documents) as used in the EDI (Electronic Data Interchange) interface. On the application side, EDI supports information exchange between R/3 systems in different enterprises, whereas ALE supports information exchange within one enterprise. The ALE distribution mechanism is similar to the EDI mechanism. In ALE, business processes are distributed at the transaction level.



You are now able to:

- **Describe the SAP R/3 Basis Technology**
- **Describe the Business Framework Architecture**



Content:

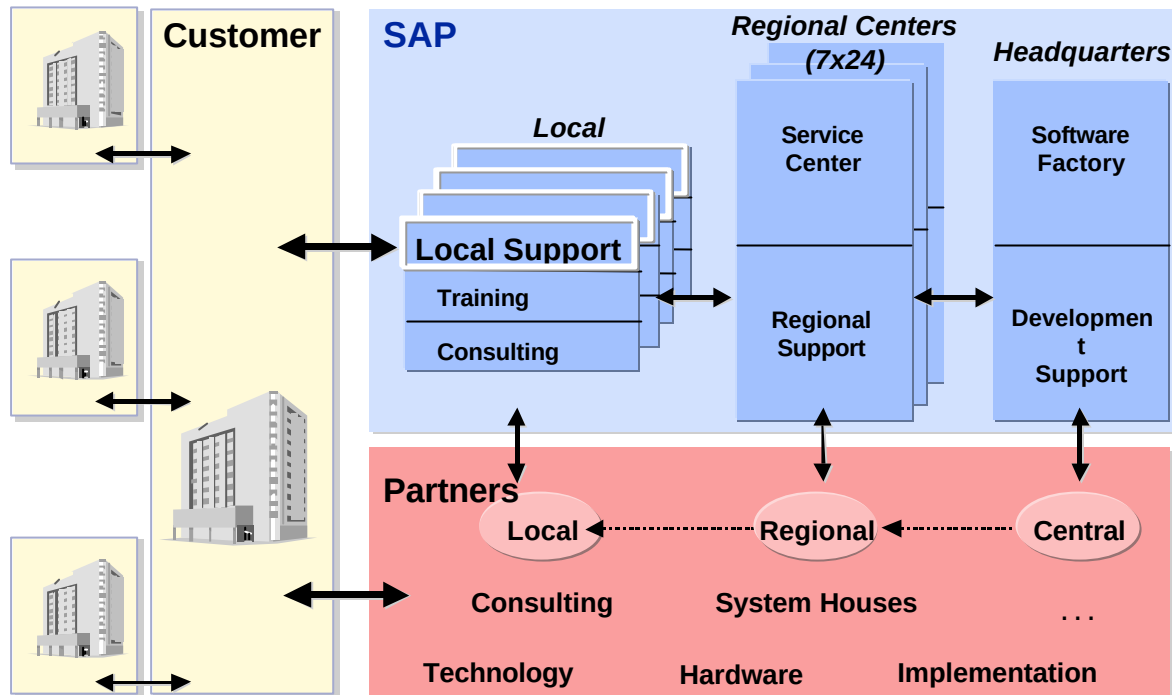
- **SAP's Service & Support Organization**





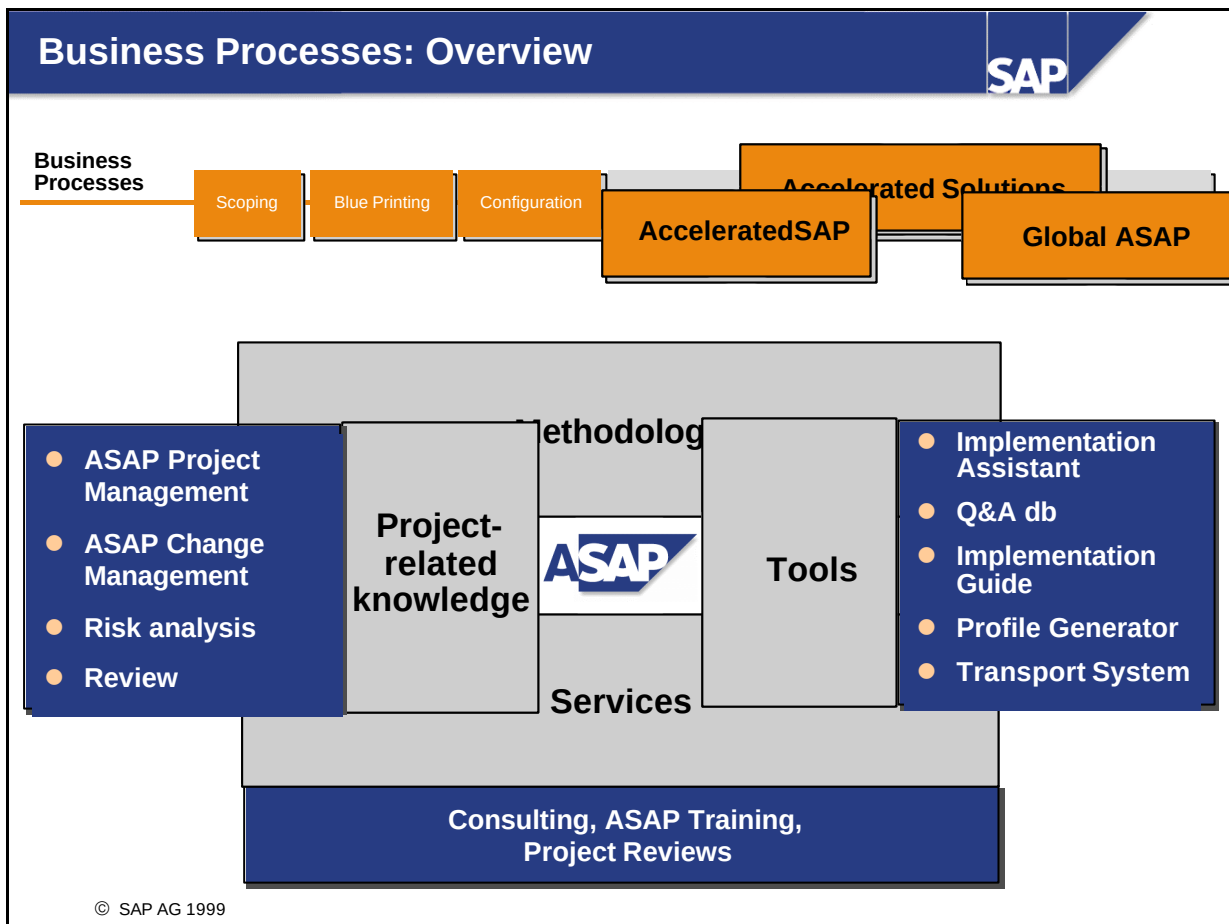
At the conclusion of this unit, you will be able to:

- **Briefly describe SAP's Service & Support Infrastructure**
- **Briefly discuss the methodologies and tools available to support business process evaluation and implementation activities**
- **Explain the various dimensions and system landscape options for implementation**
- **Describe the various SAP services for lifecycle support**

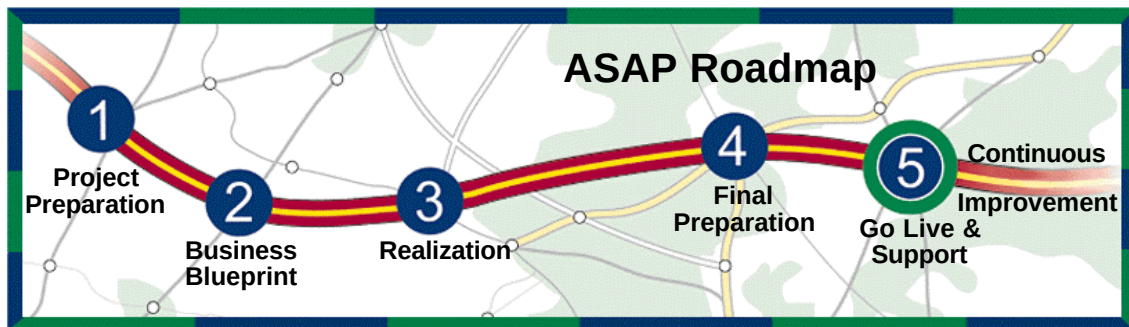


© SAP AG 1999

- SAP international subsidiaries (local)
 - Training
 - Consulting
 - Local support
- Regional Service & Support Center (regional)
 - Regional service and support for Europe, Americas, Asia and Australia
 - In-depth processing of support requests (7 x 24 hours)
- Headquarters (central)
 - Development
 - Strategic service and support planning
 - Coordination of service and support activities



- The ASAP Roadmap is recommended by SAP for implementation planning and for use in an R/3 System implementation. The ASAP Roadmap is based on a “step for step” method for R/3 System implementation.
- **AcceleratedSAP (ASAP)** is SAP's comprehensive implementation solution to streamline R/3 projects. AcceleratedSAP optimizes time, quality and efficient use of resources. ASAP integrates three components, the ASAP Roadmap, Tools, and R/3 Service and Training, which work in conjunction to support the rapid and efficient implementation of the R/3 System.
- **AcceleratedSAP Roadmap** delivers a process - oriented, clear and concise project plan to provide step-by-step direction throughout your implementation of R/3. The ASAP Roadmap consists of five phases: Project Preparation, Business Blueprint, Realization, Final Preparation, Go Live & Support and continuous improvement.
- **Tools** include ASAP specific tools to support project management, questionnaires for the business process consultants and numerous technical guidebooks and checklists.
- **R/3 Services and Training** includes all consulting, training, and support services, for example, Hotline, EarlyWatch, Remote Upgrade or Archiving Service, etc. These products help to standardize certain tasks to perform them as quickly as possible.



Methodology



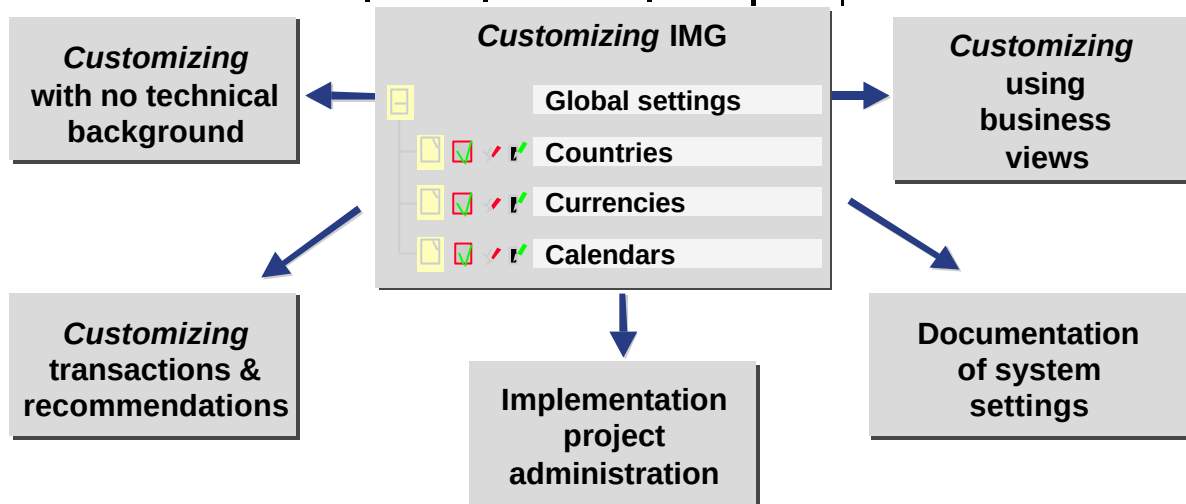
© SAP AG 1999

- **Phase 1 Project Preparation** - The primary focus of Phase 1 is getting the project started, identifying team members and developing a high-level plan.
- **Phase 2 Business Blueprint** - The primary focus of Phase 2 is to understand the business goals of the company and to determine the business requirements needed to support those goals.
- **Phase 3 Realization** - The purpose of this phase is to implement all the business and process requirements based on the Business Blueprint. You customize the system step by step in two work packages, Baseline and Final configuration.
- **Phase 4 Final Preparation** - The purpose of this phase is to complete testing, end-user training, system management and cut over activities. Critical open issues are resolved. Upon the successful completion of this phase, you will be ready to run your business in your productive R/3 system.
- **Phase 5 Go Live and Support** - Transition from a project oriented, pre-productive environment to a successful and live productive operation.

Customizing

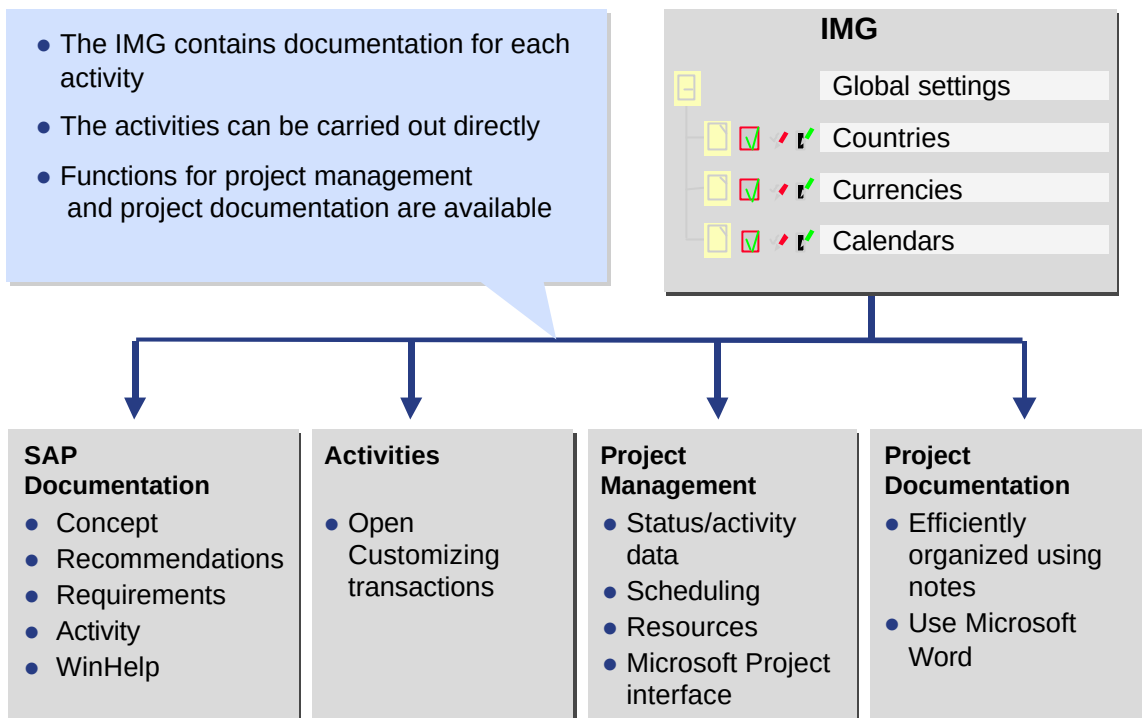
Example: Company Code Table

Company Code	Company Name	Location	Country
0001	SAP AG	Walldorf	DE
1000	Enterprise X	New York	USA



© SAP AG 1999

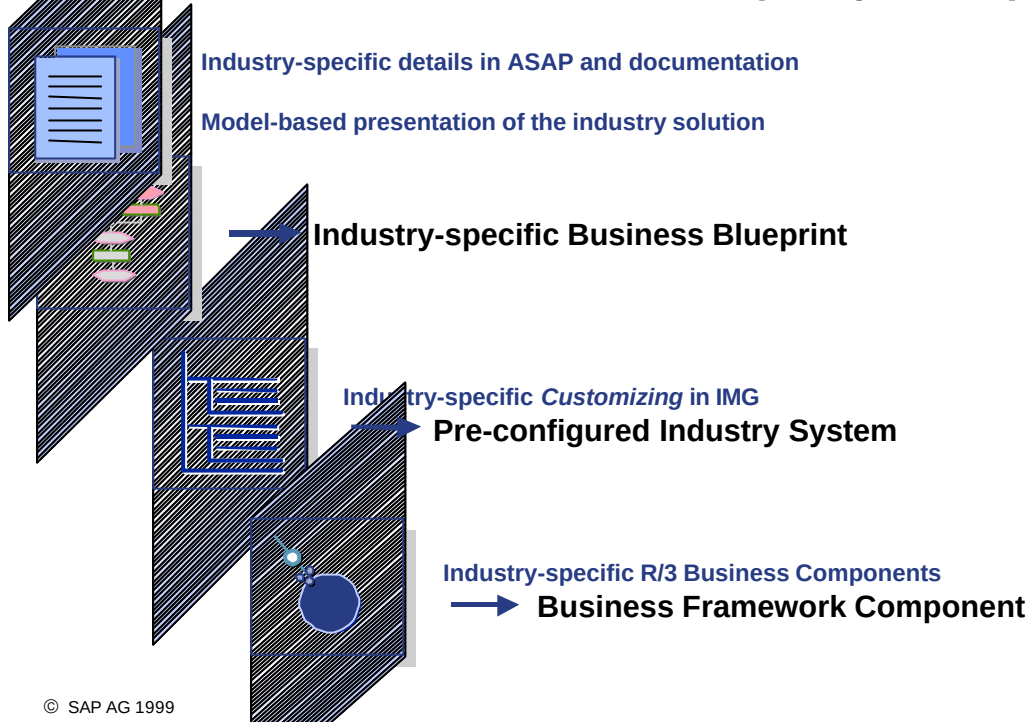
- The IMG acts as a checklist of the Customizing activities that your enterprise should complete for an SAP System implementation project. The IMG is hierarchically structured.
- The structure of the IMG and the IMG management tools (such as resource management and the MS Project interface) help your project team to work through the Customizing activities in a rational sequence.



© SAP AG 1999

- The Enterprise IMG contains all Customizing activities you need to implement application components in an enterprise.
- You can create SAP System Customizing projects to help structure and manage the implementation work. You can create and store cross-project documentation.
- You can create an IMG for each project.
- From a Project IMG you can work on Customizing transactions, project documentation, cross-project documentation, and project management information.

Accelerated Solution step-by-step



- R/3 System documentation and the ASAP Question & Answer database contain industry-specific information and are the ideal places to start to look for information.
- You are supported in your analysis of the selected business processes by model-based presentations of industry-specific business processes. A structure for every industry exists in the ASAP Question & Answer database, and helps you to produce an industry-specific Business Blueprint (Phase 2 of the ASAP Roadmap).
- Industry-specific Customizing is the name given to the installation of the default Customizing parameters in the IMG that relate to a certain industry. You can transfer industry-specific master data structures to the system by using a Computer Aided Testing Tool (CATT), which is also integrated in the R/3 System. CATTs are provided for the industry-specific business cases defined by SAP.
- Industry business solutions are integrated in the Business Framework as Business Components.
- The implementation of the system can also be a Ready-to-Run R/3 System solution (RRR). The main feature of this solution is the complete delivery of hardware and software allowing you to rapidly install the R/3 System.

Lifecycle Support

Product
Requirements

Pro-active
Support

Support on
Demand

→ **Online Service System - SAPNet**

→ **GoingLive Service, EarlyWatch**

→ **Remote consulting**

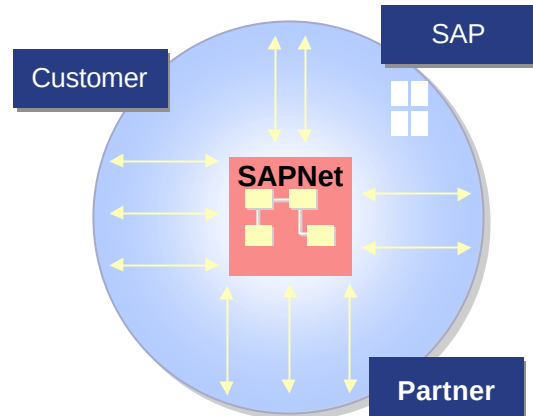


© SAP AG 1999

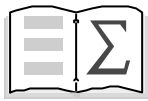
- Look in the extensive SAPNet Notes database for the answer to your question or problem. You may not need to create a problem message.
- SAPNet (Online Service System)
 - SAPNet carries the latest announcements, documentation and much more. You can also find, and contribute, information in discussion groups.
- GoingLive and Early Watch
 - The GoingLive Check is for just before you cut over to live operation. It tests whether the system is suitably configured for the requirements. In Early Watch sessions, SAP spots potential performance problems early and suggests suitable corrective measures.
- Remote Consulting
 - In remote consulting sessions, SAP consultants dial into your System at times convenient to you, trying to analyze and solve a problem in your System from their desk.
- Other services include remote upgrade, remote archiving, conversion, migration, and euro services.

Functions

- Problem Messages
- Notes
- Hot News
- Online Corrections
- Service Requests
- SAP Software Change Registration
- Training Details
- Customer Master Data Maintenance

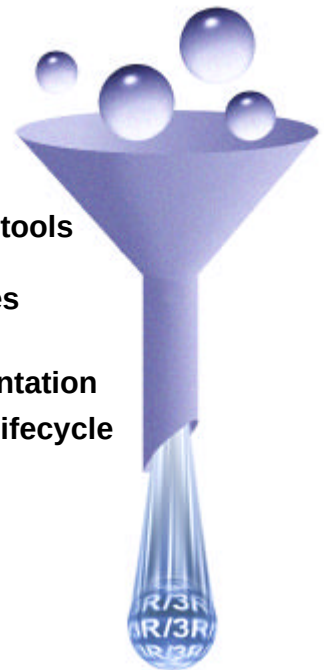


- Report problems on customer R/3 Systems.
- Find Notes in SAPNet using keywords.
 - Example: Search for Contact to find SAP contacts for any topic.
- Display the latest from SAP (HotNews).
 - Examples: News of Hot Packages
 - Generate and fetch developer keys (from Rel. 3.0) for developers and also for SAP standard objects.
- Import preliminary corrections directly into your R/3 System with Hot Packages.
- Maintain your company SAPNet user data (phone and fax numbers, first and last names), and apply for more SAPNet users.
- See the latest overview of SAP training courses.
- Allow a member of the SAP service team access to your system for quicker problem-solving.
 - Note: SAPNet was known as OSS in previous releases.



**At the conclusion of this unit,
you will be able to:**

- Briefly describe SAP's Service & Support Infrastructure
- Briefly discuss the methodologies and tools available to support business process evaluation and implementation activities
- Explain the various dimensions and system landscape options for implementation
- Describe the various SAP services for lifecycle support



Exercises

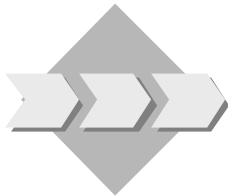


Unit: SAP Services



At the conclusion of this exercise, you will be able to:

- Access the customizing area of R/3
- View a customizing table and the details of the customizing table
- Create a new Plant and assign it to a company



You want to look at the details of an existing company code (1000) in your R/3 client. Additionally, you have built a new plant that belongs to company code 1000. You will need to create the new plant and allocate it to company code 1000.

1-1 Display the SAP Reference IMG.

1-1-1 **Tools** ® **AcceleratedSAP** ® **Customizing** ® **Edit Project**

then,

Goto ® **SAP Reference IMG**

1-2 In the Enterprise Structure in Customizing, locate Company Code **1000**.

1-2-1 **Enterprise Structure** ® **Definition** ® **Financial Accounting**

1-2-2 Select the *Execute* icon for *Define, copy, delete, check company code*.

1-2-3 Select *Edit company code data* then the *Choose* icon.

1-3 View the details of Company Code 1000.

1-3-1 Select Company Code **1000**.

Goto ® **Details**

1-3-2 What is the City and Currency for Company Code 1000?

City: _____

Currency: _____

1-4 You have built a new plant and need to create it in R/3.

1-4-1 ***Enterprise Structure ® Definition ® Logistics - General ® Define, copy, delete, check plant***

1-4-2 Select *Define plant* then the *Choose* icon.

1-4-3 Select the *New entries* button.

1-4-4 Enter the following data in the appropriate fields:

Field Name	Values
Plant	99## (## = Group Number)
Name 1	Group ## New Plant
Country	DE

Select *Save*.

In the *Edit address* window:

Enter *Country* **DE**

Select *Enter*.

1-5 Assign the new plant 99## to Company Code 1000.

1-5-1 ***Enterprise Structure ® Allocation ® Logistics - General ® Assign plant to company code***

1-5-2 Select Company Code **1000** then the *Assign* button.

1-5-3 Select your plant (99##) then select *Enter*.

1-5-4 Select *Save*.

Solutions



Unit: SAP Services

1-3 View the Details of Company Code 1000.

City: Frankfurt

Currency: UNI

Contents:

- **Customer Relationship Management**
- **Advanced Planner and Optimizer**
- **Strategic Enterprise Management**
- **Business to Business Procurement**
- **Business Information Warehouse**
- **Knowledge Management**

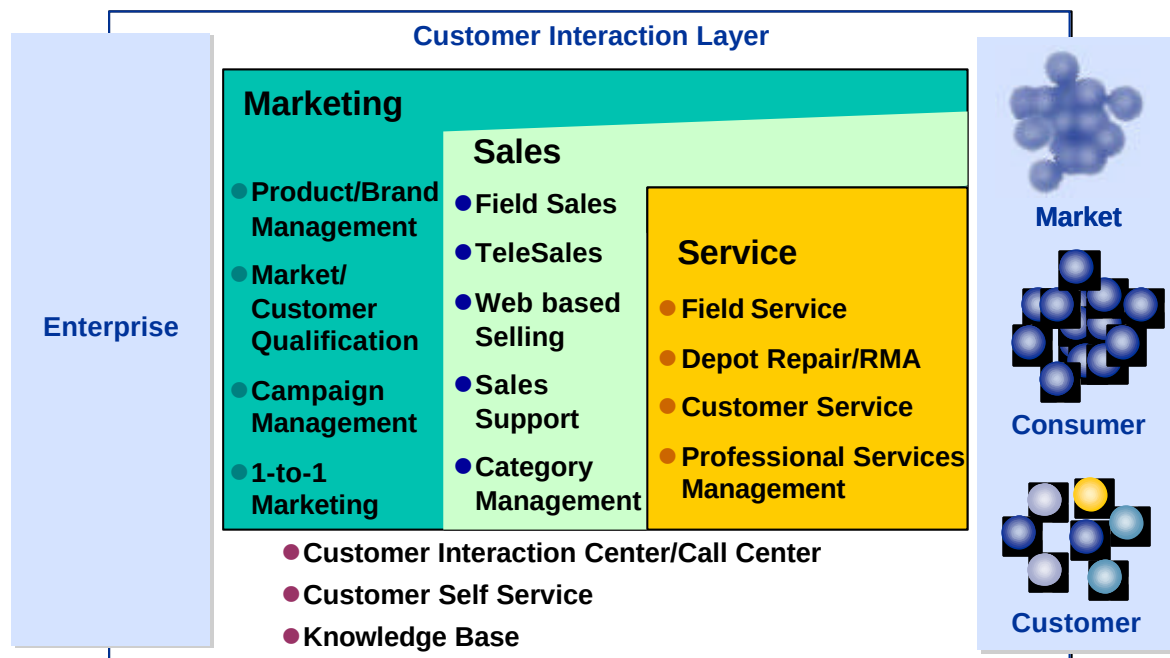




At the conclusion of this unit, you will be able to:

- **Briefly describe the concepts of the New Dimension Products**
- **Describe the relationship among the New Dimension Products in the context of business scenarios**

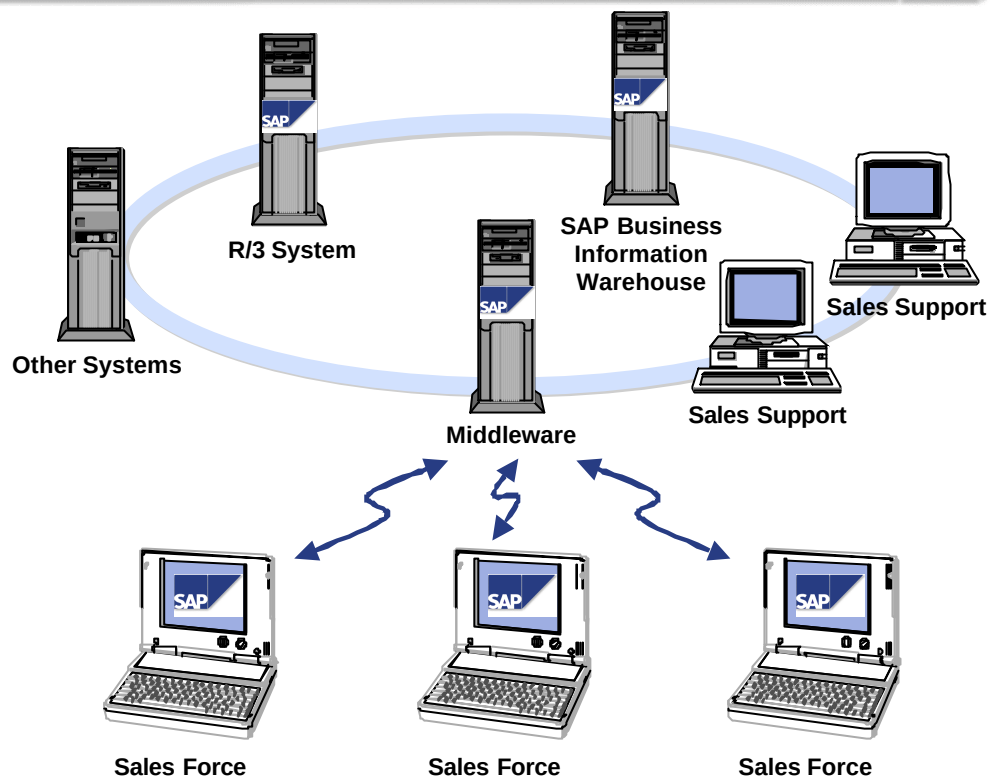




- SAP Customer Relationship Management (CRM) focuses on providing solutions that enable companies to effectively manage customer relationships throughout the entire lifecycle. The overriding goal is to aid an enterprise in understanding, as well as anticipating, the needs of its current and potential customers.

CRM Architecture - Sales Example

SAP



© SAP AG 1999

- From a technological perspective, the CRM architecture makes possible the ability to capture customer data across the enterprise, consolidate all internally and externally acquired customer-related data in a central database, analyze the consolidated data, distribute the results to the various customer touch points and use this information when dealing with customers via individual channels (for example, a mobile sales force, inbound and outbound call centers, Web sites, point-of-sale, and direct marketing via mail and E-mail).

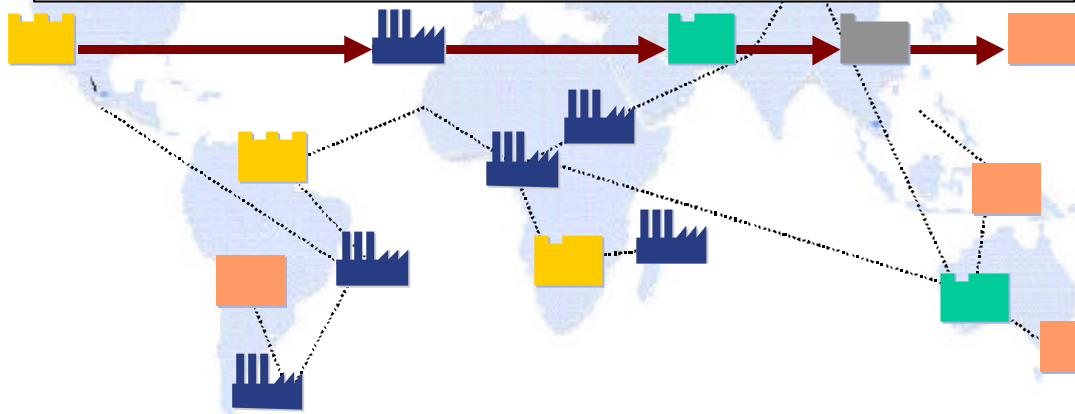
Supply Chain Planning and Optimization

SAP

SAP Advanced Planner & Optimizer (SAP APO)

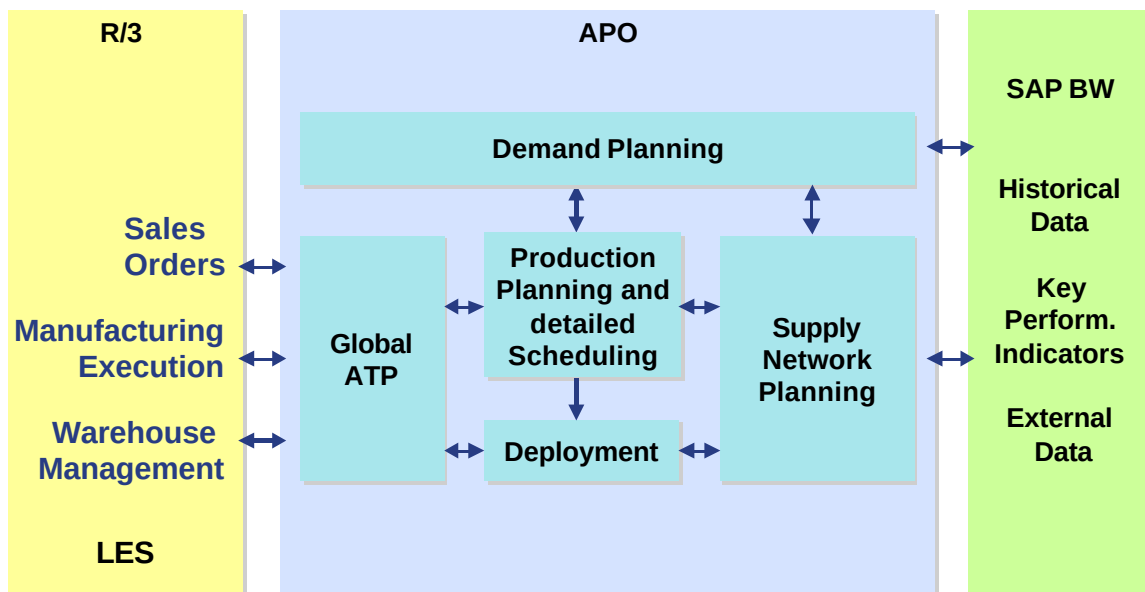


Global Supply Chain Optimization

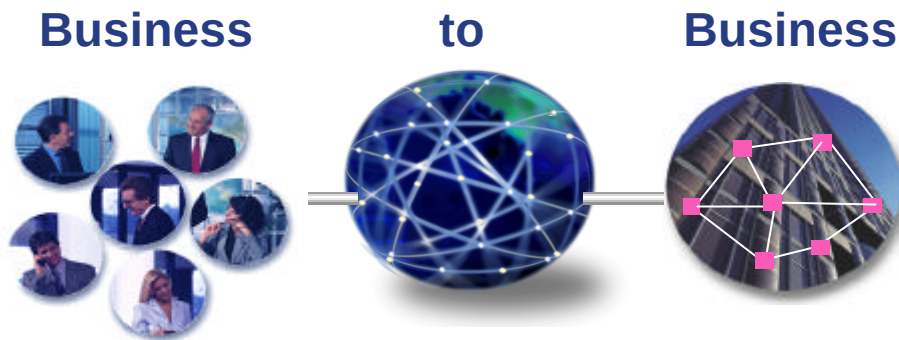


© SAP AG 1999

- Advanced Planner and Optimizer (APO) provides a complete suite of supply chain planner applications based on SAP's liveCache technology which allows forecasting, planning, and optimizing to be executed in real-time.
- **Global Available To Promise (Global ATP)** - Matches supply to demand on a truly world-wide scale, and gives customers reliable delivery commitments by means of both real-time checks and sophisticated simulation methods.
- **Production Planning & Detailed Scheduling** - Optimizes the use of resources and creates accurate plant-by-plant production schedules in order to shorten production life-cycles and respond rapidly to changes in market demand.
- **Supply Network Planning** - Matches purchasing, production and transportation processes to demand, and balances and optimizes your entire supply network.
- **Demand Planning** - Identifies and analyzes patterns and fluctuations in demand, and creates accurate, dynamic demand forecasts.
- **Supply Chain Cockpit** - Models, monitors and manages your supply chain with a specially designed graphical user interface. The Supply Chain Cockpit provides users with a bird's eye view of all activities and applications.



- SAP APO is a separate SAP Solution with its own release cycle. Each of the SAP APO components, such as Demand Planning, can be implemented as a stand alone product or as an integrated part of the Business Framework.
- The SAP Logistics Execution System (SAP LES) is part of SAP's unique Supply Chain Management initiative, and lets you create links between the production, procurement, storage, distribution, transportation, sales, and service processes. It helps keep customers happy, staff productive and decision-makers informed. It means real-time data for decision-making, simulation and planning.



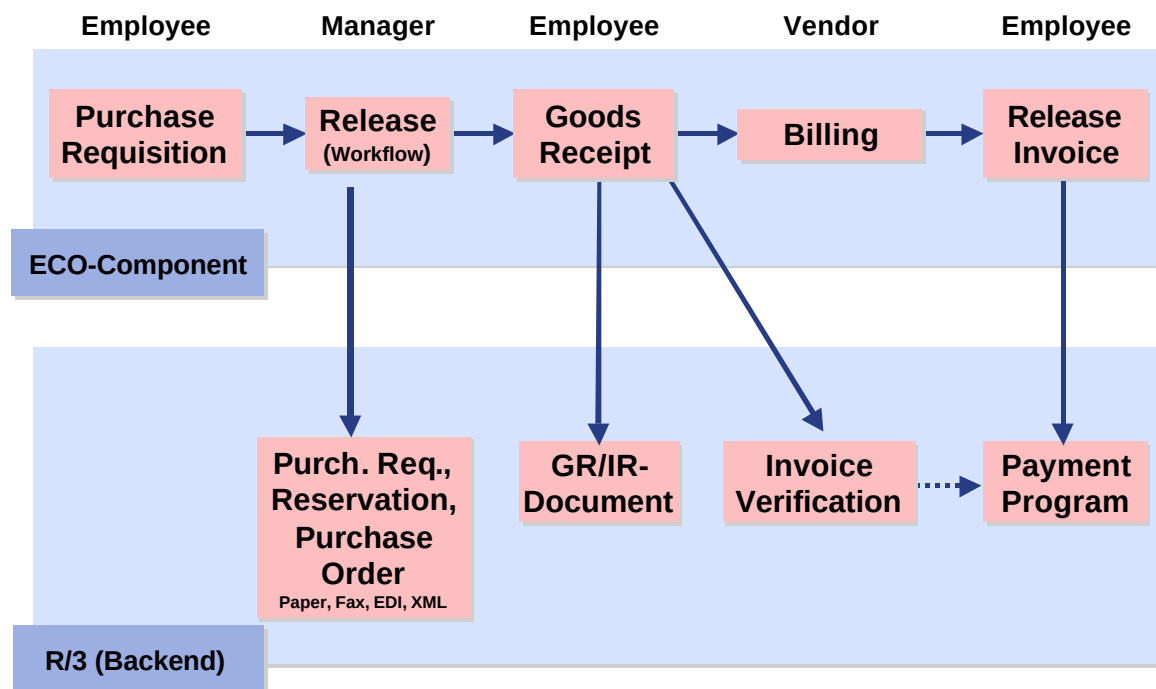
- **SAP Business to Business Procurement includes the creation and maintenance of requisitions, purchase orders and reservations with or without catalogs, approval and rejection, desktop receiving and service entry support, status and tracking, invoicing, and performance reporting functions.**

© SAP AG

- The SAP Business to Business Procurement solution enables open, full-cycle, inter-enterprise procurement and covers all processes from the creation of a requisition, with or without catalogs, to the payment of the invoice. All end users are able to purchase goods and services straight from their desktops, leaving purchase departments free to focus on strategic purchasing operations. Using this compelling business to business procurement solution, companies can streamline their requisition and indirect procurement processes and cut the overall cost of procurement, while providing the purchasing department with visibility and control across the entire procurement chain.
- Business to Business in the Internet
 - Business partners executing transactions via Internet. Backend (receiver) is an SAP R/3 system
 - Business to business via Extranet
 - Business partners communicating as external Internet users with an R/3 system
- Business to Business as application communication
 - IT-Systems communicates via Electronic Data Interchange (EDI), Application Link Enabling (ALE), and the Internet

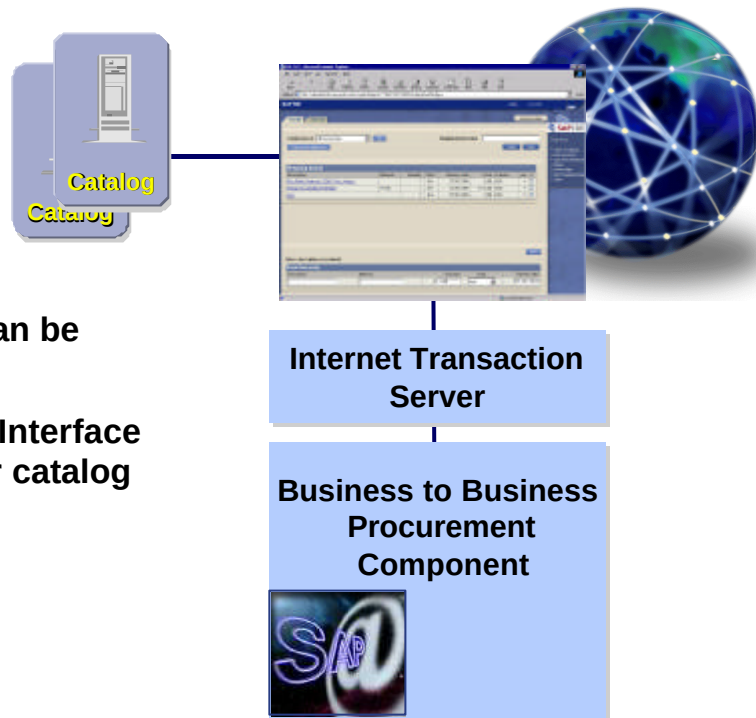
Procurement Process for Material

SAP



© SAP AG

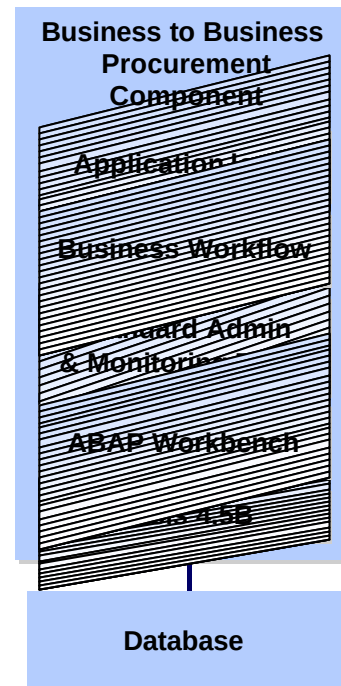
- SAP Business to Business Procurement includes the creation and maintenance of requisitions, purchase orders and reservations with or without catalogs, approval and rejection, desktop receiving and service entry support, status and tracking, invoicing, and performance reporting functions.



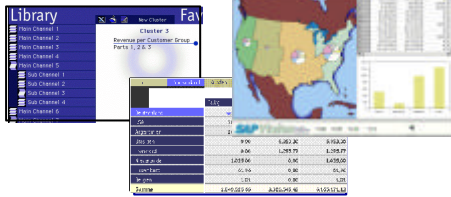
- Multiple catalogs can be accessed
- SAP Open Catalog Interface allows any supplier catalog to be interfaced

- Multiple supplier catalogs may be connected via the SAP Business to Business Procurement system and the ITS to the web front-end.
- SAP Business to Business Procurement comes with a catalog for companies who want to host their own content on their intranet.
- The open catalog interface ensures that any supplier can publish their on-line catalog and, with SAP's Business to Business Procurement solution, allow organizations to connect to these catalogs, whether they are hosted at the buyer site, provided by an external content aggregator, or provided by the supplier.
- One of two catalogs (Requisite or Aspect) are bundled with the delivered SAP Business to Business Procurement product.
- Multiple catalog strategies can be implemented.

- **The SAP Business to Business Procurement component communicates with an SAP R/3 system**
 - Requires a 3.1H or higher R/3 system as the back end
 - Version 2 will also function as a standalone system
- **Familiar R/3 Development Environment**
 - ABAP Development Workbench
 - ALE Toolkit

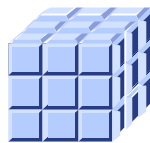


- The SAP Business to Business Procurement system is an “R/3-like” system based on R/3 4.5B which contains only limited application and basis components.
- The SAP Business to Business Procurement system holds all requirement coverage requests (RCR), User IDs, and business logic.
- Separate database with core R/3 technology, 4.5B basis system, workbench, standard monitoring, workflow, specific application logic for Business to Business Procurement.
- Version 1.0 requires R/3 backend.
- Version 2.0 will function as a stand alone system with lean R/3 Materials Management component.
 - 3 scenarios with version 2.0:
 - Document created in R/3 backend
 - Loosely coupled configuration where you can keep specific information on the component
 - Standalone system with all R/3 Materials Management purchasing functionality (no financial aspect).



Powerful Information Analysis

- innovative, intuitive user interface
- powerful OLAP analysis functions
- for all types of users



Rich Business Content

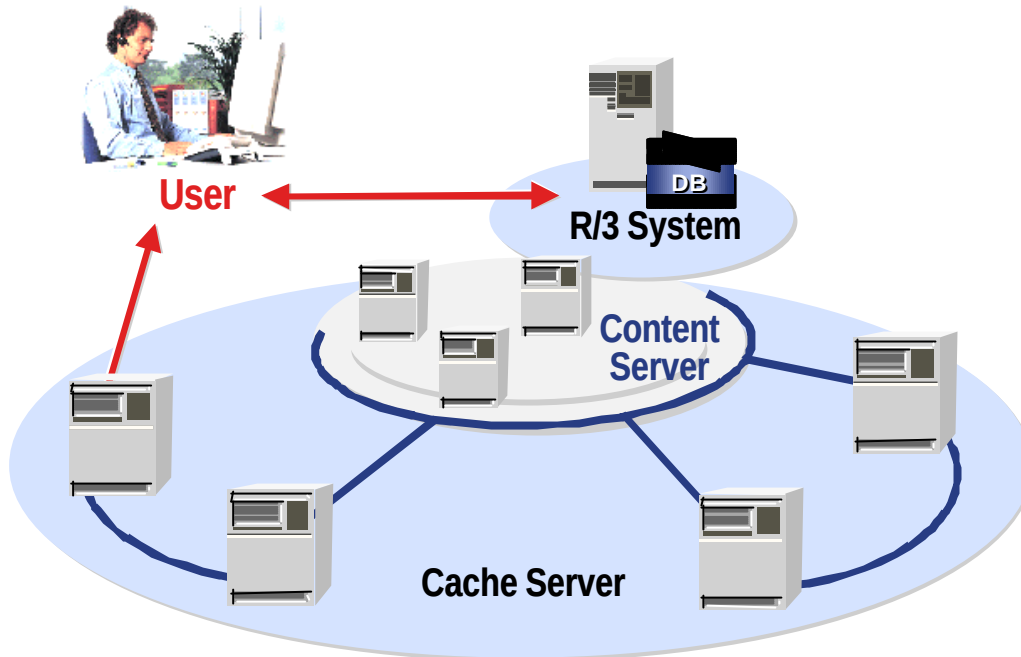
- information models, reports and extractors
- meta data repository
- company benchmark figures



End-to-end Data Warehousing Solutions

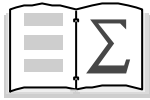
- R/3 and non-R/3 data extraction
- fully automated
- central control

- The SAP Business Information Warehouse enables you to analyze data from operational R/3 applications or any other business application, including external data sources, such as databases, online services, and the Internet.
- The SAP Business Information Warehouse supports Online Analytical Processing (OLAP) and, thanks to its structure, is particularly suited for processing large volumes of operational and historical data.
- The Business Content functionality, which is optimized to handle core areas and processes, allows you to examine the relationships in every area within your company.



© SAP AG

- SAP Knowledge Warehouse consists of one R/3 system and at least one file server.
 - The R/3 system stores all control information like user access rights, object attributes, etc.
 - The file servers contain all objects as files
 - The file servers are connected to web servers to facilitate web access
- There are two different types of file servers:
 - **Content Servers** : Contain the files in the authoring format (for example, PPT/DOC) and the viewing format (HTML/GIF). Each object is stored once worldwide in the authoring format, but can be distributed to other locations in viewing format.
 - **Cache Servers** : Normally contain only the viewing formats and are accessed by users who want to display contents. You can specify which contents (for example, languages, single courses, etc.) shall be distributed to the different cache servers.
- To ensure good performance, the SAP Knowledge Warehouse can be setup in a distributed mode. Therefore, users at different locations worldwide access different servers.
- The philosophy behind this setup is that objects are very often changed from only one location, so content servers (that is, the authoring formats) don't have to be replicated. Caching servers (for viewing) should be replicated in order to ensure the most up to date materials are available.



You are now able to:

- **Briefly describe the concepts of the New Dimension Products**
- **Describe the relationship among the New Dimension Products in the context of business scenarios**



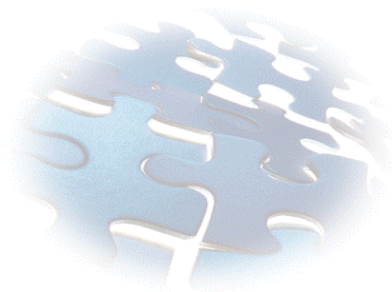
Contents:

- **mySAP.com strategy**
- **Workplace**
- **Marketplace**



At the conclusion of this topic, you will be able to:

- **Briefly discuss the concept of mySAP.com**
- **Briefly discuss the concepts of the major elements of mySAP.com:**
 - **Workplace**
 - **Marketplace**

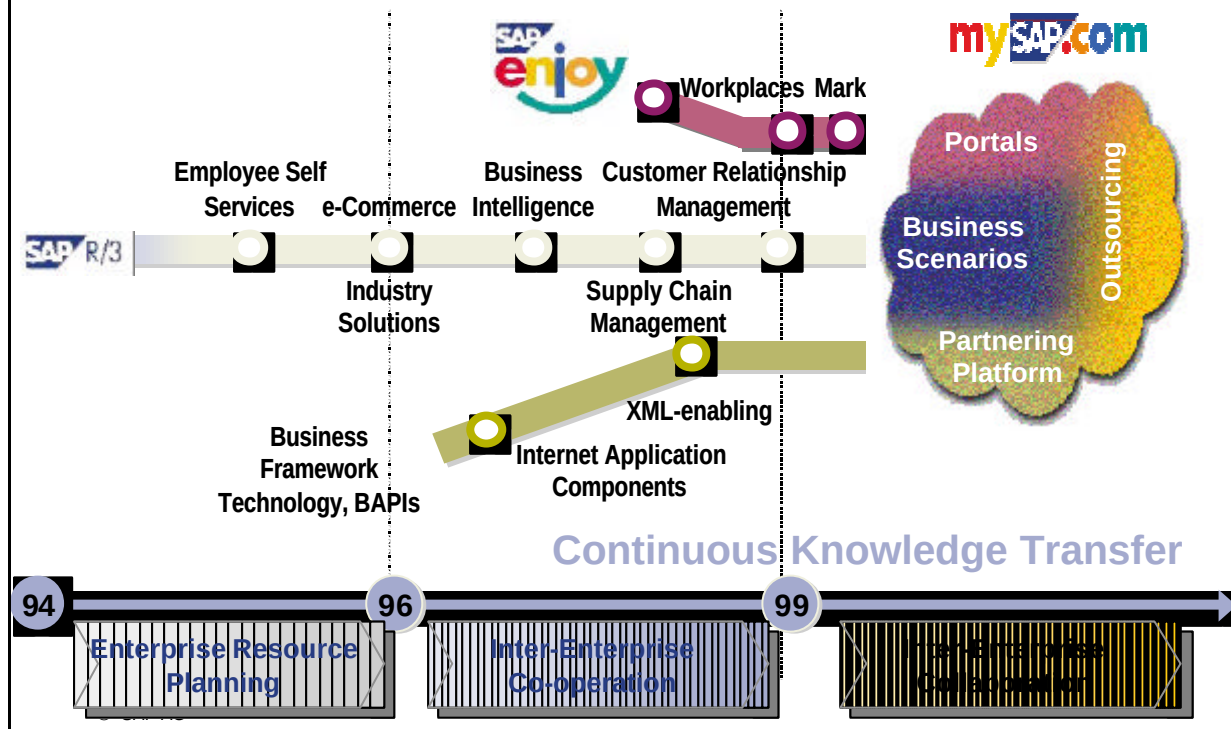


- **Buy-Side (*SAP Business-to-Business Procurement*)**
 - Targets a business' purchasing processes
- **Sell-Side (*SAP Online Store*)**
 - Business-to-Consumer
 - Business-to-Business
- **Intranet/Self-Service (*SAP Employee Self-Service*)**
 - Targets internal corporate users
- **mySAP.com**
 - Marketplace Portal
 - Workplace

- SAP Business-to-Business Procurement is a solution for the entire procurement cycle for maintenance, repair and operations (MRO) items and services.
- SAP Online Store lets customers market their products and services on the Internet. To tap the full benefits of SAP Online Store, customers need only a standard Web browser, and the online store provider must implement the functionality of R/3 Sales and Distribution. The business-to-consumer sector represents the classic playground for this type of sales front-end.
- Employee Self Service (ESS) functionality gives employees complete control of their own data - they can request vacation at their PCs, enter trip costs, and record working hours using the browser of their company's intranet system.
- mySAP.com is a comprehensive, open, e-business solutions environment comprising of portals, industry-specific enterprise applications, Internet applications and services, as well as XML-based technology - all of which combine to enable companies to participate in the Internet economy.

The Strategy: From Integration to Collaboration

SAP



- Integration in the “old” economy meant business process integration.
 - ERP made SAP R/3 a worldwide standard system
 - Since 1996 SAP R/3 has been e-commerce capable
 - SAP products incorporated business technology for the future allowing customers to be ready for the future without system change
- Integration in the “new” economy requires integration of processes between enterprises.
 - Collaboration
 - More than working together
 - Processes, where many users participate, can be executed simultaneously as one-step-business

PERSONALIZED

through the Workplace

SOLUTIONS ON DEMAND

through SAP Products and Services

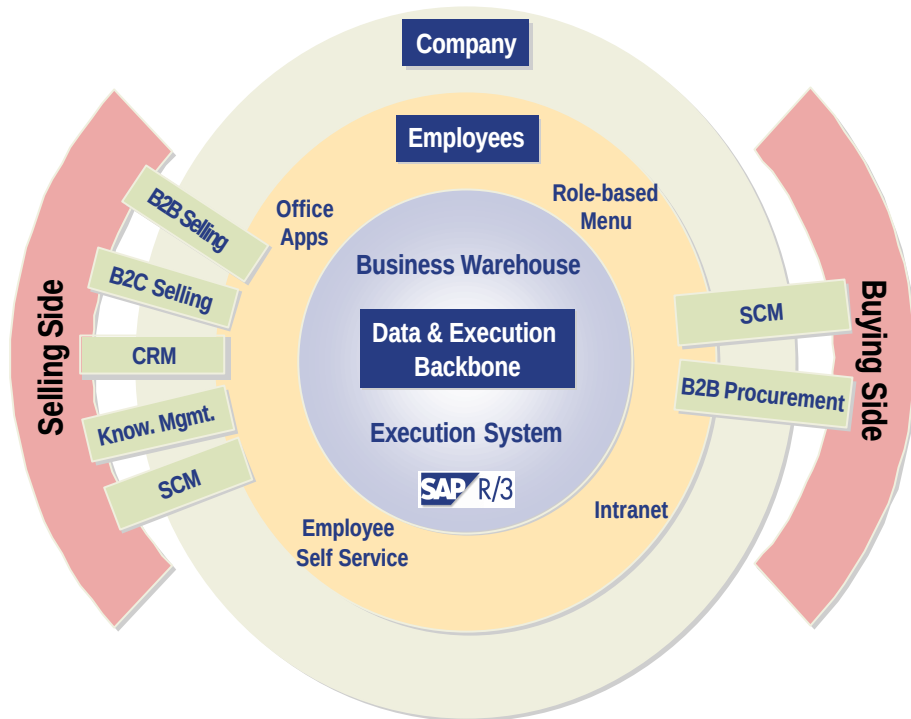


The logo for mySAP.com is centered. 'my' is in red and yellow, 'SAP' is in white on a blue background, and '.com' is in orange and green. A vertical dashed line passes through the 'SAP' part, and a horizontal dashed line passes through the dot of '.com'.

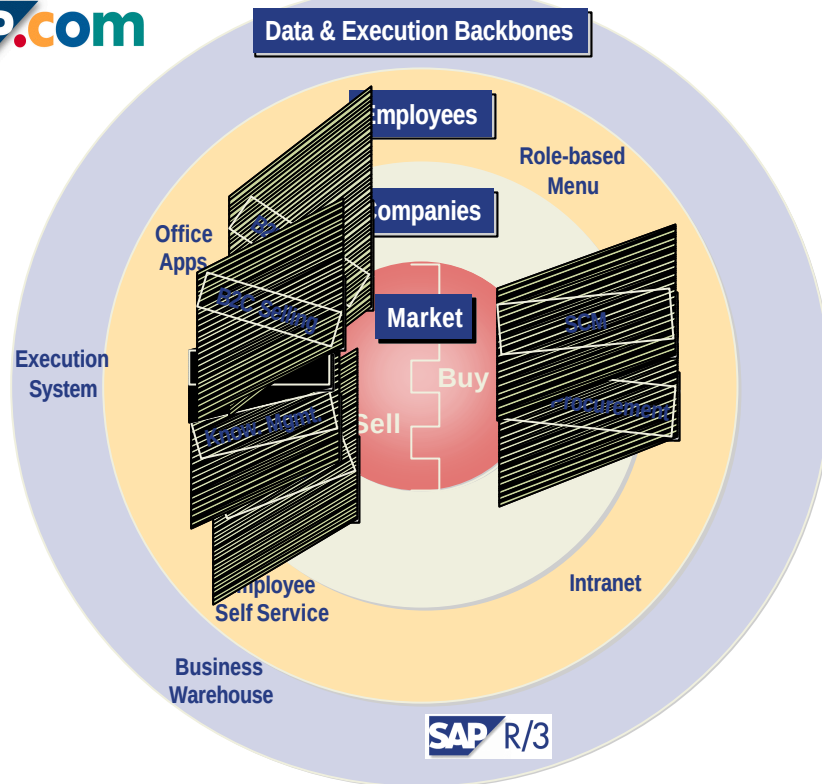
COLLABORATIVE

through the Marketplace

- mySAP.com places the Internet at the center of SAP's activities. It leverages all of SAP's key assets, including its extensive product portfolio, customer base, partner community, and expertise in integrating business processes.
- mySAP.com is the collaborative environment providing personalized business solutions on demand.

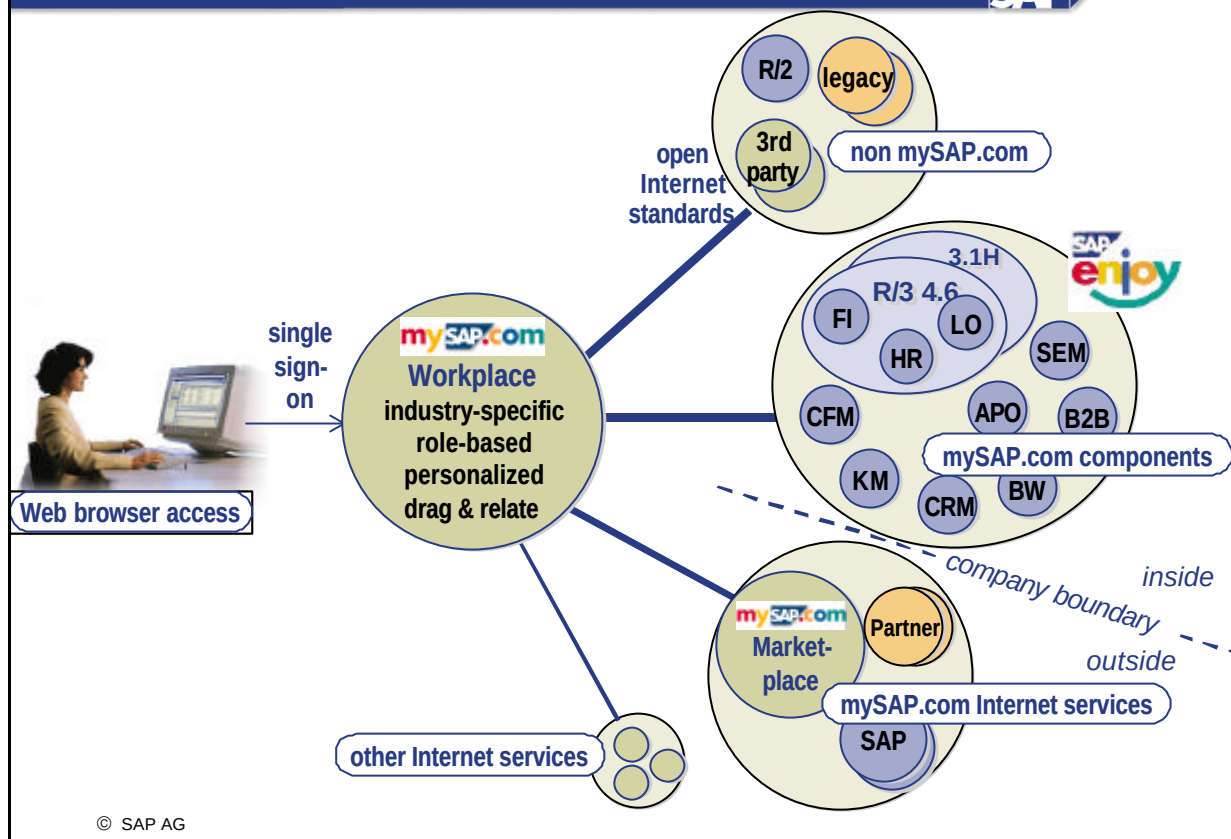


mySAP.com



Workplace Internet Business Framework

SAP



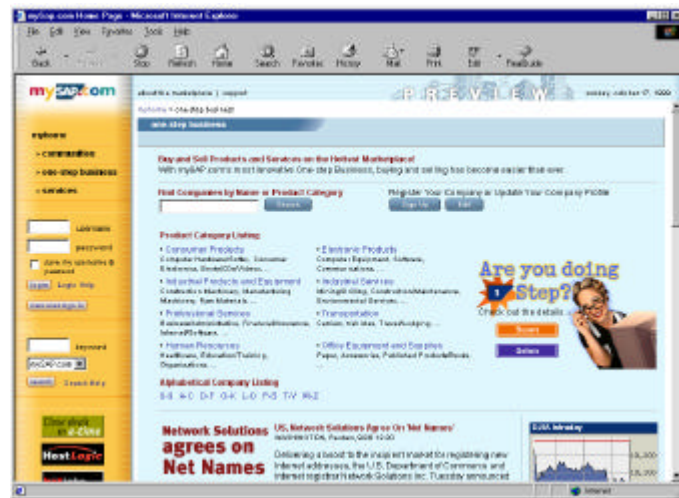
- The Workplace contains links inside and outside a company's boundaries. Links can be made to:
 - Non mySAP.com components: External systems using open internet standards
 - mySAP.com components: Classical and new web-based R/3 transactions (R/3 Standard System, New Dimensions, industry solutions) , Reports (for example, Business Information Warehouse reports with BW 2.0a) , Knowledge Warehouse contents
 - mySAP.com Internet services: my.SAP.com Marketplace
 - Any Internet or intranet web sites

Key Benefits

- Access to all necessary internal and external services through one screen
- Seamless integration in mySAP.com environment
- Portal is tailored to the user's role in the company
- Single sign-on access all services
- User friendly Web browser interface
- Access via the Internet anytime, anywhere

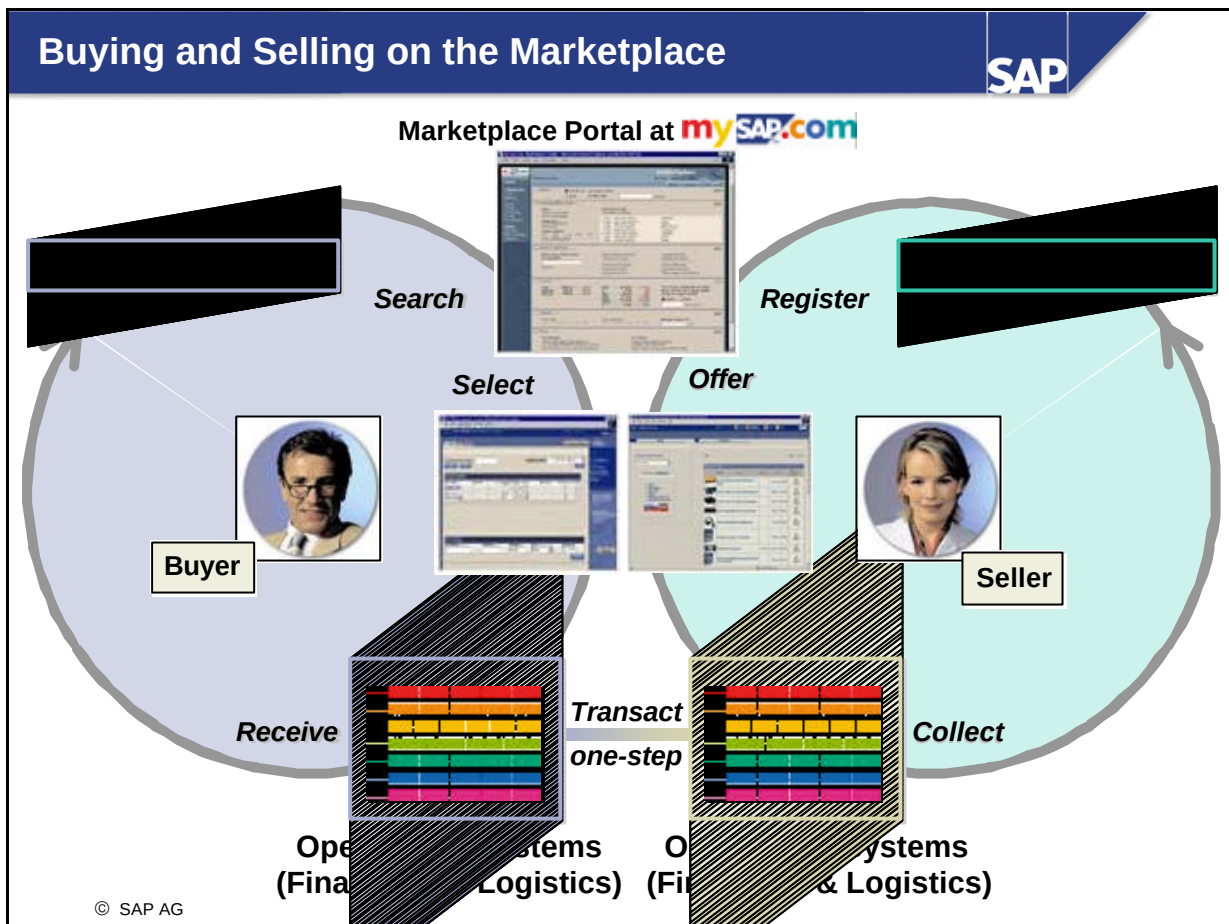


- A business portal hosted by SAP at <http://www.mySAP.com>
- Business community specific
- Enabling e-Communities
 - Building relationships
 - Collaboration
 - Internet transactions
- Access to (integrated) services
 - Web services (for example, find business partner)
 - Content services (for example, news)



© SAP AG

- The mySAP.com Marketplace is a public business portal hosted by SAP.
- Anyone who sells or buys can participate in the mySAP.com Marketplace. It is not for just SAP applications or SAP customers.
- The mission of the mySAP.com Marketplace is to engineer business collaboration across enterprises via the Internet.
- Four of the main components of the mySAP.com Marketplace include:
 - myhome: Personalized homepage for the registered user with favorites from the mySAP.com web site.
 - Communities: Content-rich data organized along the vertical and horizontal industries supported by SAP.
 - One Step Business: Portion of the site where users can browse member merchant web sites and procure products and services.
 - Services: Internet services are available for the user to which he/she can subscribe.

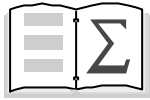


- Marketplace Portal is a place on the Web where communities can exchange goods and services electronically.
- Workplace is an application on a users desktop that cooperates with a Web browser and provides a personalized, role-specific view on the entire business world. This business world includes marketplaces, applications, services, and content provided by a company over the Intranet or other companies via the Internet.
- The business objectives of mySAP.com are to empower people, create value, and enable one-step business transactions. mySAP.com places the Internet at the center of SAP's activities. It leverages all of SAP's key assets, including its extensive product portfolio, customer base, partner community, and expertise in integrating business processes.

Key Benefits

- Personalized home page available for registered users
- Streamlined business process flow with one-step business
- Access to a broad scope of suppliers
- Reduce costs of interaction with external partners
- Content rich communities available for better decision making and to interact with other business professionals
- Direct access to value add Internet services





You are now able to:

- **Explain the concept of the mySAP.com strategy**
- **Briefly describe the concepts of the major elements of mySAP.com:**
 - **Workplace**
 - **Marketplace**



Contents:

- Basic features
- User-specific settings



At the conclusion of this unit you will be able to:

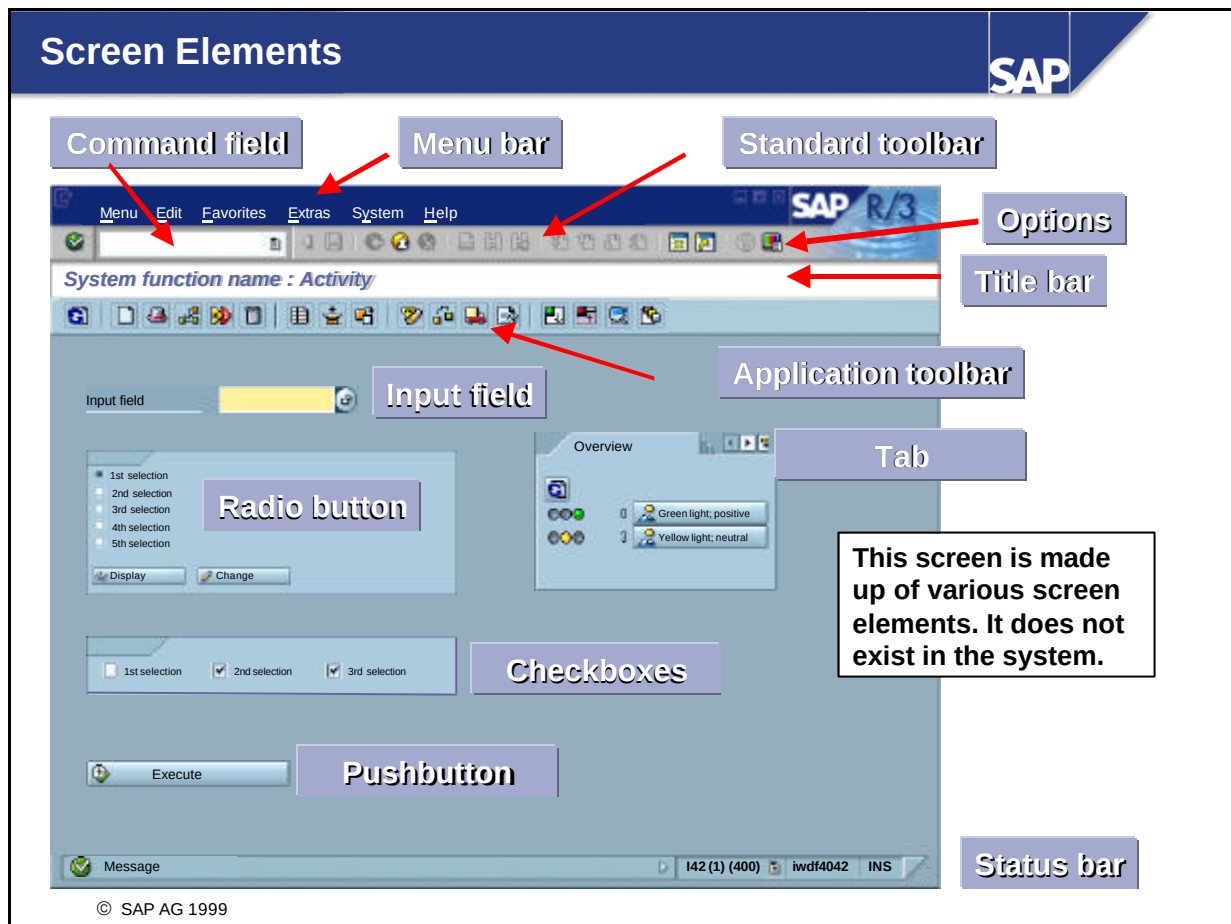
- **Identify the elements of a typical window**
- **Navigate in the system**
- **Make personal system settings**

Logging on to the R/3 System

SAP

© SAP AG 1999

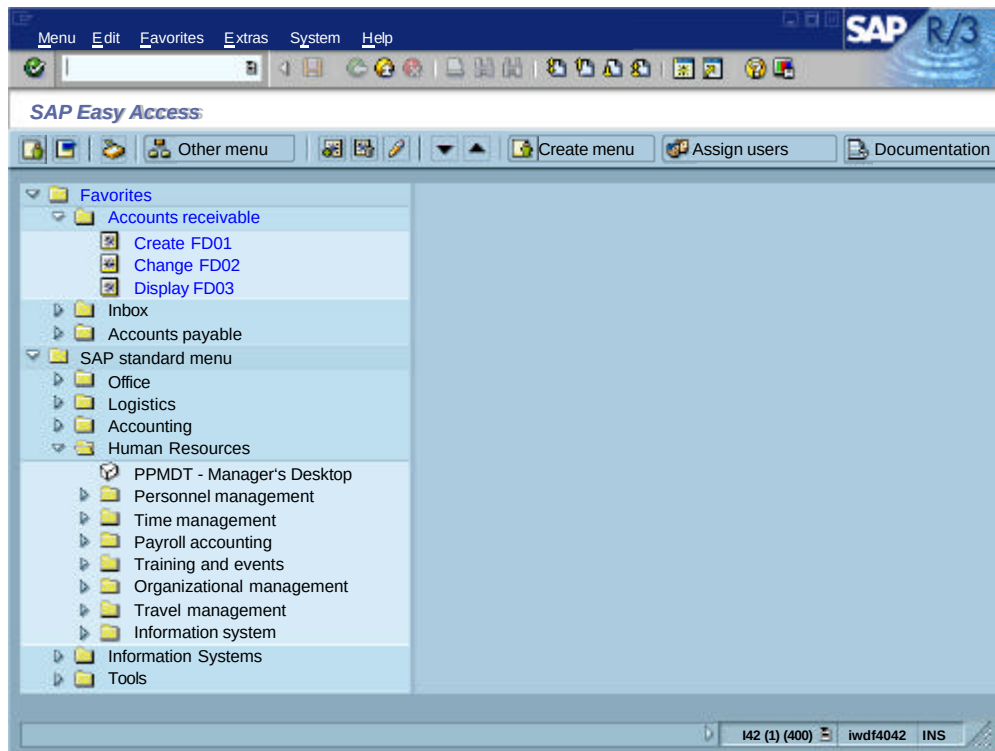
- The R/3 System is a **client system**. The client concept enables the joint operation, in one system, of several enterprises that are independent of each other in business terms. During each user session you can only access the data of the client selected during the logon.
- A **client** is, in organizational terms, an independent unit in the R/3 System. Each client has its own data environment and therefore its own master data and transaction data, assigned user master records and charts of accounts, and specific customizing parameters.
- A user master record linked to the relevant client must be created for users to be able to log on to the system.
- To protect access, a password is required for logon.
The password is hidden as you type (you only see asterisks).
- SAP systems are available in several languages. Use the *Language* input field to select the logon language for each session.
- Multiple logons are always logged in the system beginning with Release 4.6. This is for security as well as licensing reasons. A warning message appears if the same user attempts to log on twice or more. This message offers three options:
 - Continue with current logon and end any other logons in the system
 - Continue with current logon without ending any other logons in the system (logged in system)
 - Terminate current logon



- **Command field:** You can use the command field to go to applications directly by entering the transaction code. You can find the transaction code either in the SAP Easy Access menu tree (see next slide) or in the relevant application under *System® Status*.
- **Menu bar:** The menus shown here depend on which application you are working in. These menus contain cascading menu options.
- **Standard toolbar:** The icons in the system function bar are available on all R/3 screens. Any icons that you cannot use on a particular screen are dimmed. If you leave the cursor on an icon for a moment, a small flag will appear with the name (or function) of that icon. You will also see the corresponding function key. The **application toolbar** shows you which functions are available in the current application.
- **Title bar:** The title bar displays your current position and activity in the system.
- **Check boxes:** Checkboxes allow you to select several options simultaneously within a group.
- **Radio buttons:** Radio buttons allow you to select one option only.
- **Status bar:** The status bar displays information on the current system status, for example, warning and error messages.
- A **tab** provides a clearer overview of several information screens.
- **Options:** You can set your font size, list colors, and so on here.

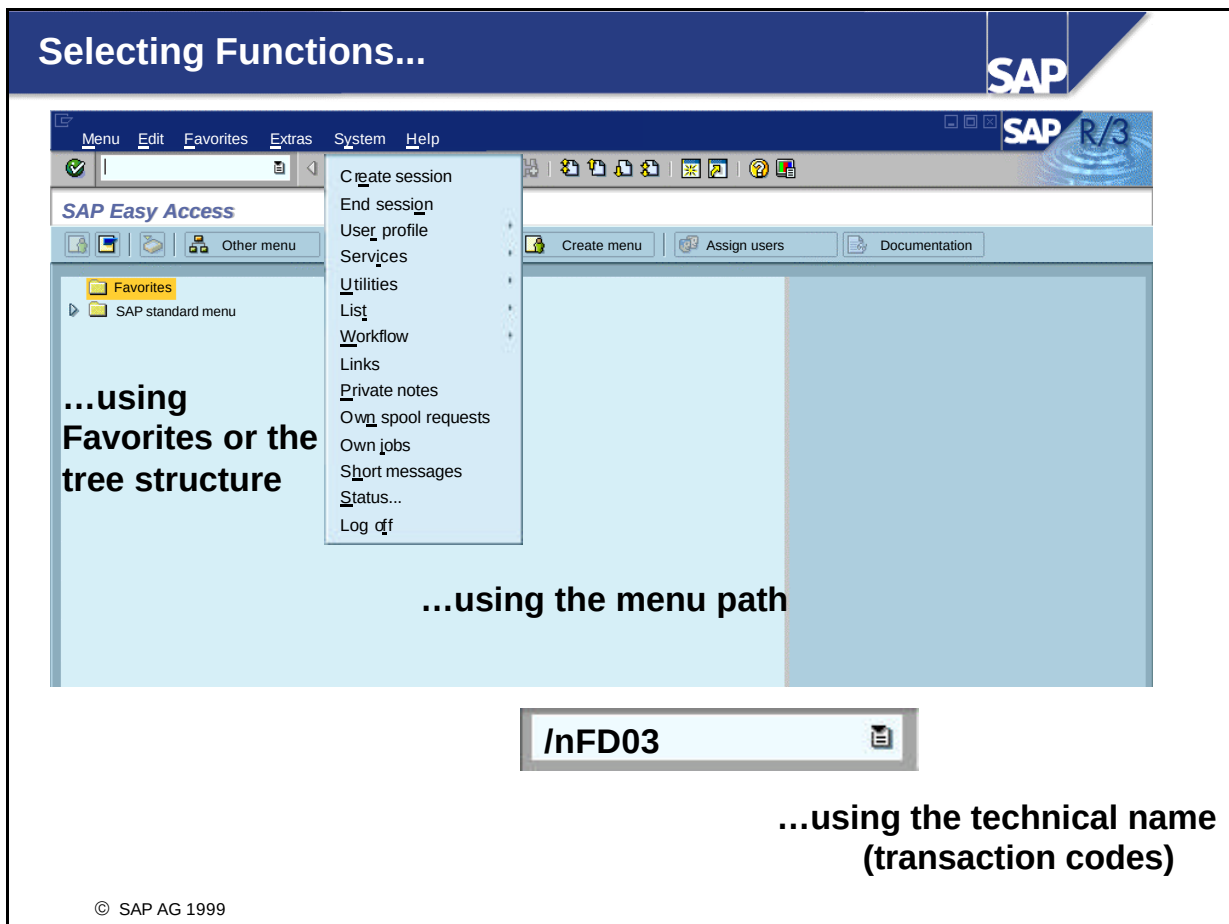
SAP Easy Access - Standard

SAP



© SAP AG 1999

- **SAP Easy Access** is the standard entry screen displayed after logon. Using the menu path *Extras® Set start transaction* you can select a transaction of your choice to be the default entry screen after logon.
- You navigate through the system using a compact tree structure that you can adapt to your own specific requirements. Use the menu path *Extras® Settings* to change your view of the tree structure. You can use this to display technical names (transaction codes).
- You can also create a **Favorites** list of the transactions, reports, files and Web sites you use most.
- You can add items to your favorites list using the *Favorites* menu option or by simply dragging & dropping them with the mouse.

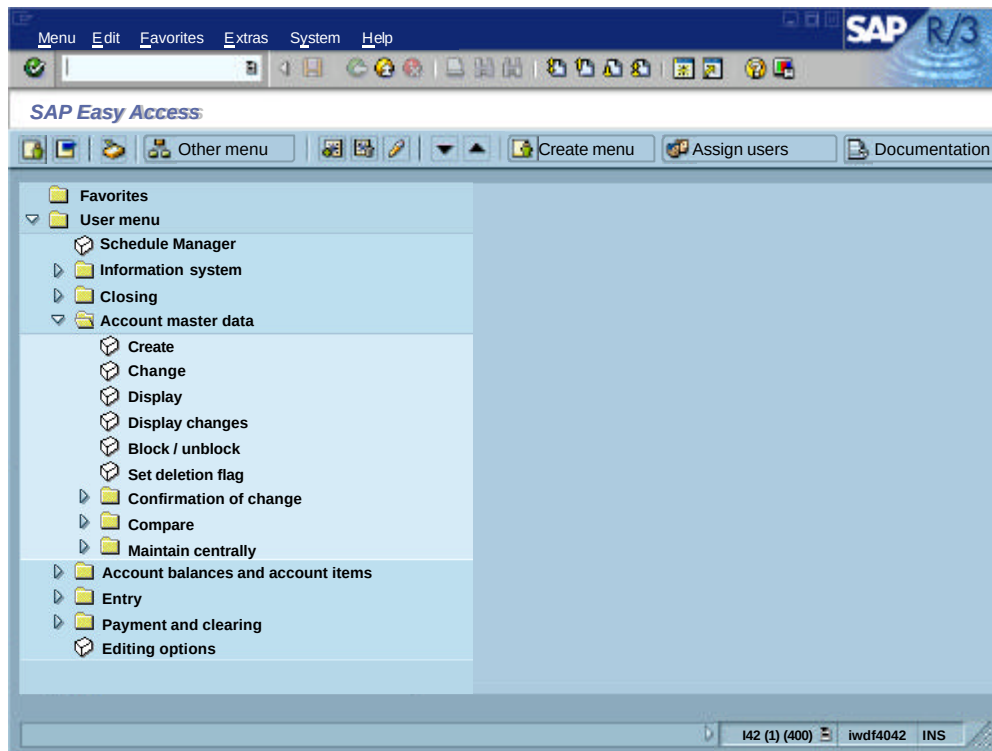


You can select system functions in the following ways:

- Use the mouse to choose
 - Menu options
 - Favorites
 - Other options in the tree structure (tree control)
- Use the keyboard (ALT + the underlined letter of the relevant menu option)
- Enter a **transaction code in the command field**:
 - A transaction code (T-Code) is assigned to each function in R/3 (not each screen).
 - You can access the assigned transaction code from any screen in the R/3 System.
 - You can find the transaction code for the function you are working in under the *Status* option of the *System* menu.
 - For example, to display Accounts receivable master data, enter “/n” and the appropriate transaction code (in this case “/nfd03”).
 - Other possible entries:
 - “/n” ends the current transaction. “/i” ends the current session.
 - “/osm04” creates a new session and goes to the transaction specified (SM04).
 - You can also use the keyboard to get to the command field. Use the CTRL + TAB key combination to make the cursor move from one (input) field group to the next. Use TAB to move between fields within a group.

Role-Based User Menu

SAP

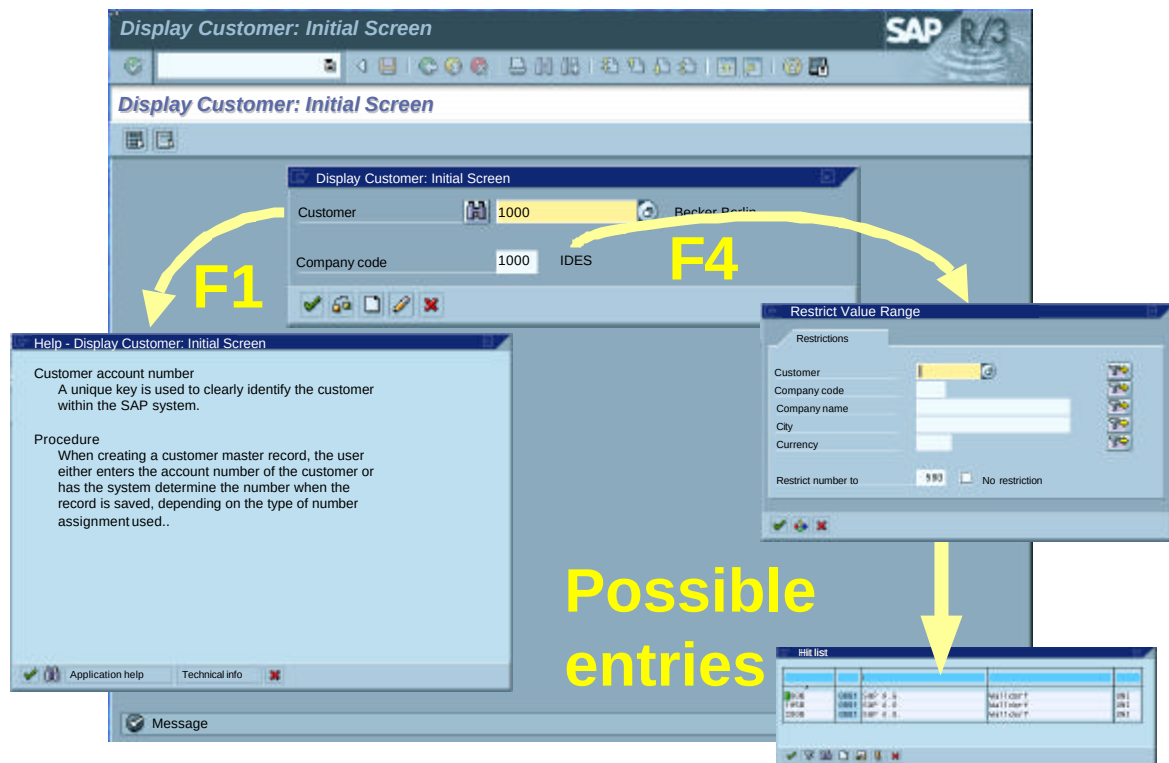


© SAP AG 1999

- A **role** describes a set of logically linked transactions. These transactions represent the range of functions users typically need at their workstations.
- **Activity groups** (user roles) have to be set up using the Profile Generator so that users of the SAP System can work with user-specific or position-related menus. The authorizations for the activities listed in the menus are also assigned to the users using activity groups. With Release 4.6, predefined activity groups (user roles) from all application areas are included in the standard system.
- Users who have been assigned to an activity group can choose between the user menu and the SAP standard menu.
- The above screen shows the role-based user menu for the “Accounts Receivable Supervisor” as an example. You can find other roles that are supplied in the standard SAP System with the corresponding activity groups using the *Other menu* pushbutton in the *SAP Easy Access* initial screen.

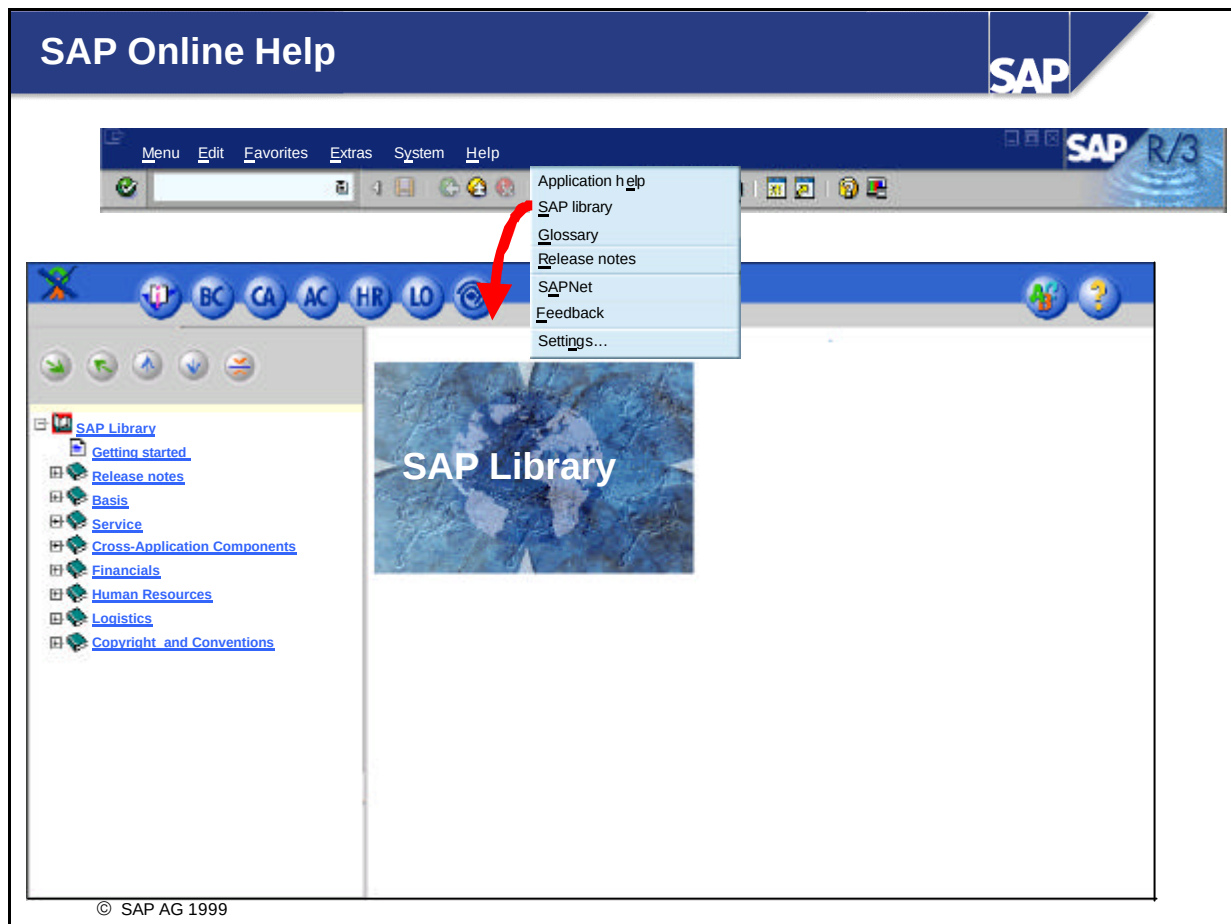
Field Help - F1, F4

SAP

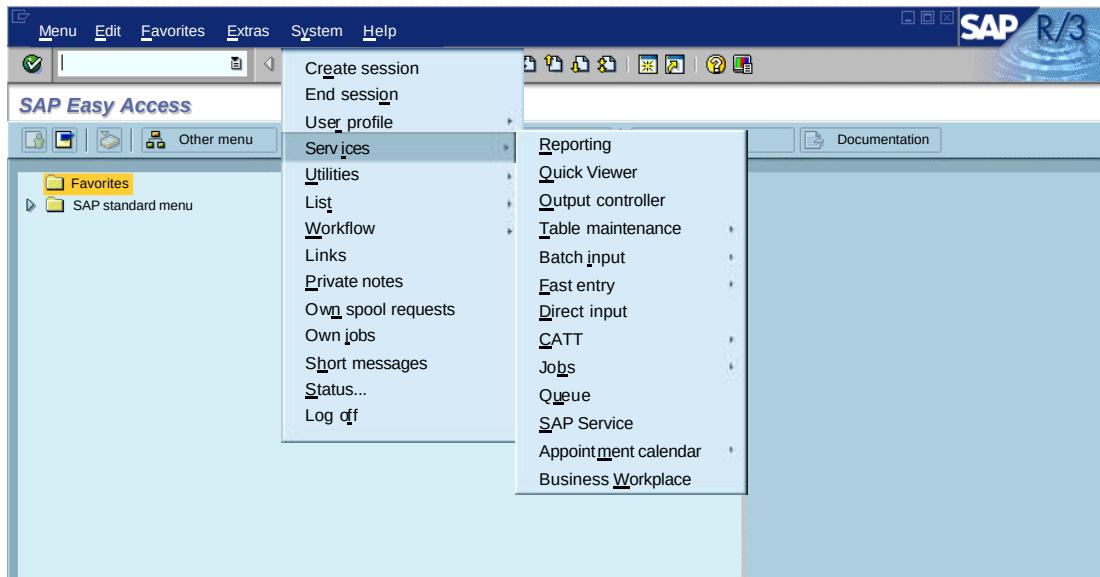


© SAP AG 1999

- Use **F1** for help on fields, menus, functions and messages.
- F1 help also provides technical information on the relevant field. This includes, for example, the parameter ID, which you can use to assign values to the field for your user.
- Use **F4** for information on what values you can enter. You can also 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 icon with a checkmark, 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.



- The R/3 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: Displays comprehensive help on the current application. Selecting this menu option in the initial screen displays help on getting started with R/3.
 - SAP Library: This is where all online documentation can be found.
 - Glossary: Enables you to search for definitions of terms.
 - Release notes: Displays notes which describe functional changes that occur between R/3 releases.
 - SAPNet: Enables you to log on to SAPNet.
 - Feedback: Enables you to send a message to the SAPNet R/3 Frontend, SAP's service system.
 - Settings: Enables you to select settings for help.

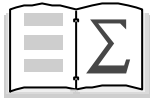


- The *System* menu contains, among others, the following options:
 - Create/end session: Enables you to create and end sessions. You can work with up to 6 sessions at a time.
 - User profile: This is where you can enter user-specific settings.
 - Services: Takes you to important service functions (see below).
 - List: Contains important list functions, such as searching for character strings, saving in PC files, printing, and so on.
 - Status: Enables you to display important user and system data.
 - Log off: Ends the SAP R/3 session with a confirmation prompt.
- The *System* ® *Services* menu contains, among others, the following options:
 - Reporting: Starts reports (ABAP programs).
 - Output controller: This is where you manage user-specific print requests.
 - Table maintenance: This is where you process tables and views.
 - Batch input: Administers batch input sessions and data transfer.
 - Jobs: This is where you can administer jobs that are processed in the background.
 - SAP Service: Enables you to log on to SAP's SAPNet R/3 Frontend.

© SAP AG 1999

- Use the menu option *System® User profile® Own data* to set your own personal profile. You can choose between the *Address*, *Defaults* and *Parameters* tabs.
 - **Address:** You can create and maintain personal data here, for example, name, function, room number, telephone number, e-mail addresses and so on.
 - **Defaults:** Defaults include the date display format, the decimal notation format, the default printer, the logon language, and so on.
 - **Parameters:** Use this to assign entries to commonly-used fields. This is only available for input fields that have been allocated a parameter ID.

Procedure for finding out a field's Parameter ID: Go to the input field to which you want to assign a value. Choose F1, then the "Technical info" pushbutton. This opens a window that displays the corresponding parameter ID (if one has been allocated to the field) in the "Field data" section.
- The *User profile* menu also contains, among others, the following options:
 - **Hold data, Set data, Delete data.** Use *Hold data* to keep data values that you have entered in fields in an application for the duration of a user session. When you call up the application again, you can overwrite these values. Once you have *Set data*, you can no longer overwrite these values and have to use *Delete data* if you want to enter different values.



You are now able to:

- **Identify the elements of a typical window**
- **Navigate in the system**
- **Make personal system settings**

Exercises



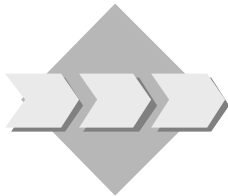
Unit: Navigation

Topic: Basic features



At the conclusion of this exercise, you will be able to:

- Log on to a given R/3 System
- Find transaction codes
- Access the SAP Library
- Use F1 help to find field information
- Use F4 help to search for possible field entries



As a new user of the R/3 System, you begin to navigate the system using the menu paths and transaction codes. You also begin to access various online help and discover the kinds of information each provides.

1-1 Logging on to the R/3 System

Select the appropriate R/3 System for this course. Use the client, user name, initial password and logon language specified by the instructor. The first time you log on, you will get a prompt in which you must enter your new password twice. Make a note of the following:

Client: ___ User: _____ Password: _____ Language: __

1-2 What is the maximum number of sessions you can have open simultaneously? __

1-3 Identify the screen names and find the transaction codes that correspond to the following menu paths?

1-3-1 ***Tools ® Administration ® Monitor ® System Monitoring ® User Overview***

Name of screen: _____

Transaction: _____

1-3-2 ***Accounting ® Financial Accounting ® Accounts receivable ®
Master records ® Display***



Enter *Customer 1000* and *Company code 1000* to get to the next screen.

Name of screen: _____

Transaction: _____

1-4 Help

1-4-1 If you choose *Application help* in the *SAP Easy Access* screen, which area of the SAP Library does it take you to ?



To answer the questions below, you will need to go to the *Display Customer: Initial Screen*

1-4-2 Use **F4** help on the *Customer* field to find the customer number for Becker ##.

Note: ## corresponds to your assigned group number.

1-4-3 Use **F1** help on the *Customer* field. What is the use of this field? Please write a brief summary of the business-related information.

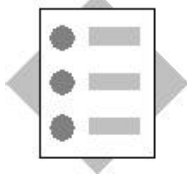
1-4-4 Use **F1** help on the *Company code* field. If you choose the *Application help* button from the F1 help screen, which area of the SAP Library does it take you to?

1-4-5 Which pushbutton do you need to use on the F1 help screen to find the parameter ID for the *Company code* field?



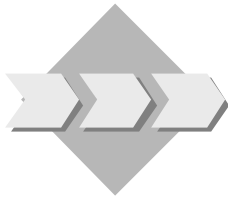
Unit: Navigation

Topic: User-specific settings



At the conclusion of this exercise, you will be able to:

- Set a user parameter for a field
- Set various user defaults such as language, date format, and decimal notation
- Create folders and add transactions to your Favorites
- Select a start transaction of your choice as the default displayed after logging on (optional)



You begin to set various user-specific settings to personalize the system to your liking.

Exercises marked * are optional.

2-1 Setting user parameters.

2-1-1 Assign a parameter value for the *Company code* field to your user profile.

Note: The instructor will tell you what parameter value to enter.

Parameter ID: ____

Parameter value: ____

2-2 Setting user defaults.

2-2-1 In your user profile, set your logon language to the value used for the course.

2-2-2 In your user profile, select the decimal notation and date format that you desire.

2-3 Defining favorites of your choice.

2-3-1 Insert at least one new folder under the Favorites folder.

2-3-2 Add any two of your “favorite” transactions to the corresponding folder(s).

2-3-3 Add the Internet address “<http://www.sap.com>” under the text “SAP Homepage”.

2-3-4 Add the Internet address for the online evaluation (the instructor will tell you the URL) under the text “Online Evaluation”.

*2-4 Setting a start transaction.

2-4-1 Enter a transaction of your choice as the initial transaction. You will then need to log off and on again for the change to take effect.

Note: If desired, you can change the initial transaction back to the system default (SAP Easy Access).

Solutions



Unit: Navigation

Topic: Basic features

1-1 Log on to the system specified by the instructor and change your initial password.

1-2 You can open and close sessions using **System ® Create session** (or using the appropriate icon) and **System ® End session**.

The maximum number of sessions you can have open simultaneously is 6.

1-3 To find the transaction code, select **System ® Status**. These screen names and transaction codes correspond to the menu paths:

1-3-1 Transaction: SM04 for Screen Name: *User list*

1-3-2 Transaction: FD03 for Screen Name: *Display Customer: General data*

1-4 Help

1-4-1 The entire SAP Library is available including Getting Started.

Help ® Application help

1-4-2 T-CO05A## (## corresponds to your assigned group number)

When you select **F4** in the *Customer* field, the *Restrict Value Range* window appears. You can explore the various tabs to see the different search criteria available. Find a tab that includes the *Name* field and enter the following:

Field Name	Values
<i>Name</i>	<i>Becker ##</i>

Select the *Continue Enter* pushbutton. A window now appears listing the customer account numbers that match your search criteria. Select the line that corresponds to *Becker ##*, then select the *Copy Enter* pushbutton. This automatically copies the customer account number into the *Customer* field.

1-4-3 Suggestion: The customer is a unique key (account number) used to clearly identify the customer within the system.

1-4-4 FI – Accounts Receivable and Accounts Payable

1-4-5 Use the *Technical Info* pushbutton to find the *Parameter Id*: BUK.



Unit: Navigation

Topic: User-specific settings

2-1 Setting user parameters.

2-1-1 To assign a parameter value to a field you will need the parameter ID of the field. First you need to select a transaction that contains this field. For example, *Company code* can be found in transaction **FD03**. Next, place the cursor on that field (just click on it with the mouse). Accessing:

F1 ® Technical Info ® Parameter ID

gives you the required information. For the *Company code* field, the parameter ID is **BUK**.

Finally, you enter the parameter ID and desired value in your user profile:

System ® User profile ® Own data

On the *Parameter* tab you enter the parameter ID and value that you want to be entered into the field. *Save* your entries.

2-2 Setting user defaults.

2-2-1 To set the logon language, go to your user profile:

System ® User profile ® Own data

On the *Defaults* tab, enter the language of your choice in the *Logon language* field.

2-2-2 To set the decimal notation and date format, remain on the *Defaults* tab in your user profile. Select the indicator adjacent to the notation and format you desire. *Save* your selections.

2-3 Defining favorites of your choice.

2-3-1 **Favorites ® Insert folder**

Type any name for the folder then select *Enter*. You can add as many folders as you desire. Once created, folders can be dragged and dropped to position them where you want.

2-3-2 To create favorites, select specific applications (transactions) that you need as favorites for your daily work from the menu tree of the SAP standard menu. Add them to your Favorites list by selecting them and choosing *Favorites ® Add* from the menu bar. Alternatively, use the mouse to drag & drop favorites to a folder. You can also use the menu path **Favorites ® Insert transaction** to add using a transaction code.. Finally, you can move existing favorites to different folders later using *Favorites ® Move* or using drag & drop.

2-3-3 Create Internet addresses using ***Favorites ® Add Web address or file.***
When you select SAP Homepage from your favorites, an Internet browser will open and you will be connected to SAP's homepage.

2-3-4 ***Favorites ® Add Web address or file***

You will use this link at the end of the course to fill out the course evaluation.

2-4 Setting a start transaction.

2-4-1 ***Extras ® Set start transaction***

Enter a transaction of your choice then select the *Enter* pushbutton. Notice the system message on the status bar indicates that your selected transaction has been set as the start transaction. The next time you log on, the system will go directly to your start transaction.

Note: To change back to SAP Easy Access as the initial screen, follow the menu path again, delete the transaction code and select *Enter*. The next time you log on, SAP Easy Access will be the initial screen.

Contents:

- **Organizational Units and Master Data**
- **Transactions and Documents**
- **Analysis and Reports**

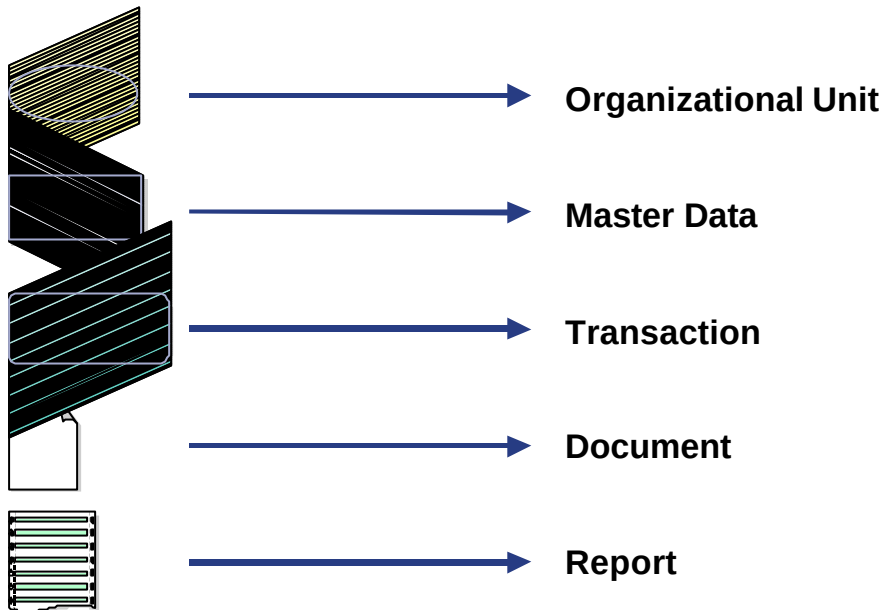




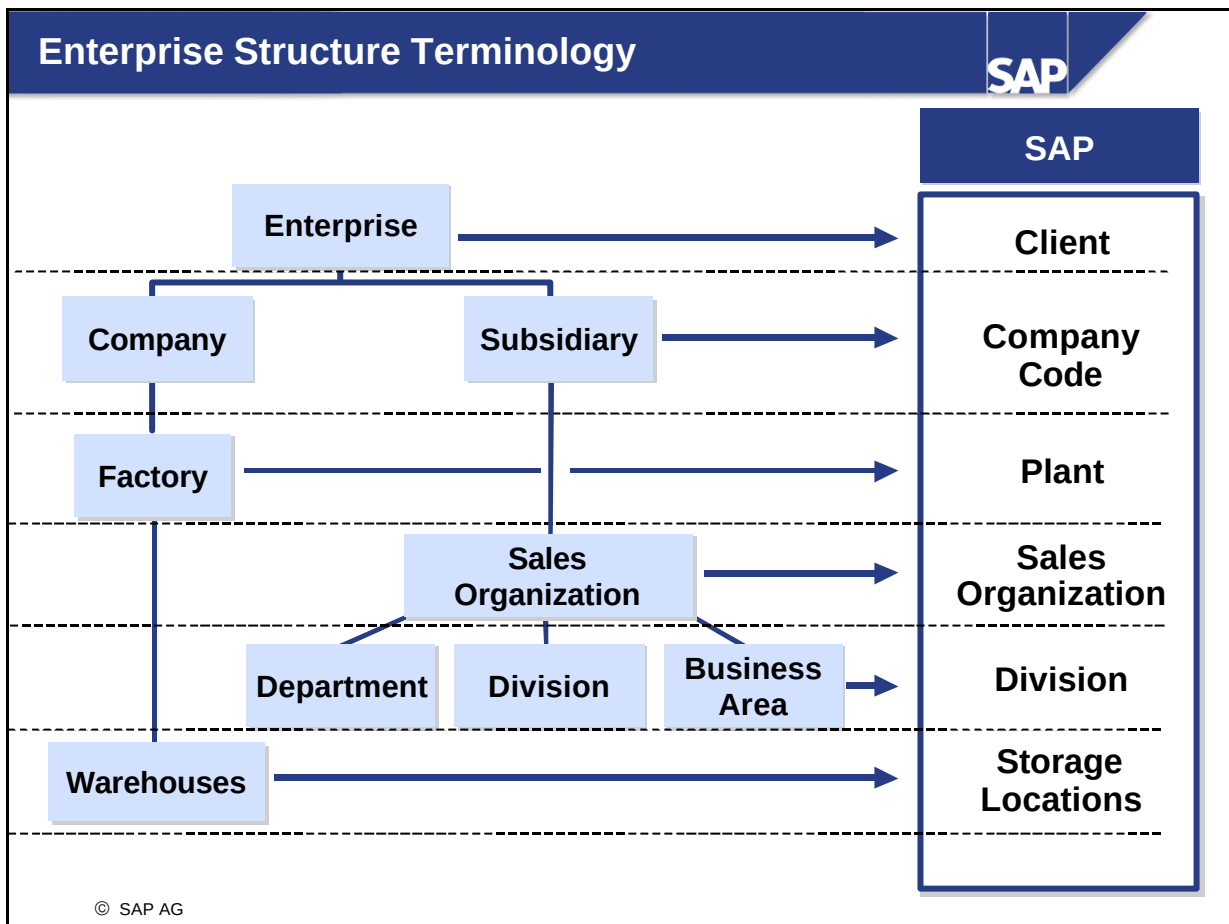
At the conclusion of this unit, you will be able to:

- **Explain the concept of a business scenario**
- **List the main elements of business scenarios**
- **Describe the relationship among the main elements of a business scenario**

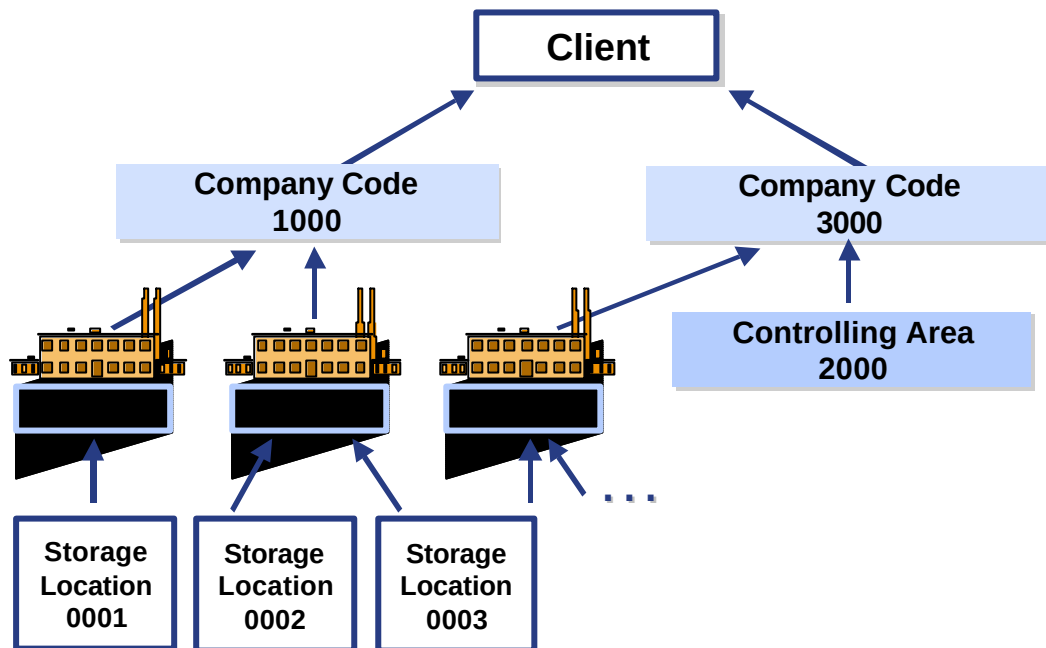




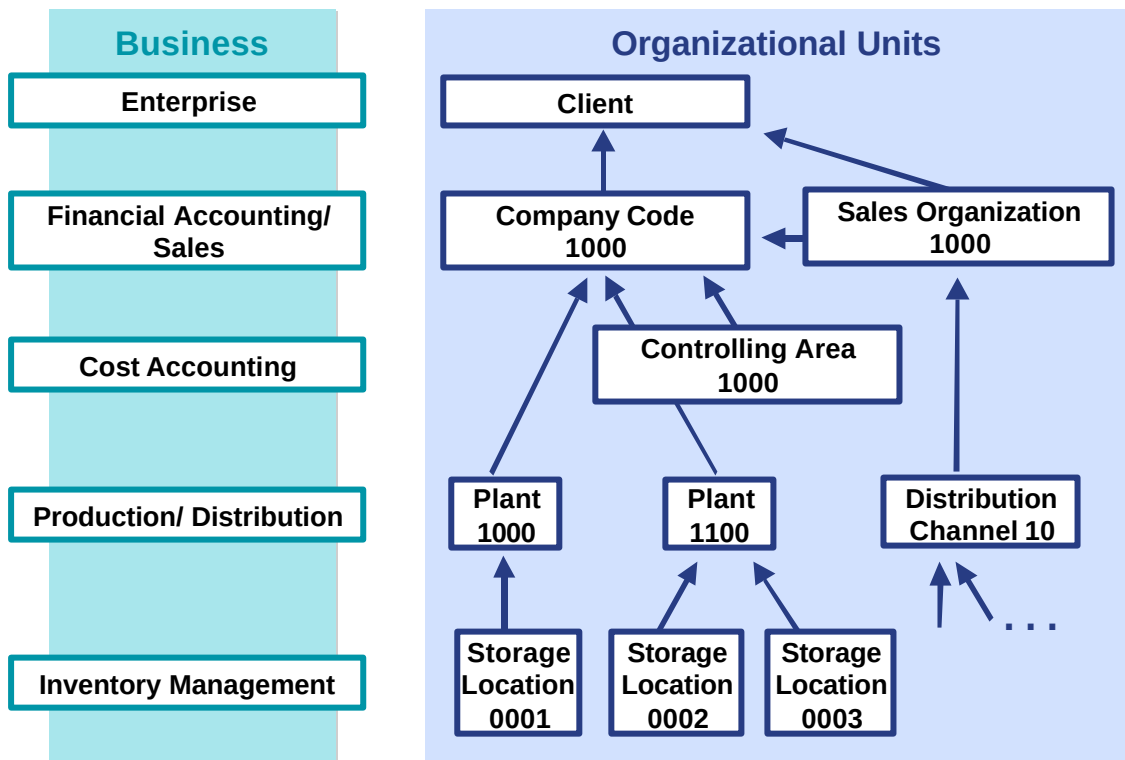
- **Business Scenario:** Business-related grouping of business processes localized in a specific organizational area that share some similar goals in an enterprise, such as purchasing, services, balance sheet preparation, production, personnel administration, and so on.
- **Organizational Unit:** Organizational grouping of enterprise areas which, for legal reasons or for other specific business-related reasons or purposes, are grouped together. Organizational units include legal company entities, sales offices, and profit centers.
- **Master Data:** Data which is used long-term in the R/3 System for several business processes. Examples include customers, materials, and vendors.
- **Transactions:** Application programs which execute business processes in the R/3 System such as creating a customer order, posting an incoming payment, or approving a leave request.
- **Document:** A data record that is generated when a transaction is carried out.
- **Reports:** Program which reads certain data elements and displays them in a list.



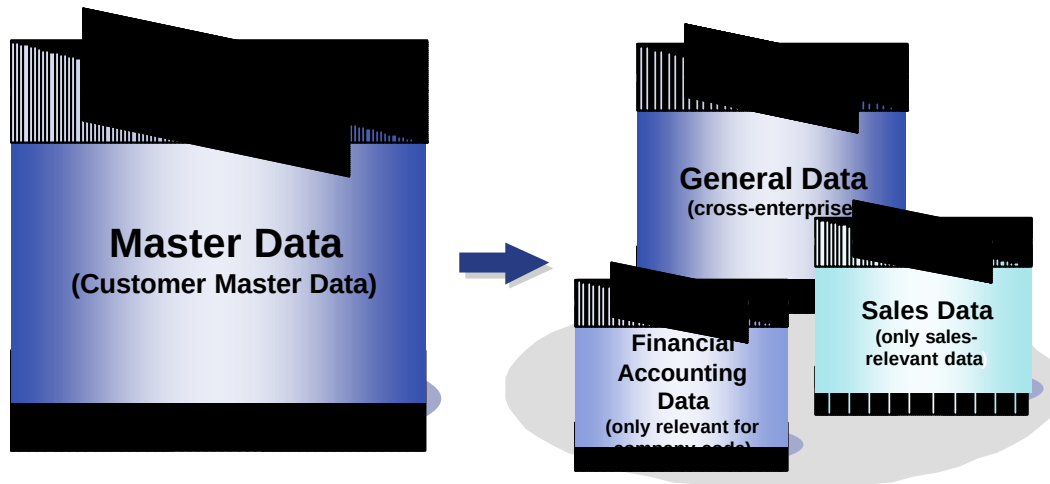
- An enterprise structure is mapped to SAP applications using organizational units. Organizational units handle specific business functions.
- Organizational units may be assigned to a single application (such as a sales organization assigned to Sales and Distribution), or to several applications (such as a plant assigned to Materials Management and Production Planning).



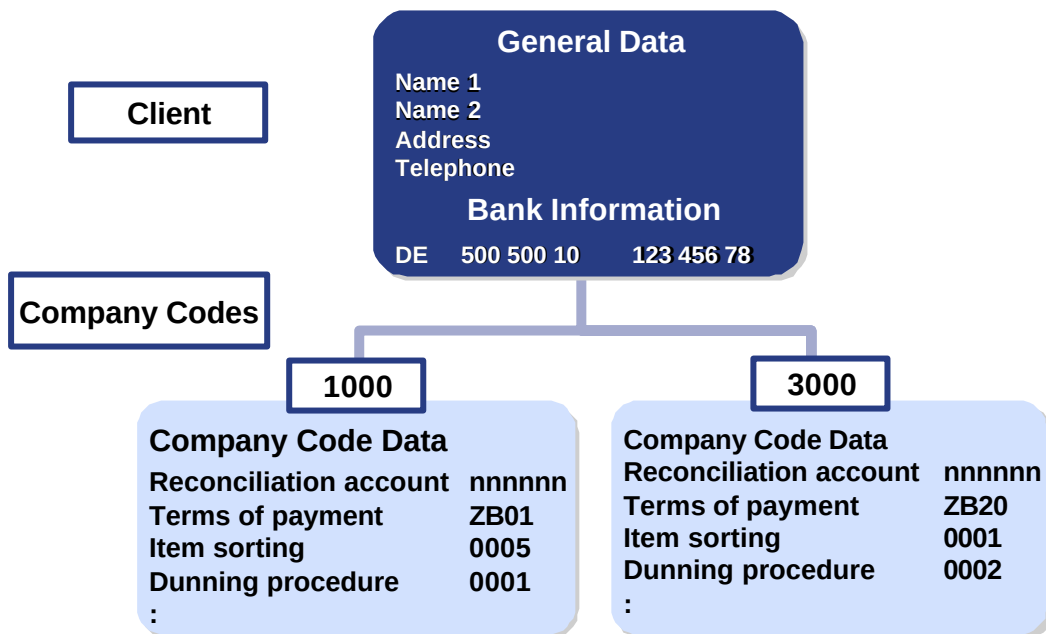
- **The highest-level element of all organizational units is the client.** The client can be an enterprise group with several subsidiaries. All of the enterprise data in an R/3 System implementation is split into at least the client area, and usually into lower level organizational structures as well.
- Flexible organizational units in the R/3 System enable more complex enterprise structures to be represented. If there are many organizational units, the legal and organizational structure of an enterprise can be presented in different views.
- By linking the organizational units, the separate enterprise areas can be integrated and the structure of the whole enterprise represented in the R/3 System.



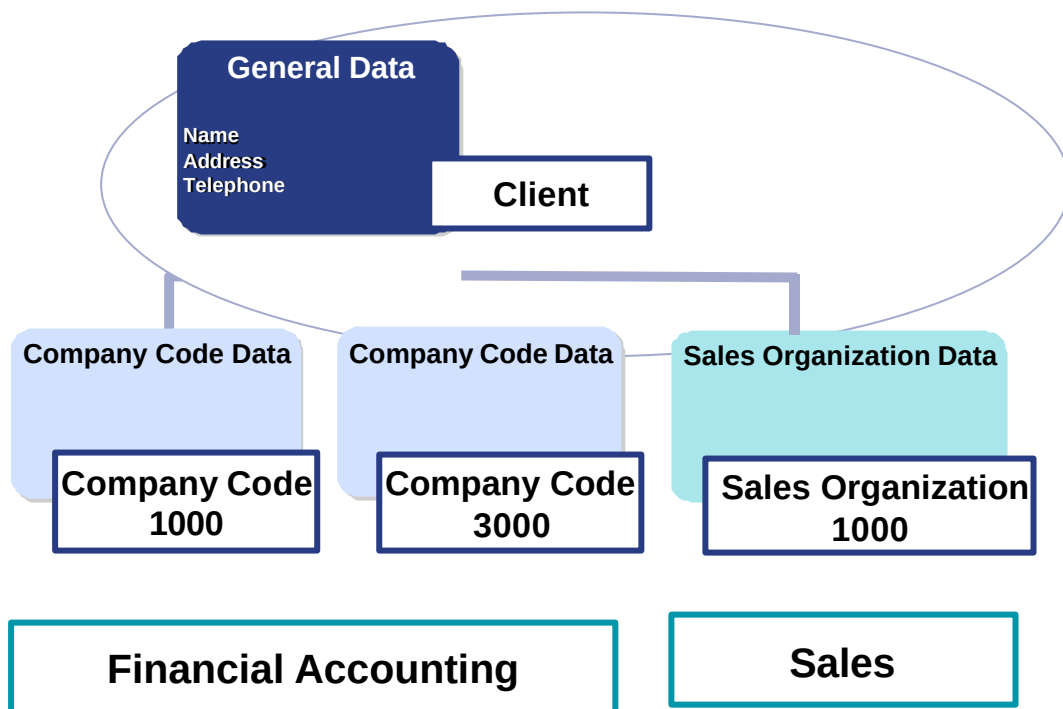
- An enterprise is structured in the SAP R/3 System according to business functions that must correspond to the functionality assigned to the organizational units.
- Examples:
 - A Company Code is a unit included in the balance sheet of a legally-independent enterprise. It is the central organizational element of Financial Accounting.
 - The Controlling Area is the business unit where Cost Accounting is carried out. Usually there is a 1:1 relationship between the controlling area and the company code. For the purpose of company-wide cost accounting, one controlling area can handle cost accounting for several company codes in one enterprise.
 - In the context of Sales and Distribution, the Sales Organization is central organizational element that controls the terms of sale to the customer. Distribution Channel is the element that describes through what channel goods and/or services will be distributed to the customer.
 - In the context of Production Planning and Control, the Plant is the central organizational unit. A plant is the place of production or simply a collection of several locations of material stocks in close physical proximity.
 - A Storage Location is a storage area comprising warehouses in close proximity. Material stocks can be differentiated within one plant according to storage location (inventory management).



- Data records that remain in the database for a long period of time are called master data. Master data includes creditors, vendors, materials, accounts, and so on.
- Master data is created centrally and can be used in all applications.
Example:
 - A customer is master data that can be used in customer requests, deliveries, invoices, and payments.
- Master data also has an organizational aspect as it is assigned to organizational units.
- Master data has cross-component usage
Examples:
 - Customer master data uses the same data for financial accounting and sales
 - Customer master records can be assigned to the following organizational units:
 - company code
 - sales organization
 - distribution channel
 - division



- When creating a customer master record, you enter:
 - Shared data on the client level
 - Company code-specific data for each company code
- Data on the client level can be used by all company codes. The customer account number is assigned on this level. That means, the same customer has an explicit accounts receivable number in all company codes from a financial view.



- If you also have SAP Sales and Distribution implemented, there are additional fields you can maintain. These fields contain information and control data that are necessary for processing the business activities in the Sales area.
- Fields for customer master data are divided into Accounting and Sales areas. Address data is used from both areas. In the Sales area, information recorded can be accessed by Financial Accounting and vice versa.

Note:

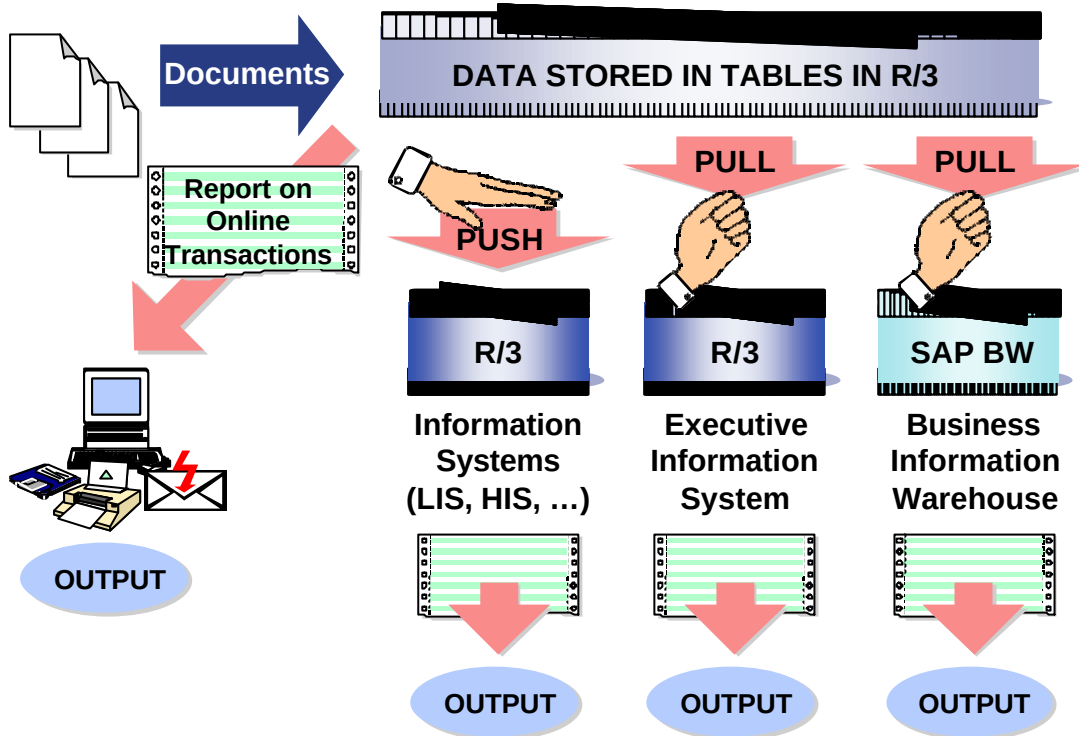
The structural logic for customer master records/accounts receivable is also valid for vendor master records/accounts payable.

Views of the Material Master Record

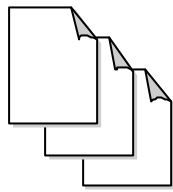


© SAP AG

- The material master represents the central source for releasing material-specific data. It is used by all of the SAP Logistics components in the R/3 System.
- Integrating all of the material data in one single database object means that the problem of data redundancy is not an issue. The stored data can be used by all areas, such as purchasing, inventory management, materials planning, invoice verification, and so on.
- The data contained in the material master is required, for example, by the following functions in the SAP Logistics component:
 - Ordering in Purchasing
 - Updating movement of goods and managing the physical inventory in Inventory Management
 - Posting invoices in Invoice Verification
 - Processing sales orders in Sales
 - Planning requirements, scheduling work in Production Planning and Control
- The structural logic that applies to vendors and customers is also valid for material master records.



- **Documents** are captured and stored on R/3 with various amounts of information.
 - Examples:
 - Sales Orders, Purchase Orders, Production Order, Material Documents, Accounting Documents
- **Output** is any type of communication of data.
 - Types of output: file, Fax, Email, Printout, Screen
- Reports/Lists are information that is derived from a source and presented to the user in some output type. You can generate reports directly from the online transactions or from the other sources of summarized data such as the Business Information Warehouse, Executive Information System or the various module Information Systems.
- Detail Transaction information is stored on the R/3 system and summarized data is typically stored on the BW, EIS or Information System for detailed summarized analysis using the tools provided by those systems.



Documents



Report Request



Key Figures



No. of Sold-to party: 239

Sold-to party	Inc. Orders	Orders Quant.	Ord. Items
ABC Company			
Don Ltd.			
Walter AG			
Chris Corp.			
Otto SA.			
Tom Inc.			

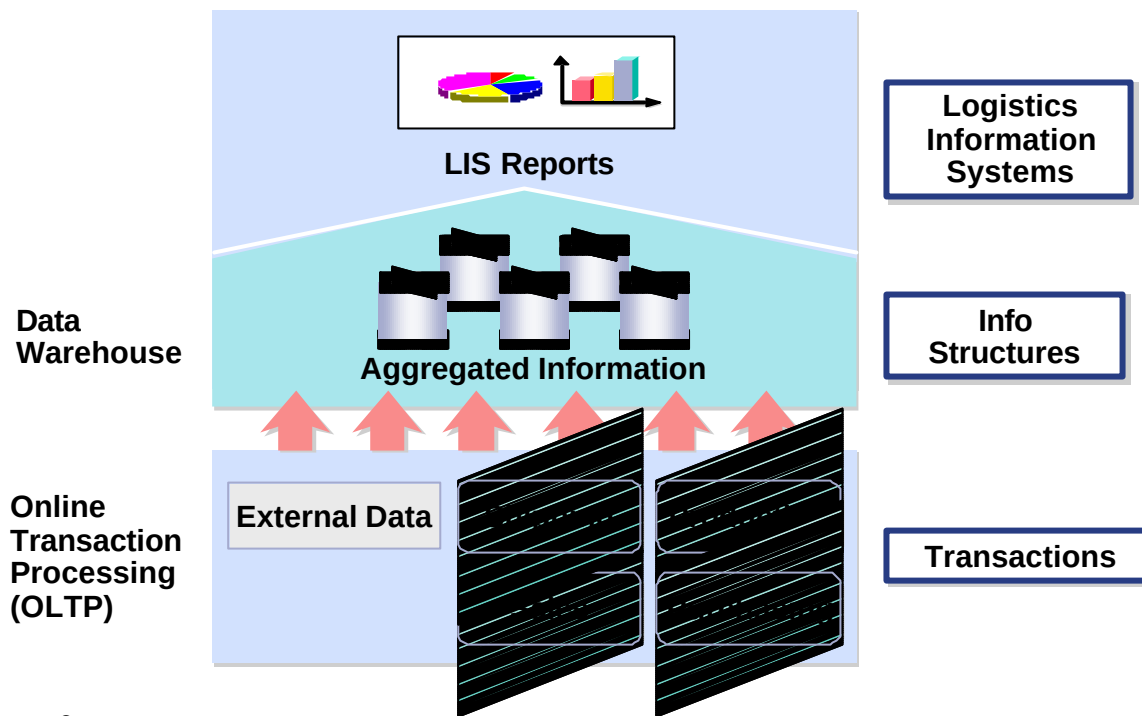
Sold-to party: ABC Company

Sales Org.	Inc. Orders	Orders Quant.	Ord. Items



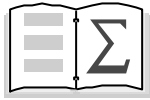
Sales Order

- Reports can be run at any time in the R/3 System. Current data is processed online at the time the report is run. Reports can be requested in several ways: they can be accessed from the initial R/3 System screen, by choosing Information systems.
- For frequent reporting, it makes sense to store report selection parameters as report “variants”. The stored report variants can be integrated in a “job.” The job is notified of the time when one or more report variants are to be run.
- In standard reports, key figures corresponding to the characteristics are formatted according to the report request. From this screen, you can access additional evaluation functions or required additional key figures by selecting a field (double-click). The data in the report list can be displayed in a list or represented in a graphic.



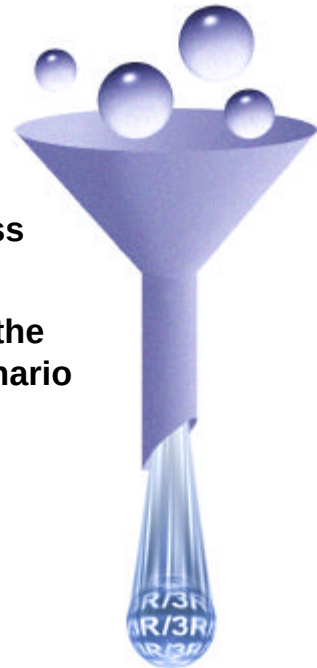
© SAP AG

- The graphic uses the LIS example to show how information systems are structured.
- All of the LIS data is stored in information structures.
- Transactions from the R/3 applications that are performed daily are aggregated for LIS for statistical purposes. Data from other systems can also be used in LIS.
- The reports most frequently used can be accessed from the SAP standard menu.
- Distinction is made between different reporting types:
 - Standard reports: List of document, master data, etc. and combinations of these objects (characteristics) to be selected in the report request
 - Reporting via information systems in the applications: Standard analyses from FIS (Financials), LIS (Logistics), HIS (Human Resources)
 - Reporting via information systems with separate databases and tools for generating flexible report structures: EIS (Executive Information System) and the Business Information Warehouse
- The application reporting trees provide various predefined reports. These reports have been defined by SAP according to business requirements.
- The application information systems also enable you to define your own information structures in the SAP R/3 System to meet your enterprise's individual requirements.



You are now able to:

- **Explain the concept of a business scenario**
- **List the main elements of business scenarios**
- **Describe the relationship among the main elements of a business scenario**





Unit	Overview of FI/CO Integration
Unit	Information System
Unit	FI Case Company Organization
Unit	FI Customizing
Unit	Create Accounts
Unit	Daily Processing

Unit Contents:

- **General Tasks of FI and CO**
- **The Components of FI**
- **The Components of CO**
- **Integration**



At the conclusion of this unit, you will be able to:

- **Explain the differences between Internal and External Accounting.**
- **Explain how CO helps manage a business, and use some standard CO reports .**
- **List the components of CO and explain their purpose.**
- **Explain the basic integration points between the components of CO.**
- **Explain the basic integration points between CO and other R/3 modules.**

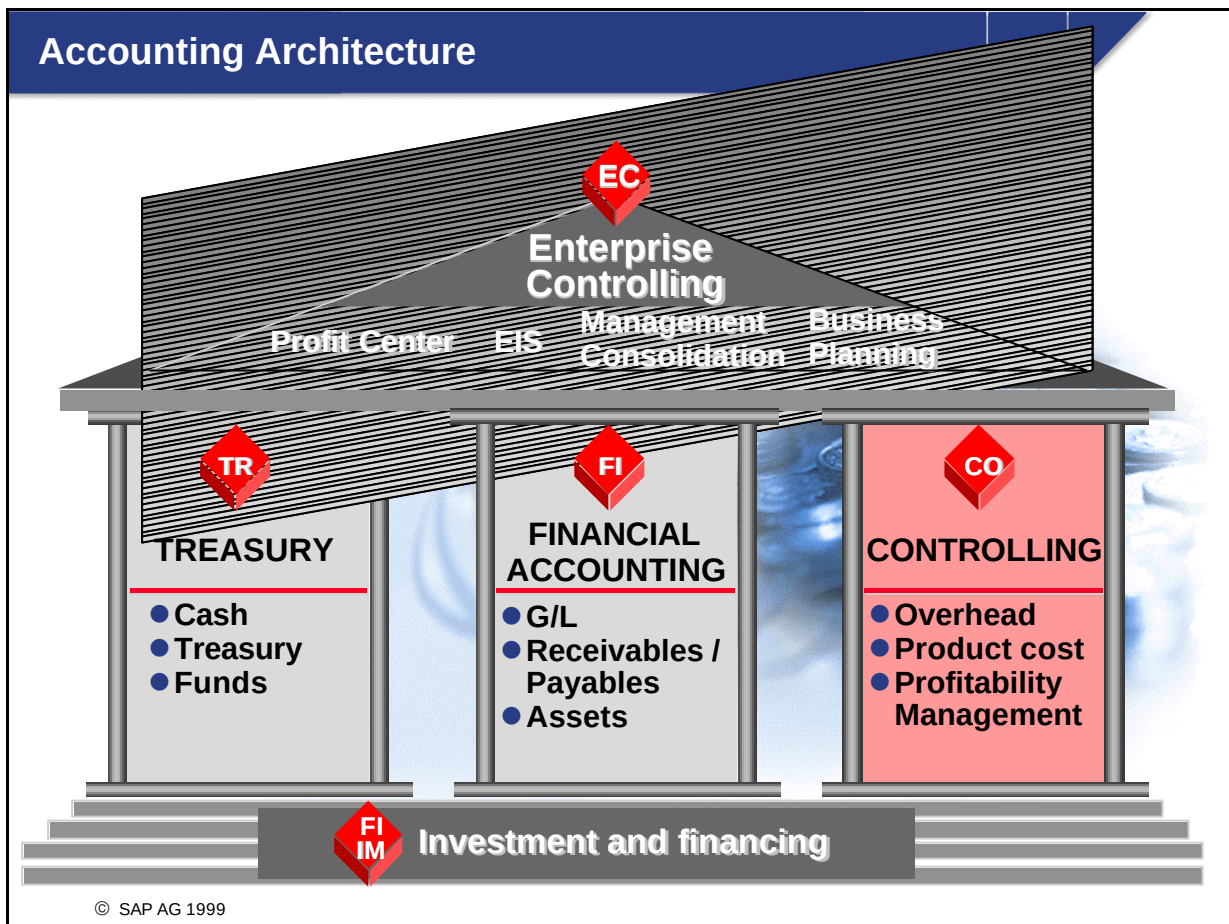


- Your initial focus is to gain an understanding of the purpose of CO, and how FI and CO work together to provide both financial and management information.
- You learn that CO has several different major components, each having a particular purpose. You also learn that these different components are integrated with each other, as well as with other R/3 components.

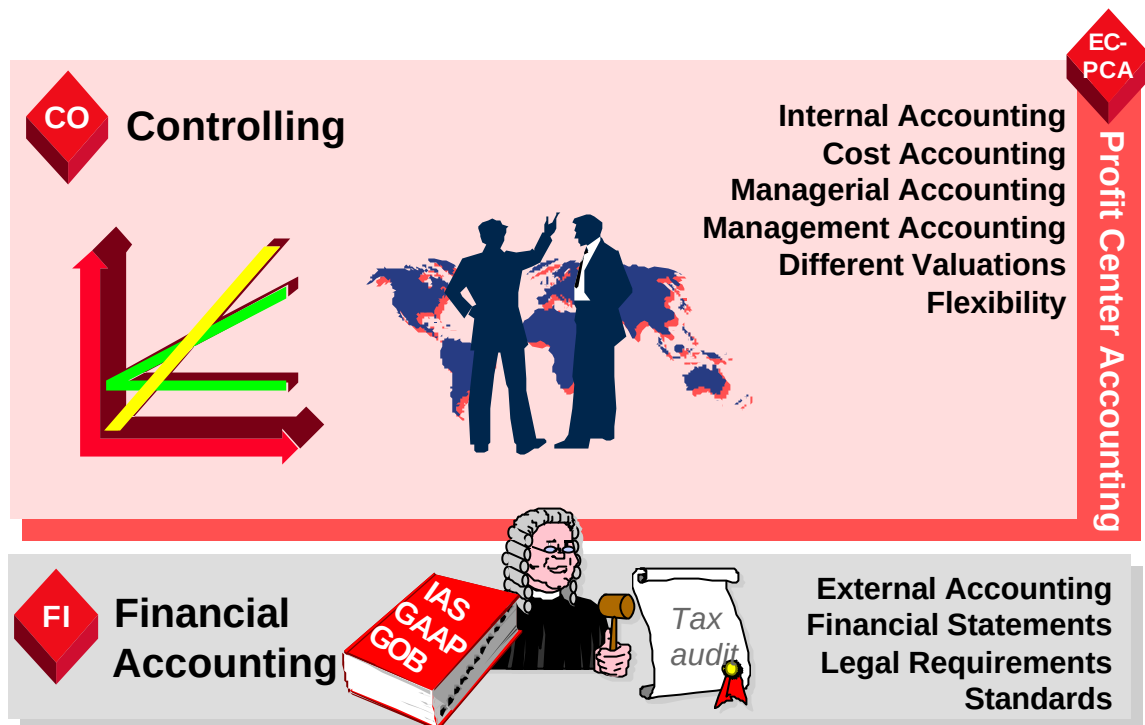


At the conclusion of this topic, you will be able to:

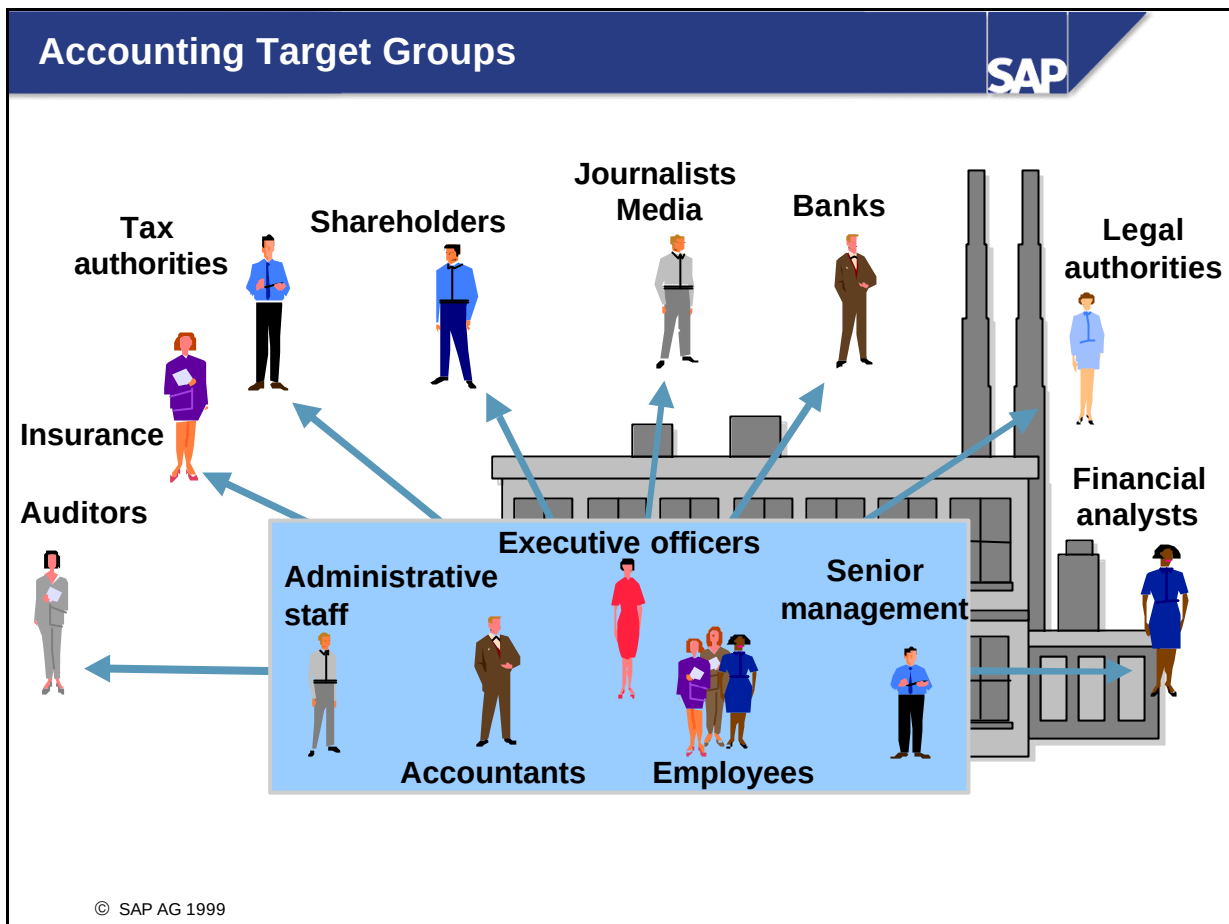
- **Explain the differences between Internal and External Accounting within the R/3 System.**
- **Explain some of the ways in which Controlling can help to manage a business.**



- The general term “Accounting” can be used to describe numerous different functions and business processes. The R/3 system provides an architecture of specialized accounting components to address these varied functions.
- The Treasury component (TR) focuses on functions such as cash management, treasury management (including money market funds, foreign exchange, derivatives and securities), loans, and market risk management.
- The Financial Accounting component (FI) focuses on General Ledger accounting (G/L), Accounts Receivable and Accounts Payable processing, and Fixed Asset accounting.
- The Investment Management component (IM) provides functions to support the planning, investment, and financing processes for capital investment measures.
- The Enterprise Controlling component (EC) includes Profit Center Accounting, the Executive Information System (EIS), Business Planning (for group-wide business plans at a high level), and EC Consolidation.
- The Controlling component (CO) provides a variety of tools that can be used to provide operational information to the management of a company to support business analysis and decision-making. The Controlling component is the focus of this course. The major CO components (Overhead Cost Controlling, Product Cost Controlling, and Profitability Management) will be examined in some detail in this course.



- The R/3 System 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 Executive Information System (EC-EIS), 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 (e.g. balance sheet and P&L statement) are created in FI. These external reporting requirements are typically established by general accounting standards like GAAP or IAS, as well as various legal requirements mandated by regulatory authorities.



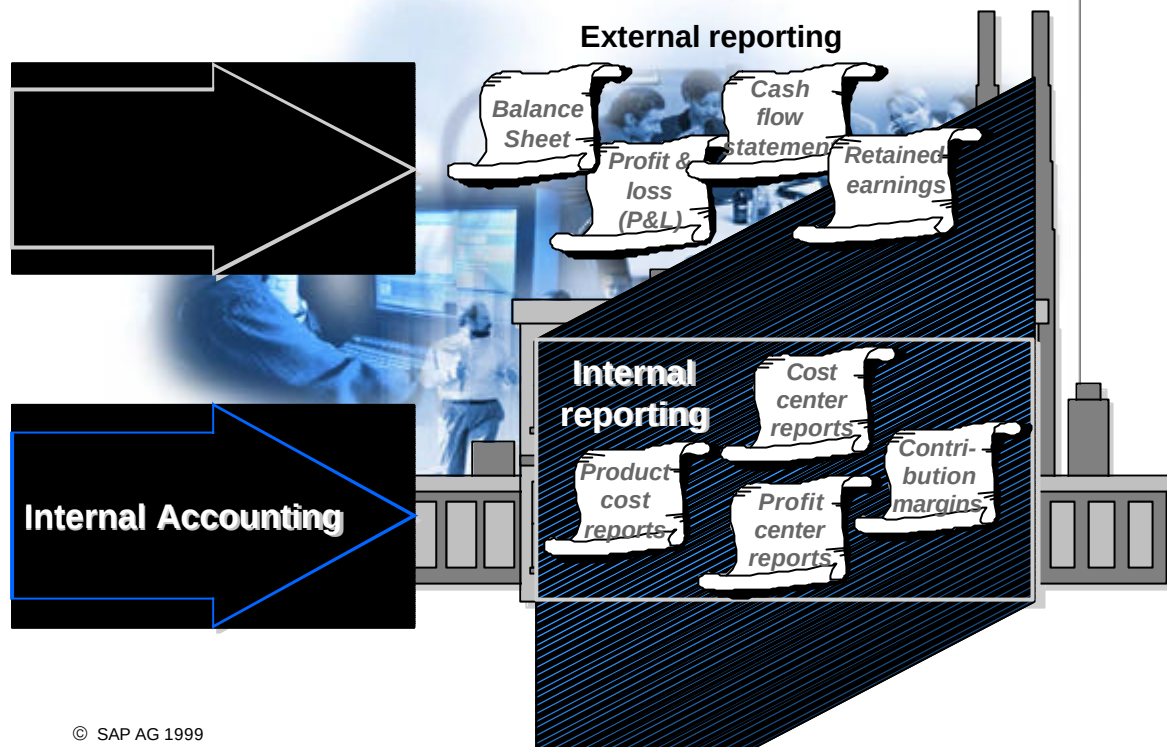
■ There are two target groups that use accounting information:

- **External users:**

These users usually require information that conforms with legal requirements. This data is managed in the application component FI (Financial Accounting).

- **Internal users:**

These users come from all levels within the company. They need information for the internal operations of the company. This information is contained in the application component CO (Controlling).



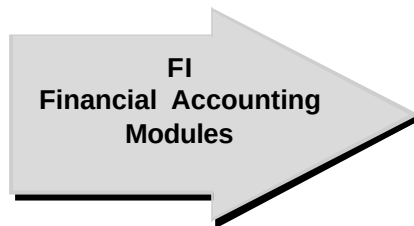
© SAP AG 1999

- While there are often different accounting information requirements for internal and external users, much of the underlying data may be relevant for both purposes. But that same data can be presented in very different ways to satisfy the different requirements.
- Standardized accounting intended for external users is sometimes termed “financial accounting”. The term “management accounting” generally refers to the non-standardized accounting approach that supports the management decision-making process.
- Financial accounting reports typically required include the income statement (or profit & loss statement), and balance sheet. Management accounting reports can be completely unique, although a common example could be departmental actual vs. plan costs for the current accounting period.



At the conclusion of this topic, you will be able to:

- **Explain the purpose of the different components of FI.**
- **List the components of FI.**



FI-GL	General Ledger Accounting
FI-AR	Accounts Receivable
FI-AP	Accounts Payable
FI-LC	Legal Consolidation
FI-SL	Special Purpose Ledger
FI-AA	Asset Accounting
FI-FM	Funds Management
FI-TM	Travel Management

- External and internal accounting are separate accounting systems that are interrelated but focus on different methods and dimensions of analysis to support different types of decision making.
- External accounting is referred to as financial accounting. It produces the financial statement view of the organization.
- Internal accounting is referred to as managerial accounting or controlling. It focuses on internal performance of the organization.



- The **Financial Accounting** component meets the international demands of a company's financial accounting requirements using an open, integrated data flow and simplifies financial decision making.
- All postings between different applications in the R/3 system are made real-time. For example, if you post to the "Accounts payable" subledger, the system automatically makes an updating entry to the general ledger.



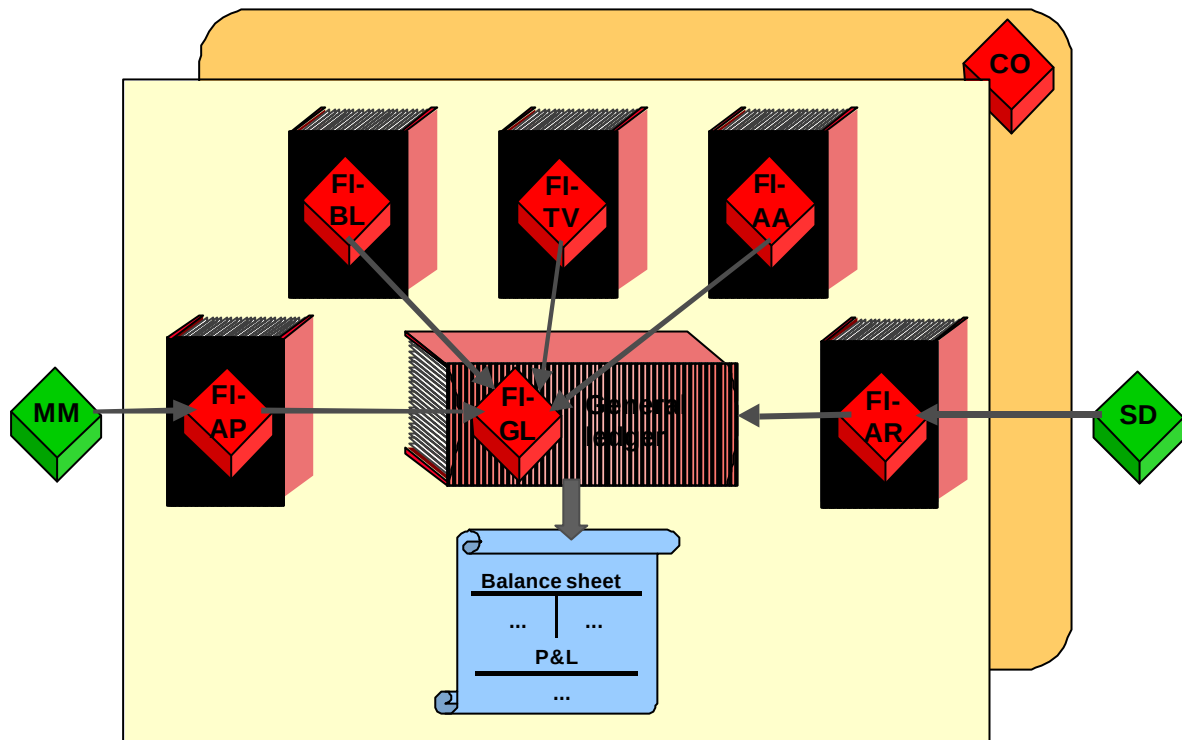
- The R/3 Financial Accounting component is divided into the following areas:
 - **FI-GL General Ledger Accounting.** The central task of G/L accounting is to provide a comprehensive picture of external accounting and of the accounts involved therein.
 - **FI-AP Accounts Payable.** A/P administers the accounting data for all vendors. It is also an integral part of the purchasing system.
 - **FI-AR Accounts Receivable.** A/R administers the accounting data of customers. It is also an integral part of sales management.



- **FI-AA Asset Accounting** This module encompasses the entire lifetime of assets from the initial acquisition up to the retirement. The system calculates the values for depreciation, interest and other values.
- **FI-SL Special Purpose Ledger** provides summary information from multiple applications at a level of detail that is user defined.
- **Funds Management** Supports financial checking and control using budgeting techniques.
- **Travel Management** The Travel Management module offers a complete range of procedures for processing business trip data, from entering and approving a travel request, to posting the actual trip costs. Integration with Controlling (CO) and Payroll Accounting (HR Payroll) guarantees correct and efficient posting, taxation and payment of trip costs.



- The aim of the Treasury system is to ensure efficient liquidity, portfolio and risk management for businesses, from a commercial viewpoint.
- It supports processing and accounting for financial investments and borrowings. The link with external information systems (such as current financial market information via an online data feed) enables you to recognize dynamic changes in financial markets and react to them.
- TR is divided into three sub-areas:
 - **TR-CM Cash Management-** allows for daily cash status management and short and medium term forecasts of cash position.
 - **TR- Cash budget management** or Commitment Accounting - is a budgeting tool allowing the structured management of cash budgets.
 - **TR-TM Treasury Management -** provides management of foreign exchange, derivatives, and other types of securities and hedging.



© SAP AG 1999

- The general ledger contains a record of all relevant accounting transactions from a business point of view in the G/L accounts. In order to retain a clear overview, the general ledger often contains collective postings. In such cases, the information posted is displayed in more detail in the subsidiary ledgers, which provide their information to the general ledger in summarized form:
 - **Accounts Payable** records all accounting transactions for dealings with suppliers. Much of its data is obtained from procurement (**Materials Management**).
 - **Accounts Receivable** records all accounting transactions for dealings with customers. Much of its data is obtained from **Sales and Distribution**.
 - **Asset Accounting** records all accounting transactions relating to the management of assets.
 - **Travel Management** manages and calculates travel costs and supports travel planning and travel expenses
 - **Bank ledger** supports the posting of cash flows.
- All G/L account postings that post to business expense accounts automatically send the expenses as costs to Controlling. The balances of G/L accounts are used to calculate financial statements.



**At the conclusion of this TOPIC,
you will be able to:**

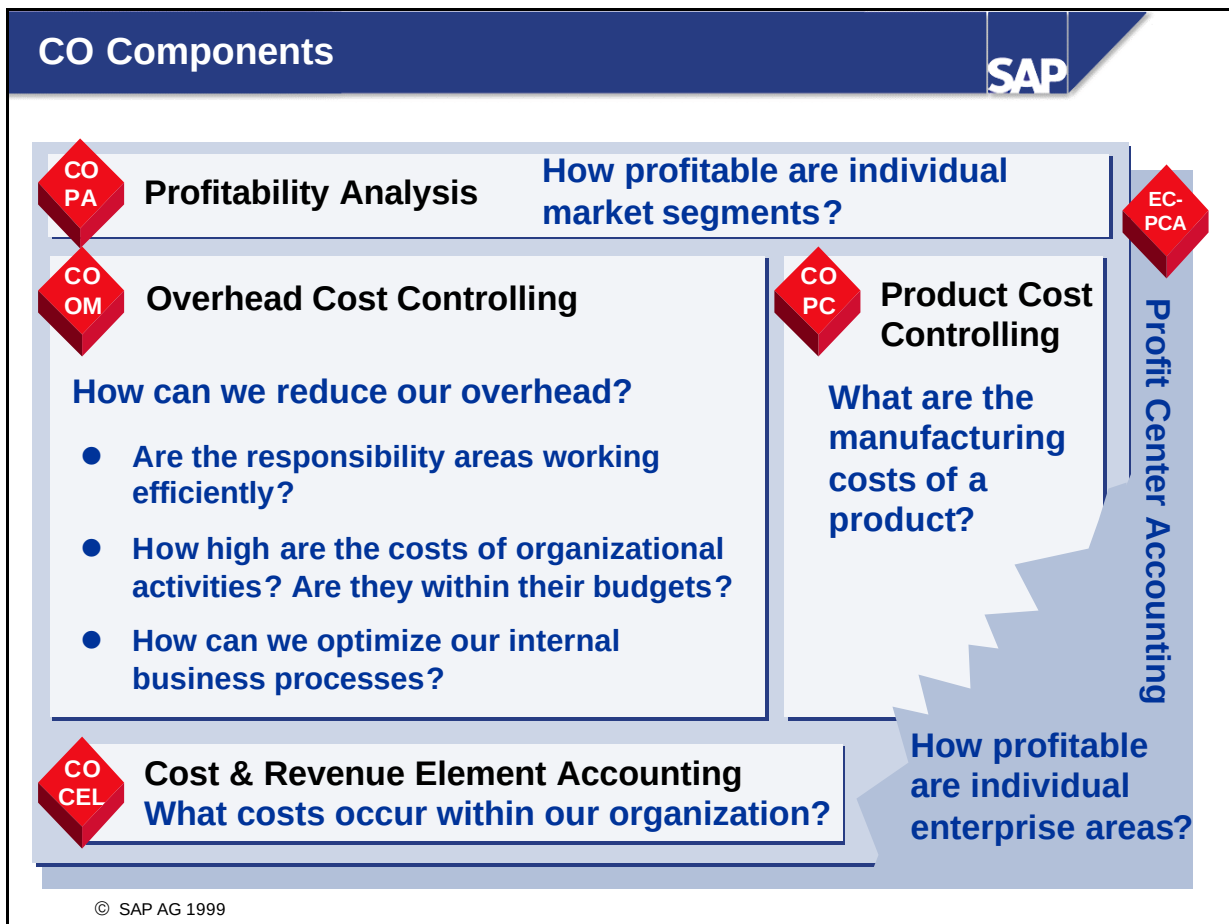
- **List the components of CO.**
- **Explain the basic purpose of each of these components.**



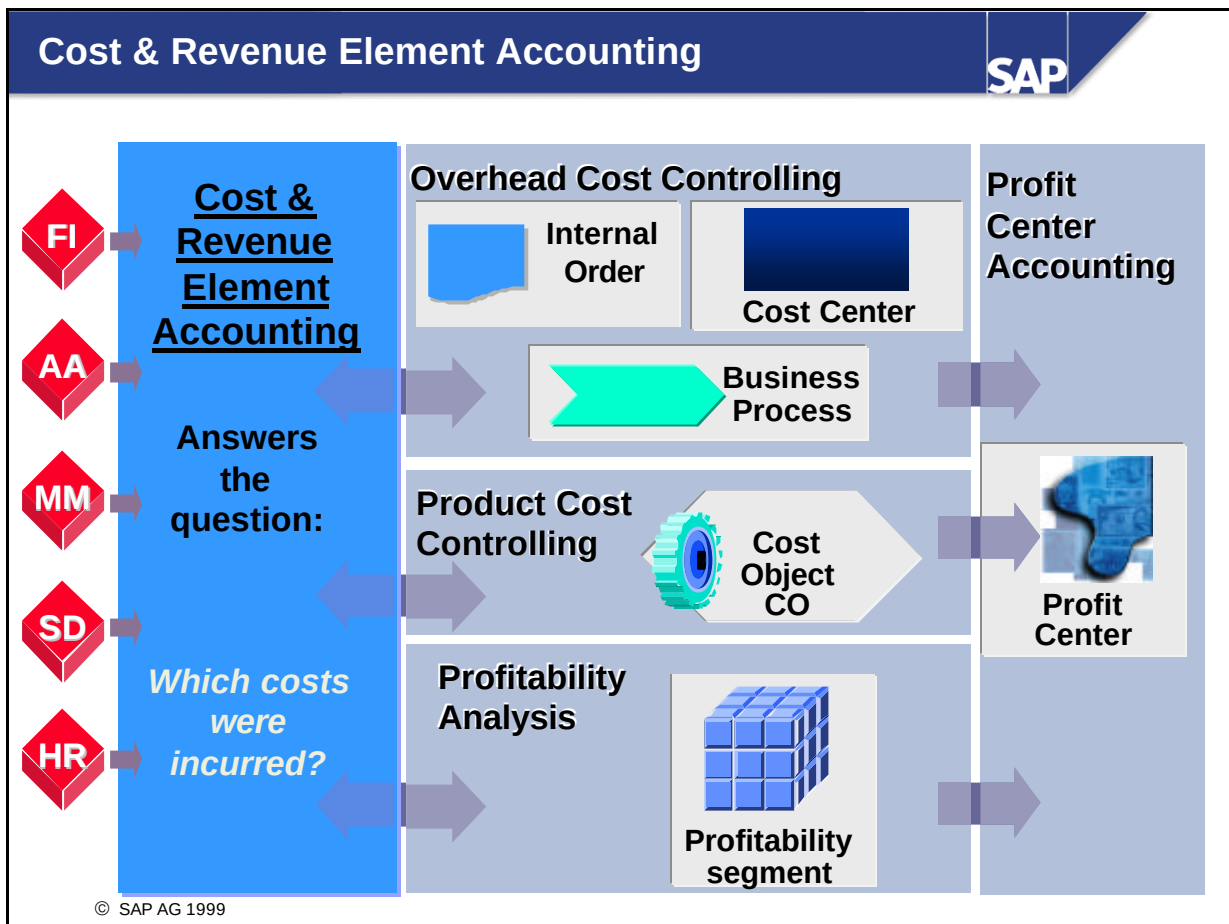
- **Cost and Revenue Element Accounting**
- **Overhead Cost Controlling:**
 - Cost Center Accounting
 - Internal Orders
 - Activity-Based Costing
- **Product Cost Controlling:**
 - Product Cost Planning
 - Cost Object Controlling
 - Actual Costing/ Material Ledger
- **Profitability Management**
 - Profitability Analysis
 - Profit Center Accounting

© SAP AG 1999

- The various CO components can be classified into different groups. The classification indicates the general purpose of a given component.
- Management of an enterprise requires the use of different tools for different situations. If you want to analyze profit, for example, then you need a tool appropriate to the view you wish to take (e.g.: by product or by responsibility center). The Profitability Management component group has two tools (components) that are available for addressing this business need (Profitability Analysis and Profit Center Accounting).
- Similarly, the Overhead Cost Controlling and Product Cost Controlling component groups offer tools appropriate to other types of business requirements.



- **How do we reduce our overhead costs?** Overhead Cost Controlling (CO-OM) is the CO component that provides tools to help answer that question. In many organizations, overhead costs have taken a huge upward jump, including costs which the organization cannot assign directly to either products or services. While production areas often display great progress in controlling costs and optimizing processes, overhead continues to display little cost transparency, so it is difficult to get a clear picture of why these costs are incurred.
- **What costs occur within our organization?** Cost Element Accounting (CO-OM-CEL) classifies the costs and revenues that are posted to CO, and provides the capability for reconciliation of costs in CO with the Financial Accounting (FI) module.
- **What are the manufacturing costs of a product?** Product Cost Controlling (CO-PC) has two major areas of focus. It is used to develop estimates of what it will cost to produce a product (or even a service). It also has capabilities to track the actual costs of production, and provides extensive tools for cost analysis.
- **How profitable are individual market segments?** Profitability Analysis (CO-PA) provides a focus on the results of a company's doing business with the external marketplace. It provides the ability to define which aspects or segments of that market are relevant for analyzing operating results, such as profit by customer, product, geographic area, sales organization, etc. And it offers multi-dimensional drill-down reporting, to provide extremely flexible views of operating results.
- **How profitable are individual enterprise areas?** Profit Center Accounting (EC-PCA) provides a focus on internal areas of a company that have responsibility for achieving certain profit or productivity goals.



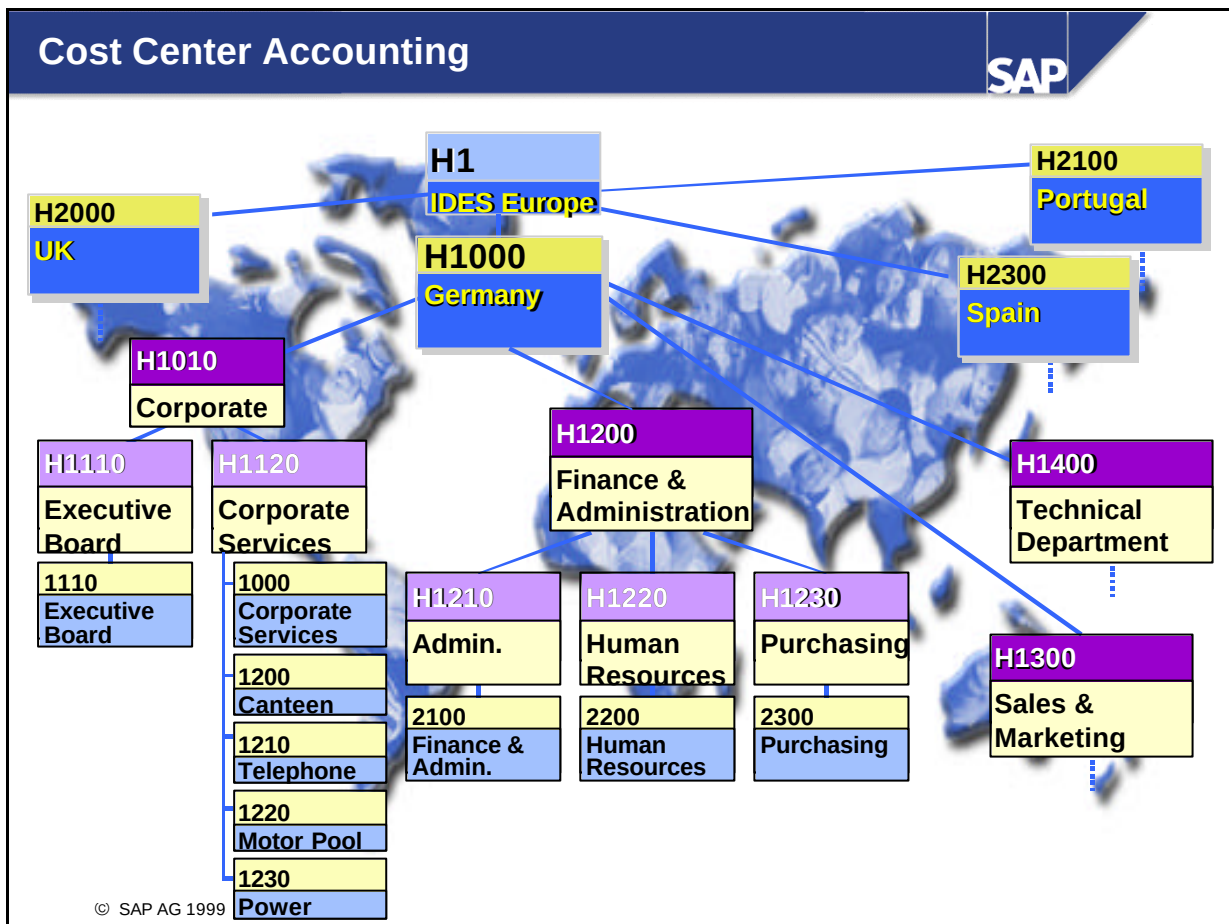
- Cost and Revenue Element Accounting (CO-OM-CEL) is part of the Overhead Cost Controlling component group. It provides the structure for assignment of CO data through the classification of transaction line items according to the nature of the cost or revenue being posted to a given controlling object (e.g. cost center, internal order, etc.).
- The cost flows in CO can lead to the need for reconciliation between internal and external accounting in certain cases. Cost and Revenue Element Accounting is the CO component providing functionality that supports this possible requirement. The Reconciliation Ledger provides reporting capabilities for identifying the differences in costs between FI and CO, as well as a tool for creating reconciliation postings to FI, if desired.



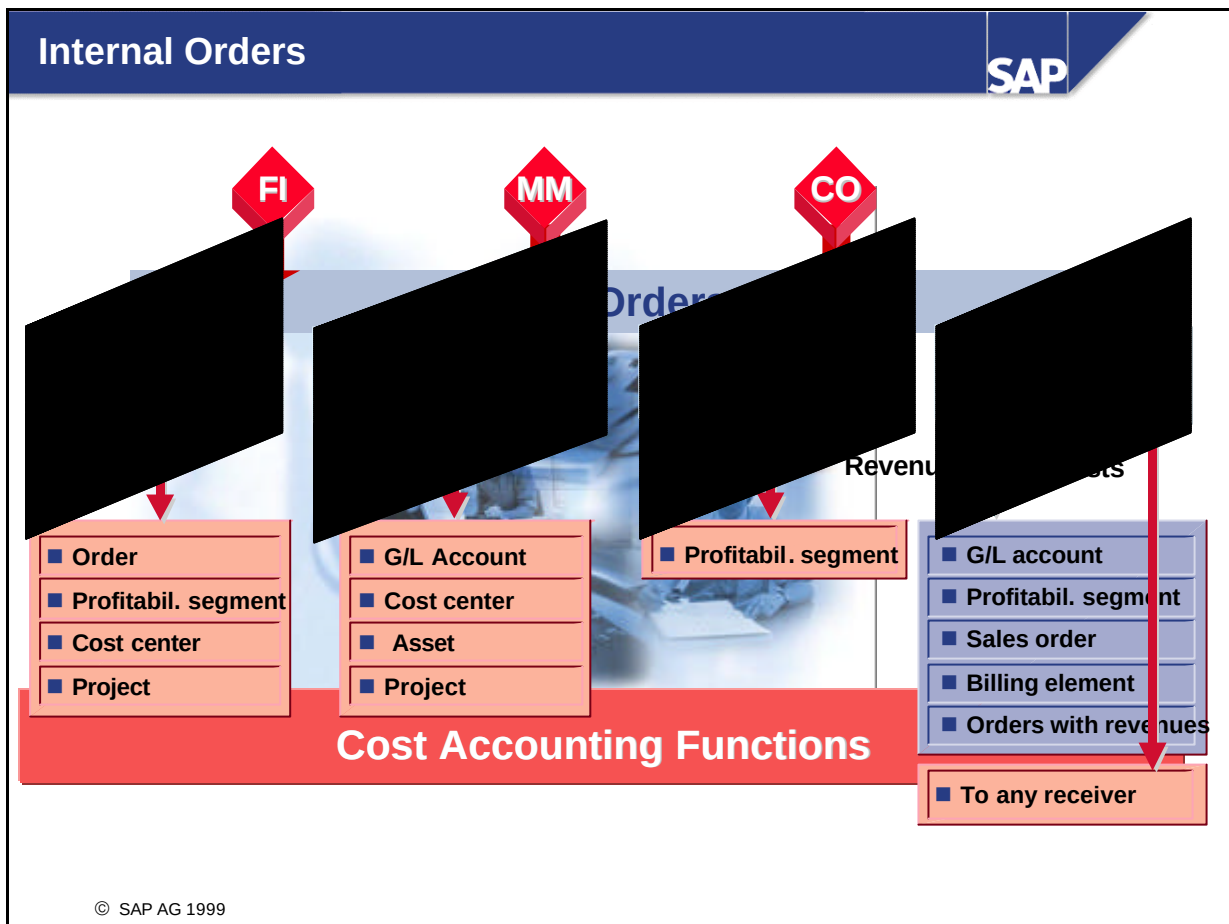
- **Overhead Cost Controlling:**

- **Cost Center Accounting**
- **Internal Orders**
- **Activity-Based Costing**

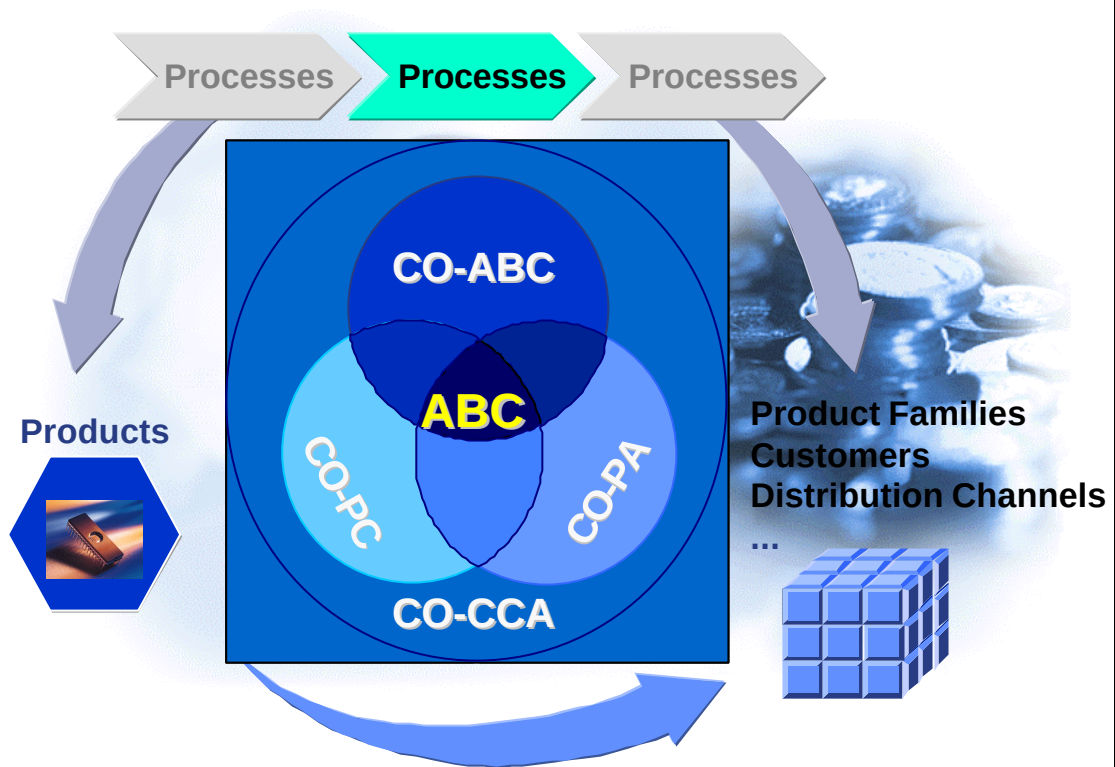
- Overhead Cost Controlling has three components. Each addresses certain aspects of analyzing and controlling overhead costs. Overhead costs are defined as costs that cannot be assigned directly to cost objects (e.g. production orders, etc.).
- The percentage of overhead in total costs has risen sharply in recent years. The number of workers employed in overhead areas grew from 25-30% in the 1950's to more than 50% today. Overhead has grown in both manufacturing and service organizations. Research in the United States revealed that overhead makes up approximately 80% of the costs in the machine and electronics manufacturing industries. As overhead grows, the proportion of directly assignable production costs shrink. Consequently, it is becoming increasingly important to analyze and control overhead costs. Similarly, increasingly sophisticated tools are needed to facilitate the application of overhead to production orders and other cost objects.



- The Cost Center Accounting component (CO-OM-CCA) tracks where costs occur in your organization. The cost center is an organizational unit in a controlling area. Cost centers can be defined according to several different design approaches. A typical approach could be for an enterprise to define a cost center for each low-level organizational unit that has responsibility for managing costs. As costs are incurred, they are assigned or posted to the appropriate cost center. These costs could include payroll costs, rent and utility costs, or any other costs assignable to a given cost center.
- Each cost center is assigned to a category, e.g. Administration cost center, production cost center, etc. Each cost center master record has a field for the name of the person responsible for the cost center.
- The posting and assignment of costs to cost centers not only makes managerial accounting possible; but is a vital step for utilizing the other Controlling components. As noted above, cost centers can be set up according to different design approaches, including functional requirements, allocation criteria, activities or services provided, geographic location and/or area of responsibility. But whichever approach is selected, it should be consistent throughout the enterprise.
- Cost centers can be grouped together to provide summary cost information. In fact, a fundamental requirement for implementing Cost Center Accounting is the creation of a standard hierarchy for a controlling area. The standard hierarchy includes all cost centers in that controlling area, and provides the ability to analyze summary costs at each node of the structure. This will be described in greater detail in the next Unit.



- An Internal Order is an extremely flexible CO tool that can be used for a wide variety of purposes to track costs and, in some cases revenues, within a controlling area. Internal orders provide capabilities for planning, monitoring, and allocation of costs.
- Internal orders may be used for a variety of purposes, and can be grouped into four general categories:
 - Overhead orders: Used to monitor overhead costs incurred for a particular purpose, such as conducting a trade fair, or tracking costs for maintenance and repair work.
 - Investment orders: Used to monitor costs incurred in the creation of a fixed asset, such as building a storage facility.
 - Accrual orders: Used to offset postings of accrued costs (costs calculated in CO) to cost centers.
 - Orders with revenue: Used to replace the cost accounting parts of SD customer orders if SD is not being used, so that both costs and revenues can be tracked; or to monitor revenues not affecting the organization's core business (such as miscellaneous revenues).



© SAP AG 1999

- Traditionally, overhead costs are allocated from cost centers to cost objects through various methods, such as surcharges and activity allocations.
- By contrast, Activity-Based Costing assigns costs to business processes, without regard for which organizational units may be involved in generating those costs. A process is a cross-functional object, which can pull resources from any cost center in a controlling area.
- ABC has been implemented in R/3 as an enhancement to the cost management functionality. All overhead costs are still assigned to cost centers. The cost centers that utilize resources in carrying out a process allocate the cost of those resources to the process. (Example: a Purchasing cost center would allocate costs it incurred in preparing and distributing a Request for Quotations to a Procurement business process.) The processes are then consumed by cost objects (such as production orders) and the related costs are allocated to those cost objects. Process costs not related to cost objects are passed along to CO-PA in order to provide a more accurate and complete accounting of overhead costs.
- Cost Center Accounting answers the question of where costs occur, whereas Activity-Based Costing answers the question of why (for what purpose) costs occur.



- **Product Cost Controlling**

- **Product Cost Planning (PCP)**
- **Cost Object Controlling (OBJ)**
- **Actual Costing / Material Ledger (ACT)**



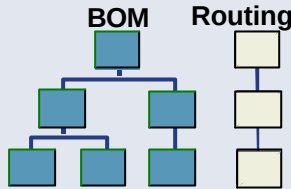
- Product Cost Controlling is concerned with all aspects of planning the cost of producing products or services, as well as tracking and analyzing the actual costs that are incurred in the production process. Product Cost Controlling consists of the following components:
- **Product Cost Planning** is used for preliminary costing and can answer the following questions:
 - What will be the cost of producing a certain product or service?
 - Is external procurement less expensive than in-house production?
 - What are the costs of production, if we assume an ideal situation? This estimate could then be used as a baseline against which we can compare other “real world” production scenarios.
- **Cost Object Controlling** focuses on tracking the actual direct costs of production and the period end closing process.
 - Actual production costs are accumulated as raw materials are issued and labor is performed. This information allows detailed comparisons between the planned cost and the actual cost of any given production phase.
 - Period end closing procedures include the application of overhead costs, calculation and posting of the value of goods still in production (work in process), calculation of variances between standard and actual costs, and settlement of variances to the CO-PA, EC-PCA and FI modules.
- **Actual Costing / Material Ledger** is used to calculate actual costs for each material at the end of the period. Materials and their movements are valued with a standard price during the period. Any variances from this standard are collected in the material ledger when invoices are received or orders settled. During period end closing these variances are used to calculate an actual price for the material in the closed period. Postings can be made in FI to reflect this price.

Product Cost Controlling - Overview

SAP

Product Cost Planning

Quantity Structure: PP Master Data



Value Structure

Prices for Materials
Prices for Activities
Prices for Processes
Overhead

**Cost estimate:
Standard costs**

Cost Object Controlling

Preliminary Costing, Simultaneous Costing

Planned
costs,
Actual
costs

Order

Material	\$
Labor	\$
Overhead	\$
Process	\$
Total	...

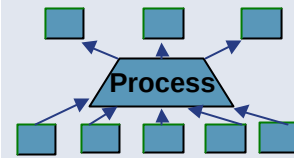
Final Costing Period-End Closing

Work in process
Scrap
Variances
Settlement



Actual Costing / Material Ledger

Quantity Structure: Material movements



Value Structure

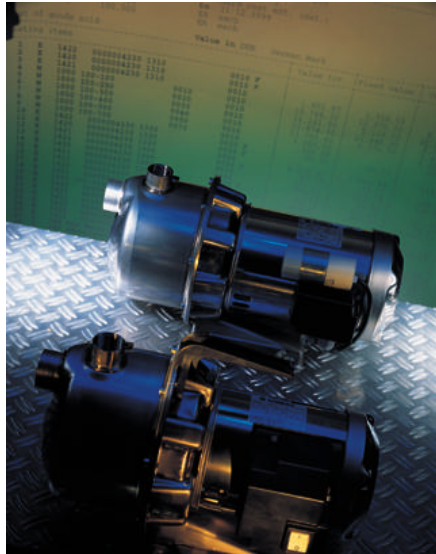
Material movements

Material Ledger

**Material Settlement:
Actual Costs**

© SAP AG 1999

- **Product Cost Planning** refers to the creation of cost estimates for the production of goods or services. If a quantity structure (Bill of Material and routing) is available in the PP (Production Planning) module of the R/3 system, you can create a cost estimate automatically using the PP data. If no quantity structure is available in R/3, the cost items can be entered manually by means of unit costing, or can be transferred automatically from a non-SAP system using batch input.
- In **Cost Object Controlling**, the costs incurred in the production of a product or service are collected on a cost object (such as a production order). Various types of cost objects can be used, depending on your controlling requirements. These include production orders, sales orders, process orders or product cost collectors. Cost Object Controlling also provides tools for calculating Work In Process, scrap costs, and variances at period end close.
- **Actual Costing** is used to calculate actual product costs at period end close. The result may be transferred to the material master as a weighted average price for the closed period. The values connected with material movements are collected in the **Material Ledger**. Both single-level settlement and multi-level settlement functions are available to calculate the actual material costs at period end close.



- **Costing results**
 - **Cost of goods manufactured**
 - **Cost of goods sold**
- **Pricing**
- **Productivity**
- **Comparison of alternatives**
- **Continuous improvement**
- **Comparison of plants**
- **Influences of primary costs**
- **Material valuation**

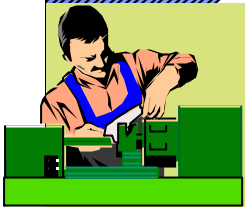
© SAP AG 1999

- There are many commonly asked questions that Product Cost Planning can help answer. These might include:
 - How high are the cost of goods manufactured and the cost of goods sold?
 - Is it currently possible to produce at this market price at all? What is our price floor?
 - Is it cheaper to produce large or small lots?
 - What does my cost structure look like? How much of the total cost is material and how much is labor?
 - What are the effects of improvements in the production process?
 - Which organizational unit most influences the product costs?
 - Which plant has the lowest production costs?
 - What is the influence of machine depreciation and energy costs on my product (primary costs)?
 - A standard cost estimate can be used to value the material stock.

BOM



The Bill of Material is a complete, formally structured list of the components that make up a product or assembly.



A work center is a physical location at which an operation is carried out. Each work center is assigned to a cost center.

Routing



A routing describes a sequence of processing steps and determines the activity quantities used from cost center accounting.

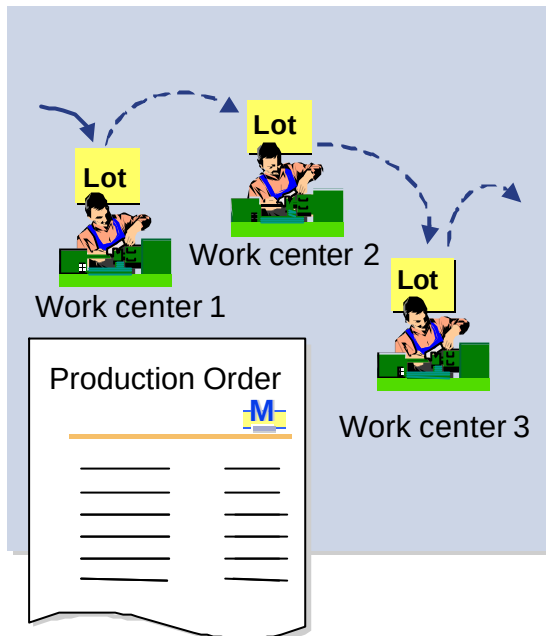
© SAP AG 1999

- A Bill Of Material (BOM) is a complete, formally structured list of the components that make up a product or assembly. The list contains the material number of each component, together with the quantity and unit of measure. The components are known as BOM items. A BOM can include materials that have their own BOMs.
- The work center is the physical location at which an operation is carried out. When the master record for a work center is created in PP, it is linked to a cost center, and also the various activity types produced by the cost center. This link allows access to the activity type unit prices, which are used in valuing labor (or machine time) supplied by the cost centers in a production process.
- The Routing lists the specific steps required to manufacture a product. These “steps” are called operations. The routing specifies the following for each operation:
 - the work center which carries out the operation
 - the default values used for calculating dates, capacities and production costs
 - whether the costs of an operation are taken into account for costing
 - the material components needed to carry out an operation



- What actual costs did we incur in our area in the current period?
- What costs were we expecting based on the quantities manufactured?
- Are some product groups performing significantly better than others?
- What is causing these variances?
- What are the scrap costs of our new line?
- Did continuous improvements show cost effects?

- Cost Object Controlling includes three principal steps: preliminary costing of the cost object, simultaneous costing, and period-end closing.
- Preliminary costing refers to the calculation of planned costs for a cost object, such as a production order. Planning variances can be determined by comparing the results of preliminary order costing with the standard cost estimate for the quantity of material to be produced with the order.
- In Cost Object Controlling, as quantities of raw materials are issued for use in a production scenario, either from inventory or from external purchase, their value is accumulated on the appropriate cost object (such as a production order). Similarly, as an activity type is performed in the production scenario (such as hours of direct labor), the cost of that activity is also accumulated on the cost object. This process is termed simultaneous costing. It refers to the posting of cost to a cost object by the same transaction that documents the material issue or activity completion. (The transaction that is used to document the completion of units of an activity is called a confirmation.) The simultaneous costing concept may sometimes be referred to as valuation of quantity flows to a cost object.
- Period-end closing refers to a series of tasks performed at the end of each accounting period. This includes calculating applicable overhead costs, calculation of work in process (WIP), calculation of variances, and settlement (which passes information to Financial Accounting, Profit Center Accounting, and Profitability Analysis).
- Various standard reports are provided to analyze the costs posted to cost objects.

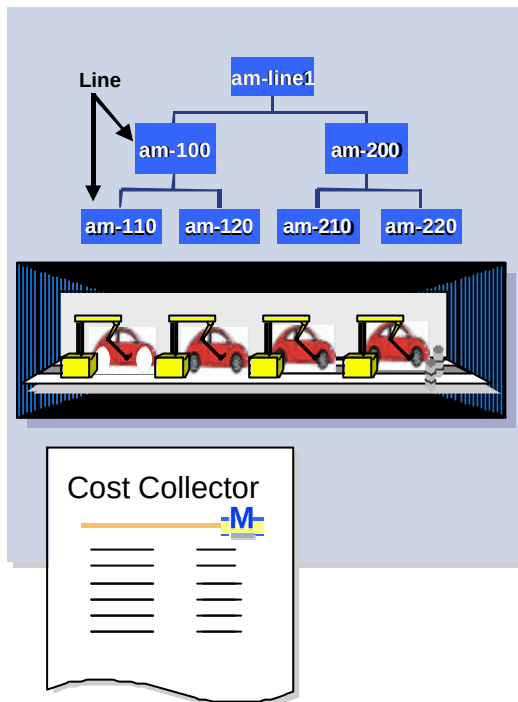


© SAP AG 1999

When to Use?

- **Very flexible production environment**
- **High set-up costs**
- **Full cost tracing needed**
- **Controlling by individual production lots needed**
- **Example:
Order related production**

- Order-related production is lot-based production to stock. Cost Object Controlling in order-related production provides information about a production order whose costs are settled to stock. Cost Object Controlling in order-related production can be used with or without the Production Planning module.
- For each production order, you can
 - Calculate planned and actual costs
 - Pass on actual costs to other objects in the R/3 System
 - Analyze planned and actual costs
- The functions for order-related production allow you to do the following:
 - Find out which costs were incurred for production orders that have not yet been settled, and pass on the work in process for each order to Financial Accounting and Profit Center Accounting at the end of each period.
 - Find out which production variances occurred for each order and pass these values on to FI, Profitability Analysis, and Profit Center Accounting as costs for the period.
 - Find out which costs were incurred for scrap and pass these values on to FI, Profitability Analysis, and Profit Center Accounting as costs for the period.
 - Total the costs for all production orders with specific selection criteria and display the results in a summarized form.



When to Use ?

- **High volume production**
- **Stable and continuous production**
- **No individual lot oriented controlling needed**
- **Collecting costs on product cost collectors**
- **Example: Repetitive production**

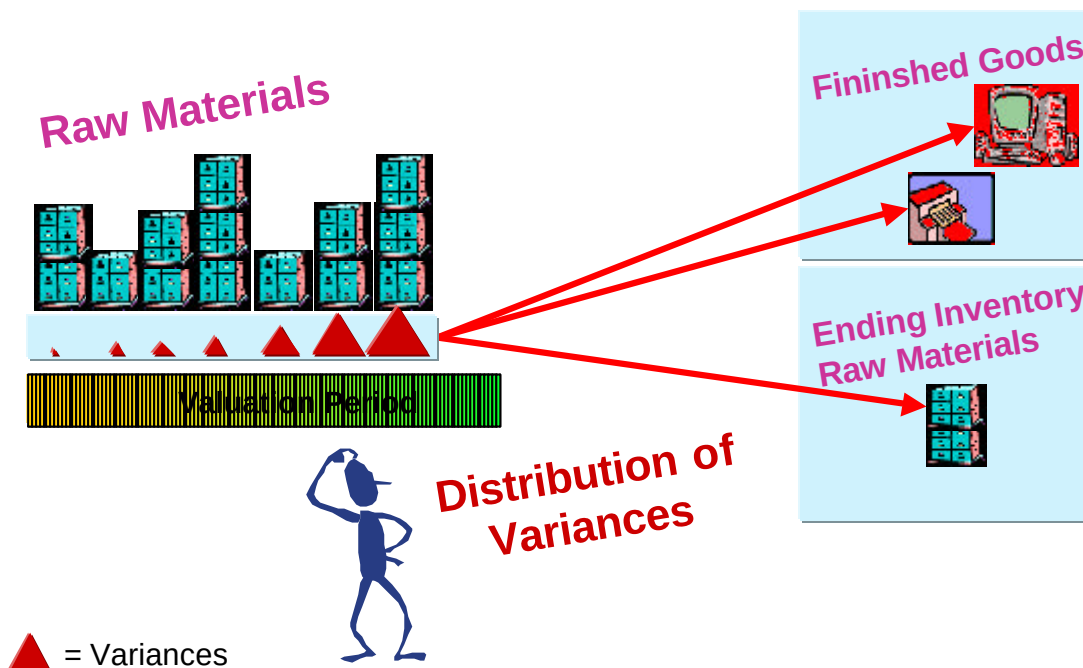
© SAP AG 1999

- Repetitive manufacturing refers to production planning and control using run schedule headers that deliver the semifinished and finished products to stock.
- The planned requirements for repetitive manufacturing are normally generated automatically by material requirements planning (MRP), although they can also be created manually. Production planning and control uses the planned orders for capacity planning and scheduling.
- In contrast to order-related production, the planned orders are not converted into run schedule headers using the lot size. Instead, the planned requirements are defined on run schedule headers. Run schedule headers are not based on lots, but exist over a period of time defined by the user. Under some circumstances this period can be the entire life cycle of the product.



- When to Use ?
- **Collecting costs and revenues collected by Sales Order irrespective of manufacturing scenario**
- **Collecting special sales costs on sales orders**
- **Tracking funds committed**
- **Calculating Work in Process and Reserves with Results Analysis**
- **Example: Controlling complex Make-to-Order Production**

- The Product Cost by Sales Order component is recommended for make-to-order environments.
- You can use the Product Cost by Sales Order component in the following situations:
 - When you are manufacturing in-house with reference to a sales order.
 - When you are purchasing products with reference to a sales order and reselling them to your customers.
 - When you are providing services whose costs are assigned to a sales order.
- This component allows you to do the following:
 - Calculate and analyze planned costs and actual costs by sales order item
 - Calculate and analyze planned revenues and actual revenues by sales order item
 - Calculate the value of your inventories of finished and unfinished products
 - Create reserves automatically
 - Transfer data to Financial Accounting (FI)
 - Transfer data to Profitability Analysis (CO-PA)
 - Transfer data to Profit Center Accounting (EC-PCA)



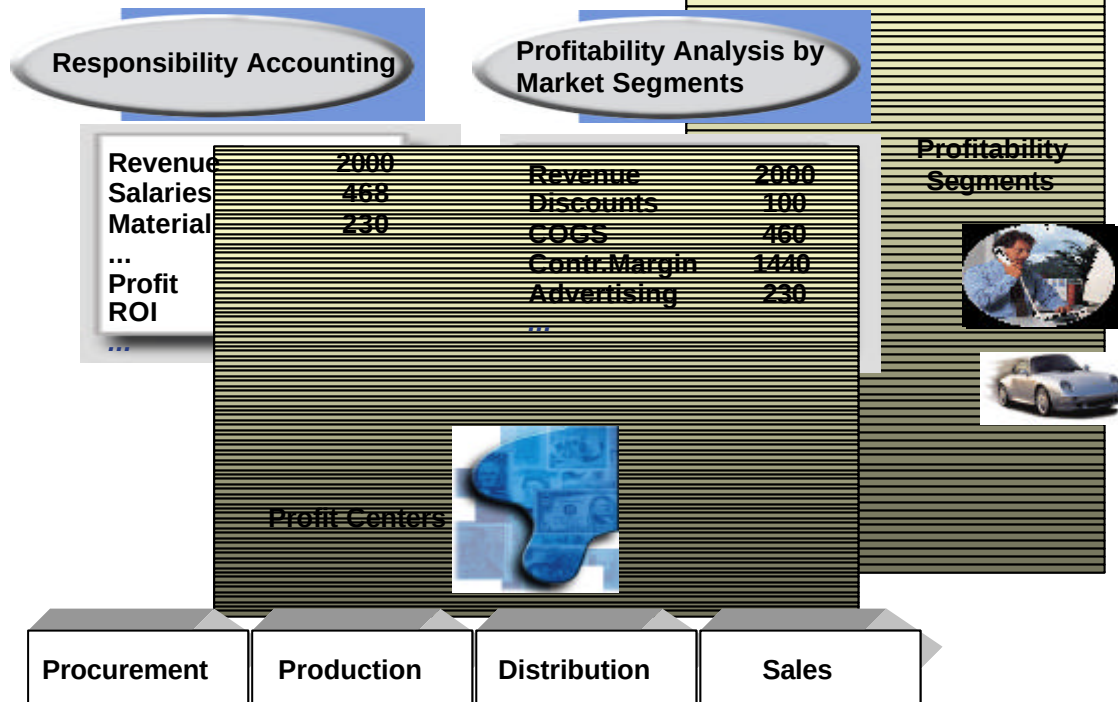
- Actual Costing uses the Material Ledger to store material prices in up to three currencies and according to three valuation strategies (group, legal and profit center).
- Actual Costing aims to provide the actual costs for each material at period close. Each material movement is recorded in the Material Ledger together with the preliminary valuation and any variance (from invoice or order settlement). Material settlement is used to integrate this variance into the material price at period close.
- Both single-level and multi-level material settlement are available. Multi-level settlement is used to reconstruct the quantity structure based on the material movements for the period, and assign variances for the raw materials to the finished and semi-finished products as follow-up costs.
- The actual price for each material can be updated to the material master for the closed period.



- **Profitability Management**
 - **Profitability Analysis (CO-PA)**
 - **Profit Center Accounting (EC-PCA)**



Aspects of Profitability Management



© SAP AG 1999

■ Profitability Reporting:

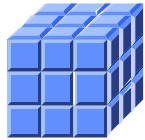
- Profitability Analysis (CO-PA) lets you analyze the profitability of segments of your external market. These segments can be defined according to products, customers, geographic areas, and numerous other characteristics, as well as your internal organizational units such as company codes or business areas. The aim is to provide your executive management, sales, marketing, planning, and other groups in your organization with decision-support from a market-oriented viewpoint.

■ Responsibility Reporting:

- EC-PCA lets you analyze internal profit and loss for profit centers. This makes it possible for you to evaluate different areas or units within your company. You can structure profit centers according to region (branch offices, plants), function (production, sales), or product (product groups, divisions). Profit Center Accounting is a component of the "Enterprise Controlling" module.

Typical Questions in Profitability Analysis

SAP



Contribution of Individual Market Segments

Which are the largest and fastest growing customers?



Margin goals of Individual Sales Entities

Did the sales force reach their contribution margin goal?

Success of Marketing Activities

What was the success of the most recent sales promotion for a product line?

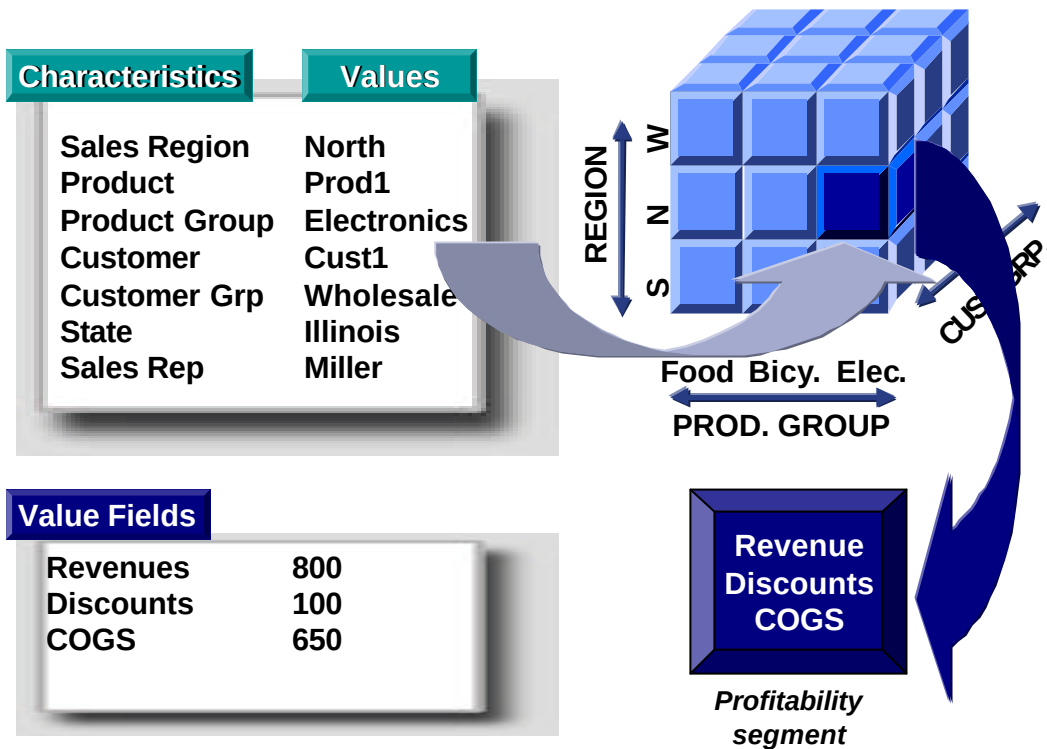


Revenue and Cost Structure

What is the impact of a pricing strategy for a group of customers?

© SAP AG 1999

- Profitability Analysis (CO-PA) enables you to analyze profits and contribution margins for market segments of your company. The objective of CO-PA is to support sales, product management, and corporate-wide planning and decision-making, using an external view from a market-oriented perspective.



■ Characteristics

- Answers the question: "What do I want to report on?"
- Examples: Divisions, Regions, Products, Customers

■ Characteristic Values

- Answers the question: "What values can I have for these characteristics?"
- Examples: Southern Region; Northern Region, Western Region

■ Profitability Segments

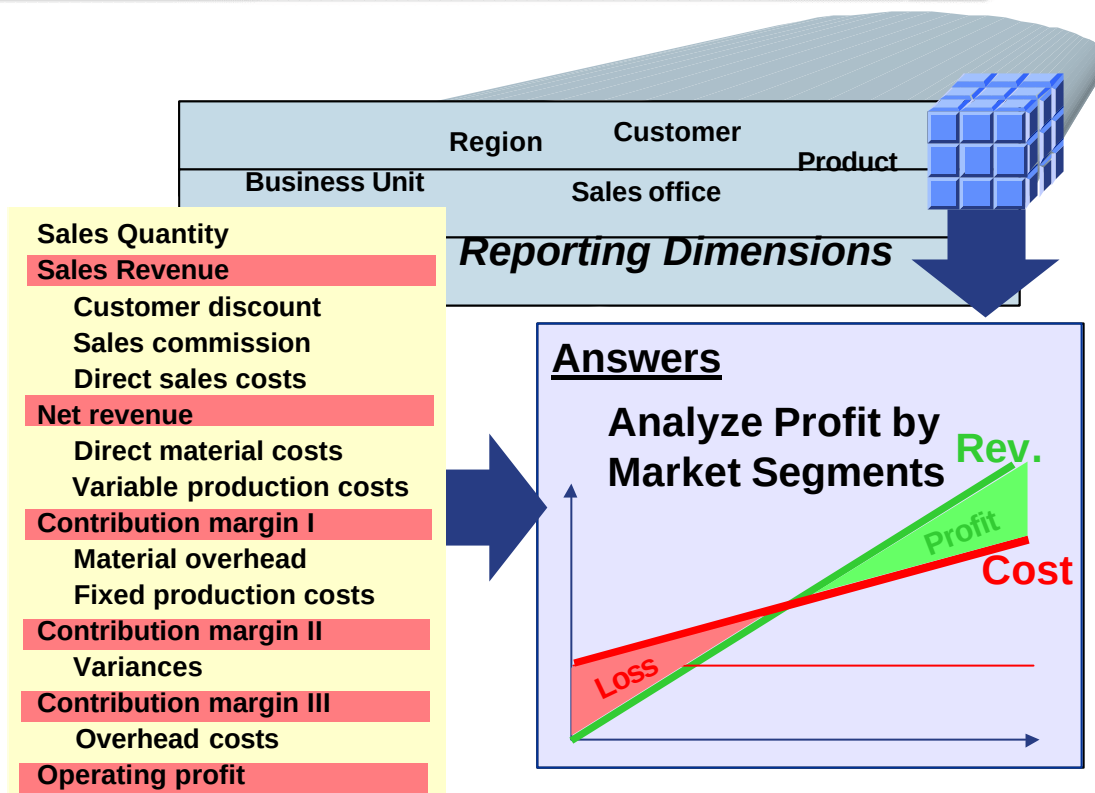
- Answers the question: "What is the specific segment of my sales market I wish to examine?"
- Example: Sales of product Prod1 to customer Cust1 in the Northern Region by sales rep Miller

■ Value Fields

- Answers the question: "What performance measures do I want to track and analyze?"
- Examples: Gross Sales, Surcharges, Discounts, Cost-of-Sales, Gross Margin

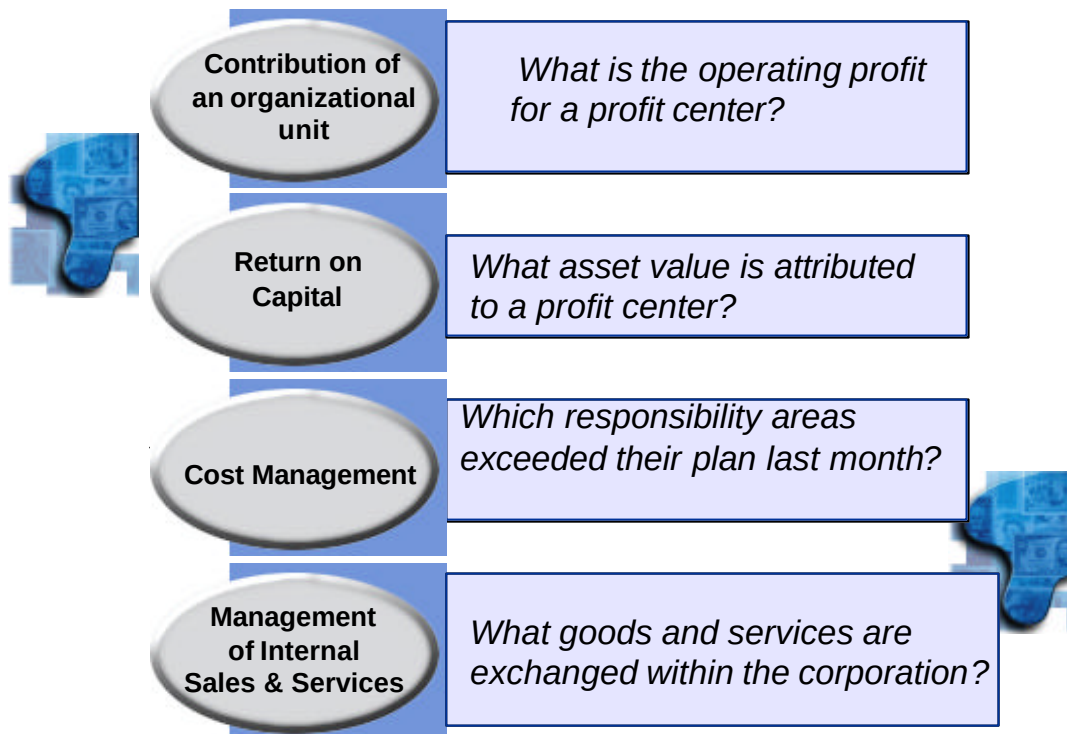
Profitability Analysis by Market Segments

SAP

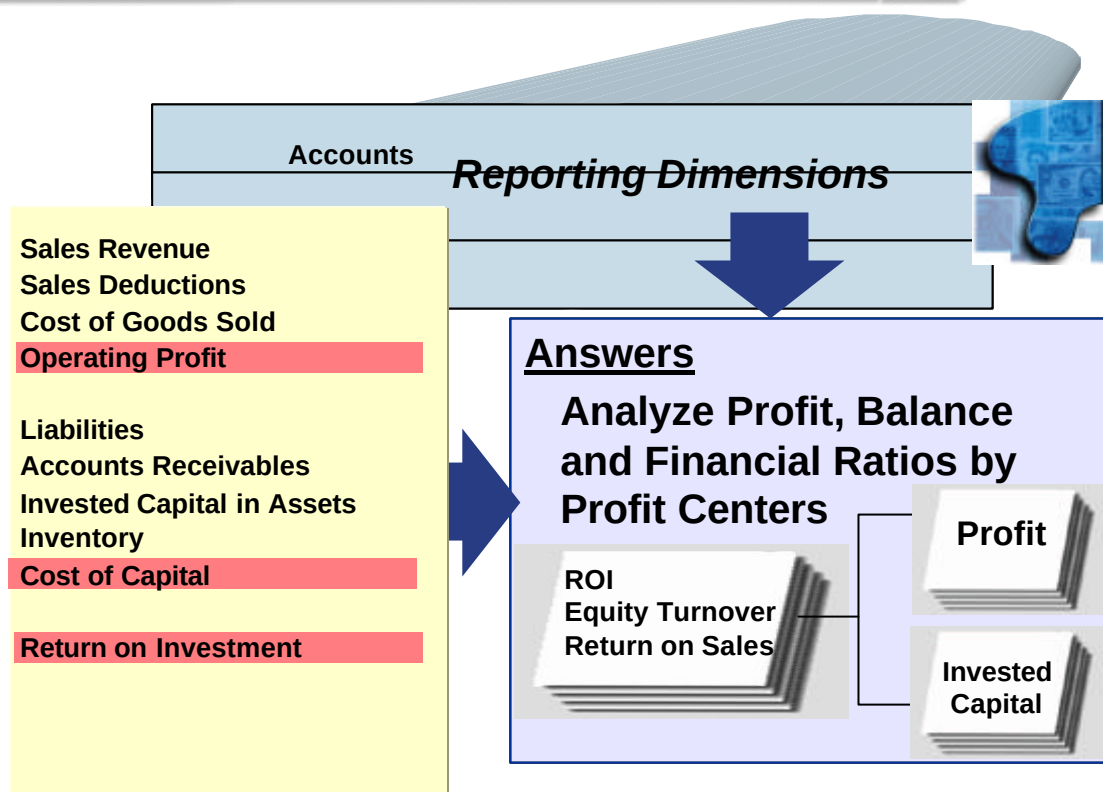


© SAP AG 1999

- The market segments are defined in terms of characteristics such as products, product groups, customers, customer groups, geographic areas, etc. For example, you may wish to analyze profitability for a specific group of products that you sell to a particular customer (or group of customers). When setting up CO-PA for use in your company, you will have broad flexibility to choose whichever characteristics are relevant for defining your company's market segments. Each unique combination of characteristic values (e.g. sales of product A to customer Y) defines a profitability segment.
- You must also decide which specific values related to profitability should be analyzed for those segments. These values are known as key figures. For example, you can define which types of revenue and expense/cost categories should be used to determine a value for gross margin according to your company's requirements. Here again, CO-PA gives you the ability to freely select whichever values are relevant to the various users in your company. If different types of users define gross margin differently (e.g. sales management vs. product management), it is possible to provide separate gross margin figures for each, calculated according to their individual requirements.
- CO-PA provides a multidimensional reporting tool that can be used to design reports that analyze data for any selected market segments, and any defined measures of profitability.



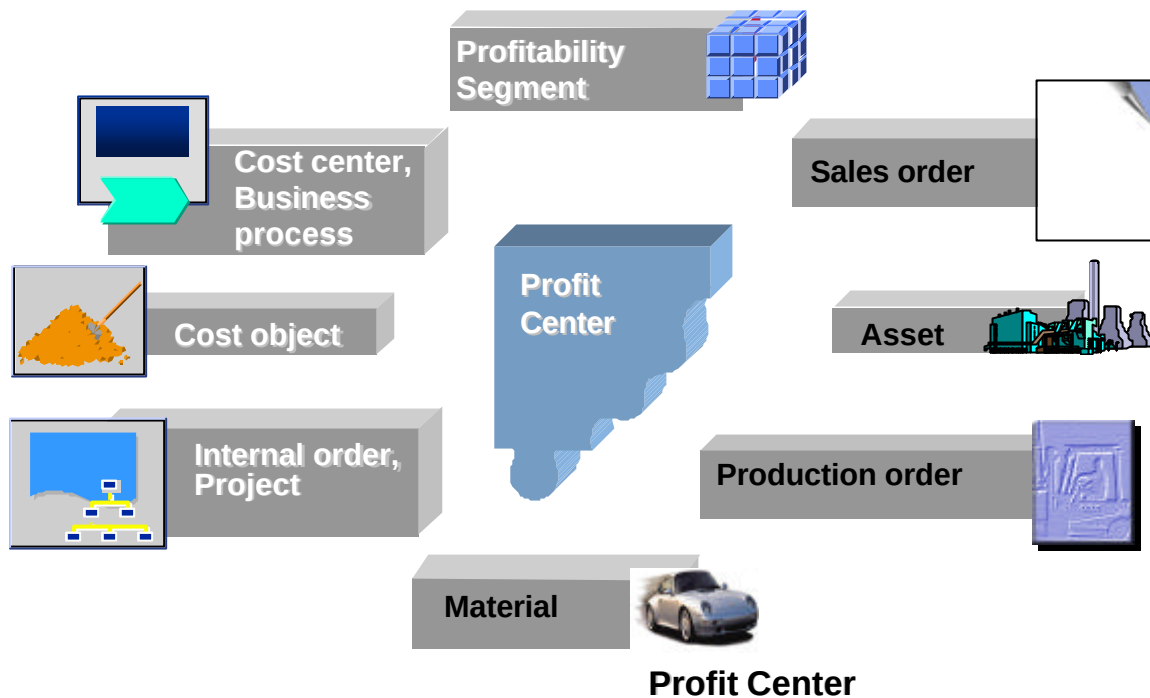
- A profit center is a management-oriented organizational unit used for internal controlling purposes. Dividing your company up into profit centers allows you to analyze areas of responsibility and to delegate responsibility to decentralized units, thus treating them as "companies within the company". EC-PCA lets you set up your profit centers according to product (product lines, divisions), geographical areas (regions, offices or production sites) or function (production, sales).



- Profit Center Accounting (PCA) allows you to calculate internal measurements of profitability. This internal view of profitability, then, reflects the success of a given profit center at meeting the profitability goal for which it was given responsibility.
- The Information System provides a tool for evaluating plan and actual data. Numerous standard reports are provided, and you can create your own custom reports as well. Reports can be executed for Profit Centers or Profit Center groups. Profit Center Accounting can report on selected balance sheet items, such as Assets, AR/AP, Material Inventory, and Work in Process. This permits the calculation of certain financial key ratios such as ROI (Return on Investment). Other reporting capabilities include detailed information on the source objects (e.g. cost centers, internal orders) that contributed costs posted to profit centers.

Profit Center Assignments

SAP



© SAP AG 1999

- When you implement Profit Center Accounting, you **assign each object** which incurs costs or revenues in your system to a specific profit center. These assignments also make it possible to display selected balance sheet items.
- The system automatically posts the data to Profit Center Accounting when it is posted to the original object. Both actual and plan data from the assigned objects in Profit Center Accounting are updated in this way.
- Cost centers, business processes, internal orders, projects, production orders, and cost objects have a profit center assignment field in their master records.
- A project, such as the construction of a crane, usually involves several profit centers (design of the motor, construction of the frame, and so on). Consequently, the various operational structures -- WBS element, network header and network -- are assigned separately to profit centers.
- Generally, revenue postings are transferred to Profit Center Accounting by determining the profit center assignment from the master record of the material in the sales order item in SD. The subsequent cost of goods sold posting is made to the same profit center when the delivery note is created.
- Profitability segments do not have master records. A profitability segment is a combination of characteristics, such as a customer, product, plant, distribution channel, and so on. One of these characteristics is always the profit center. The profit center can be derived automatically from the material/plant or other characteristics, or you can enter it manually.
- Assets are assigned to profit centers indirectly via the cost center stored in the asset master record.

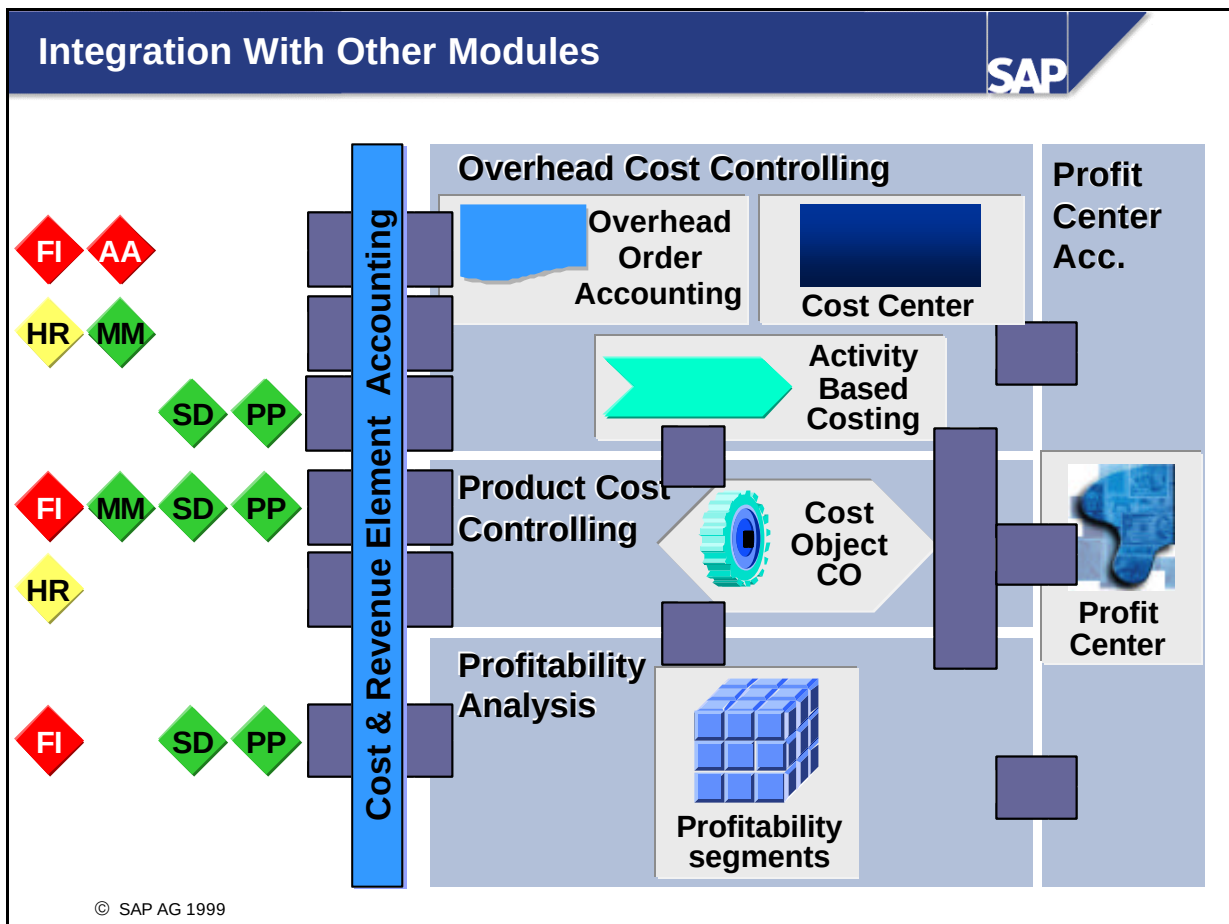
Cost-of-sales accounting	Period accounting
Revenue - Sales deductions - Cost of sales	Revenue - Sales deductions +/- Inventory changes +/- Fixed Asset changes +/- Changes to work in process
Gross results	Total output
- Sales and Marketing costs - Administration costs - Research and development	- Material costs - Personnel costs - Depreciation - Interest
Net results	Net results

- Two accounting methods can be used for generating profitability statements: the cost-of-sales method and the period accounting method. Applying either method to a given set of business transactions under a given set of accounting standards should yield the same bottom-line result (profit), in concept. The difference is in how the overall profit and loss picture is presented.
- Companies must choose one of these methods for generating their external income statements. The choice is often determined by country-specific legal requirements. However, the methods facilitate two different types of analyses, both of which a company may find useful. So it may be worthwhile to track information in both ways for internal profit reporting.
- **Cost-of-sales accounting:** With this method, the emphasis is on matching the revenues for goods and/or services provided (the value that a company receives as a result of sales) against the related costs/expenses for those items (the value that is lost when products are transferred out of the company). This accounting method provides profit and loss information in a manner that is particularly effective for various margin analyses. Consequently, it is especially useful for the sales, marketing, and product management areas.
- **Period accounting:** With this method, the emphasis is on summarizing productive activity through changes in the value of certain asset categories over the course of a period, for a given organizational unit. This accounting method presents the revenues that have been recognized for the period, and also the various period costs/expenses (such as personnel costs, depreciation, etc.). But it also includes the changes for the period in inventory value, work-in-process, and fixed assets. As such, it is useful as a measure of productivity for profit centers.



**At the conclusion of this TOPIC,
you will be able to:**

- **Explain the basic integration points between the components of CO.**
- **Explain the basic integration points between CO and other R/3 modules.**
- **Run a simple inquiry in the system on an FI document and associated CO document(s).**



- Other R/3 modules generate data that has a direct impact on CO. For example, when non-stock consumable items are purchased, an expense is posted to the GL. 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 a production cost center, or elsewhere in CO.
- The Financial Accounting application area of R/3 is a primary source of data for Controlling. Typically, most expense postings to the General Ledger would result in a cost posting 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). Revenue postings could also be created by a journal entry to the G/L, and would also typically generate postings in CO to CO-PA and Profit Center Accounting.
- The Human Resources (HR) modules can generate several types of cost postings to Controlling. The HR system allows you to allocate the cost of work to different Controlling (CO) objects. In addition, planned personnel costs can be transferred to CO as input to CO planning.
- The Logistics area of R/3 also has numerous integration points with Controlling e.g. when doing a goods issue to a controlling object or a goods receipt from production.
- The Production Planning (PP) and the Sales and Distribution (SD) area of Logistics also work very closely with Controlling. Consumption of activities, cost of goods issues, overhead surcharges, process allocations and direct primary costs can be posted to the cost object (e.g. PP-production order, sales order item) and by doing the period closing data like WIP, variances and price differences are settled to CO-PA, CO-PCA and FI. The billing document can incur revenues directly to CO-PA or to the sales order, if the sales order item is a cost object.

FI Data Entry:

Line item 001

- G/L Account 420000
(P&L)

- Amount

- Controlling Object
Line item 002

- G/L Account 113100
(Bal. Sheet)

- Amount

FI Document # 1200000089

G/L Account (P&L) 420000	G/L Account (Bal. Sheet) 113100
Amount	Amount

CO Document # 1000000009

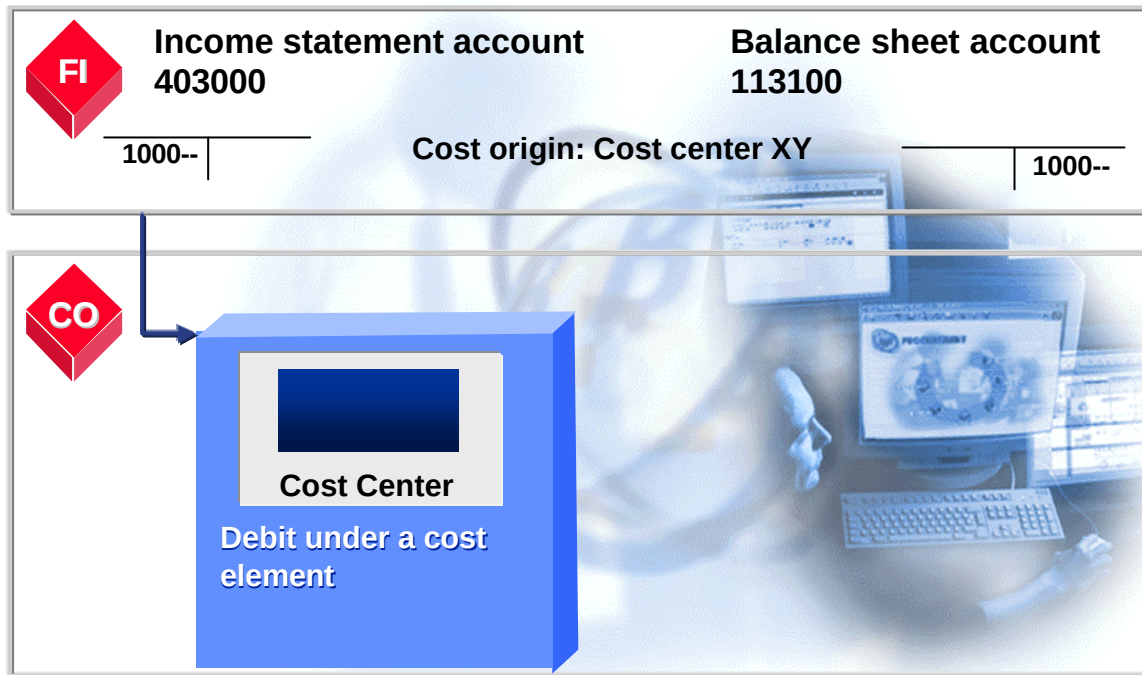
Controlling Object

Cost Element (420000)	Amount

- When an FI document is created that posts to an expense (or revenue) account having a corresponding cost element, and a valid controlling object (such as a cost center) is identified for the expense line item, a controlling document is also created.
- This CO document has its own unique number and contains the following details:
 - controlling object posted to
 - the cost element used
 - the amount
- In the above example, the FI document debited a P&L account and credited a Balance Sheet account. The CO document debited the controlling object (using the corresponding primary cost element of the same number). Note that there is no corresponding credit entry in the CO document.
- 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. (Note that 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.)

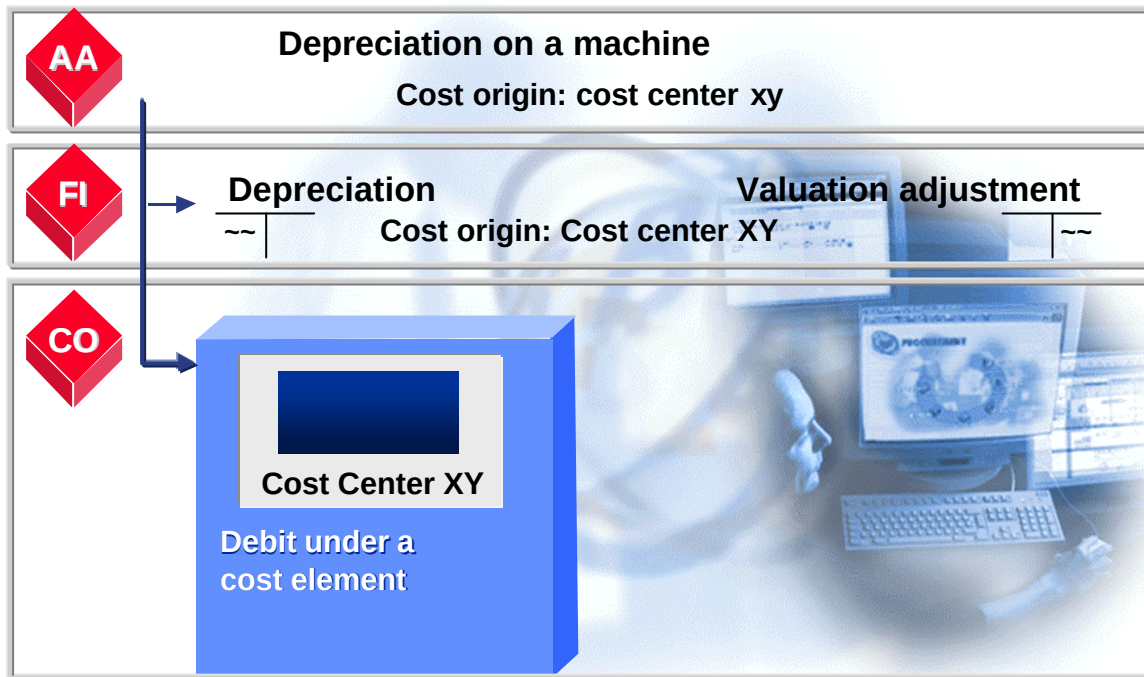
Posting from FI to a Cost Center

SAP

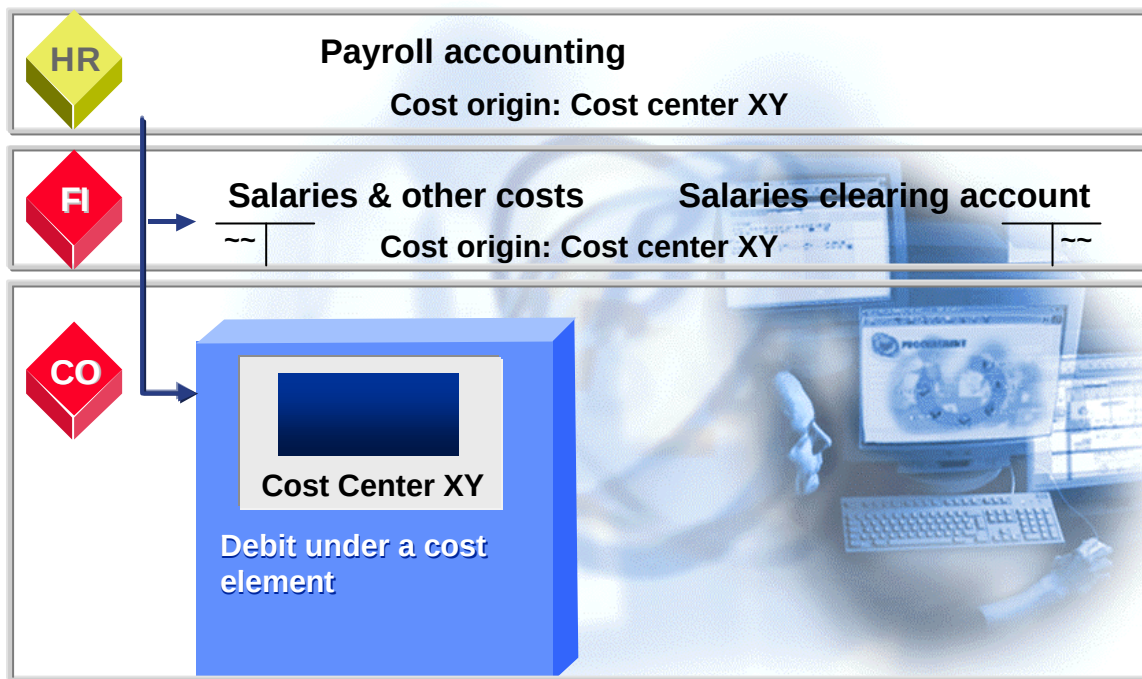


© SA

- When a journal entry is created in FI that includes an expense line item, that expense can be posted to CO as a cost if:
 - a primary cost element has been created in CO that corresponds to the expense account used in the FI journal entry, and
 - a valid cost center is referenced in the FI line item.
- As a result, two separate documents are created: both an FI document as well as a CO document. Each document has a unique document number, and it is possible to drill down in either document to link to the other.



- If Asset Accounting initiates a transaction in FI that affects a P&L account for which a primary cost element has been created, a CO posting will also be created.
- An asset master record has a cost center field that can be used to assign the asset to a cost center.
- Depreciation and interest expense postings are examples of AA-initiated transactions that could generate cost postings to CO.



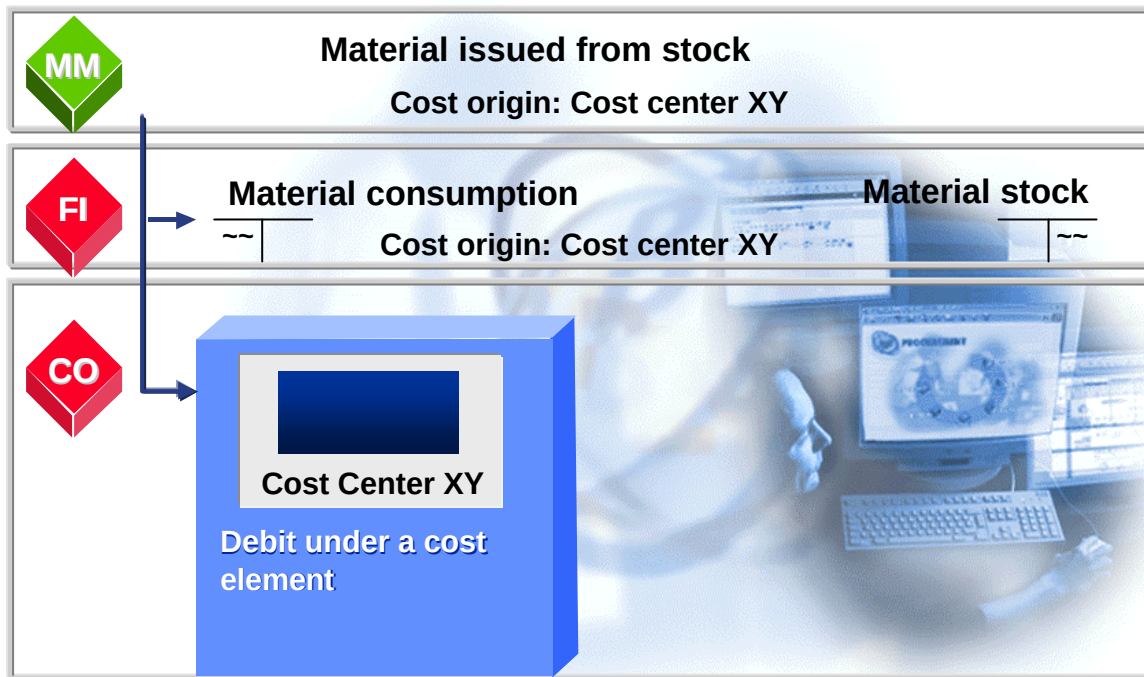
- Payroll accounting in Human Resources calculates the amounts for the different salaries and related costs, and records them in a session.
- When you process the session, the system generates FI postings and also posts the costs to the cost centers to which the employees are assigned.
- If you prefer, you can charge all the costs to a clearing or collecting cost center and then use CO tools to distribute or transfer them to the actual cost centers.
- Employee master data in HR can be assigned to infotypes. The infotype determines the company code, personnel area, and personnel subarea to which the employee is assigned. For example, Infotype 0001 Organizational Assignment enables you to determine the cost center to which personnel costs are debited, and to assign your employee to a business area.

Time Sheet							
Personnel number		000001 Max Miller					
Date		01/01/2000 - 12/31/2000			Week 12.2000		
Receiver	Sum	Monday	Tuesday	Wednes.	Thursday	Friday	
3200	40.50	8.50	8.50	7.00	8.50	8.00	

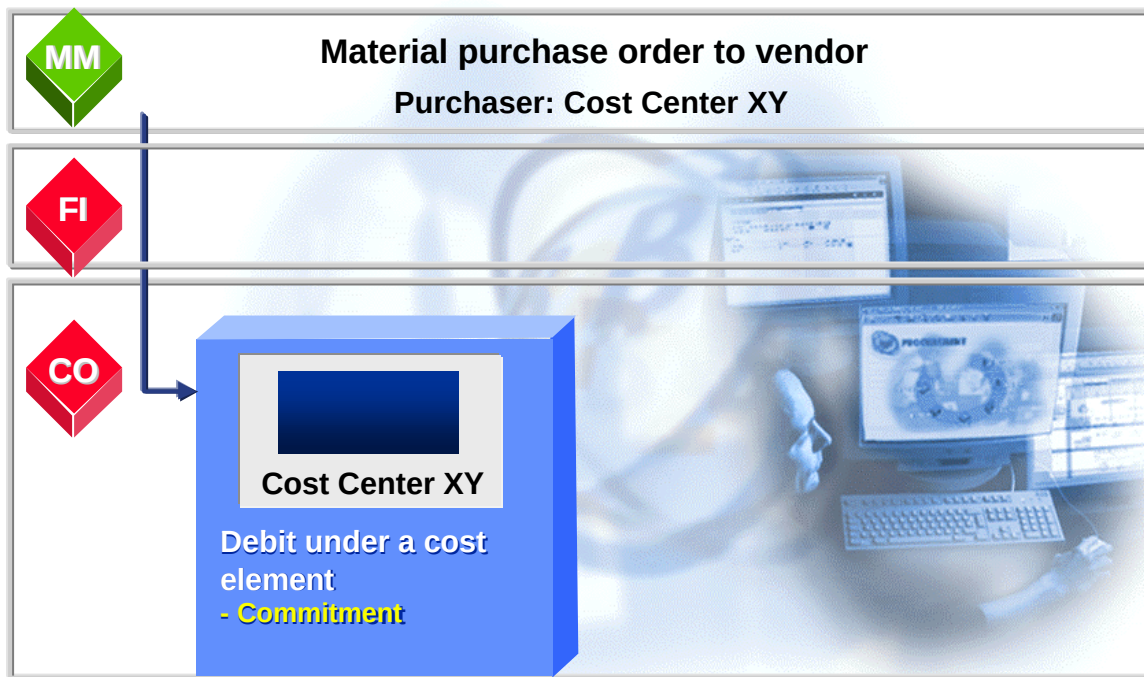
- Single entry point into R/3
- Easy-to-use multiple entry screen
- Use of templates and defaults
- Approval process
- Flexible via user exits
- Audit trail

© SAP AG 1999

- The R/3 Time Sheet component facilitates standardized, cross-application time recording. The time sheet combines the existing functionality for time recording from a variety of applications into a single transaction. Using the time sheet, you can supply the following components with information on working times:
 - Attendance and absences in Human Resources (HR)
 - Internal activity allocation in Controlling (CO)
 - Confirmations in Plant Maintenance (PM), Project System (PS), and Service Management (SM)
 - Entry of services performed in External Services Management (MM-SRV)
- Both internal employees and external service providers can use the time sheet to enter their personal working times into the system. There is also a screen for central data entry for several persons. The time recording interface is designed for ease of use.
- Working times are entered as a number of hours or as actual clock times, and are always linked to a specific person. Each internal employee or external service provider is assigned a personnel number in the R/3 System. You can create the required mini-master record even if you do not use HR.
- Users access the time sheet with special data entry profiles. When you define these profiles in Customizing, you can tailor the entry process according to the user's level of knowledge and area of activity. There is a field selection function for the data entry profiles. You can use the function to limit the fields that appear on the entry screen.



- **Goods issue** transactions posted in the Material Management component can be assigned to a cost center. An example could be parts issued to an R & D cost center for constructing a product prototype.
- From the aspect of the cost center, this type of transaction is called material consumption. When you enter a goods issue in the system, you must enter a **movement type** to differentiate between the various categories of goods movements. A movement type is an identification key which has important control functions in Inventory Management, such as updating stock and consumption accounts.
- A goods issue to a cost center creates an FI transaction that debits a material consumption expense account and credits a material stock (inventory) account. The cost center is debited with the value of the goods issued using a primary cost element.



- A purchase order is a formal request from a purchasing organization to a vendor or a plant to supply or provide a certain quantity of goods or services at or by a certain point in time. A purchase order does not create an entry in FI. Each item in a purchase order can be assigned to a separate cost center (or other controlling object).
- Once posted, the purchase order record creates a “commitment” line item for the cost center entered on the purchase order item. The Information System can report on outstanding commitments for a given cost center.
- Subsequently, when the actual costs are incurred (such as when the ordered goods are delivered), the R/3 System clears the commitment and posts the actual costs.



Income statement account

Balance sheet account

Cost origin: Order 123456



Order 123456

Debit under a cost
element
- Real costs

optional
additional

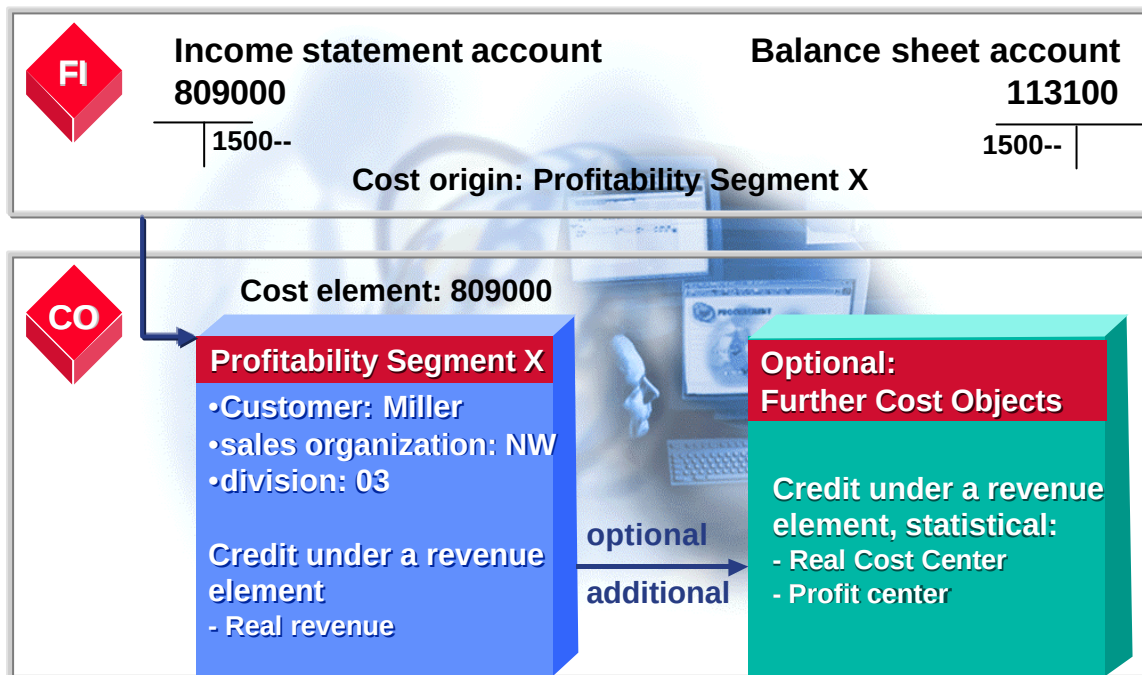
**Optional:
Further Cost Objects**

Debit under a cost
element, statistical:
- Real Cost Center
- Statistical project
- Profit center
- ...

- In this example, the internal order is entered in the FI document as the account assignment object. The internal order is apparently a real object, which means that the cost posting is a real posting.
- If the FI document were to also specify a cost center as an account assignment object, the cost center would be updated statistically. When a real internal order and a cost center are both specified in the source document line item, the real posting is directed to the order, and statistical postings are recorded for the cost center and profit center.

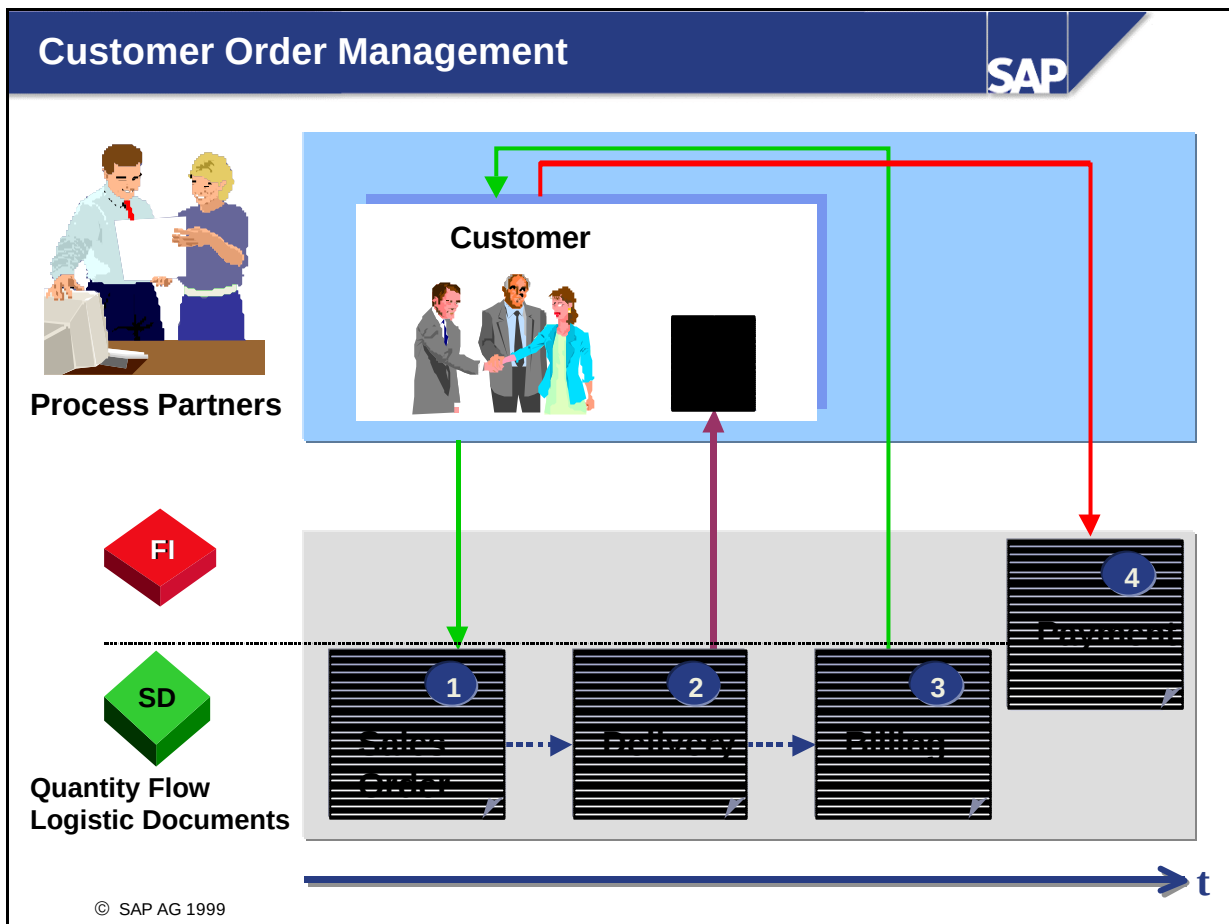
Posting to a Profitability Segment

SAP



© SAP AG 1999

- In this example, there is a revenue posting to FI. If there is a primary cost element of type 11 (revenues) that corresponds to the revenue account, then the revenue will post to the appropriate profitability segment in CO-PA.
- Real revenues can be posted only to a profitability segment, customer order, customer project, or revenue order. As with cost postings, revenue postings to profit centers are statistical.
- Additionally, revenues can be entered statistically on cost centers



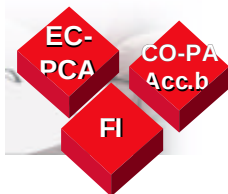
- Effective sales order processing ties all activity to customer demand in a series of tightly integrated processes. R/3 Sales and Distribution gives you precisely this kind of sales order processing using a series of linked documents to generate a workflow for sales and distribution. Sales and Distribution begins with pre-sales processing and ends with customer payment for goods received and services rendered. Sales Distribution represents each of these processes with electronic documents, each linked both to preceding and subsequent electronic documents.
- As part of Sales Order Processing, you create a sales document.
- During Inventory Sourcing, R/3 determines the supplier of the inventory, based on data that you create and control. Is the supplier one of your plants? If so, which one? Is the supplier a third-party vendor? If so, which one?
- As a part of Delivery, you create a delivery document.
- During Billing, you create a billing document.
- In the Customer Payment process, you receive payment and post the payment receipt in Financial Accounting (FI).
- In R/3, the documents defined in Sales and Distribution help you manage the Customer Order Management cycle for you and your customer.

Transferring Incoming Orders

SAP

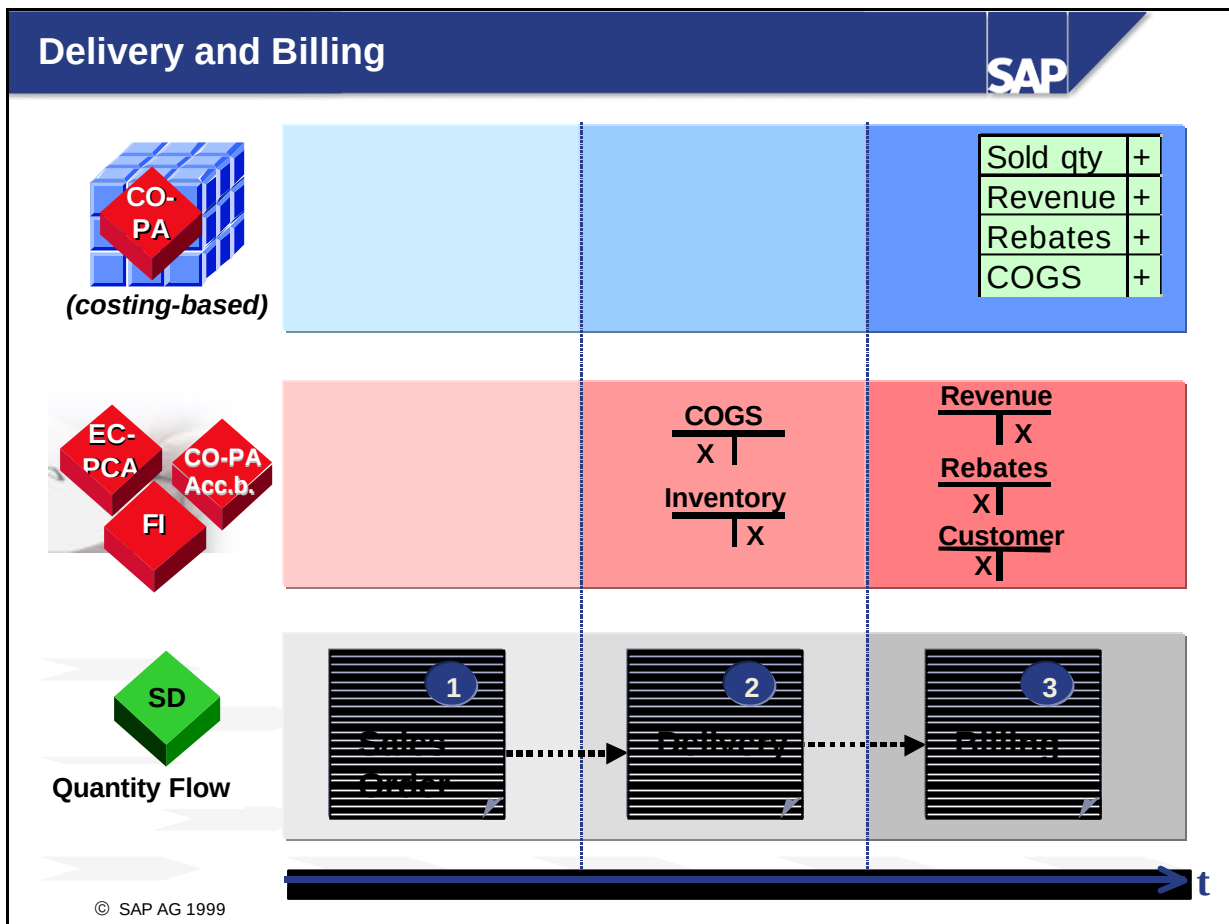


Sold qty	+
Revenue	+
Rebates	+
COGS	+

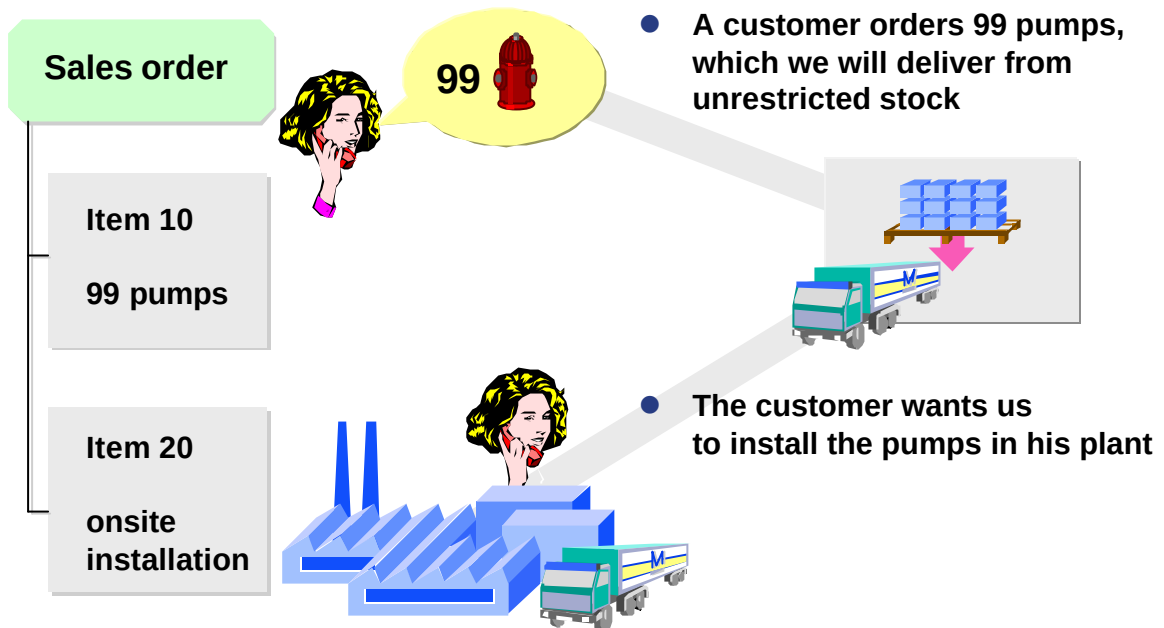


© SAP AG 1999

- You can value incoming sales orders (as expected revenues) and transfer them from SD to costing-based CO-PA in order to obtain an early analysis of anticipated profits. Consequently, you can create reports that not only reflect the course of actual profits and contribution margins on the basis of billing documents, but also allow you to analyze these developments on the basis of incoming orders.



- Data is transferred to account-based CO-PA at the same time as it is posted in Financial Accounting (FI). This means that the system creates line items in CO-PA when it creates the accounting documents upon goods issue and billing. Note that a line item is created in CO-PA for each item and each cost or revenue element. The amounts these line items receive are also the same ones posted in FI. No line items are created here for incoming sales orders, since those do not lead to postings in FI.
- The values in account-based CO-PA are assigned to profitability segments and are stored in the cost or revenue element determined in MM (for goods issues) or SD (for billing documents) and posted in FI. Note that the data is only transferred to account-based CO-PA if the general ledger account posted in FI is defined as a cost or revenue element in CO. (See also the general posting logic in Controlling.)
- A business transaction is usually concluded in SD with the billing **document**. The **billing** data is automatically transferred to FI, where the revenue and receivable postings are made at the same time.
- When a billing document is created, SD calculates all sales revenues, sales deductions, and other values (such as the standard cost) using pricing procedures, and stores these values in condition types. By assigning these condition types to the value fields in costing-based Profitability Analysis, you can have the system automatically transfer their values to CO-PA.

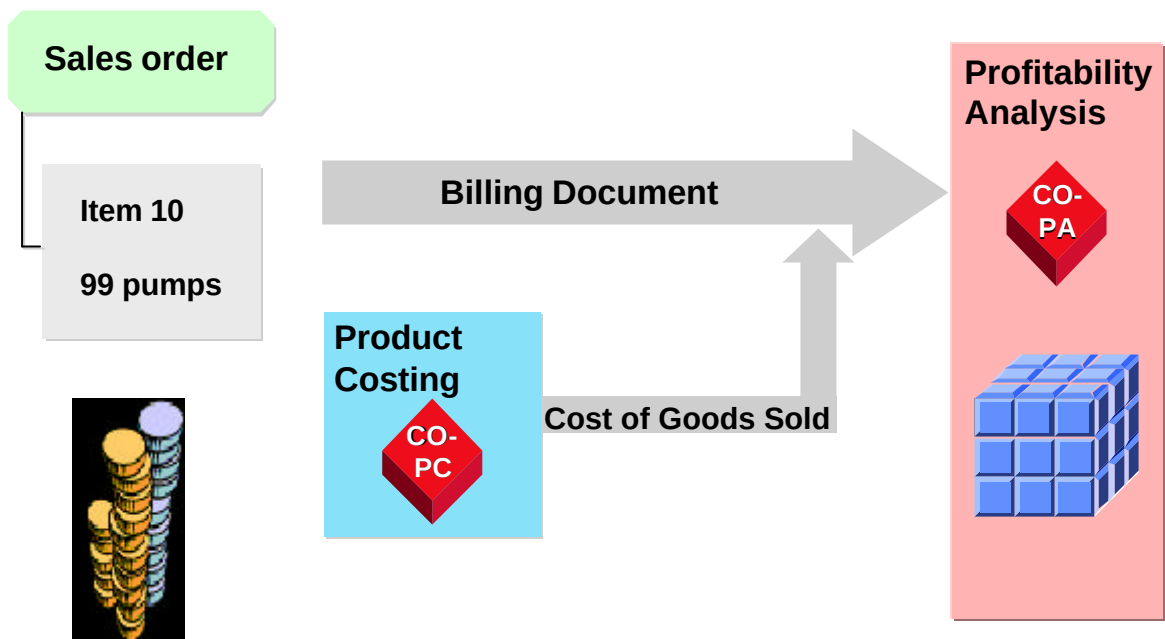


© SAP AG 1999

- This example combines the sale of a product from finished goods inventory together with the sale of a service.
- If a customer orders both products and services, each item is depicted as a separate sales order item.

Selling Goods and Services without Sales Order Controlling

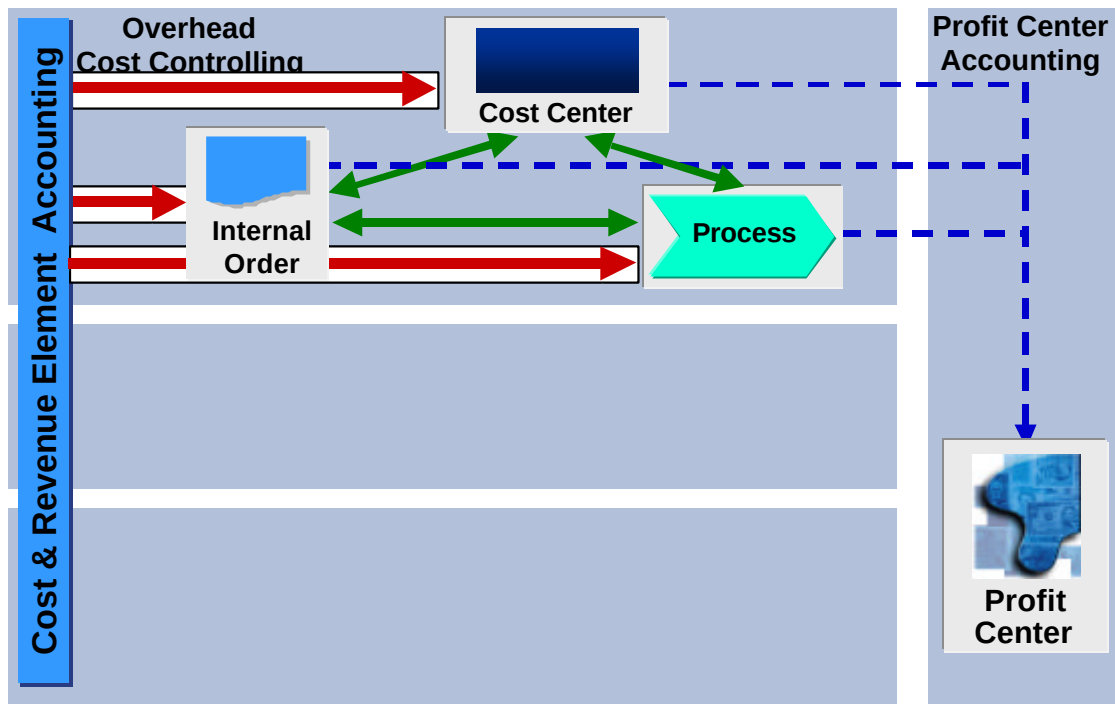
SAP



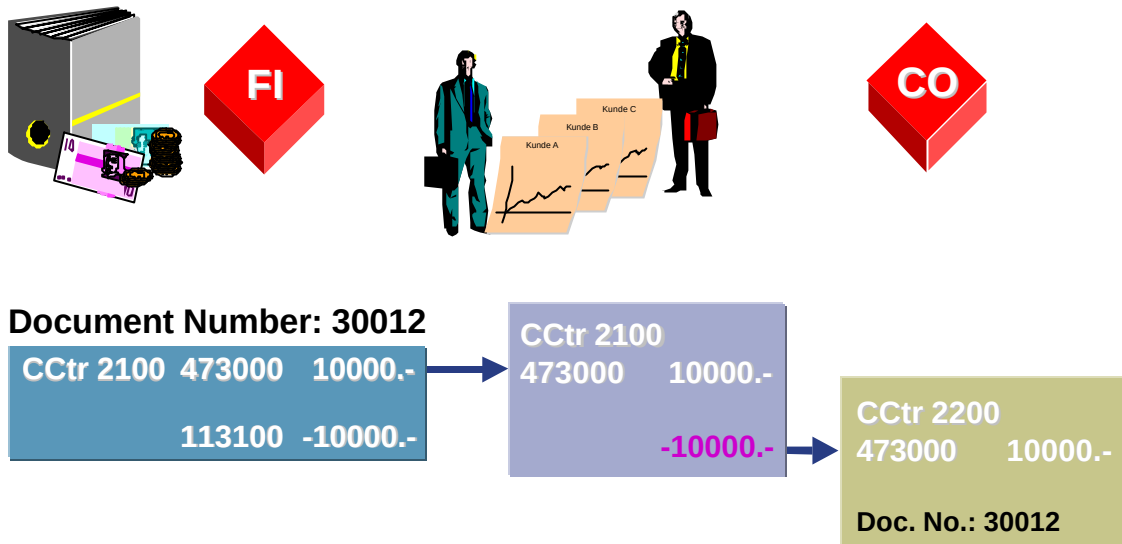
© SAP AG 1999

■ First sales order item (Item 10):

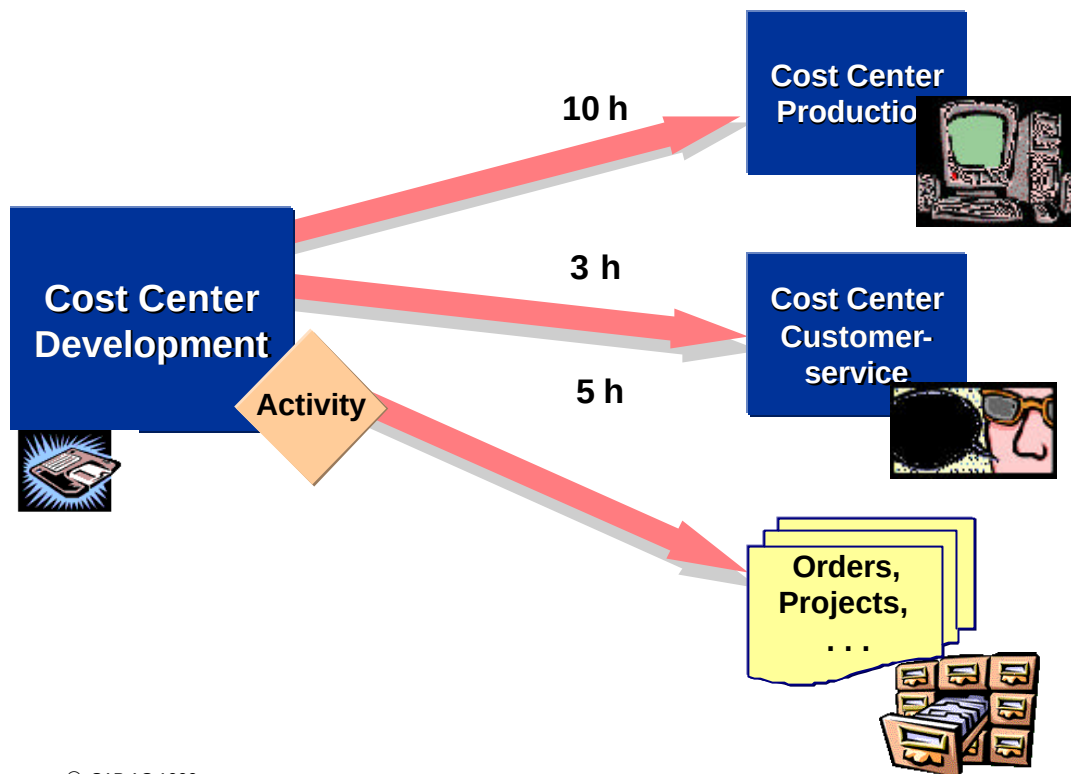
- The first item is related to products, which we produce in a make to stock environment. The production process is controlled by a production order, which delivers the finished goods to warehouse unrestricted stock, for sale at a later time.
- In this case, the sales order item is not a cost object.
- The products are shipped to the customer without postings to CO. When the billing document is created in SD, revenues and cost of goods sold postings are made to Financial Accounting and to CO-PA.
- Since the sales order item is not a cost object in this scenario, the revenues will be transferred directly to profitability analysis (CO-PA) during the billing process. The cost of goods sold posting to CO-PA is based on a cost estimate created previously in Product Cost Planning. Production variances are transferred to PA during settlement of the production order.



- There can be numerous interrelationships between the various CO components. Value flows can occur for many different purposes.
- Within the Overhead Cost Controlling area, costs can be posted to cost centers and internal orders from other R/3 modules (external costs). Cost centers can then allocate costs to other cost centers, to orders, and to processes in Activity-Based Costing (ABC). Processes, in turn, can pass costs to cost centers and orders. Internal orders can settle costs to cost centers and to processes in ABC (as well as to other orders).

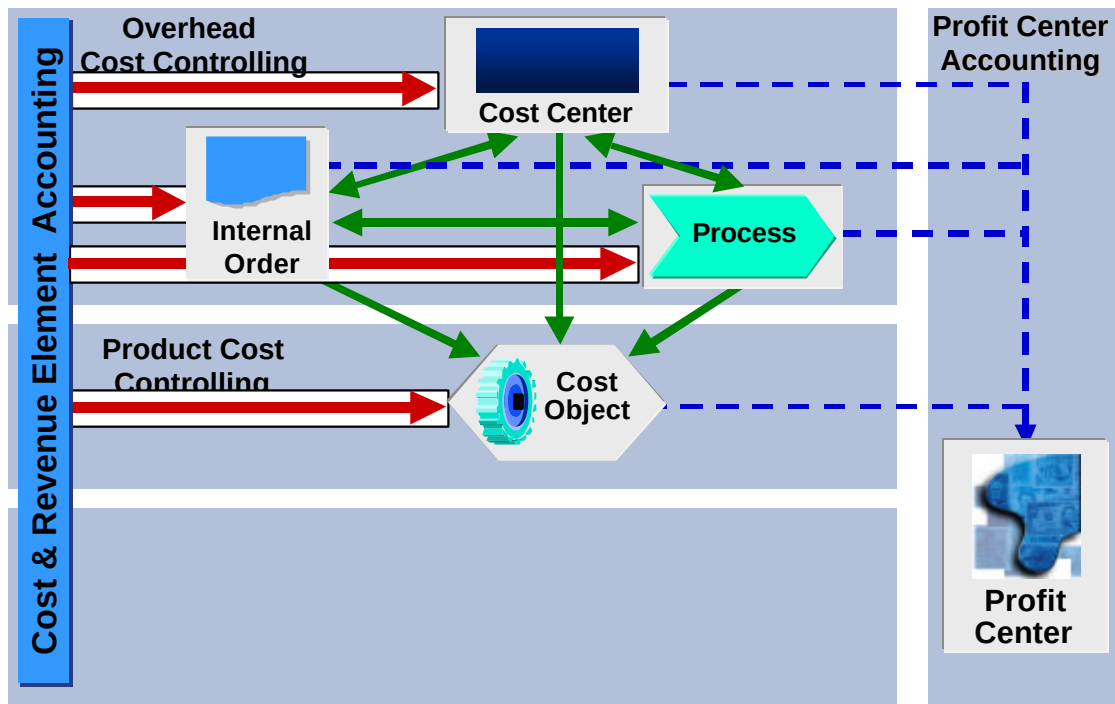


- You can repost primary costs from one controlling object to another using transaction-based transfers; the original cost element is always retained. This function is designed to correct posting errors. Posting errors should preferably be corrected in the application component where they occurred, so that external and internal accounting (FI and CO) are always reconciled. Posting errors involving assignment to a controlling object (cost center or internal order) can, however, be corrected using a transaction-based reposting in CO.
- There are two types of reposting transactions: reposting costs (or revenues), and reposting line items.
- The reposting costs transaction is a simple transfer of cost from one controlling object to another. This reposting does not preserve a direct link between the amount transferred and the transaction that originally posted the costs to CO.
- Alternatively, you can repost line items from CO documents. To do this, the CO reposting document must reference the original FI document that posted the costs to CO. This enables you to track the movement of cost within CO, and still preserve the link with the originating FI document.
- You can enter multiple receiver objects for a line item reposting. The full amount of the original line item must be reposted.

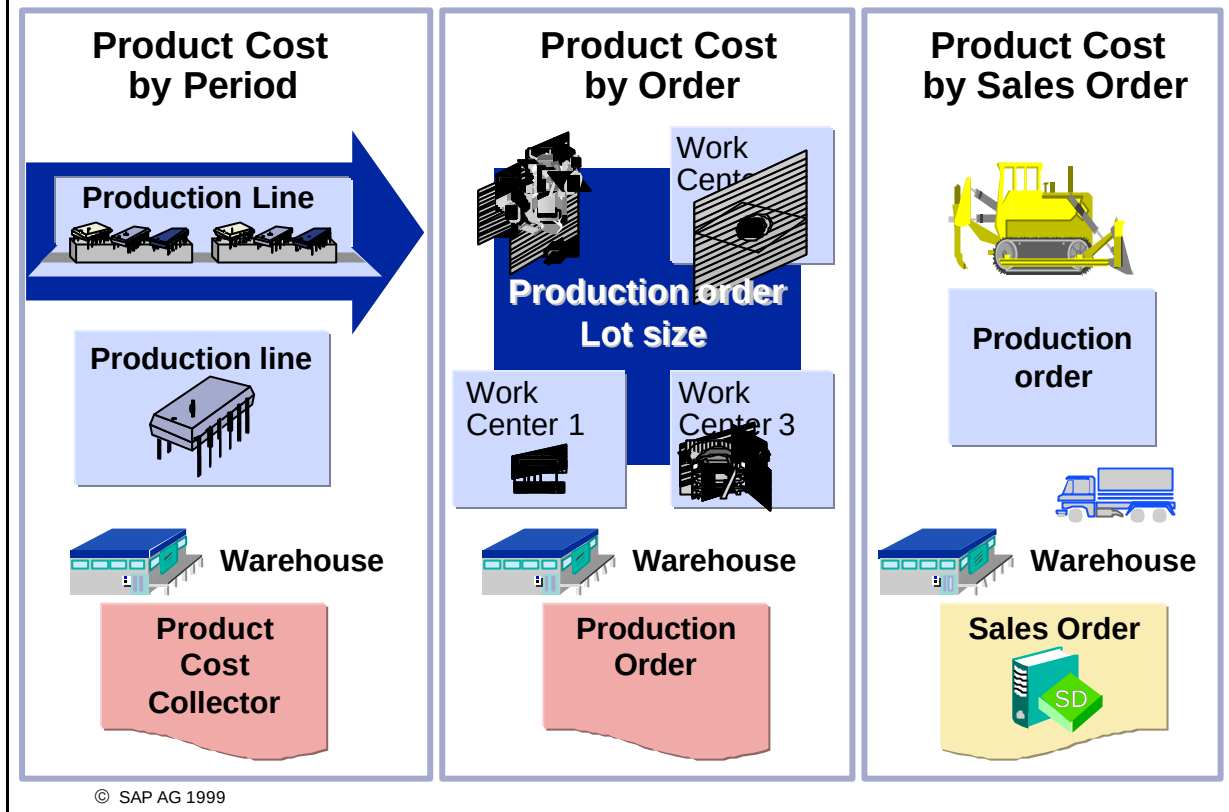


© SAP AG 1999

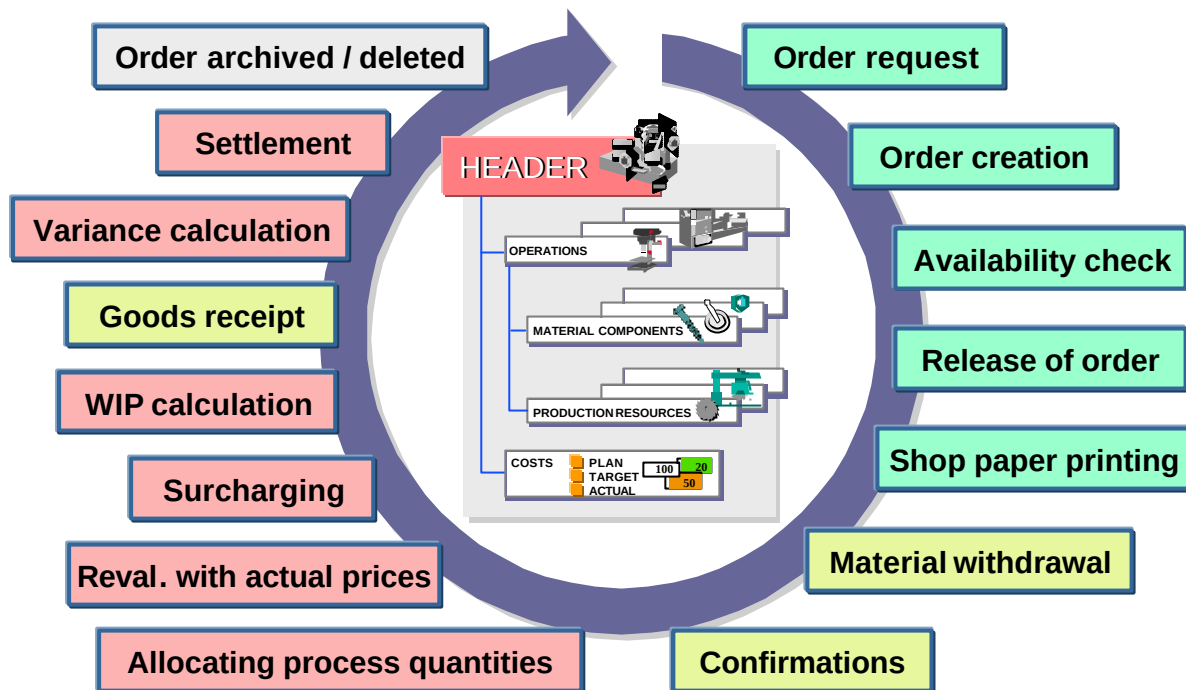
- Direct activity allocation deals with the measurement and allocation of a quantity of activity type units produced by a cost center.
- To enter a direct activity allocation, you record the cost center providing the service (sender cost center), the object receiving the service (receiver), the type of service performed (activity type), and the quantity of service provided (number of units of the activity type consumed). Note that only a cost center can be the sender in an activity allocation. The receiver can be any real controlling object, such as a cost center, order, project, and so on.
- Direct activity allocation credits the sender cost center and debits the receiver object. Debits and credits use a secondary cost element (category = 43). This cost element is maintained in the activity type master record. The allocation is valued by multiplying the quantity of activity produced by the planned activity price.
- A direct activity allocation is documented by creating line items from the perspectives of both sender and receiver.



- There are also important cost flows that can occur between the Overhead Cost Controlling and Product Cost Controlling components. Cost objects (such as production orders, etc.) can receive direct cost postings from FI (such as when an invoice receipt is assigned to the cost object); allocated costs from cost centers (as production activities are performed, or from assignment of overhead); costs settled from internal orders; and costs allocated from processes in ABC.

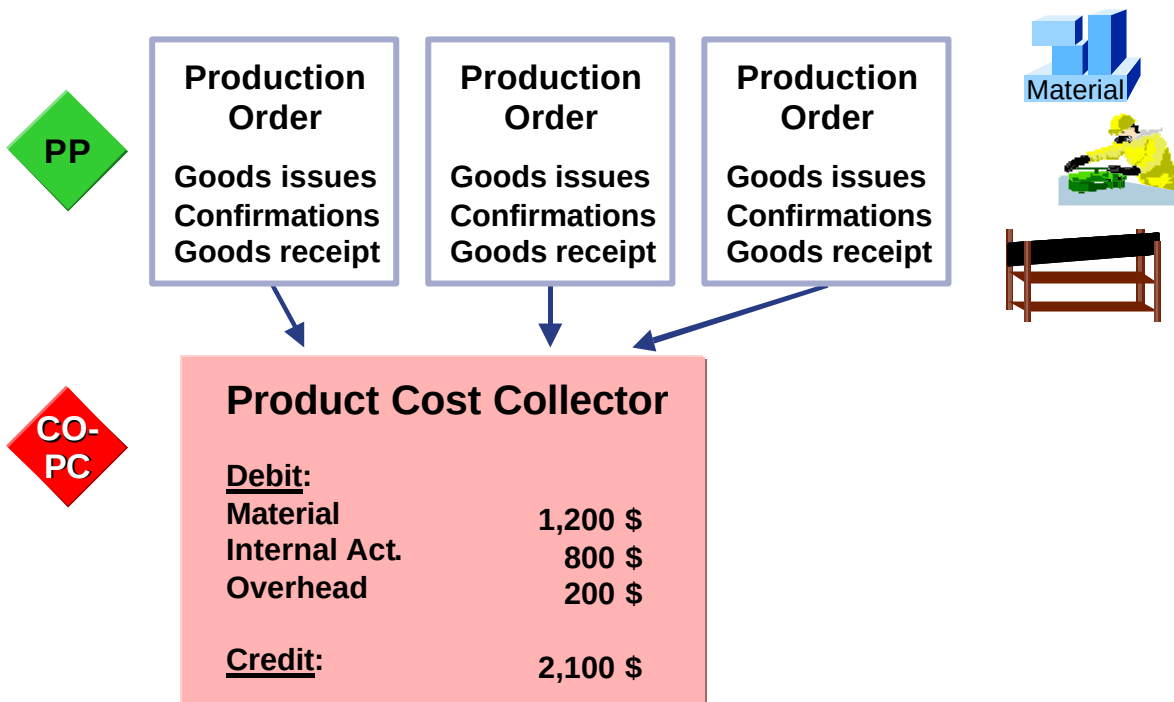


- In Product Cost by Order, Cost Object Controlling provides information on production orders whose costs are settled to stock. The order quantity is of central importance for cost object controlling in this scenario, since the planned costs of the order are calculated using this quantity, and the actual costs cannot be settled until the final delivery of this quantity has been made. The actual costs for the internal activities and materials are collected on each production order, and can be compared with the planned costs for the order, as well as the results of the product cost estimate.
- In contrast to Product Cost by Order in which you analyze costs by lot, in Product Cost by Period you analyze costs by period. You collect the costs on a product cost collector over an extended period of time, and analyze the debits and credits in each period. Product cost collectors enable you to collect costs at the product level independently of the production type. Regardless of whether the production environment is order-related production, process manufacturing, or repetitive manufacturing, you collect the production costs for the product on a product cost collector and analyze the costs in each period.
- In the application component Product Cost by Sales Order, the sales order items function as the cost objects for which you can calculate costs and revenues for both planned and actual data. You can use the Product Cost by Sales Order component in the following situations:
 - When you are manufacturing in-house with reference to a sales order in complex make-to-order production
 - When you are purchasing customer-specific trading goods with reference to a sales order and reselling them to your customers
 - When you are providing services whose costs are assigned to a sales order



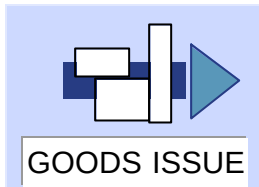
© SAP AG 1999

- The process chain shows each step of order related manufacturing.
- The order request may come from the SOP- planning that was described in the unit on plan integration. You can transfer the SOP- data to the production plan. The MRP- run can generate a plan order, which can be converted to a production order. The order request could also be based on a business request from outside the system. During the MRP- run, the system will also check the availability of the necessary raw materials and semi-finished goods required for the manufacturing process. If there are not enough materials available, the system may create additional plan orders for them, which can be converted to production orders, purchase requisitions, or purchase orders.
- When the order is created, a preliminary cost estimate is generally carried out (although not for repetitive manufacturing) to calculate the planned costs for the order. The planned costs are updated whenever the order is changed.
- When the order is released, actual costs can be assigned to the order. Actual costs are incurred when materials are withdrawn from stock for the order and when confirmations are created, which documents the consumption of activity types. Primary costs can also be posted directly from other system components to the production order. Shop papers are printed for the shop floor.
- After finishing the production process, the goods are delivered to stock. It is possible to perform partial deliveries at any time during the production process.



- A product cost collector is a cost object in the Product Cost by Period component that collects the actual costs incurred in each period for the production of a material. When you use a product cost collector, the product becomes the main cost object.
- Product cost collectors are independent of the production type. This means that the actual costs for a product cost collector can be collected in any of the following environments: order-related production, process manufacturing, or repetitive manufacturing.
- Actual costs can be collected on the product cost collector in the following ways:
 - Through logistics transactions (such as goods issues or confirmations) for manufacturing orders (production orders or process orders) and run schedule headers. For example, goods issues to a production order or reporting point backflushes in repetitive manufacturing debit the product cost collector with actual costs. Goods receipts from production credit the product cost collector.
 - Directly, for example through G/L account postings in Financial Accounting (FI)
- You can view the actual costs for the product cost collector in the Information System at any time
- During the period-end closing process, you can:
 - Charge the product cost collector with process costs by means of a process template
 - Revalue the activities at actual activity prices
 - Calculate overhead for the product cost collector
 - Calculate the value of your unfinished products (work in process) for the period
 - Calculate the variances of the period
 - Settle the work in process and variances to other application components

Resource Allocation



Cost Object

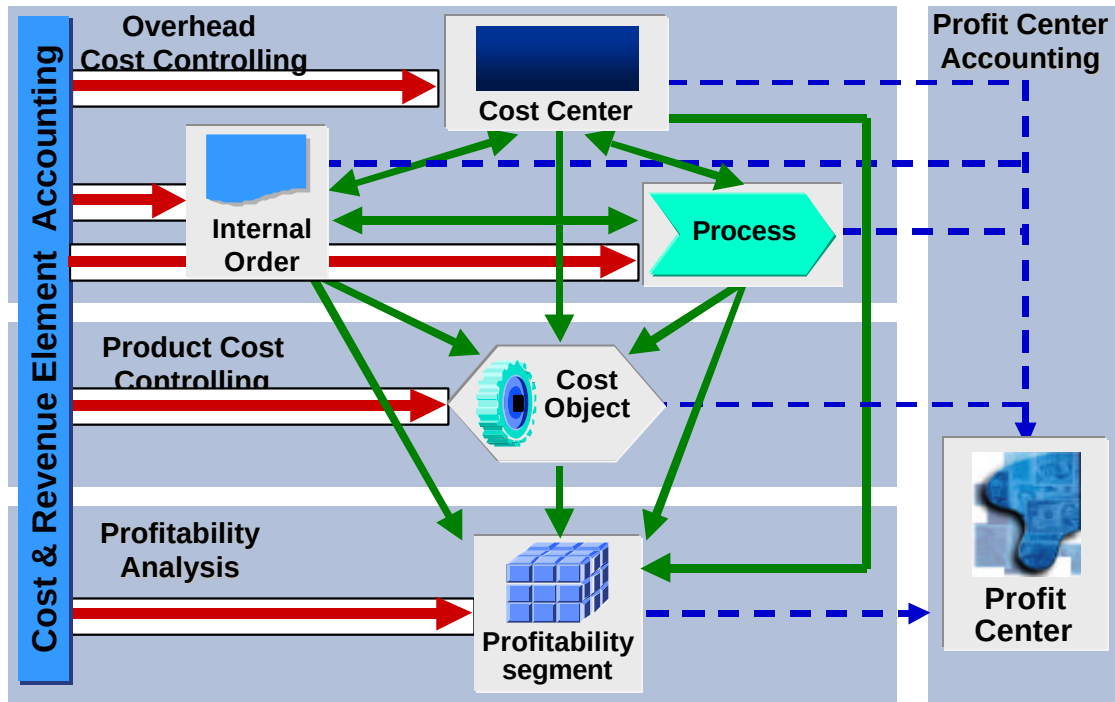
Name	Cost Items	Plan	Actual
	glass	1,500	1,800
	Plug	2,000	2,200
	Cable	500	600
	Material	4,000	4,600
	Labor	2,500	2,800
	Overhead	1,500	1,600
	Process	1,000	1,500
	Total Costs	9,000	10,500
	Delivery Value		9,000
	Order Balance		1,500



- After final delivery, any costs remaining on the order are settled to stock or to a price difference account. The order is then fully credited.
- If the price control indicator in the material master record is S, a price difference account is debited with the difference between the actual costs incurred and the credit postings for the goods receipts. The moving average price is recalculated and updated for statistical purposes.
- If the price control indicator in the material master record is V, the material stock account is debited with the difference between the actual costs incurred and the credit postings for the goods receipts. The total value of the stock and the moving average price are recalculated.
- If the warehouse stock at the time of settlement is less than the order quantity because goods were issued in the meantime, the following happens:
 - The costs that are based on the quantity that is still in stock are posted to the material stock account of the material.
 - The remaining costs are automatically posted to a price difference account.
- If the material ledger is active, the delivery is posted to the material ledger and can be used to calculate an actual material price at period-end.

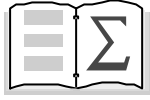
Integration Within CO - Value Flows (3)

SAP



© SAP AG 1999

- Profitability Management components also are tightly integrated with Overhead Cost Controlling and Product Cost Controlling. Profit Center Accounting, by virtue of its basic design, receives statistical cost postings from virtually all other CO components.
- In addition to direct postings from FI, Profitability Analysis can receive cost assessments from cost centers and ABC processes, settlements of cost from internal orders, and production variances settled from cost objects.



Having completed this unit, you should now be able to:

- **Explain the differences between Internal and External Accounting.**
- **Explain how CO helps manage a business and use some standard CO reports .**
- **List the components of CO and explain their purpose.**
- **Explain the basic integration points between the components of CO.**
- **Explain the basic integration points between CO and other R/3 modules.**

Exercises



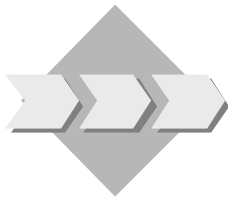
Unit: Overview of FI/CO Integration

Topic: The Components of Controlling



At the conclusion of this exercise, you will be able to:

- Describe the purpose of each component of Controlling.



To provide data for different purposes and different users, you can use the various components in Controlling to focus on the appropriate objects.

- 1-1 What components of Controlling (CO) and Enterprise Controlling (EC) were discussed in this unit?

[illegible]

Exercises



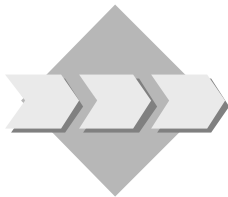
Unit: Overview of FI/CO Integration

Topic: Integration



At the conclusion of this exercise, you will be able to:

- Understand the process of selling a product from stock by using a sales order.



The company receives an order from a customer, requesting to purchase pumps.

2-1 Create a sales order for the customer.

2-1-1 Create the sales order and the first item, the requested pumps. Create a standard order for the Frankfurt sales organization (**1000**), sales distribution channel (**10**), and division **00**. The Sold to party and Ship to party are both Becker Berlin (**1000**), and the customer purchase order number is **1000##**. The customer has requested **80** pieces of your material **T-F1##** (the pumps).

2-1-2 Review the pricing conditions for the pumps.

2-1-3 Review the account assignment for the pumps to view the Profitability Analysis settlement. Save the sales order and record the document number.

2-2 Process a delivery to ship the pumps to the customer. Ship the goods from the Hamburg shipping point (1000), with a selection date that is two weeks from today's date. Be sure to Pick all 80 pumps from storage location 0002 and post a goods issue to record the transaction in accounting. Record the delivery document number.

2-3 Bill the customer for the pumps and review the CO-PA posting.

2-3-1 After shipping all the materials create the billing for the sales order item. The pump invoicing information is generated from the delivery document. Record your billing document numbers and the billing date.

2-3-2 View the accounting document type created for the billing document. Review the data (value fields) which was posted to CO-PA for this product.

Solutions



Unit: Overview of FI/CO Integration

Topic: The Components of Controlling

- 1-1 What components of Controlling (CO) and Enterprise Controlling (EC) were discussed in this unit?

Overhead Cost Controlling (CO):

- ***Cost and Revenue Element Accounting***
- ***Cost Center Accounting***
- ***Overhead Order Accounting***
- ***Activity-Based Costing***

Product Cost Controlling (CO):

- ***Product Cost Planning***
- ***Cost Object Controlling***
- ***Actual Costing/Material Ledger***

Profitability Management:

- ***Profitability Analysis (CO)***
- ***Profit Center Accounting (EC)***

1-2 Briefly, what is the purpose of each component?

Cost and Revenue Element Accounting provides the structure for assignment of CO data through the classification of transaction line items according to the nature of the cost or revenue being posted.

Cost Center Accounting tracks where costs occur in your organization.

Overhead Order Accounting (internal orders) describes costs for individual jobs (conducting a trade fair, building a storage facility) or ongoing activity (periodic maintenance of Administration building, operating & maintenance costs for a vehicle) within a controlling area.

Activity-Based Costing provides a business process-oriented view of the organization. It provides greater transparency (or visibility) of the activities performed within your company, and the associated costs of those activities.

Product Cost Planning is the tool used to create cost estimates for production of materials or services.

Cost Object Controlling focuses on tracking actual production costs and performing period-end closing activities related to the production effort.

Actual Costing/Material Ledger calculates actual costs for each material at the end of the period.

Profitability Analysis enables you to analyze profits and contribution margins for market segments of your company. The objective is to support sales, product management, and corporate-wide planning and decision-making, using an external view from a market-oriented perspective.

Profit Center Accounting allows you to calculate internal measurements of profitability. This view reflects the success of a given profit center at meeting the profitability goals for which it was given responsibility.

Solutions



Unit: Overview of FI/CO Integration

Topic: Integration

2-1 Create a sales order for the customer.

2-1-1 Create the sales order and the first item, the requested pumps.

Logistics ® Sales and Distribution ® Sales ® Order ® Create

Enter OR (Standard Order) in the Order type field.

Enter 1000 in the Sales organization field.

Enter 10 in the Distribution channel field.

Enter 00 in the Division field.

Select Item overview.

Enter 1000 in the Sold-to party field.

Enter 1000 in the Ship-to party field.

Enter 1000## in the PO number field.

Enter T-F1## in the Material field.

Enter 80 in the Order quantity field.

Select Enter.

Click "Continue" button to pass through the Availability screen.

2-1-2 Review the pricing conditions for the pumps.

Select the item. (Click on the box to the left of the item number.)

Select the Item conditions icon at the bottom of the screen to review pricing conditions. (Or use the menu path Goto ® Header ® Conditions)

2-1-3 Review the account assignment for the pumps to view the PA assignment.

Save the sales order.

Select the Account assignment tab.

Select the Profit segment icon, and press continue.

Select Save.

- 2-2 Process a delivery to ship the pumps to the customer.

Go Back to the standard SAP menu.

Select Order® Subsequent functions® Delivery.

Enter 1000 in the Shipping point field.

Enter the current date + 2 weeks in the Selection date field.

Verify that your sales order number is in the Order field.

Select Enter.

Menu path: Subsequent functions → Create transfer order.

Answer yes, if delivery is to save.

Record the delivery number.

Enter 001 in the Warehouse number field.

Enter 1000 in the plant field.

Verify that the delivery number is in the delivery field.

Enter 2 in the Adopt pick quant. field.

Enter 2 in the Adopt putaway qty field.

Select Enter.

Select post.

Record the transfer order number

- 2-3 Bill the customer for the pumps and review the CO-PA posting.

- 2-3-1 After shipping all the materials, create the billing for the sales order item.

Logistics® Sales and Distribution® Sales® Order® Subsequent functions® Billing document

Verify that your delivery document number appears in the first field in the Document column.

Select Save.

- 2-3-2 View the accounting document type created for the billing document.

Select Billing document® Display.

Enter the billing document number.

Select Accounting.

If the Profitab. Analysis document type is displayed in the list:

- ***Double-click on it.***
- ***Select Item data to view the product.***
- ***Select Value fields and use the Next screen and Previous screen functions to view the data transferred to Profitability Analysis for this product.***

Go Back to the Sales screen.

Unit Contents:

- **Reporting Overview**
- **Report Writer Reporting**
- **Reporting based on ABAP List Viewer (ALV)**
- **Drilldown Reporting**
- **Defining Reports using Report Painter**



At the conclusion of this unit, you will be able to:

- **Name the different reporting tools available in Controlling.**
- **Explain the purpose and capability of each reporting tool.**

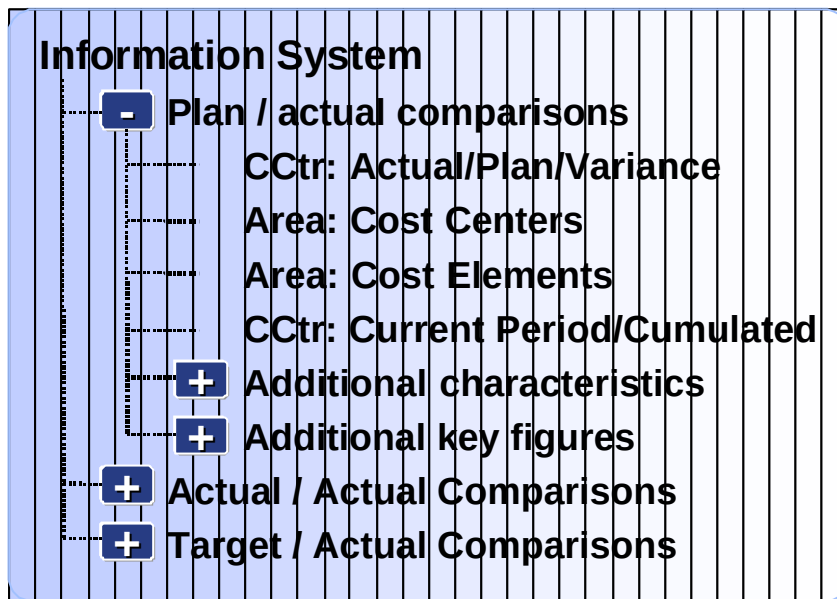


- The next stage of your system review involves the area of reporting. You are very aware that reporting requirements can vary substantially throughout an organization.
- You talk with a number of different managers with different information needs to assess the adequacy of their current reports. You find that, in many cases, the standard reports that were delivered with R/3 are sufficient.
- But you also find that in some instances, custom developed reports are required to meet specialized needs. Depending on the type of report required, you learn that there are several different reporting tools available to create custom reports.

- **Different Report Tools used**
 - **Report Painter/Writer Reporting**
 - **Drilldown Reporting**
 - **Reporting based on ABAP List Viewer (ALV)**



- Several different reporting tools are used in the Controlling Information System. Every report tool has its own features and range of applications.
- **Report Painter** allows you to create reports using data from CO and other R/3 application components, which you can adapt to meet your individual requirements. Many of your reporting requirements can already be met by using the standard reports provided by the various CO application components. If these standard reports do not meet your reporting needs, Report Painter enables you to define your specific reports quickly and easily.
- Report Painter fulfills a function similar to **Report Writer**, but is easier to use. Most of the functions found in Report Writer have been built into Report Painter; however, you do not have to be familiar with all Report Writer concepts (such as Sets) in order to use Report Painter.
- **Drilldown reporting** is used in Profitability Analysis (CO-PA) and in Product Cost Controlling (CO-PC). This reporting tool uses characteristics to classify transaction data. Controlling area, company code, customer, product group, order, and product are examples of characteristics. The time reference (fiscal year, period) is also a characteristic. Key figures represent specific values of the classified data. Examples of key figures include direct costs, sales, sales deductions, number of employees, and sales quantity. You can perform calculations with key figures to derive values such as sales per employee and contribution margin.
- The **ABAP List Viewer** standardizes and simplifies the operation of lists in the R/3 System. It is used for line item reporting throughout CO. A uniform interface and list format is available for all lists. It contains convenient features for the dynamic creation of display variants. Using display variants, you can change the format of your list. You can choose fields to be added to the display, change the order of the fields, and adjust the column width to suit your requirements



- Data is evaluated in Controlling by means of reports that are provided in the standard system or that you define yourself.
- You select reports in the information system using the report tree. The report tree contains all reports in an application organized in a hierarchical tree structure.
- There is a separate standard report tree in each application area in Controlling. The standard reports for each application area are assigned to the nodes of the relevant report tree.
- In addition to the report tree in the standard system, you can also define your own report tree to which you can assign both standard reports and your own reports.

- Cost Element/Cost Center Actual/Target: Results Report

***** Cost Element/Cost Center Actual/Target *****

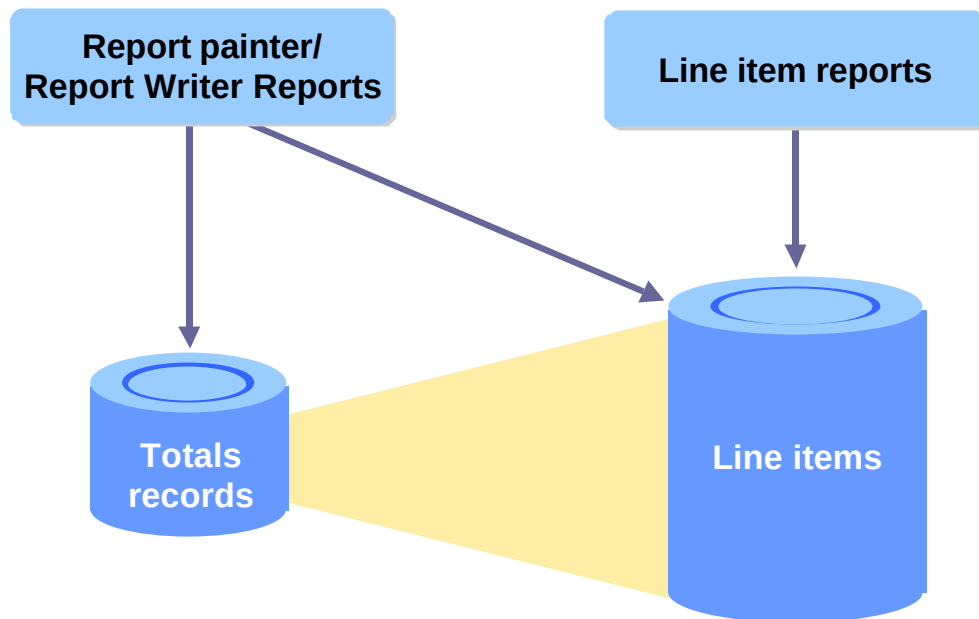
Reporting period 1 to 03

2000

Date 07.04.00

Cost Elements / Cost Centers	Actual Costs	Target Costs	Variance (abs)
** Other Administrative Costs	6,477,800.00	3,238,900.00	3,238,900.00 -
2210 Electricity	112,000.00	56,000.00	56,000.00 -
* 481000 Depreciation	112,000.00	56,000.00	56,000.00
** Imputed Costs	112,000.00	56,000.00	56,000.00
2110 Goods Receipt	566,000.00	283,000.00	283,000.00
2120 Warehouse, Receiving	849,000.00	424,500.00	424,500.00
2130 Warehouse, Shipping	1,414,999.84	707,499.92	707,499.92 -
2310 Admin Building	590,000.00	295,000.00 -	295,000.00
2320 Warehouse Building	900,000.00	450,000.00 -	450,000.00
2330 Production Building	1,340,000.00	670,000.00 -	670,000.00
* 511111 Assessment			
2110 Goods Receipt	1,277,159.92	638,579.96	638,579.96 -

- In addition to standard reports, you can also use Report Painter and Report Writer to define your own reports. You can then add these custom reports to your reporting tree.
- In the interactive information system, you can evaluate posted data immediately after its entry into the SAP R/3 System, and follow its origins down to the document level. Both Report Painter and Report Writer reports offer a variety of options to display, sort, filter, and summarize the data.
- Report Painter has similar capabilities to Report Writer, but is easier to use. Most of the functions of Report Writer have been incorporated into Report Painter, but in general have been designed to be more intuitive and end-user oriented.
- Report Painter reports can be edited by using Report Writer, but can then no longer be maintained by Report Painter. Report Writer reports cannot be modified by Report Painter.
- When you use Report Painter to create your own reports, you define the report column and row structure and general data selection. Report Painter can access the data out of an extract, directly out of the data base, or out of an archive.
- The variation feature makes it possible to create an individual report for each element of a group that you defined in the general data selection. For example, you can create an individual report for the total summary node and each group node in a cost center hierarchy.
- All reports available online can be executed in the background at predefined times. This can be particularly useful during a process such as period-end reporting, where multiple reports are executed for various users throughout the organization. This feature allows you to process large quantities of data during periods of lower system use.



© SAP AG 1999

- In the R/3 System, a distinction is made between **line items** and **totals records**. These are recorded in separate database tables.
- A line item is entered for each business transaction. You can access these line items using the **line item report**.
- For reporting, all the line items entered for business transactions are automatically stored in **totals records**. The amounts are totalled in the R/3 System based on the cost center/cost element or cost center/cost element/activity type and enables data to be evaluated more quickly. You can analyze the totals records using a Report Painter/Report Writer report.
- Normally, you would analyze a cost center using a **Report Painter** report. If you require detailed information for particular cost elements posted to the cost center, you can call up the corresponding line items.
- The **line item report** displays the actual costs, plan costs or commitments as line items and as based on the posting documents. This information is displayed as a list (output list display).
- **Example:** In FI, personnel costs for an external repair firm were posted twice within the same month.

• Line item 1:	420000	Personnel costs	5,000	Manufact.cost center	07/1998
Line item 2:	420000	Personnel costs	3,500	Manufact.cost center	07/1998
Totals record:	420000	Personnel costs	8,500	Manufact.cost center	07/1998

Summary report

Cost Elements	Act. costs	Planned costs	Var. (sales)	Variance (%)
476000 Office supplies	1,000		1,000	



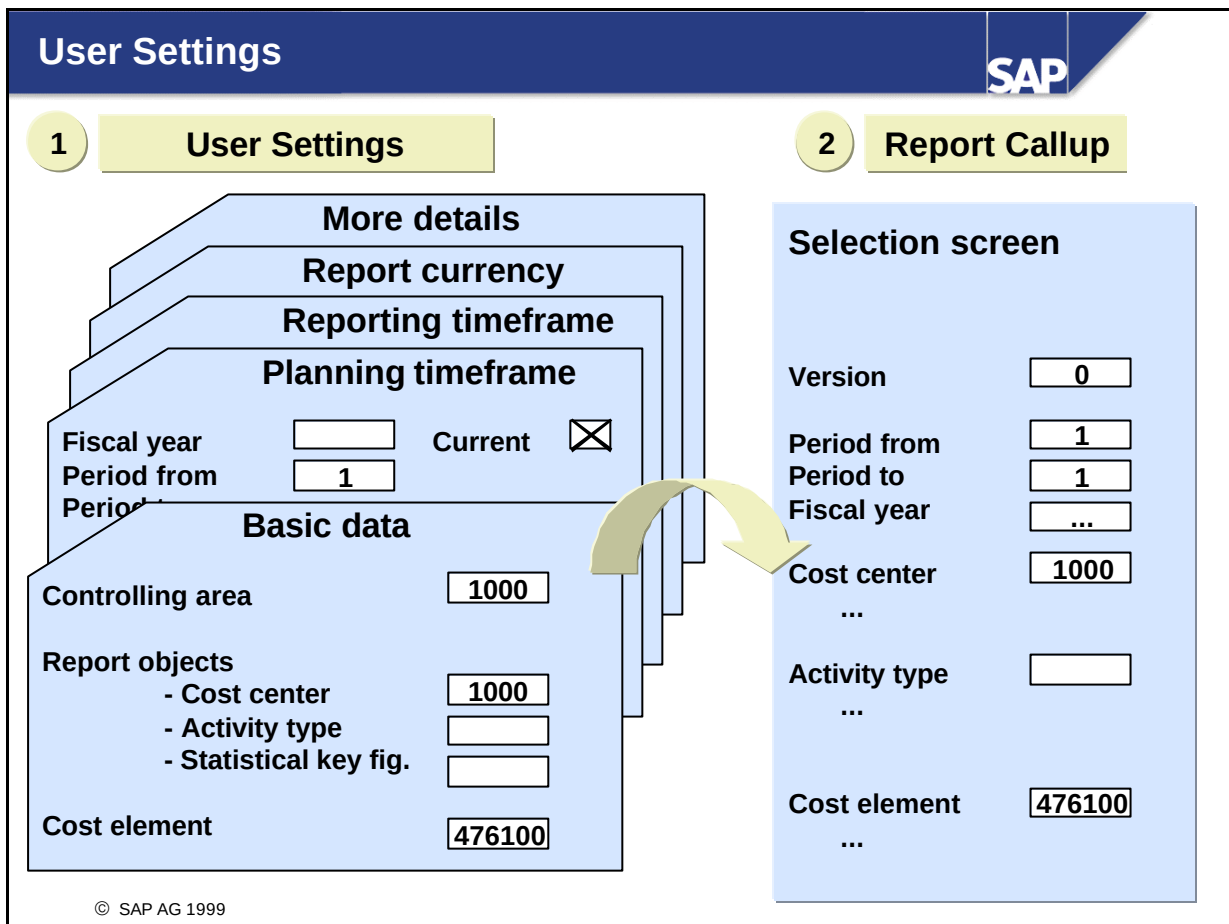
Line item report

Line items	476000	1,000	UNI
------------	--------	-------	-----

Source document FI document

40	476000 Office supplies	1,000
50	113100 Bank	1,000

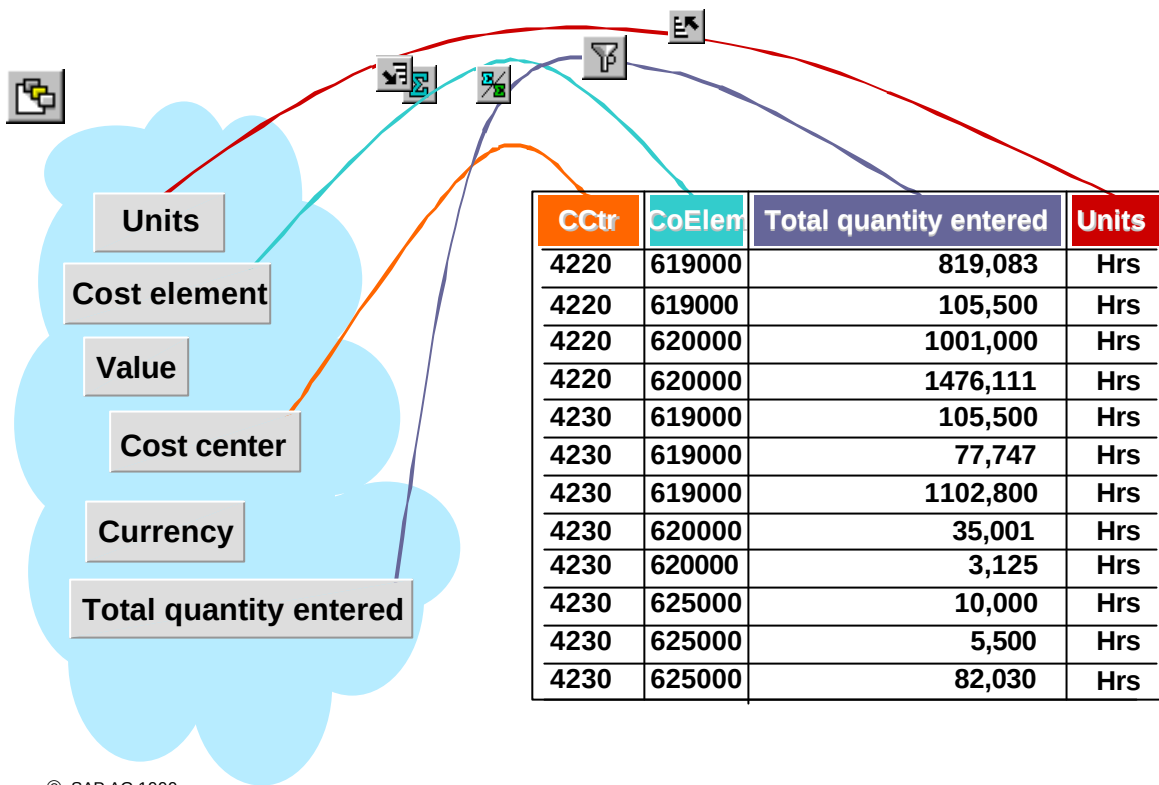
- You can use the interactive information system to total and analyze all, or selected business transactions, according to various criteria (for example, cost center / cost element).
- The totals records in the Report Painter report are normally analyzed, but sometimes the **line items** from the **summary report** are also selected and examined. You can also move from the line items to the corresponding source documents. The **source document** can be an FI document, or for example, an accounting document from a reposting.
- You can call up other reports using the Report/Report interface.



- You can specify general and user-specific default values for the **selection criteria**, and the report currency. The advantage of user settings is that more than one, or all values that you normally need to enter before executing a report group are automatically displayed. When you call up a report, the R/3 system checks to see if you have made all the required entries. If this is the case, then the report can be executed without any entries required in the selection screen.
- You can enter the following **default values**:
 - Basic data (controlling area, cost center, or cost center group, cost element, and so on)
 - Settings for extract management
 - Planning timeframe
 - Reporting timeframe
 - Report currency
 - Other specifications, such as, the version

Line Item Report: Maintain Display Variants

SAP



- The R/3 system provides you with **standardized display variants**. You can define additional variants for global or user-specific use.
- You can select as many fields as required from the group of available fields (including customer-specific fields) for a **display variant that is enterprise-specific**.
- You need to define the item (column) in the report, and the column width for each field.
- Depending on the column width, the R/3 system automatically uses the short text or long text from the field name. It also uses your log-on language if this is available for the report.
- You can select an ascending or descending **sort sequence** for each column.
- You can define **filters** for each column. Rows that fulfil filter criteria are not displayed. However, they are included in the totals and subtotals calculation.
- You can define **totals** interactively, by selecting a column and then totals. It is possible to select more than one column at a time.

Drilldown Reporting Example

SAP

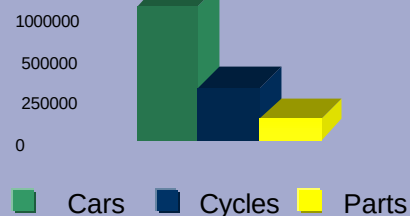
Sales Report: Divisions

Period 1 - 7, 1999

Characteristics	Divisions		Revenue	Cost of Sales	CM1
Customer Group	01	Cars	1,000,000	800,000	20%
Sales Organization	02	Cycles	250,000	150,000	16%
Material Group	03	Parts	100,000	70,000	30%
Division					

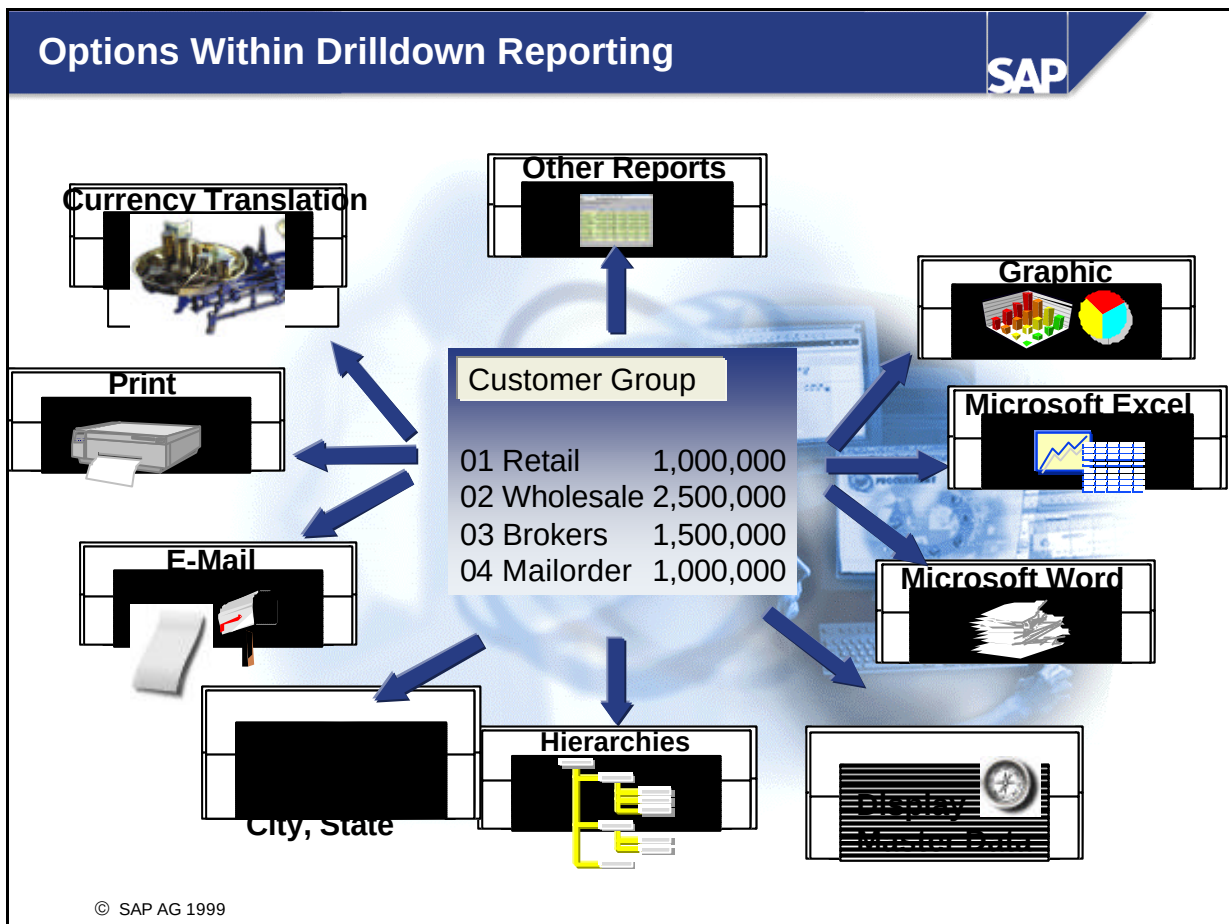
Revenue 1,000,000
Cost of Sales 800,000
CM1 200,000
CM1 % 20%
Sales & Admin 50,000

Revenue - Divisions



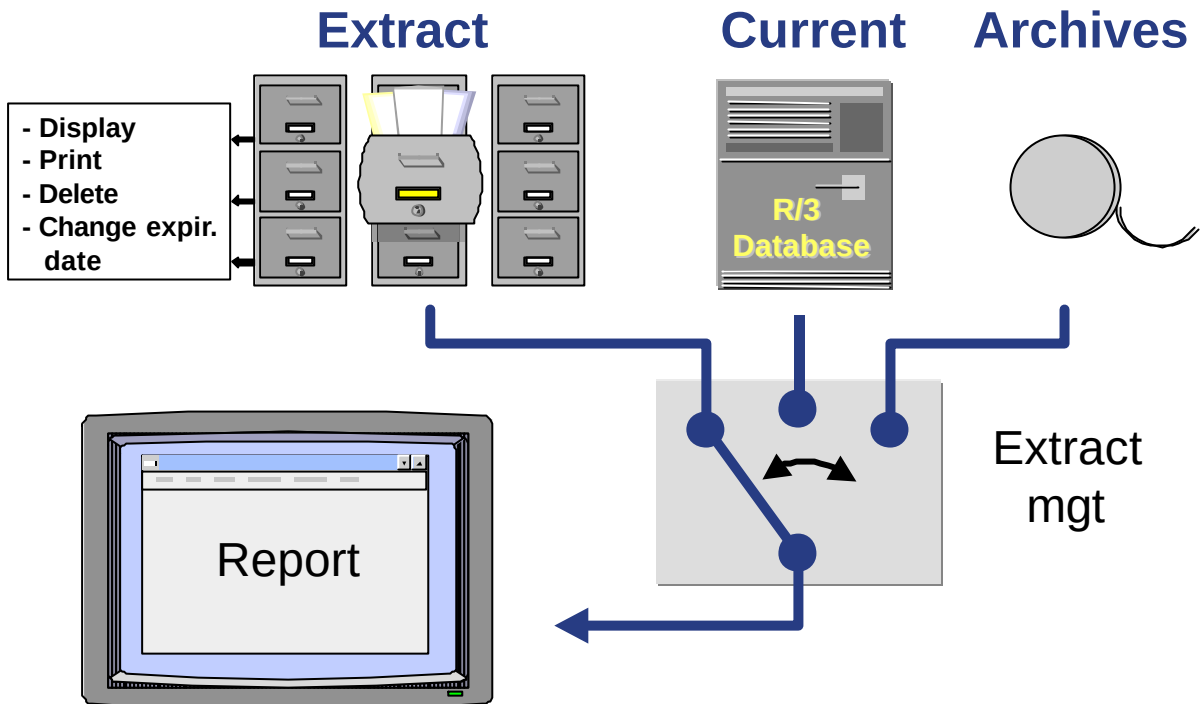
© SAP AG 1999

- In drilldown reporting you can summarize data according to the characteristics, and then drill down interactively. At each level of the report, you can display the drilldown list (overview) or detailed information (margin analysis).
- In the example above, the drilldown was executed with the characteristic “Region”, followed by “Customer group”. From the first drilldown list, the region “North” was chosen for further analysis, and both a detail and drilldown list produced. This second drilldown list shows overview profitability information for each value of the next lower level characteristic (customer group). The detail list shows detailed profitability information for all of “North”, without further breakdown to customer group:

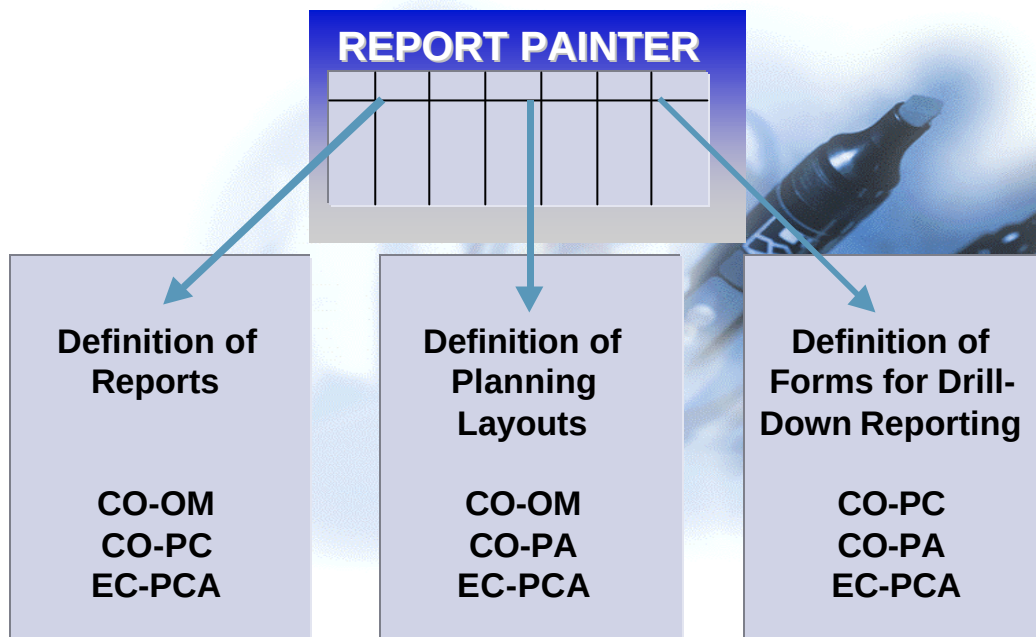


- The functions of drilldown reporting are divided into three levels so that you can give each user only those functions that he or she requires.
- **Level 1** contains the basic functions of drilldown reporting, plus it lets you send reports by SAPmail. This level is designed for users who do not require the full functionality of drilldown reporting.
- **Level 2** contains the rest of the drilldown functions, plus it lets you display graphics and download reports to Microsoft Excel.
- **All functions** offers you all the functions in drilldown reporting, including the print setup function and the functions for saving report data and defining exceptions. This level is designed for users who need to print and modify reports in addition to all the interactive drilldown functions.
- You can define the desired level for each user by entering the parameter RLV (0 = All functions, 1 = Level 1, 2 = Level 2) in his or her user parameters.
- Remember: The individual function levels are subjected to an authorization check.

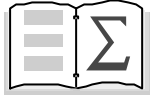
Data sources



- If you **save reports in extracts**, then you have faster access to the data saved. Report extracts for groups support navigation in the group with the "Variation" function.
- It is possible to select data from the database to create an ad-hoc report with the most current information.
- It is also possible to read from **archive data**. Reports are used for providing archived information.
- To create extracts, you can select **Create extract** before you run the report, or you can choose **Yes** on the dialog box that appears when you exit the report. The selection parameter and the time of the report definition automatically characterize the extract.
- In **Extract Management in customizing**, you specify the user-specific settings for the data access. The following options are provided for this:
 - New selection
The system reselects the data and does not use existing extracts for the specified selection criteria.
 - Display extract
If existing extracts fulfil the selection criteria, then the R/3 system displays them in a dialog box for selection. If none of the extracts fulfil the criteria then the R/3 system uses the current data records.
 - Automatic display of the current extract
The R/3 system automatically displays the most current extract.
- You can **display** all of the **extracts** in an overview, or you can **print** or **delete** them, or change the **expiration date**.



- The Report Painter functionality is used in several different areas of Controlling.
- The Report Painter is used to create and execute reports in the Overhead Cost Controlling, Product Cost Controlling, and Profit Center Accounting components.
- The functionality of Report Painter is also utilized in the definition of planning layouts in Overhead Cost Controlling, Profitability Analysis, and Profit Center Accounting.
- Drill-down reporting also makes use of Report Painter functionality in the definition of forms. Forms are used in drill-down reporting in the Product Cost Controlling, Profitability Analysis, and Profit Center Accounting areas of Controlling. A form determines the content and formal structure of a report. A form can be thought of as a semi-finished report, which you complete by specifying (additional) characteristics and key figures when you define the individual report. The content of a form is generally fixed and changes only under rare circumstances. When you change a form, it affects every report that uses that form.



Having completed this unit, you should now be able to:

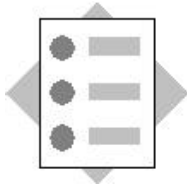
- **Name the different reporting tools available in Controlling.**
- **Explain the purpose and capability of each reporting tool.**

Exercises



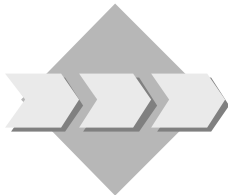
Unit: Information System

Topic: Additional Functions



At the conclusion of these exercises, you will be able to:

- Create and call up an extract for a report.
- Define user settings for extract management.
- Send a report to another user.



At the end of a period, each cost center manager wants to analyze the data for their cost center. As a rule, they all use the same reports. Report creation takes a great deal of time if there is a large amount of data, and your project team wants to find a way to solve this problem. You suggest running the reports at consulting department level, and then saving them as extracts. If the cost center managers call up the reports for your department, they can use the report extracts already created.

1-1 Running reports with extracts.

- 1-1-1 Call up the *Cost Centers: Actual/Plan/Variance* report for the **current period**, and for the entire consulting department (**B##**) in version **0**.
- 1-1-2 Exit the report and, on the dialog box that is displayed, confirm that you want to create an extract. Enter **Extract##** as the name and set the **expiration date** to **tomorrow**. Save your entries.
- 1-1-3 To be able to access this extract, specify under *Data source* that you want the **extracts displayed**
- 1-1-4 As manager of cost center **301##** (FI/CO consulting) you want to call up the data for your cost center for the **current period**, in version **0** in the *Cost Centers: Actual/Plan/Variance* report.
Call up the extract already created.
- 1-1-5 In the report, you want to be certain that the data displayed is indeed the extract data. To do so, call up the selection log.
- 1-1-6 After the extract was created, a posting was made to cost center 301## (FI/CO consulting). Does this information appear in the report when you call up the extract again?

- 1-1-7 It seems to you that the expiration date for **Extract##** is too early, so you **extend** this date by **four days**.
You also decide to **assign a password** for your extract.
- 1-1-8 You want to ensure that the system always displays the **most recent extract** for a report. In Customizing, enter this information in the user settings for extract management.
- 1-2 The manager of cost center **301##** (LO consulting) wants a report to be sent to their deputy, as this person is not authorized to run reports.
- 1-2-1 Call up the *Cost Centers: Actual/Plan/Variance* report for the **current period** in version **0**, for cost center **301##** (FI/CO consulting).
- 1-2-2 Send the report to the deputy for this cost center. Write a short note to the recipient and enter their user ID as the address. (In this exercise, use your own user ID, or that of your neighbor.)
- 1-2-3 Check whether the message arrived at your work center. Call up the notice. Choose "Continue" and execute the document.

Solutions



Unit: Information System

Topic: Additional Functions

1-1

1-1-1 **Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost Centers: Actual/Plan/Variance**

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center group</i>	<i>B##</i>

Program ® Execute

1-1-2 **Report ® Exit**

Select the **Create extract** indicator.

Exit the report:

Field name or data class	Values
<i>Description</i>	<i>Extract##</i>
<i>Expires on</i>	<i>Tomorrow's date</i>

Enter

Confirm dialog box by choosing "Enter"

1-1-3 On the report selection screen, choose **Data source**.

Select the **Display extract** indicator.

Enter

1-1-4 **Program ® Execute**

Place the cursor on your extract.

Double-click on the extract or choose the **Display** icon.

1-1-5 **Extras ® Selection log**

The name of the saved data is the same as the same as that of the extract description **Extract##**.

1-1-6 An extract is a snap-shot of a report at a particular time. Those postings that you make after having created the extract are therefore not included and can only be displayed by reselecting the data.

1-1-7 **Environment ® Extract directory**

Select "Only self-created extracts" and "Created in the last 10 days".

Program ® Execute

Select an extract by placing your cursor on the button in the first column of the extract row.

Extracts ® Change expiry date of selected extract

Enter the new expiry date in the *Expires on* field.

Extracts ® Password ® Change

Enter your new password twice.

Enter

1-1-8 **IMG: ® Controlling ® Cost Center Accounting ® Information System
® User Settings ® Specify Settings for Extract Management**

Enter your user **AC410-##**.

Program ® Execute

Confirm the dialog box.

Select your user.

User settings ® Change

Under extract selection, choose "Display current extract automatically".

Confirm icon.

Save your data.

1-2

1-2-1 **Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost Centers: Actual/Plan/Variance**

Field name or data class	Values
Controlling area	1000
Fiscal year	Current
From period	Current
To period	Current
Plan version	0
Cost center	301##

Program ® Execute

Enter your password.

Enter

1-2-2 **Report ® Send**

Enter a note, for example "Please call back"

Recipient AC410-## (your user or that of your neighbor)

Document ® Send

1-2-3 **Office ® Workplace ® Inbox ® Unviewed documents**

Select your document with a double-click.

Confirm the note by choosing **Enter**.

Document ® Execute

Enter your password.

Unit Contents:

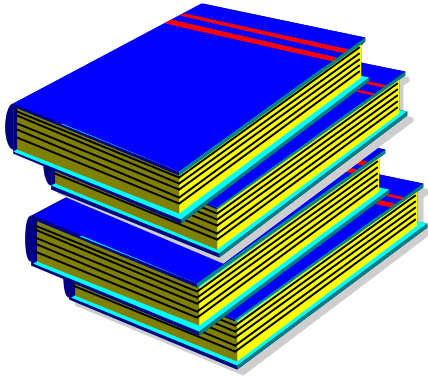
- Accounting Sub-Modules
- Organization Structures
- Integrated Organization Structures



At the conclusion of this unit, you will be able to:

- **Explain the functionality and use of financial organization structures.**
- **Map organizational structures to business scenarios using a sample case study.**
- **Differentiate among sub-modules within accounting**

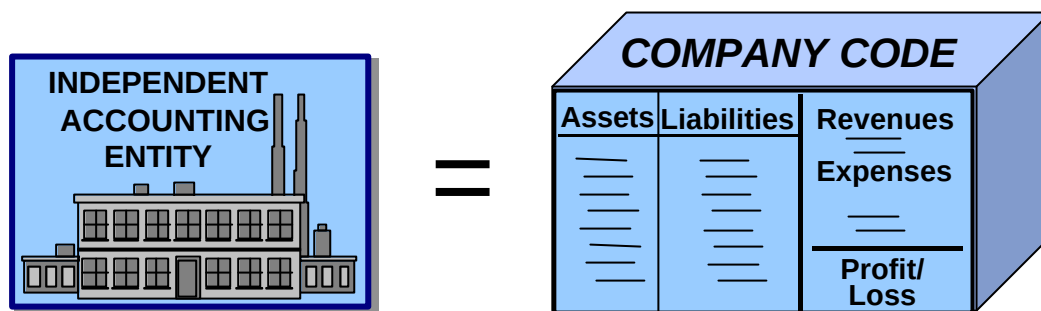
- The SAP R/3 System uses the following organizational structures to represent business processes in financial and management accounting:



- ◆ Company code
- ◆ Group company
- ◆ Business area
- ◆ Controlling area
- ◆ Operating concern

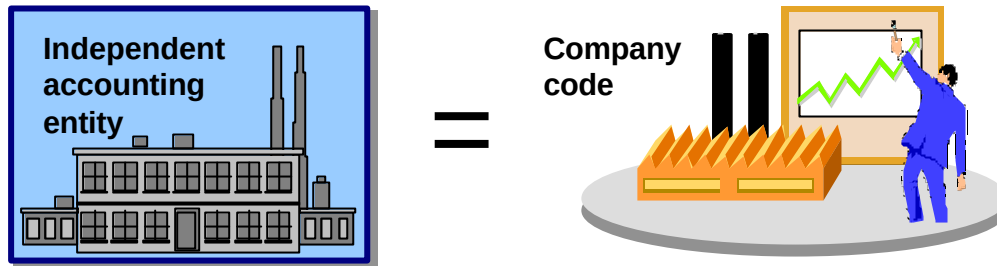
- In order to most effectively configure the SAP R/3 System, a project team must understand the organizational elements used within R/3, as well as the company's own structure and requirements.

A company code is an independent accounting entity (the smallest organizational unit for which a complete self-contained set of accounts can be drawn up). An example is a company within a corporate group.



© SAP AG 1999

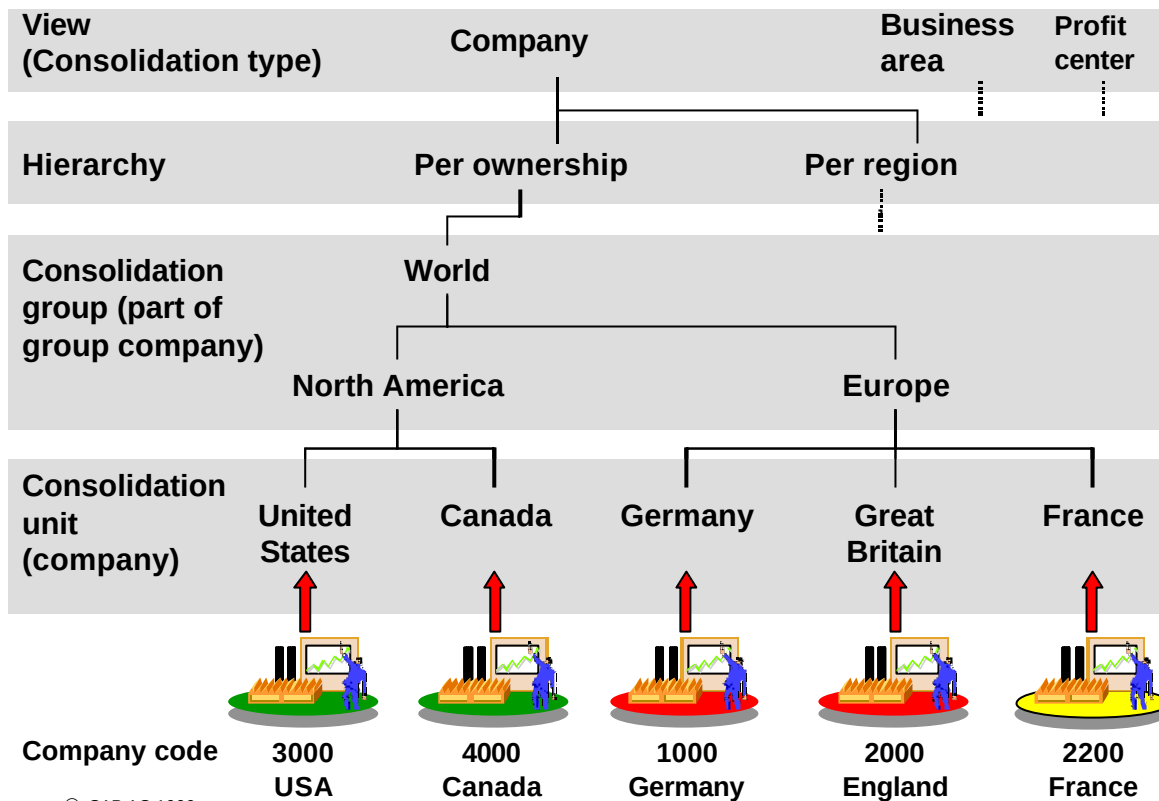
- Balance sheets and profit & loss statements, required by law, can be created at the company code level.
- A company code designation will be required on every financially based transaction entered into R/3. It will be input at entry time or the system will derive the information from system configuration.
- Company code uses a 4 digit alphanumeric field.



- A **company code** is an independent accounting entity (the smallest organizational element for which a complete self-contained set of accounts can be drawn up). An example is a company within a corporate group. It has a unique, four character key.
- The general ledger is kept at the company code level and is used to create the legally required balance sheets and profit and loss statements.
- A company code designation is required for every financially based transaction entered into R/3. This is done either manually or automatically by deriving the company code from other data elements.

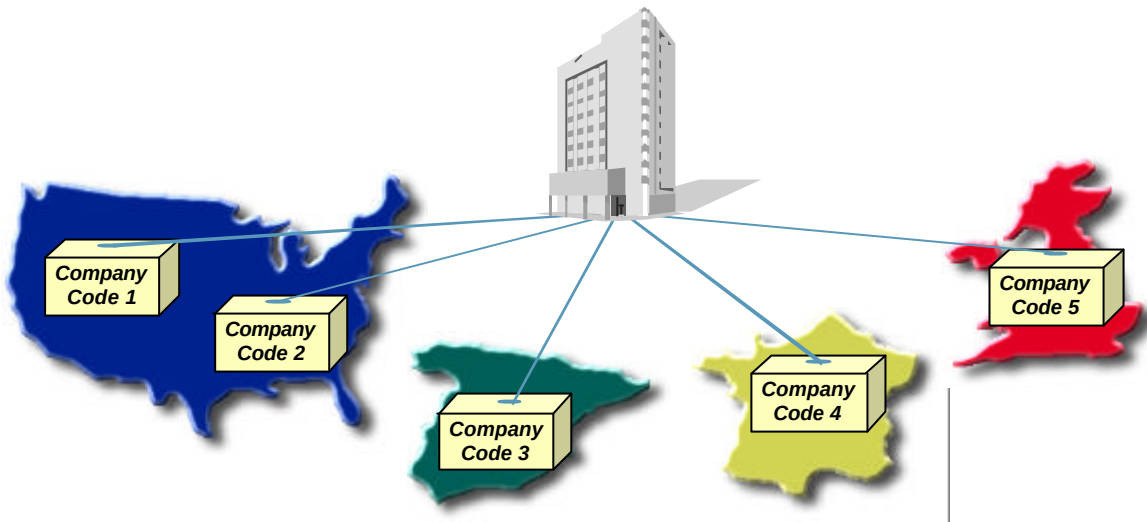
EC-CS: Organizational Units

SAP



- With EC-CS, you can perform legal and management consolidations. The basis for this are the organizational units company, business area, and profit center. For each consolidation type, a **view** is created.
- The group structure with a view can be represented in various **hierarchies**. IDES uses a hierarchy for legal representation and one for regional representation.
- EC-CS forms the company structure using consolidation groups and units. Per hierarchy, **consolidation groups** are defined. They represent the levels at which the consolidation is completed. Consolidation groups can be: Subgroups (company consolidation), business areas (business area consolidation), profit centers, and hierarchy nodes (profit center consolidation).
- The objects to be consolidated that lie below consolidation groups are **consolidation units**. Depending on the consolidation type, these are companies, combinations of companies and business areas, or combinations of companies and profit centers.

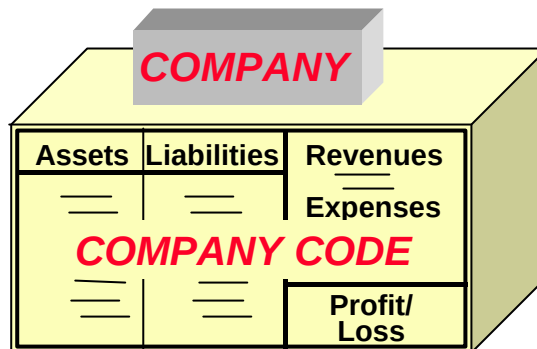
In an international business, operations are often located across numerous countries. Since most governments and tax authorities require each company to be established as a separate legal entity, a company code is usually defined for each country.



© SAP AG 1999

- The company code does not usually extend across national boundaries.
- You should create a company code according to tax law, commercial law, and other financial accounting criteria.

- A *group company* is the legal unit of consolidation to which company codes are assigned.

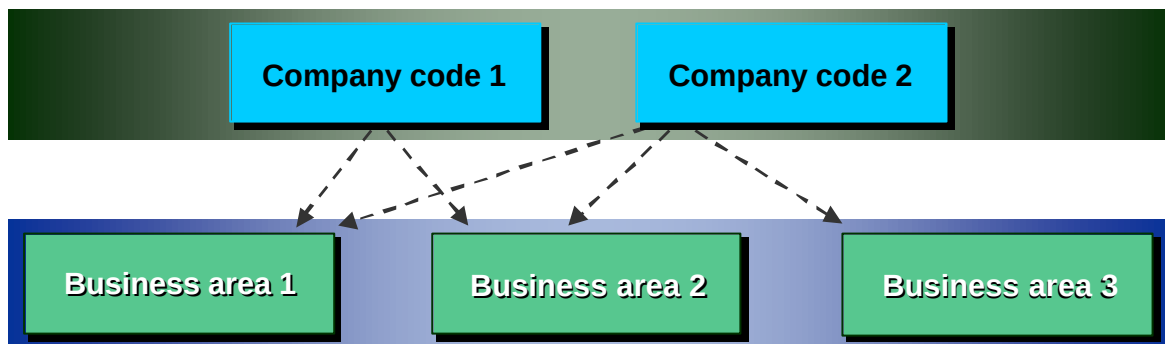


© SAP AG 1999

- A group company can comprise one or more company codes and is the main structure used for consolidations.
- It uses a 6 digit alphanumeric field.

Business areas are used for internal purposes to create balance sheet and profit and loss statements or alternatively can be used to meet external segment reporting requirements.

Every business area can be used by every company code.

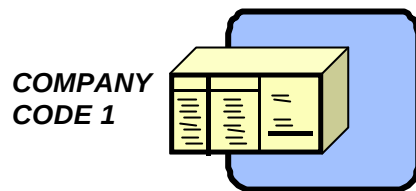


© SAP AG 1999

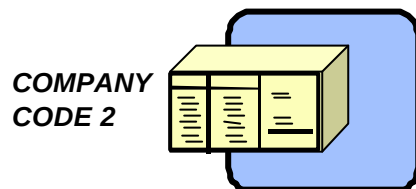
- You can set up several business areas to which the system can assign postings made in any company code defined within a client.
- Business areas may be used to facilitate external segment reporting across company codes, covering the company's main areas of operation (product lines, subsidiaries) where legally required.
- If no external business segment reporting is legally required, the business area is entirely optional and flexible within the constraints of the business area definition.
- Business area is a 4 digit alphanumeric field.

- A controlling area identifies an independent organizational structure for which costs and revenues are collected.
- Each controlling area can have one or more company codes assigned to it (see below).

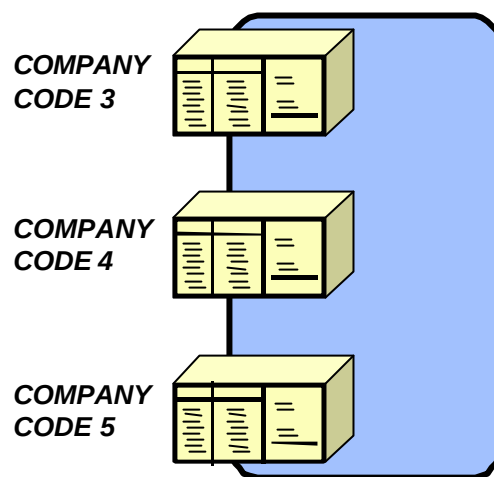
CONTROLLING AREA 1



CONTROLLING AREA 2

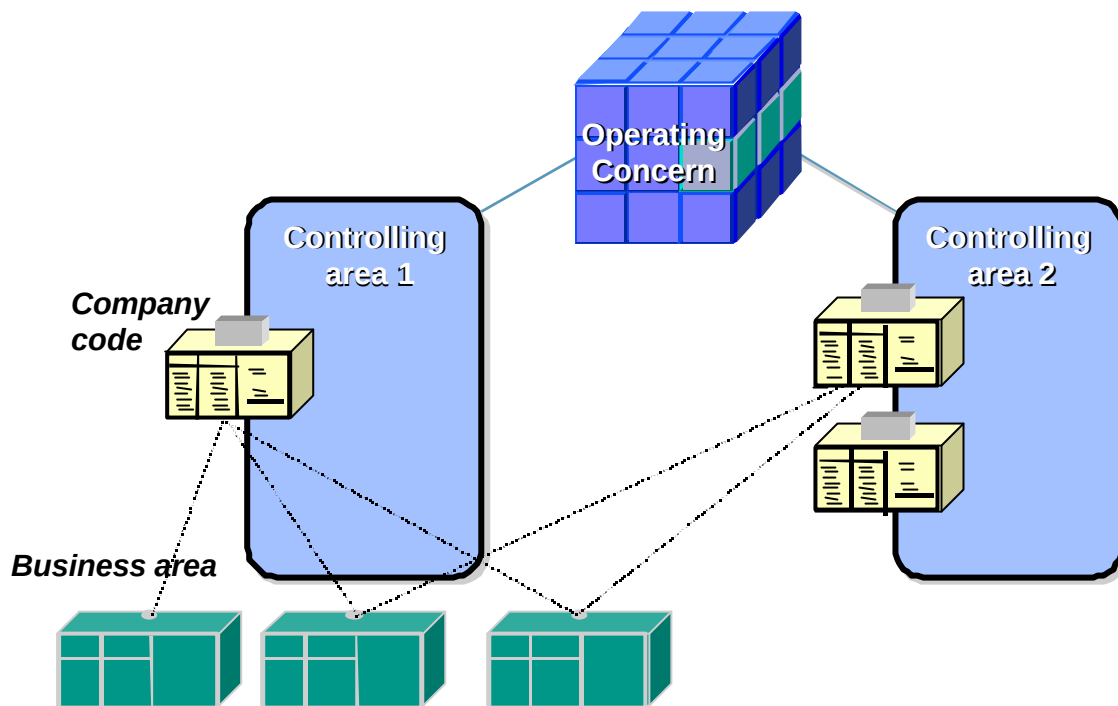


CONTROLLING AREA 3



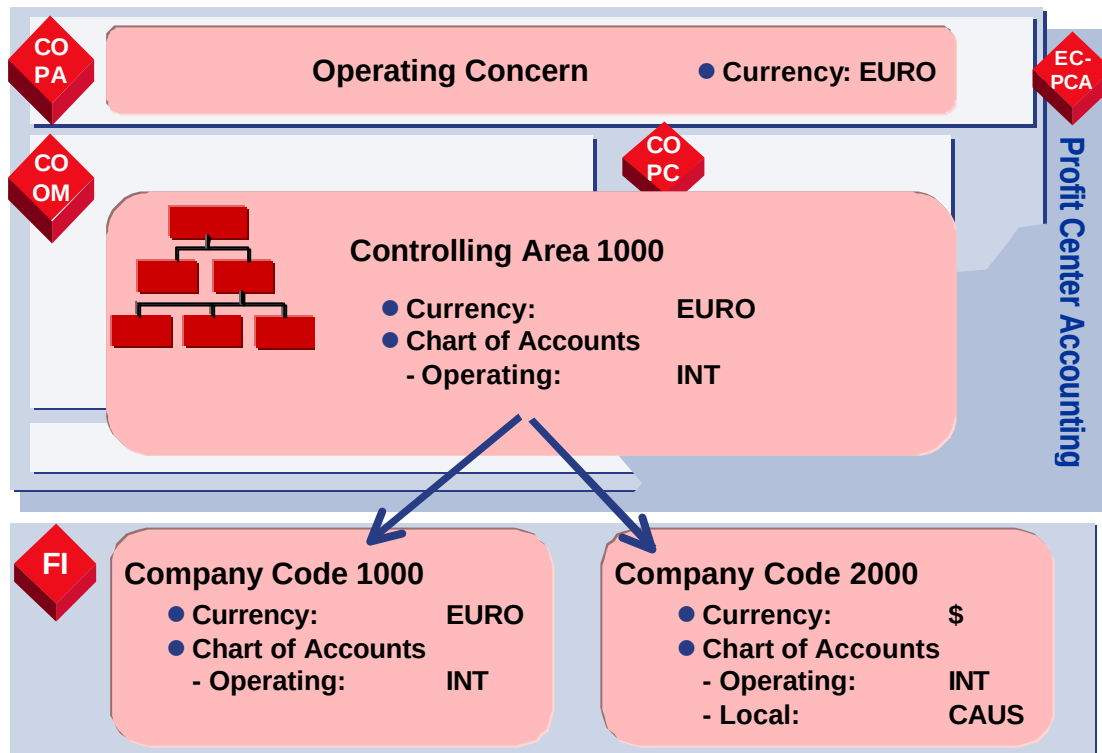
© SAP AG 1999

- Controlling area is the structure used to capture revenues and costs for internal management reporting.
- The use of multiple company codes within one controlling area allows for the additional functionality of performing cross company allocations.
- Company codes within the same controlling area must use the same operating chart of accounts and fiscal year.
- Controlling area is a 4 digit alphanumeric field.



© SAP AG 1999

- **Company code** is the smallest organizational unit where a complete balanced set of books is produced.
- **Group company** is the legal unit for consolidated reporting. One or more company codes can be mapped to a group company.
- **Business areas** provide balance sheet reporting for business segments. They can cross company codes.
- **Controlling areas** capture costs and revenues for internal managerial reporting.
- **Operating concerns** provide the structure to analyze market performance on the basis of user defined criteria.

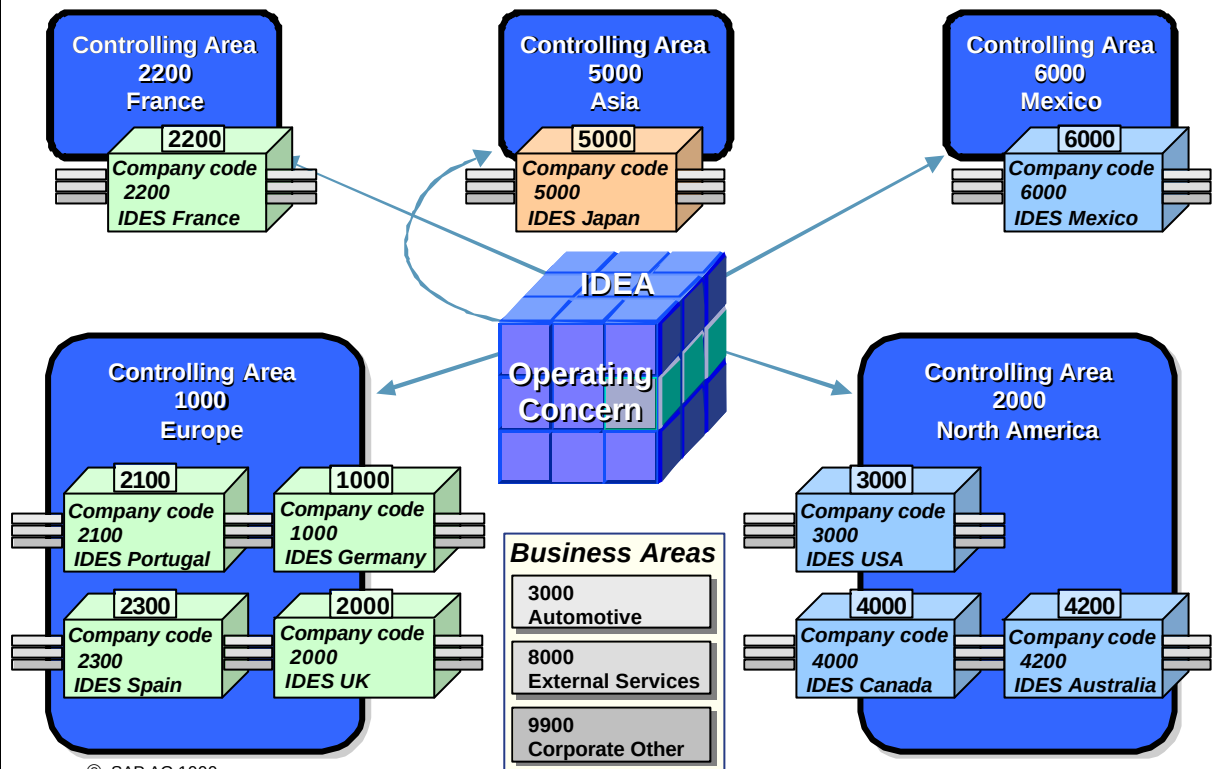


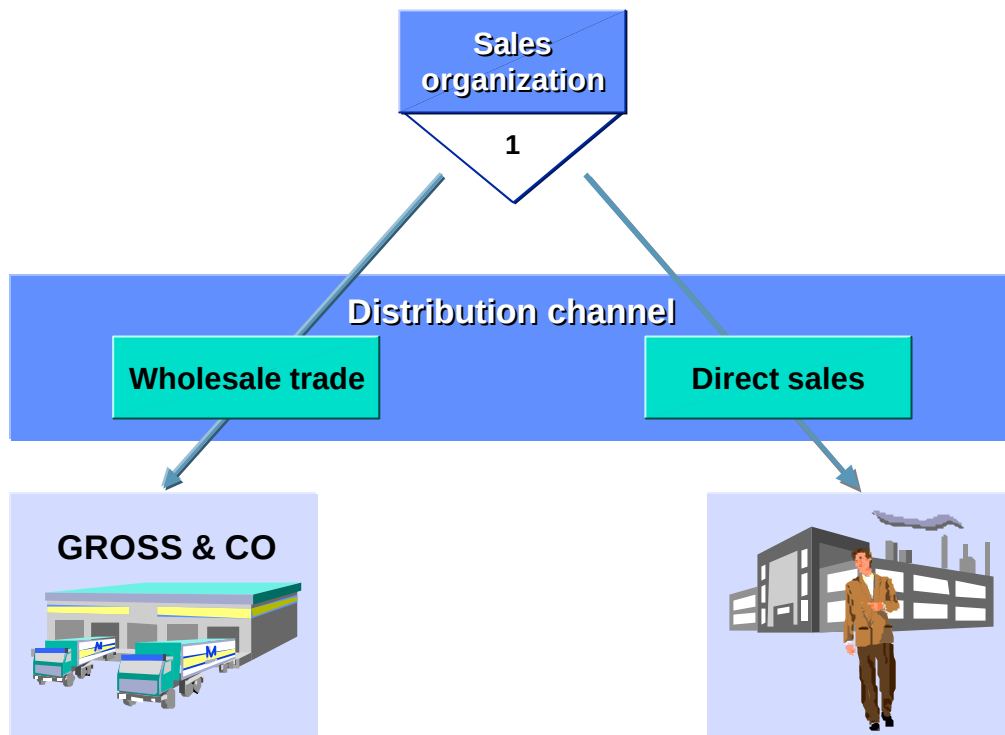
© SAP AG 1999

- By assigning multiple company codes to a controlling area, you can perform cross-company-code cost accounting. You can make allocations in CO that refer to more than one company code.
- In cross-company-code accounting, you assign a currency, a chart of accounts, and a fiscal year variant to the controlling area.
- In cross-company-code cost accounting, the controlling area and company codes may have different currencies. You can define the controlling area currency to be the same as one of the company code currencies, or it can be different from the currency of any company code assigned to it.
- You may utilize three currencies in CO:
 - **Controlling area currency**
 - **Company code currency OR object currency**
 - In cross-company-code cost accounting, the object currency defaults from the company code currency, and can not be modified. If there is only one company code assigned to the controlling area, then the object currency is freely assignable for each controlling object (such as cost center).
 - **Transaction Currency**
 - The transaction currency is the currency in which a document is posted to CO.
- Multiple company codes from different countries can still be linked to a single controlling area, even when some of the companies are required to produce country-specific external reports. All companies within the controlling area have to use the same operating accounts, but these accounts may be linked to country-specific accounts via the alternative account number field on the account master record.
- The fiscal year variants assigned to the controlling area and assigned company codes can differ only in the number of special periods.

IDES: Summary Example

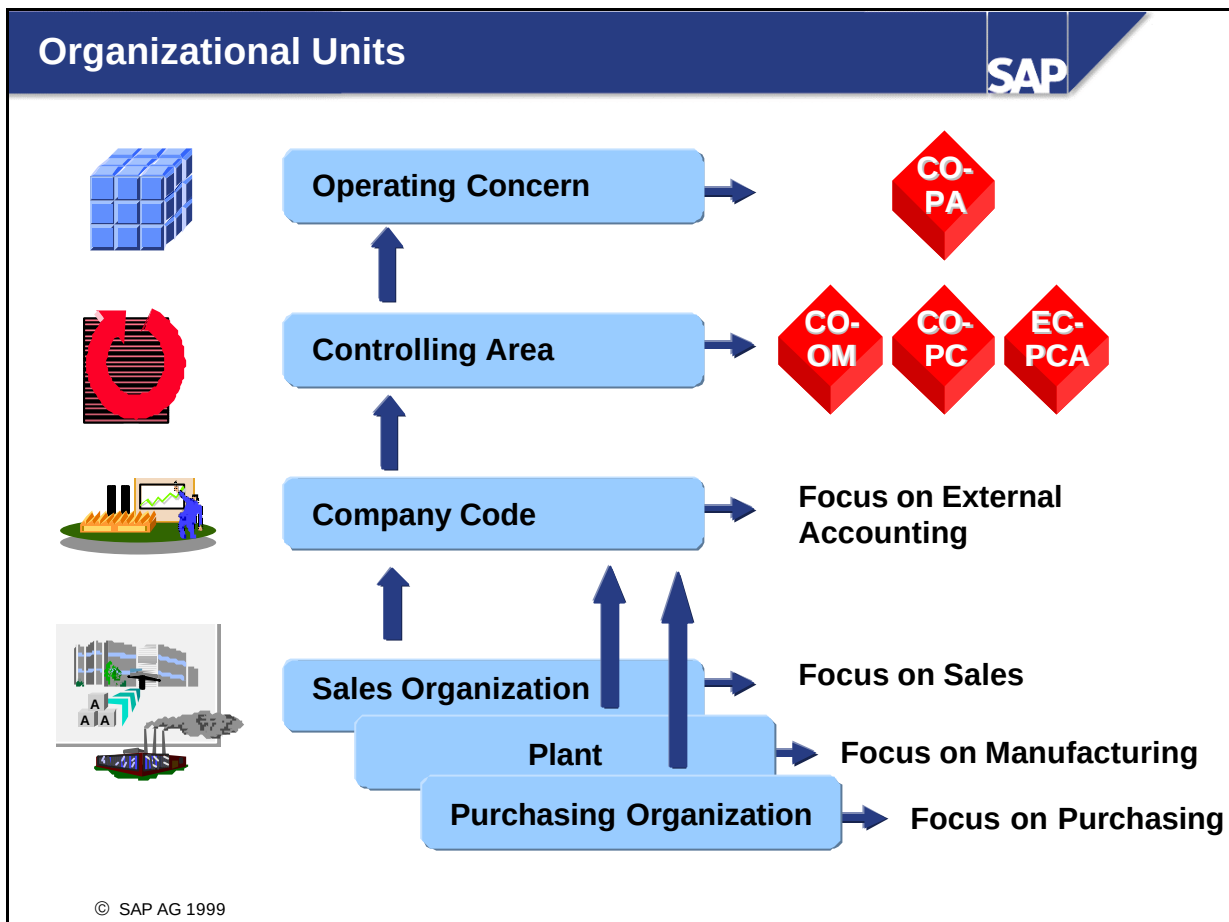
SAP



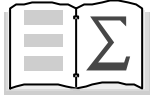


© SAP AG 1999

- The structure in sales and distribution is represented in the system with the help of Sales Organizations. Every sales organization represents a selling unit in the legal sense.
- In configuration, a sales organization is allocated to a company code. This establishes a link between the SD and FI systems. Since a sales organization belongs to just one company code all financial transactions for this sales organization are posted to the linked company code.
- More than one sales organization can be linked to the same company code.



- The **Controlling Area** is the fundamental organizational unit in Controlling. A controlling area represents a closed system for cost accounting purposes. Cost allocations can only be performed within a controlling area. They cannot involve objects in different controlling areas. Several company codes may be assigned to one controlling area, which gives the ability to perform cross-company-code controlling.
 - **Note:** The controlling area and its assigned company codes must always use the same operating chart of accounts and must have the same fiscal year (only the number of special periods can be different).
- The **plant** represents a production facility. It is an important organizational unit in the SAP R/3 Materials Management and Production Planning application components. Plants are assigned to company codes when organizational structures are defined.
- The purchasing organization is responsible for the complete processing of purchasing activities (such as requests for quotations and purchase orders).
- A purchasing organization can be assigned to one company code, several company codes, or can exist without being assigned to a company code (since each plant must be assigned to a company code, the latter can be determined via the plant at the time of each procurement transaction to provide the tie for legal reporting).
- The purchasing organization maintains information relevant to vendors and pricing to support the most efficient and cost effective acquisition of goods.



Having completed this unit, you should now be able to:

- **Explain the Functionality and Uses of Financial Organization Structures.**
- **Map Organizational Structures to Business Scenario.**
- **Differentiate among Sub-Modules within Accounting.**

Unit Contents

- **Creating Company Code**
- **Fiscal Year**
- **Currencies**
- **Charts of Accounts**



At the conclusion of this unit, you will be able to:

- **create company code**
- **customize fiscal year**
- **customize currencies**
- **copy and assign charts of accounts**



To create a company code copy an existing company code using the organization copy function, which copies:

- the definition
- global parameters
- customizing tables (approx. 315 tables)
- general ledger accounts (if desired)
- account determination

After using this function, only the desired changes between the original and the new company code have to be maintained.

© SAP AG 1999

- **Note :** The IMG suggests the order
 - Copy, delete, check company code
 - Edit company code data
- Copy the company code from an existing company code. This has the advantage that you also copy the existing company code-specific parameters. After copying, you can edit data in your new company code.
- You have to select a four-character alpha-numeric key as the company code key. This key identifies the company code and must be entered later when posting business transactions or creating company code-specific data.
- **Note :** The use of the organization copy function is not required. It is also possible to define the company code and fill the customizing tables from scratch.

- **Definition of a company code**

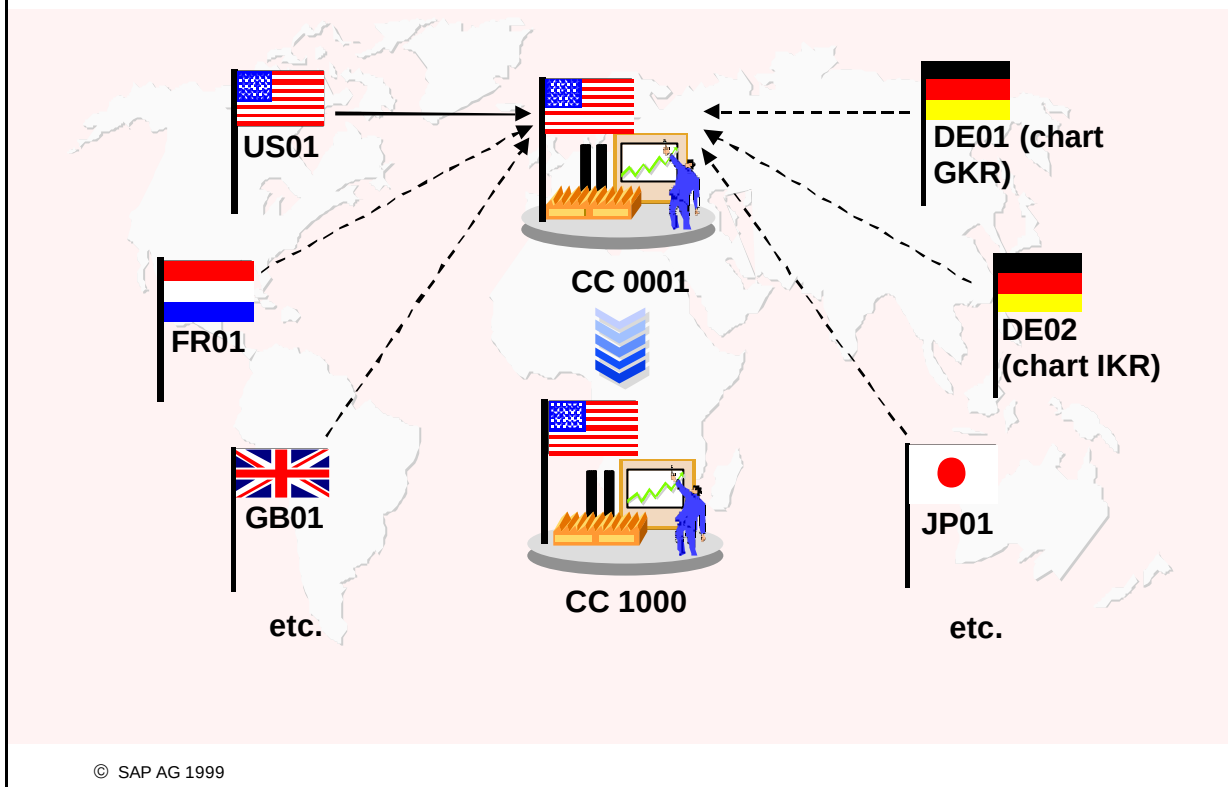
- 4 character company code key
- Company name
- City
- Country
- Currency
- Language
- Address

- **Global Parameters**

- Chart of accounts
- Fiscal year
- Company code defaults

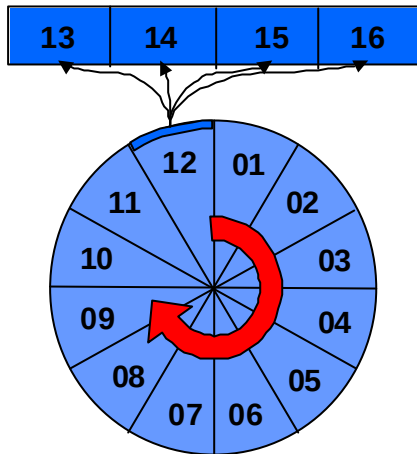


- The editing of the company code data includes:
 - The **address** data is required for correspondence and is recorded on evaluation reports.
 - For each company code a **currency** must be specified. Accounts are managed in the company code currency. All other currencies are indicated as foreign. The system converts the amounts posted in a foreign currency into this currency. The currency defined in the company code is known as the **local currency** within R/3.
 - The **country** key specifies which country is to be regarded as the home country. The system interprets all other countries as foreign. This is important with business or payment transactions, since different forms are needed for foreign payment transactions, and the system supports different formats for addresses for foreign correspondence.
 - A **language** key must be entered so that the system can create texts automatically in the correct language; for example, when issuing checks.
- When defining a business area, only a 4 digit alpha-numeric key and a short description are needed.



© SAP AG 1999

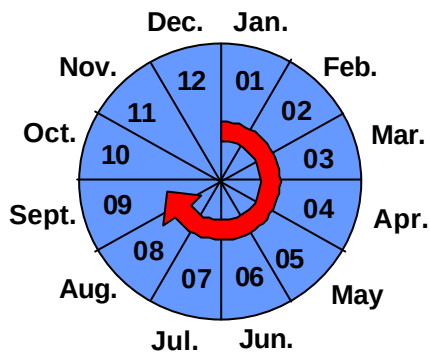
- In the R/3-standard system **company code 0001** is a template for a general company code with chart of accounts INT and no special country-specifications.
- If you need a company code in a country for which a **country template** exists, you can use the **country version program** which copies the country-specific customizing tables from the specific country template into company code 0001. Upon completion, company code 0001 will be customized for the selected country. You should then copy this company code into your new desired company code. You may then start the country version program again to create a template for another country and so on.
- **Note:** The country version program not only creates a country-specific company code template but also a country-specific template for controlling areas, plants, purchasing organizations, sales organizations, credit control areas, financial management areas, etc.
- **Attention:** Do not forget to copy the template before you proceed further. Do not use company code 0001 as your productive company code because the country version program always uses this company code as the target company code. Furthermore, you should run the country version program only in a new installation of R/3 and not in an upgrade installation because the structure of the country-specific customizing may have changed from one R/3 release to another.



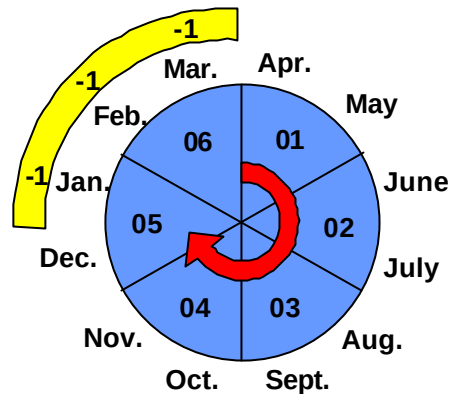
- The fiscal year can be defined as...
- Year-independent
 - ==> the same number and dates for the periods every year
- Year-dependent
 - ==> periods can be differ from year to year

- To separate business transactions into different periods, a **fiscal year** with posting periods has to be defined. The fiscal year is defined as a variant which is assigned to the company code.
- The fiscal year variant contains the definition of **posting periods** and **special periods**. Special periods are used for postings which are not assigned to time periods, but to the process of year-end closing. In total, 16 periods can be used.
- The system derives the posting period from the posting date. When the posting date falls within the last normal posting period, the transaction may be posted into one of the special periods.
- Example: Above you see a fiscal year with 12 posting periods and 4 special periods. If the posting date falls in the 12th period, the transaction can instead be posted in one of the four special periods.
- Standard fiscal year variants are already defined in the system and can be used as templates.
- Note: The fiscal year variant does not include the information as to whether a period is open or closed; this is maintained in another table. The fiscal year variant only defines the amount of periods and their start and finish dates.

the calendar year



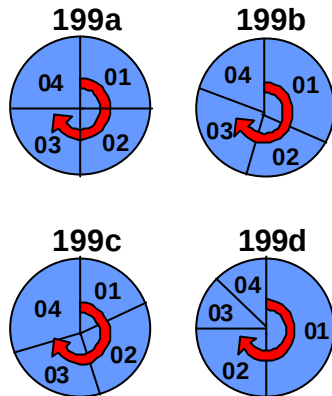
a non-calendar year



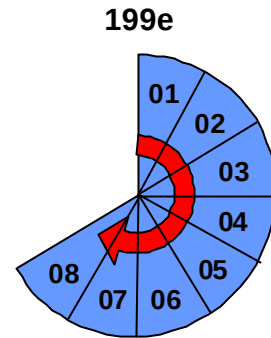
© SAP AG 1999

- If each fiscal year of a fiscal year variant uses the same number of periods, and the posting periods always start and end at the same day of the year, the variant is called **year-independent**. A year-independent fiscal year variant can be defined as
 - the calendar year
 - a non-calendar year
- If the fiscal year is defined as the **calendar year**, the posting periods are equal to the months of the year. Therefore a calendar year variant must have 12 posting periods.
- If the fiscal year is defined as a **non-calendar year**, the posting periods need to be defined by assigning ending dates to each period. A non-calendar year can have between 1 and 16 posting periods. If the non-calendar year does not start at January 1st the periods of the year which belong to the former or the coming fiscal year must get an annual displacement indicator (-1, +1).
- The example above on the right shows a non-calendar year with 6 posting periods which goes from April to March. The months January to March therefore still belong to the old fiscal year and need to have the annual displacement indicator "-1".
- If the fiscal year differs from the calendar year, but the posting periods correspond to calendar months, the day limit for February should be 29 to be prepared for leap years.
- Fiscal years are normally year-independent.

Full years with different period dates



Shortened fiscal year



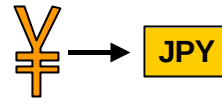
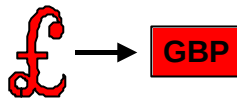
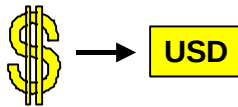
- A fiscal year variant has to be defined as "**year-dependent**" if the start and the end date of the posting periods of some fiscal years will be different from the dates of other fiscal years, and/or if some fiscal years shall use a different number of posting periods.
- If all of the years of a year-dependent fiscal year variant have the **same number of periods**, only the different period dates for the different years have to be defined (see example to the left).
- If one year of a fiscal year variant has less posting periods than the others, it is called a "**shortened fiscal year**" (see example on the right). This could be required if closing has to be made before the end of the normal fiscal year; (e. g. if the beginning of the fiscal year should be changed or if the company was sold). The shortened fiscal year and its number of posting periods has to be specified before definition of the period dates. For this year only a lesser number of posting periods can be assigned.



At the conclusion of this topic, you will be able to:

- **define currencies in the R/3-system**
- **explain the meaning of different exchange rate types**
- **maintain exchange rates**
- **use the different tools which help in exchange rate maintenance**
- **define direct or indirect quotation as the standard quotation for the exchange rate**

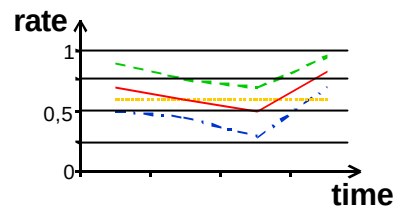
Currency Codes, e.g.



Exchange rate types:

- historical rate
- bank selling rate
- bank buying rate
- average rate
- the rate on certain key dates
- ...

0 00 0000 00 00 00

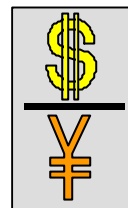
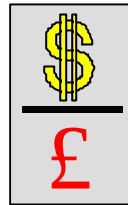


- Every currency which will be used has to be identified by a **currency code**. Most of the world's currencies are already defined in the SAP R/3-System. Each currency code can have a validity date.
- For every combination of two currencies, different exchange rates can be maintained which are distinguished by an **exchange rate type**. These different exchange rates can be used for various purposes such as: valuation, translation, conversion, planning, etc.

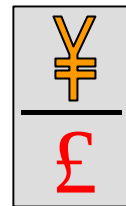
$$\frac{\$}{\pounds} \longrightarrow \frac{1}{1}$$
$$\frac{\$}{\yen} \longrightarrow \frac{1}{100}$$

- The relation between currencies have to be maintained per exchange rate type and currency pair in the **translation factors**. This usually has to be performed only once.
- Because inflation can dramatically change the relationship between currencies, translation factors can be maintained on a time-dependent basis (since 4.0A).

Average rate
To maintain:



Average rate
Calculated:

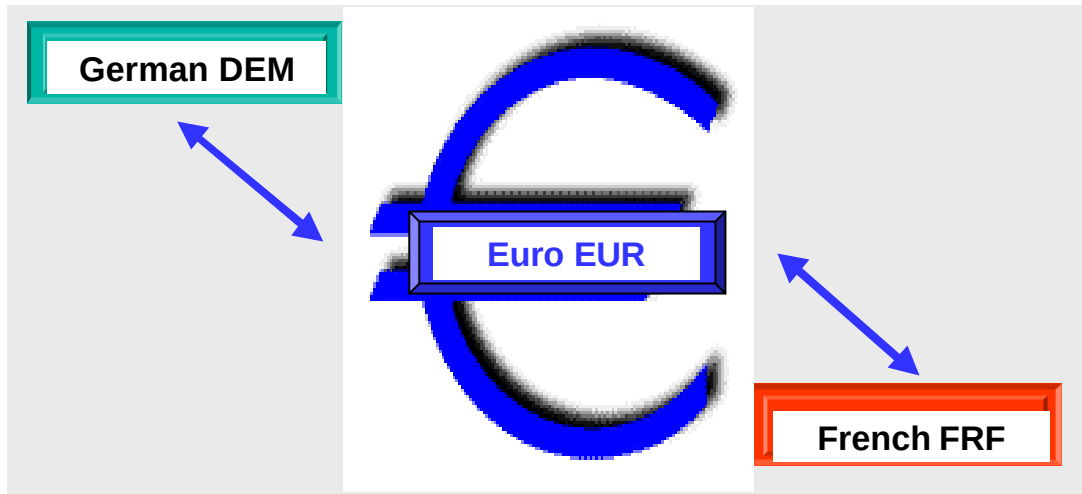


- A base currency can be assigned to an exchange rate type. It is then only necessary to maintain exchange rates for all other currencies into this base currency. An exchange rate between two foreign currencies is calculated by combining the two rates between each currency and the base currency.
- Note: A base currency can only be used for an average rate (e.g. M), not for a selling or buying rate.
- Until 4.0A it was only possible to use one base currency per exchange rate type. Legal requirements may make it necessary to use different base currencies for the exchange rates with different currencies.
 - Example: The base currency of the group is USD. One company code of the group lies in Mexico. In Mexico it is a legal requirement that all company codes have to use the local currency MXN as the base currency.
 - Solution: To all currency pairs with MXN of the normal exchange rate type a derived exchange rate type gets assigned which has the base currency MXN. Normally the base currency USD is used; however, for all exchange rates with the currency MXN, the base currency MXN is used.



- **Base currency switches to EURO**
 - derived exchange rate types are used in translation
- **Special translation regulations**
 - no inversion calculations
 - no cross rates
 - six significant figures
- **Fixed exchange rates between participating currencies**

- At the beginning of the currency union, the base currency has to be switched to EURO. This can be done by defining a new exchange rate type with the base currency EURO valid from the day of the beginning of the European Monetary Union (EMU). This new exchange rate type then has to be entered as the derived exchange rate type of the former exchange rate type.
- Special translation regulations for the EMU have to be followed, e.g. rounding rules. For each exchange rate type you can choose whether these regulations should be followed or not.
- The exchange rates of an exchange rate type can be “fixed,” i.e. the system checks whether the manually entered exchange rate varies from the fixed exchange rate.



- Since January 1, 1999 in EU countries, officially you may only calculate rates via the EURO. There are no longer any direct exchange rate relations between the participating countries.
- Please see Note No. 91481 and 99271.
- EURO Conversion with the SAP System is set up, is covered in the course **CA990**.

**Direct
Quotation**



1

0,92000

**Indirect
Quotation**



1

1,08696

© SAP AG 1999

Base Currency = Euro

- All R/3 applications and functions process exchange rates using the *direct quotation* as well as the *indirect quotation*. Whether the exchange rate is defined or communicated using the direct or indirect method of quotation depends on the market standard or the individual business transaction. The use of indirect quotation is neither application nor country-specific - it affects all the components in which exchange rates are used.
- The **direct quotation** is also known as the **price notation**: The currency value is expressed in the local currency per unit of foreign currency. The **indirect quotation** is also known as the **volume notation**: The currency value is expressed in units of the foreign currency per unit of the local currency. Example:
 - local currency: EUR, foreign currency: USD
 - *direct quotation*: 1 USD = 0.92000EUR
One unit of foreign currency USD costs the displayed number of units of local currency
 - *indirect quotation*: 1 EUR = 1.08696 USD
For one unit of the local currency EUR you will receive the displayed number of units of the foreign currency.
- For each currency pair you can define either the direct quotation or the indirect quotation as the standard notation for the exchange rate. If the exchange rate you enter does not have the same quotation as the standard quotation set up here, the exchange rate is highlighted to show this.

Transaction with exchange rate in *Direct Quotation* (local currency EUR): 1 USD = 0,92000 EUR

Curr/ExchRate	USD	0,92000
---------------	-----	---------

Transaction with exchange rate in *Indirect Quotation* (local currency EUR): 1 EUR = 1,08696 USD

Curr/ExchRate	USD	/1,08696
---------------	-----	----------

© SAP AG 1999

- Exchange rates can be entered as a direct or indirect quotation. You can maintain **two prefixes** that can be used to differentiate between direct and indirect quotations exchange rates during input and display. If you don't set up a prefix, the standard setting is valid:
 - “” (blank, without a prefix) for direct quotation exchange rates
 - “/” for indirect quotation exchange rates
- Scenario 1: If you use mainly direct quotation exchange rates and indirect quotation occurs seldom, use the default configuration. In this way you can enter direct quotation exchange rates without a prefix.
- Scenario 2: If, in addition to direct quotation exchange rates, the handling of indirect quotation is required, you should define a prefix that is not “blank” for both quotation types, e.g.:
 - “*” for direct quotation exchange rates, “/” for indirect quotation exchange rates
 - If you follow this suggestion, the configuration does not allow exchange rates to be entered without a prefix, an error message occurs. Thus users are forced to consider which the correct quotation is and enter the rate with a valid prefix.
- Scenario 3: If indirect quotation is the major notation at your company, you can configure the settings this way:
 - “*” for direct quotation exchange rates, “ ” (blank) for indirect quotation exchange rates
 - This configuration allows indirect quotation exchange rates to be entered without a prefix whereas the less used direct quotation exchange rates have to be entered with a prefix.

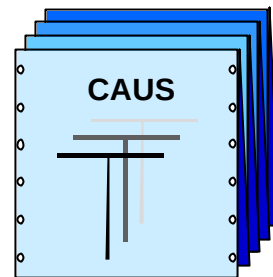
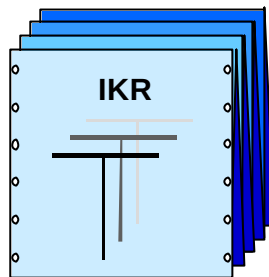
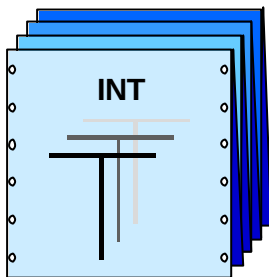
Exchange rate type	From	To	Valid from	Exchange rates
Every used exchange rate type !	\$ £ \$ ¥ £ ¥	£ \$ ¥ \$ ¥ £	Every day ?	 A lot of daily work! ==> tools offer help
	Every currency combination !			

© SAP AG 1999

- Maintaining exchange rates is an on-going task.
- To reduce maintenance, R/3 offers several tools. For each exchange rate type one of the following **tools** can be used:
 - Inversion (of the tools available, inversion is the oldest and is seldom used today)
 - Base Currency
 - Exchange Rate Spreads
- Note: Just *one* of these three tools can be used per exchange rate; however, for different exchange rate types different tools can be used.
- Furthermore: the program RFTBFF00 maintains the exchange rate table automatically by uploading an input file in multicash-format.

The three steps to create and use a chart of accounts :

- Define the chart of accounts,
- Define the properties of the chart of accounts,
- Assign the chart of accounts to company codes.

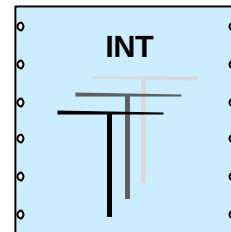


© SAP AG 1999

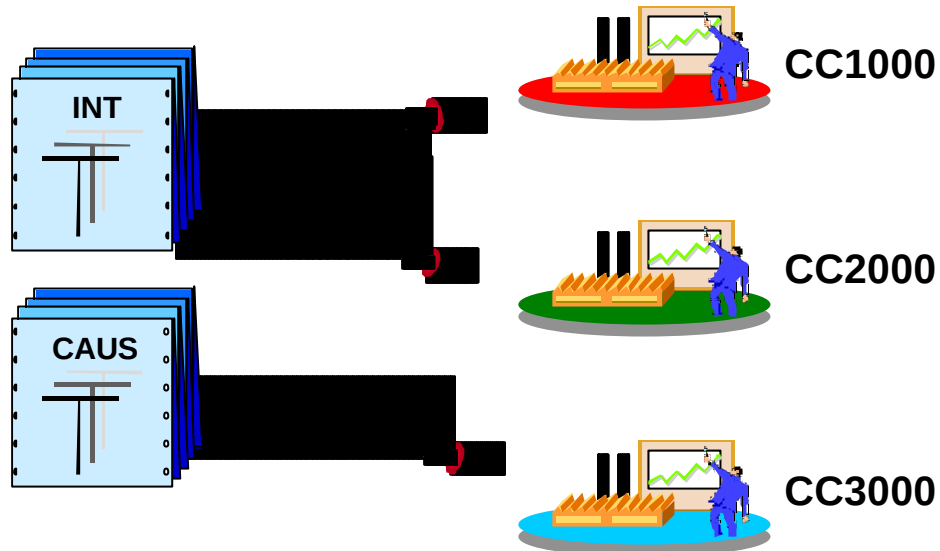
- The **chart of accounts** is a variant which contains the structure and the basic information about general ledger accounts.
- You define the chart of accounts with a 4 character identifier.
- You define the components of the chart of account, e.g. language, length of the G/L account number, group chart of accounts, status.
- The chart of accounts has to be assigned to every company code which would like to create accounts based on the defined structure.

The definition of a chart of accounts contains:

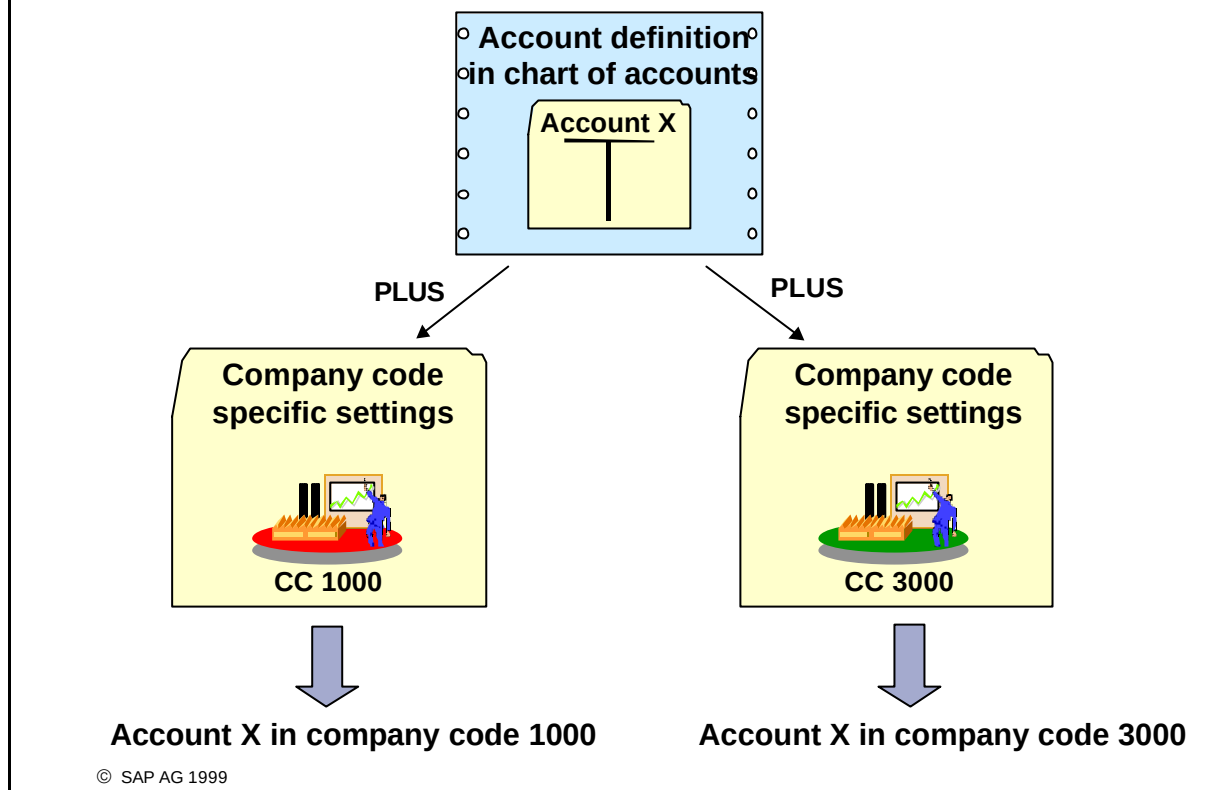
- key
- description
- maintenance language
- the length of the G/L account number
- controlling integration
- a group chart of accounts
- a “blocked”-mark



- The **maintenance language** is the language in which account descriptions are maintained.
- A group account number can be entered into a G/L-account. This group account number is used for reporting across company codes which use different charts of accounts. If a **group chart of accounts** is entered into the chart of accounts, the system makes this field a required entry in the G/L master account and verifies that the group account number entered exists in the group chart of accounts.
- A chart of accounts which is not yet completed can **be blocked** so that no company code can use it until ready.
- The **length of the G/L account number** can be from 1 to 10 digits.



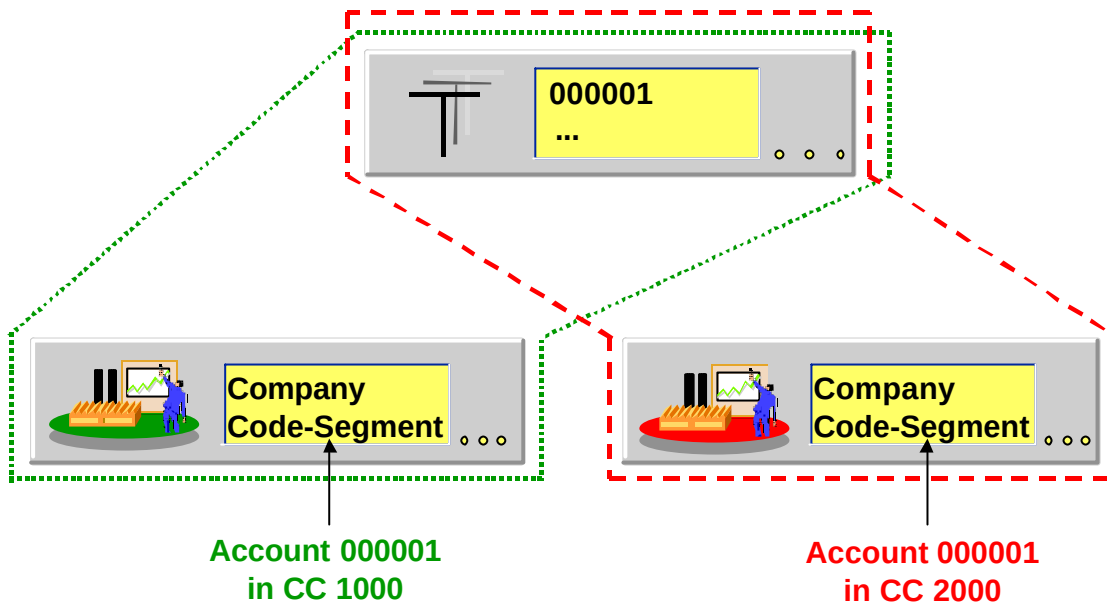
- Every single company code needs to have a chart of accounts assigned to it. Several company codes can share the same chart of accounts (variant principle).
- The R/3-CO module uses the same chart of accounts as the FI module. If company codes intend to use cross company code controlling, they must use the same chart of accounts. In the example above, company codes 1000 and 2000 can do cross company code controlling, but company codes 2000 and 3000 cannot.



- Before you can use an account in a company code, you have to maintain the account definition at the chart of accounts level. You then create company code-specific settings, which are only valid in the company code. An example of a company code-specific setting is defining the account currency. Most of the accounts in company code 1000 use the UNI currency, whereas company code 3000 uses USD for most of its accounts.

One Chart of Accounts, Several Company Codes

SAP

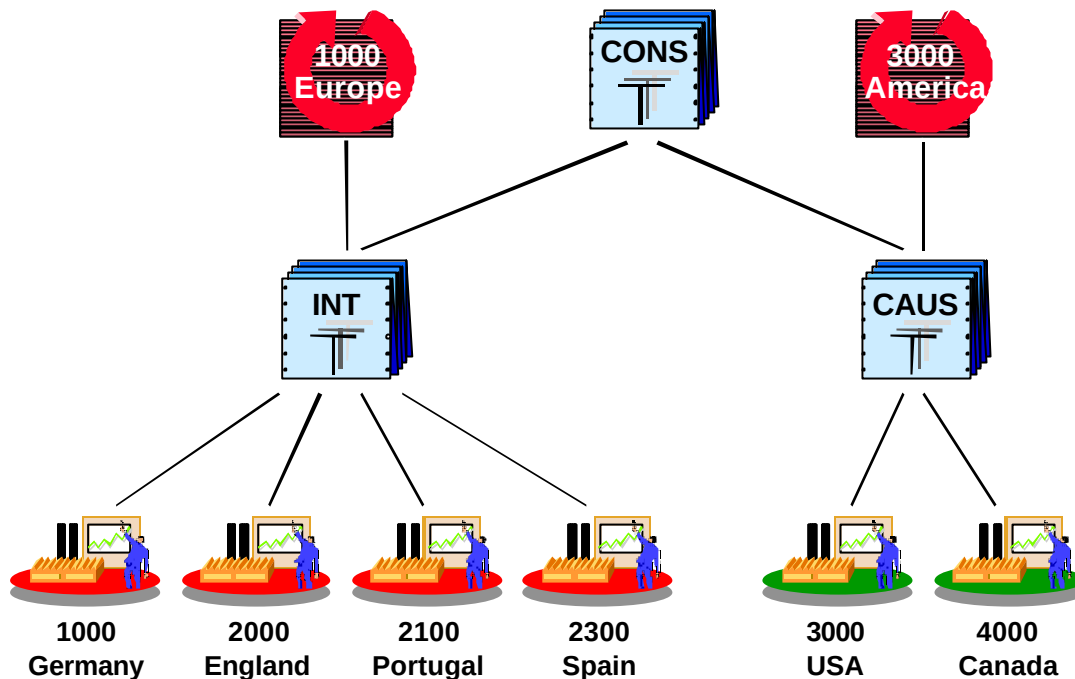


© SAP AG 1999

- Every company code that needs to use an account from the assigned chart of accounts has to create its own company code segment. Because the number and name of the account is maintained at the chart of account level, the account will have the same name and number in all assigned company codes.

Group Chart of Accounts

SAP

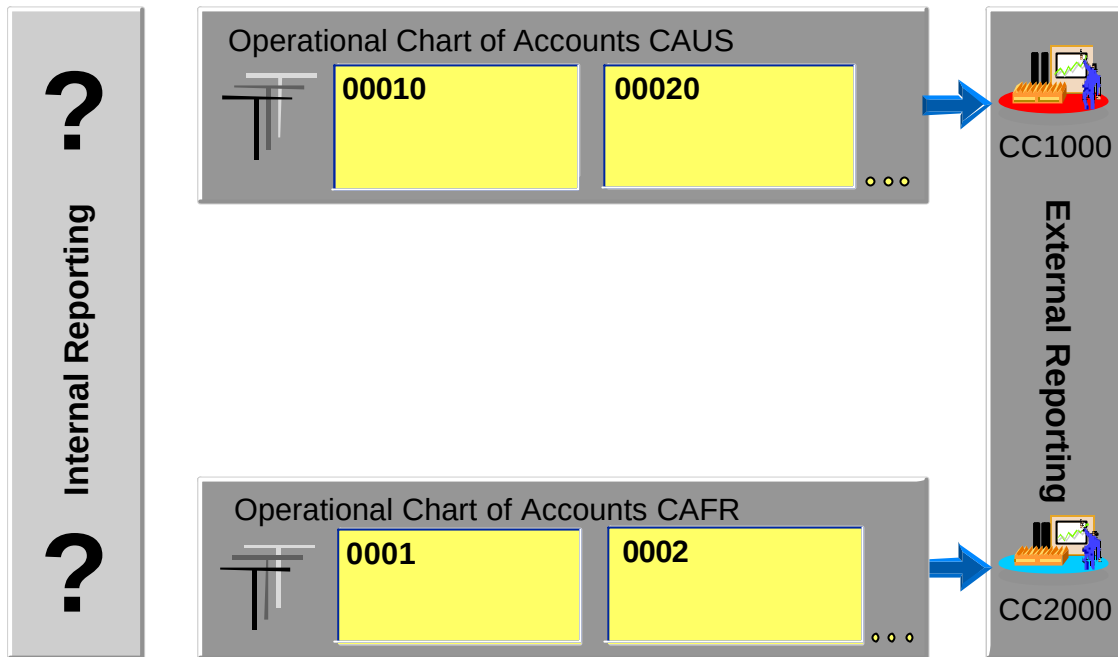


© SAP AG 1999

- The two companies in North America were originally independent firms but were purchased by the IDES group. Both companies were already live with R/3 and were using the chart of accounts CAUS as the operating chart of accounts
- Management determined that cost accounting for Europe and the USA together is not necessary. For this reason, management decided to retain the operating chart of accounts CAUS for the two U.S. company codes and to assign them to a separate controlling area.
- For consolidation purposes, a **group chart of accounts** was set up for the two operating charts of accounts.

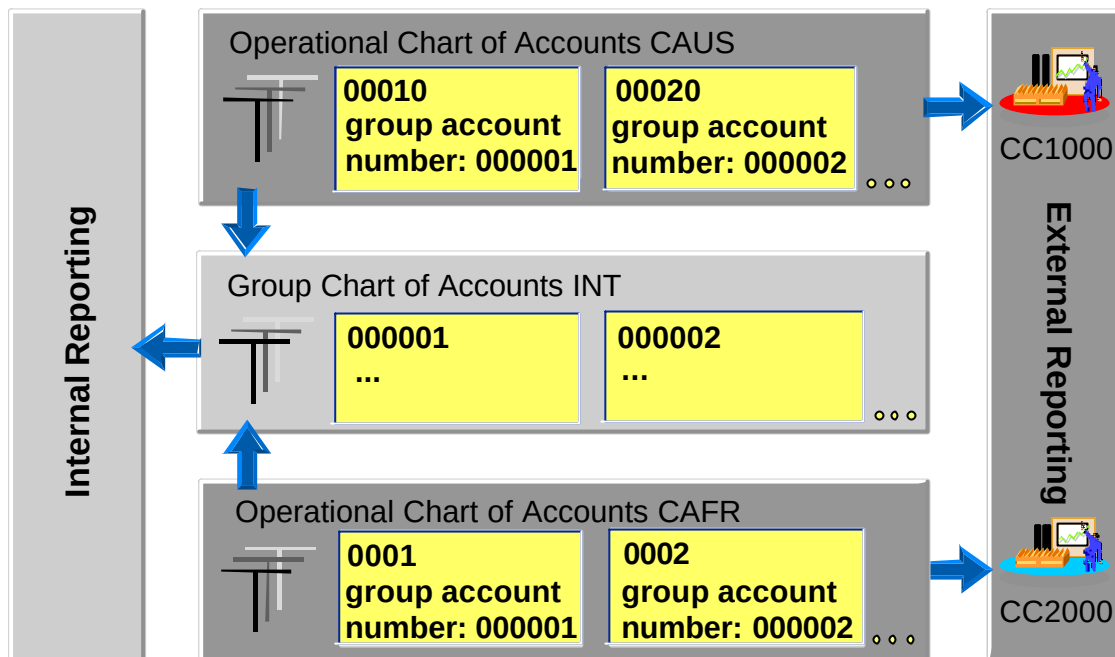
Group Chart of Accounts (1)

SAP



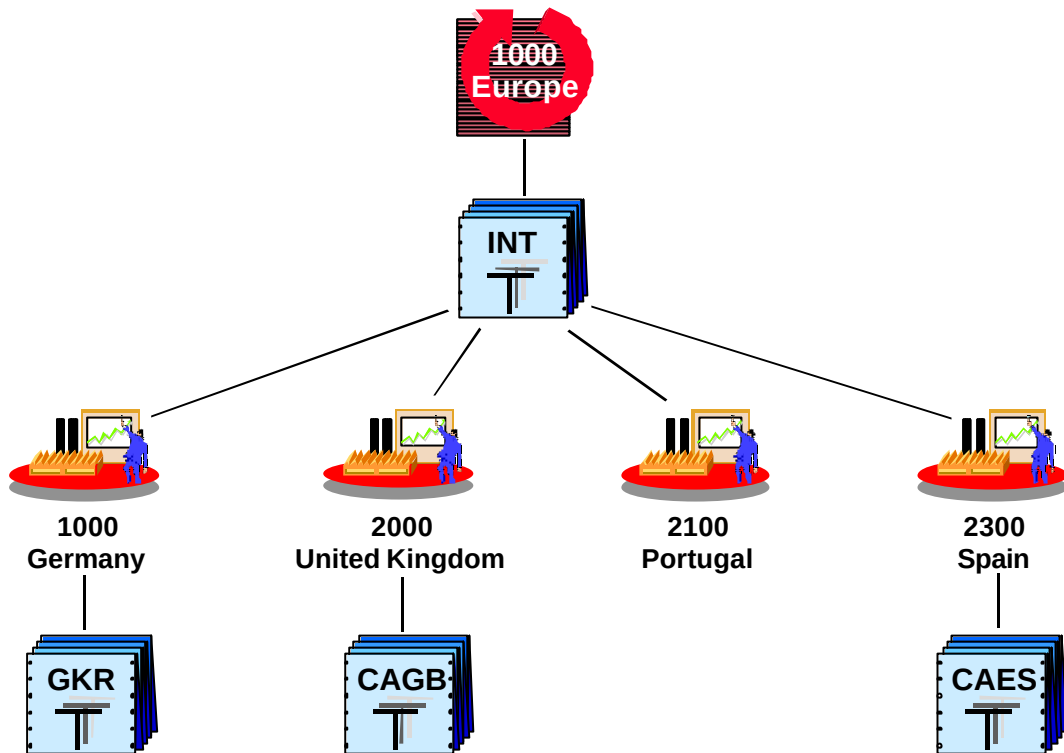
Group Chart of Accounts (2)

SAP



© SAP AG 1999

- For internal purposes, reporting over several company codes may be desirable, e.g a balance sheet shall be generated which contains the financial positions of several company codes.
- This is no problem as long as all company codes use the same chart of accounts. However, some company codes may have to use special charts of accounts because of legal requirements. If this is the case for internal reporting, then:
 - a **group chart of accounts** can be used. This chart has to contain all of the group accounts.
 - the group chart of accounts has to be assigned to each operational chart of accounts. If this is done, the field "group account number" in the chart of account segments of the operational charts of accounts becomes a required entry field.
 - in the chart of account-segment of every operational account, the group account number has to be entered. Different accounts of one operational chart of accounts can point to the same group account.
 - a financial statement version, for the group chart of account, has to be used.
- Disadvantage: Because the company codes use different operational charts of accounts, no inter-company code controlling can be performed.

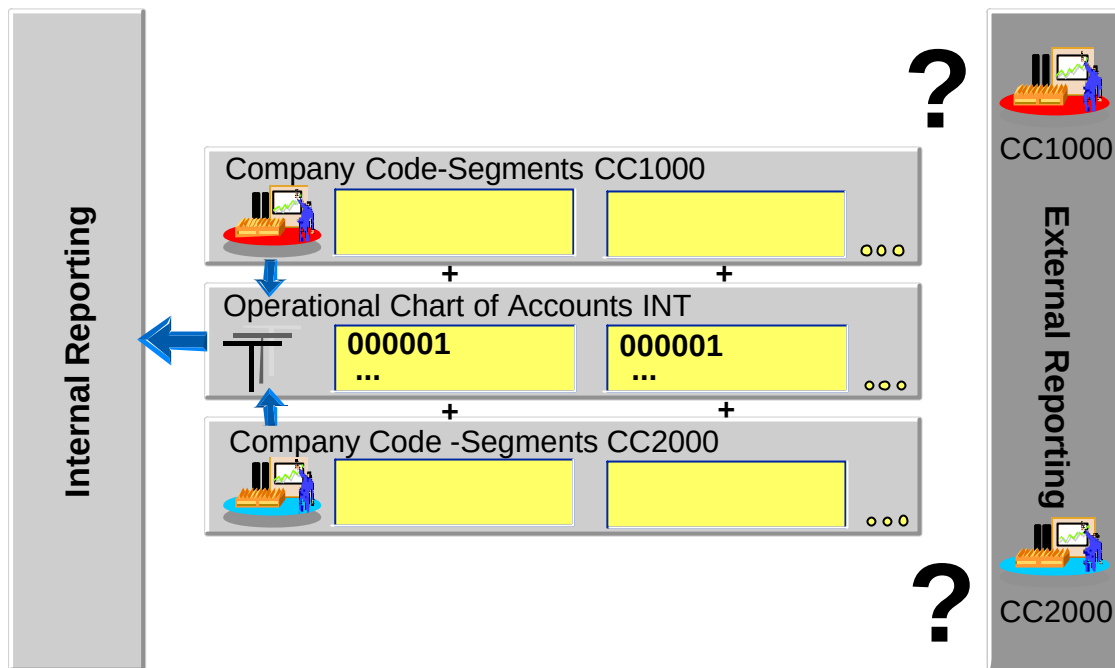


© SAP AG 1999

- It was particularly important to the IDES board of directors that the European company codes, Germany, United Kingdom, Portugal, and Spain, all belong to the same controlling area, since a great deal of activity takes place between these company codes. Therefore, all four company codes had to adopt the operating chart of accounts (INT) of the controlling area. However, in order for it to be possible for external reports to contain the account numbers usually used in the individual countries, a country-specific chart of accounts was created for the company codes Germany, the United Kingdom, and Spain. These country-specific charts of accounts meet the requirements of the separate countries.

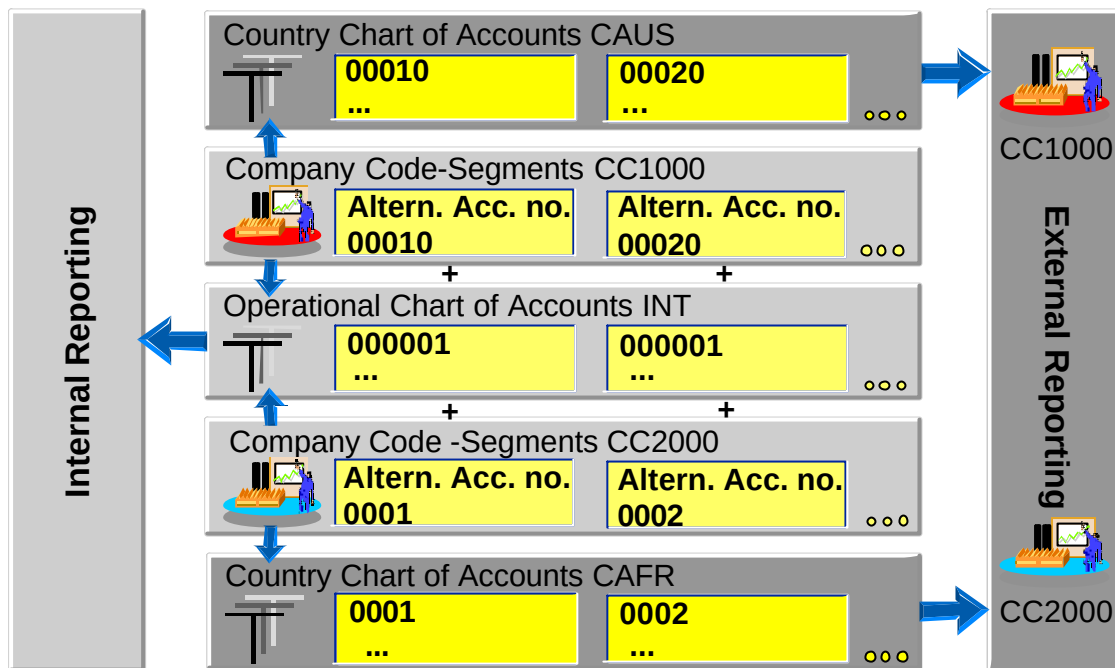
Country Chart of Accounts (1)

SAP



Country Chart of Accounts (2)

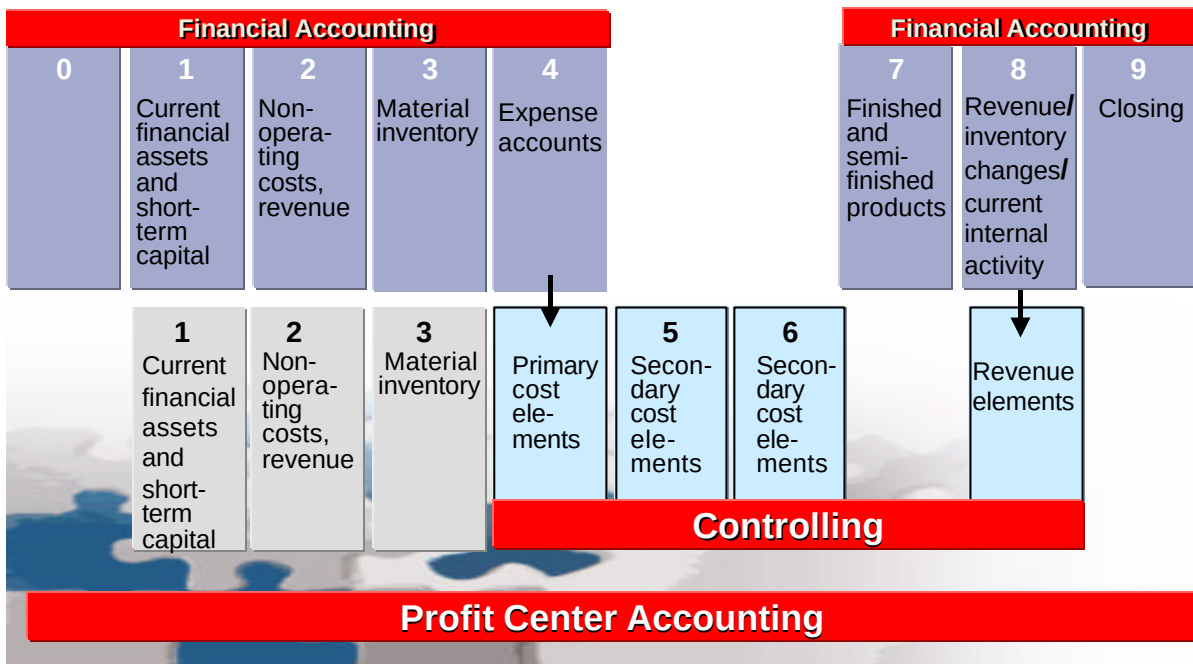
SAP



© SAP AG 1999

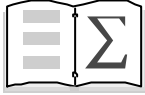
- An alternative to using a group chart of accounts is to use a **country charts of accounts**. While every company code uses the same operational chart of accounts, the company codes which require a different chart of accounts for external reporting can:
 - have a country chart of accounts assigned
 - have the country chart of account number (alternative number) entered in every company code segment. Every country account number can only be used once.
- Note: Since all company codes post into the same operational chart of accounts, cross-company code controlling is possible.
- Disadvantage: Accounting clerks who may be familiar with the country charts of accounts may have to get used to using the operational chart of accounts.

Example: International Chart of Accounts



© SAP AG 1999

- The integration of the R/3 System requires you to create expense accounts in Financial Accounting (FI) with corresponding primary cost elements in Controlling. This ensures that expenses in FI and primary costs in CO can be reconciled. You must create the primary cost elements in FI as G/L accounts before you can create them in CO.
- Postings with primary cost elements are made to cost-carrying controlling objects, such as cost centers or internal orders. Examples of primary cost elements are material costs, salary & wage costs, and utilities costs.
- Secondary cost elements are used exclusively in CO to identify internal cost flows, such as assessments or settlements. They do not have corresponding general ledger accounts in FI and are defined only in CO.
- If you analyze revenues in Controlling, the R/3 System records them as revenue elements, which are simply a different category of primary cost element. Revenue postings are normally made to Profitability Analysis and Profit Center Accounting. Revenues in Cost Center Accounting can be treated as statistical only, which means they cannot be allocated elsewhere in CO.
- When you create a cost element master record, you must assign a cost element category. The category determines the transactions for which you can use the cost element. For example, category 01 (general primary cost element) is used for the standard primary postings to CO from Financial Accounting, Materials Management, or other R/3 modules.



Participants should be able to:

- **create company code**
- **customize fiscal year**
- **customize currencies**
- **copy and assign charts of accounts**

Exercises



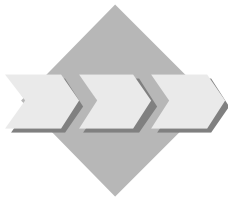
Unit: FI Customizing/Basic Settings

Topic: Company Code



At the conclusion of this exercise, you will be able to:

- Check the definitions of your company code



The company of your client is a medium sized enterprise based in the course country. The enterprise is a single legal entity and in addition to implementing R/3 external accounting it has the desire to perform internal financial reporting at a later stage. The internal reporting is to consider two product lines, Product A and Product B.

- 1-1 Check the company code AC## . In the rest of this course, you will be working within this company code.

Check the following definitions of your company code AC##:

Company name: **Group ##**

Country: **DE**

Currency: **UNI**

Language: **DE**

- 1-2 T/F: You can assign a company code to a business area. _____

Exercises



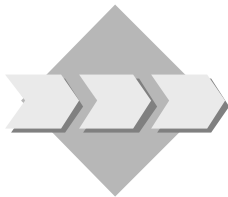
Unit: FI Customizing/Basic Settings

Topic: The Fiscal Year



At the conclusion of this exercise, you will be able to:

- Check the fiscal year variant which is assigned to your company code
- Explain the purpose of the different fiscal year variants



The enterprise operates in a fiscal year that corresponds to the calendar year. The head accountant wants four special periods for postings concerning year-end closing.

- 2-1 Which of the predefined fiscal year variants are
- calendar-year? _____
 - year-dependent? _____

- 2-2 For what purposes are year-dependent fiscal year variants usually used?

- 2-3 Check the fiscal year variant which is assigned to your company Code.

Exercises



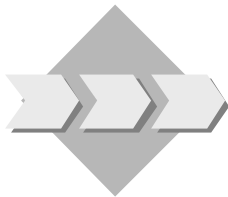
Unit: FI Customizing/Basic Settings

Topic: Currencies



At the conclusion of this exercise, you will be able to:

- Check your knowledge about the possibility of maintaining exchange rates in R/3



The enterprise has customers and vendors in several foreign countries. The head accountant is worried that it will be a substantial amount of daily work to keep the exchange rates up-to-date within the system. You need to convince him that it is much less work than expected if the tools R/3 offers are used.

3-1 Name the tools for maintaining the exchange rates:

3-2 In R/3, currencies are defined by _____.

3-3 Name three commonly used exchange rate types and what they are used for:

3-4 List the IMG path where base currency is defined?

3-5 What is the difference between a participating and non-participating currency?

3-6 Post an outgoing invoice to your customer at the value of USD 1000.00 (Tax code A0), GL account 800200. The exchange rate is 1.753.

3-7 View the document in local currency and in foreign currency.

Post another invoice, again in USD, but without specifying the exchange rate this time. Then view the document - which exchange rate has been used?

Call up the exchange rate table and compare the current table exchange rate with the exchange rate used in the document.



The exchange rate is defined in the document header which is saved together with the document.



Unit: FI Customizing/Basic Settings

Topic: Company Code

- 1-1 Check the company code AC##. In the rest of this course you will be working within this company code.

IMG Menu Path Options:

IMG Menu Path: Tools ® AcceleratedSAP ® Customizing ® Edit Project ® SAP Reference IMG Pushbutton

IMG Transaction Code: SPRO

IMG: Enterprise Structure ® Definition ® Financial Accounting ® Define, copy, delete, check company code ® Edit company code data

Select AC##.

Field Name or Data Type	Values
Company name	Group ##
City	any city
Country	DE
Currency	UNI
Language	DE

Select Save.

- 1-2 **False. Business areas can cut across company codes.**

Solutions



Unit: FI Customizing/Basic Settings

Topic: The Fiscal Year

2-1 Check the properties of the fiscal year variants.

IMG: Financial Accounting ® Financial Accounting Global Settings ® Fiscal Year ® Maintain Fiscal Year Variant (Maintain Shortened Fisc. Year)

Calendar year: 01, K1, K2, K3, K4

Year-dependent: AA, AM, R1, UL, WK

2-2 **Purposes of the year-dependent fiscal year variants.**

The year-dependent fiscal year variants are used:

- **if start and end date of the posting periods differ from year to year**
- **if one fiscal year has fewer posting periods than the others (shortened fiscal year)**

2-3 Check fiscal year variant to company code.

IMG: Financial Accounting ® Financial Accounting Global Settings ® Fiscal Year ® Assign Company Code to a Fiscal Year Variant

Field Name or Data Type	Values
Fiscal year variant	K4

Select Save.

Solutions



Unit: FI Customizing/Basic Settings

Topic: Currencies

3-1 *Inversion*

Base Currency

Exchange Rate Spreads

3-2 *Currency Code*

3-3 *M: Average rate for posting and clearing*

B: bank selling rate

G: bank buying rate

Euro: fixed exchange rate type for countries in the EMU

3-4 *General Settings ® Currencies ® Check exchange rate types*

3-5 *A participating currency is the currency of the country participating in the European Monetary Union. Those countries include: Austria, Belgium, France, Finland, Germany, Luxembourg, Ireland, Italy, Netherlands, Portugal and Spain.*

A non-participating currency is the currency of a country not participating in the EMU.

3-6 *Post an outgoing invoice to your customer at the value of USD 1000.00 (Tax code A0) , G/L account 800200. The exchange rate is 1.753.*

*Accounting ® Financial accounting ® Accounts receivable ® Document entry
® Invoice*

Enter the currency ID in the "Currency "key"" field on the Basic Data tab. Hit Enter and select the now visible Local Currency tab for entry of the exchange rate..

3-7 View the document in local currency and in foreign currency.

Post another invoice, again in USD, but without specifying the exchange rate this time. Then view the document - which exchange rate has been used?

Call up the exchange rate table and compare the current table exchange rate with the exchange rate used in the document.

***Accounting ® Financial accounting ® Accounts receivable ® Document entry
® Invoice***

***Accounting ® Financial accounting ® Accounts payable ® Environment ®
Current settings ® Enter exchange rates.***

***Accounting ® Financial accounting ® Accounts receivable ® Document ®
Display ® Document header***

***Under Environment ® Current Settings is it possible to jump into the table of
foreign currencies.***

Select the "Position" pushbutton at the bottom of the screen.

Exchange rate type M

***The values displayed here are dependent on the date on which the exchange rate
was last entered. Please remember that since the introduction of the EURO the
european EURO currencies are managed via the exchange rate type EURX.***

***Compare the exchange rate with the exchange rate specified in the document
header.***

Check the exchange rate type M = it indicates that the translation for USD to UNI is calculated via EURX beginning on the 01.01.1999.

The exchange rate table shows the exchange rates

USD to EUR = 1,0791

UNI to EUR = 1,95583

The system calculates as follows:

1000 USD : 1,0791 = 926,698 * 1,95583 = 1812,46 UNI

Unit Contents:

- **G/L Accounts**
- **Customer/Vendor Accounts**



At the conclusion of this unit, you will be able to create, maintain and control:

- **G/L Accounts**
- **Customer/Vendor Accounts**



- The accounting department uses some data which remains unchanged for long periods of time and which is often referred to by other data. This data is called master data.
- In FI, master data includes general ledger and sub ledger accounts, as well as bank master records.
- The head accountant wishes to know how accounts are structured, how they can be influenced, and how they may relate to each other.



At the conclusion of this topic, you will be able to:

- **define and use a chart of accounts**
- **describe the structure of a G/L account**
- **control the appearance of a G/L account**
- **name and explain different types of G/L accounts**
- **create G/L accounts using different methods**
- **discuss methods to change multiple GL accounts simultaneously**
- **explain advantages and disadvantages of group and country charts of accounts**

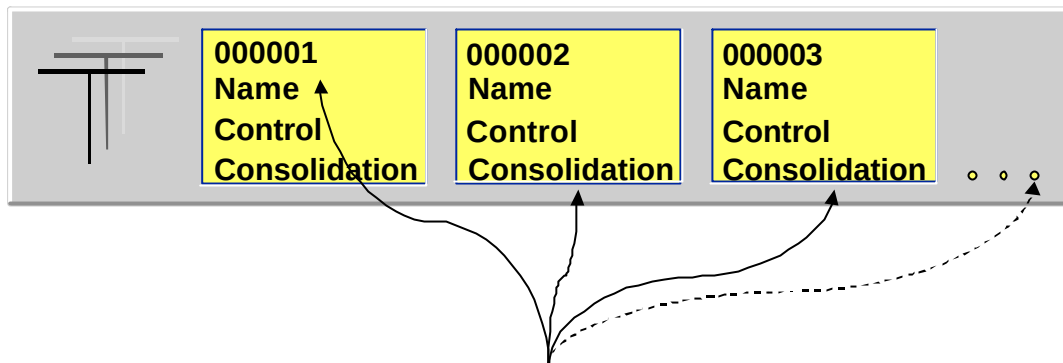


Chart of accounts - segments

- The chart of accounts contains basic information about the accounts. Information per account is bundled into what is called the **chart of account-segment**.
- It contains the:
 - Account number
 - Name of the account (as short and as long text)
 - Control fields (discussed on the following slides)
 - Consolidation fields
- You can translate the chart of accounts into other languages in order to be able to display the account name in the appropriate logon language when displaying master data and posting. If the chart of accounts has not been translated into the appropriate logon language, the account name appears in the maintenance language.
- Texts with different information can be assigned to each chart of accounts-segment.

The Chart of Account segment consists of several groups of fields:

Type/Description

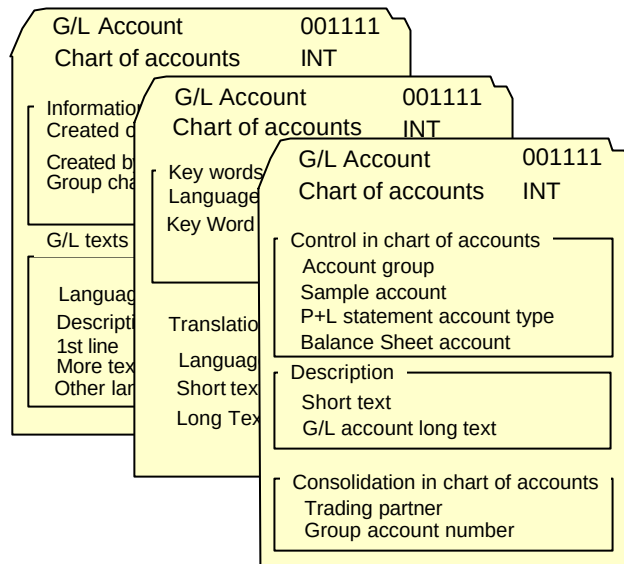
- Control in chart of accounts
- Description
- Consolidation data in chart of accounts

Key Word/Translation

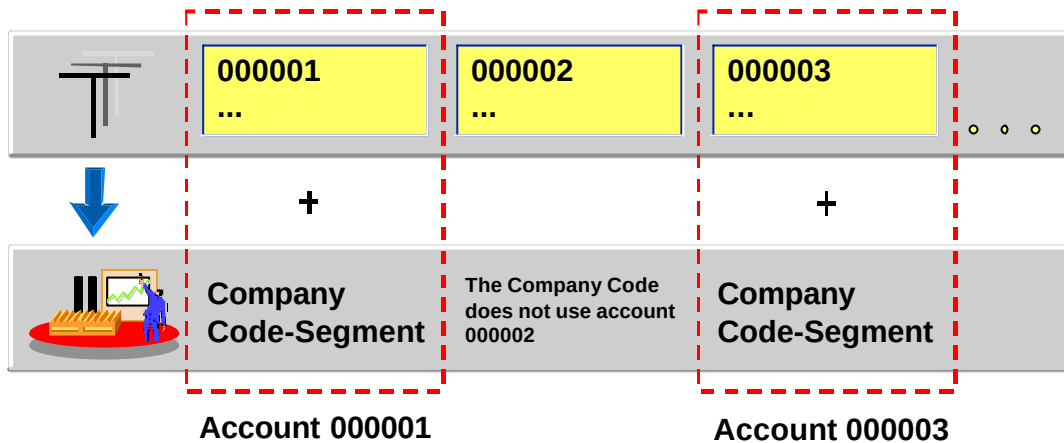
- Key words in chart of accounts
- Translation

Information

- Information in chart of accounts
- G/L texts in chart of accounts



- The information entered in the Chart of Account segment is unique whether users have one or multiple company codes. This is how the *name remains the same* and is consistent across company codes.
- The information is entered once. Whenever you enter information for a company code for an account number, the information from the Chart of Account segment is accessed automatically, so you do not have to enter it again.
- Texts entered for the Chart of Account segment are managed by text ID and language.
- Texts can be displayed by the report "Account assignment manual".
- The Key Words facilitate the search on an account number.



- To use one of the accounts from the assigned chart of accounts in your company code, a **“company code-segment”** has to be created. This “company code-segment” is added to the chart of account-segment, and together they form the account.
- Information in the company code segment is *specific for this company code*. This information controls entry of accounting documents and management of accounting data.

The Company Code segment consists of several groups of fields:

Control Data

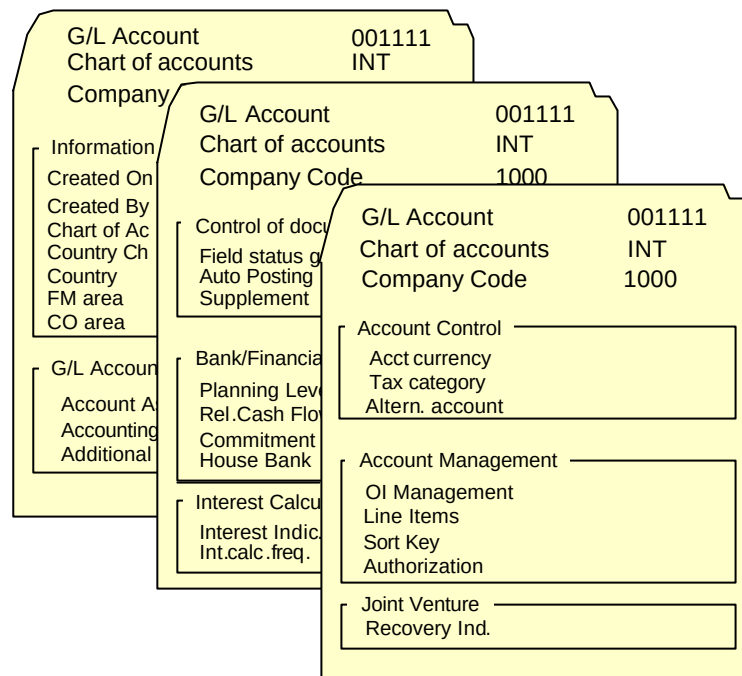
- Account control
- Account Management
- Joint Venture

Bank/interest

- Document Creation
- Bank/Financial Details
- Interest Calculation

Information

- Information
- G/L Account texts

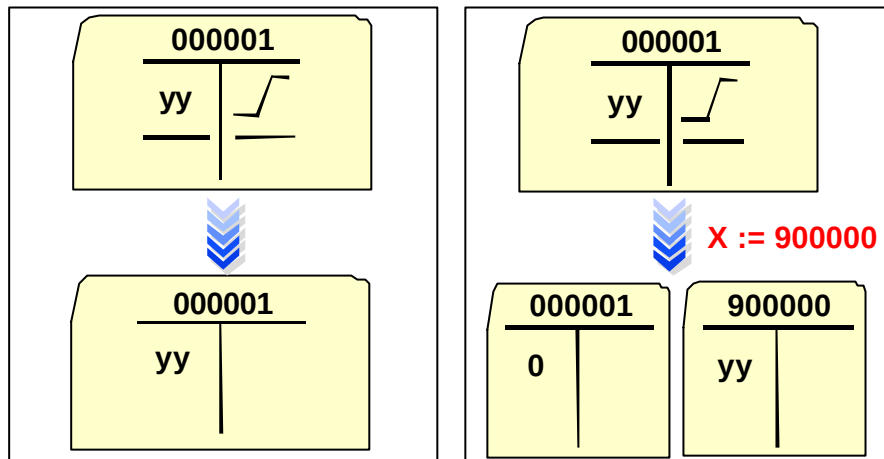


© SAP AG 1999

- The Company Code segment for the same G/L account can be different depending on the needs of the company code. For example, one company code may collect tax when using expense accounts and would flag the tax category field, whereas another company code may not.
- You define the information that is pertinent to each company code:
 - Currency
 - Tax
 - Reconciliation account
 - Line item display
 - Sort key
 - Field status group
 - House bank
 - Interest calculation information
- As mentioned before in the Account Chart segment, texts are managed by text ID and language. Texts can be displayed by the report "Account assignment manual".

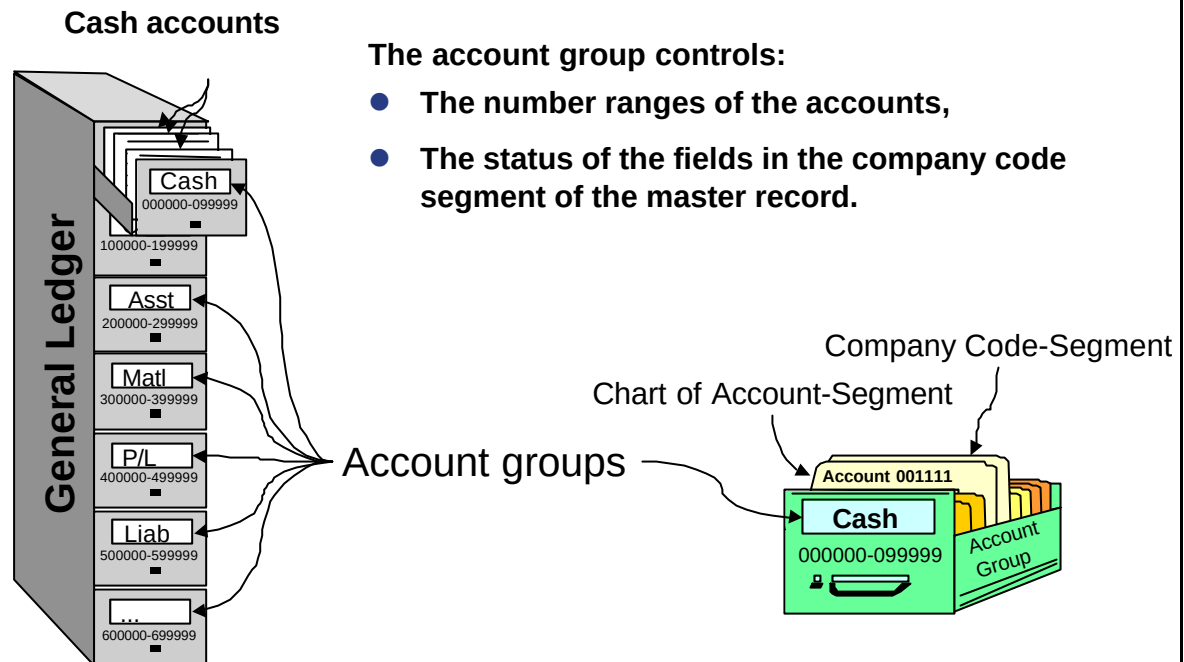
	000001	P+L statement acct type ☐	...
	Balance sheet account ☒		
	000002	P+L statement acct type ☒	
	Balance sheet account ☐		

Carry forward



© SAP AG 1999

- In the chart of accounts-segment, it is necessary to indicate whether the account will be a balance sheet or a profit+loss statement account.
- These two types of accounts are treated differently in the closing procedure.
 - For balance sheet accounts, the balance is carried forward to the same account.
 - For P+L statement accounts, the balance is carried forward to a retained earnings account and the P+L statement account is set to zero. The account to which the balance is carried forward is assigned to a key (e.g. x) and this key is entered in the field "P+L statement account type" in the chart of accounts-segment.
- In customizing, users define the retained earnings account and during G/L master record creation, it is assigned to expense accounts. If there is only one retained earnings account, R/3 will automatically use the one defined in customizing. If there are more than one retained earnings account, during master record creation, the user will have the option to choose the retained earnings account per P+L account.

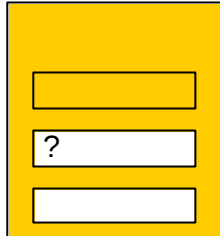


© SAP AG 1999

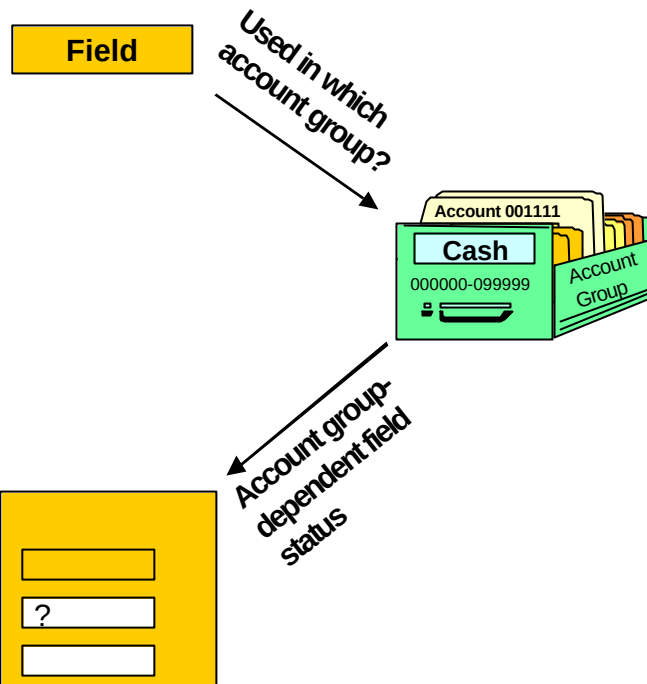
- Since a chart of accounts contains many different types of accounts, they can be bundled into different “**account groups**”. Usually one account group bundles accounts with the same tasks within the general ledger, e. g. cash accounts, material accounts, asset accounts, profit and loss accounts,...
- By assigning a number range to an account group, you can ensure that accounts of the same type are within the same number range. Number intervals for G/L account master records can overlap.
- The account group has to be entered in the chart of accounts-segment and controls the appearance of the company code segment of a G/L account. For example, for all of your cash accounts, you want to be able to view all of the detailed line items. In customizing, for your “Cash Accounts” account group, you would alter the field status to make “line item display” a required entry.
- R/3 delivers predefined account groups.

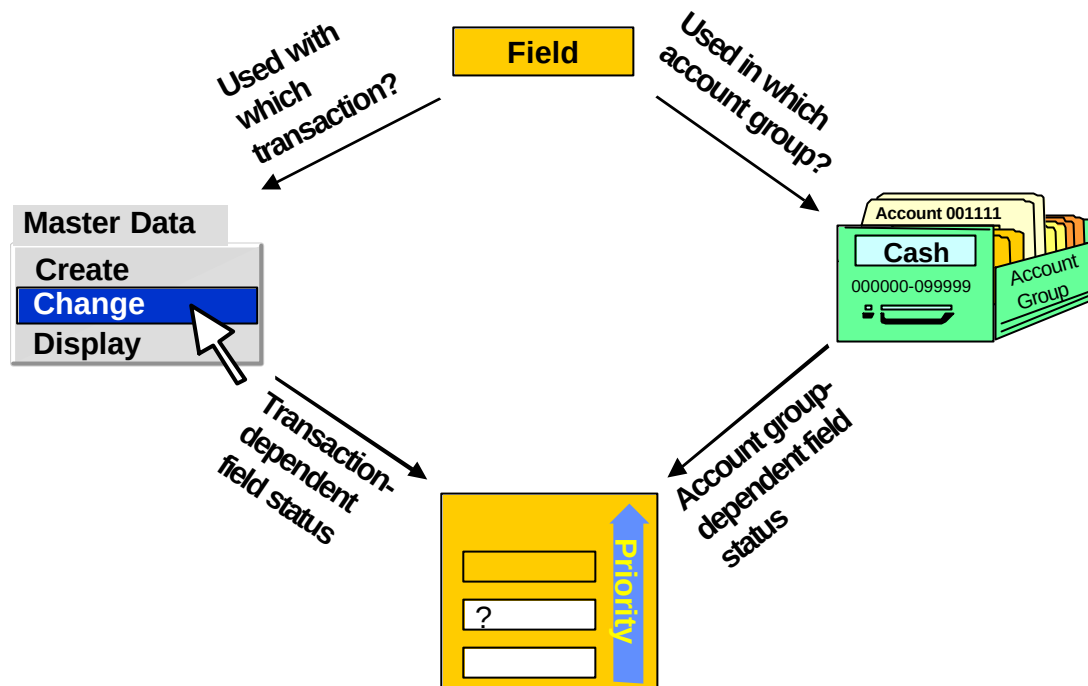
Every field has one of the following properties:

- **Suppress**
- **Display**
- **Required Entry**
- **Optional Entry**



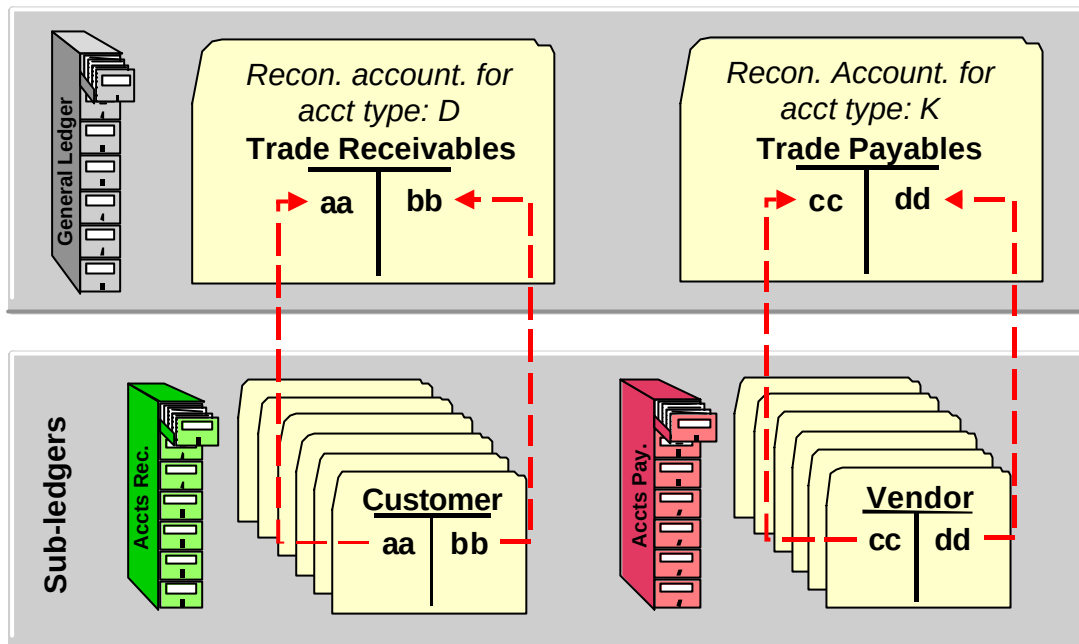
- The **field status** makes it possible to influence the appearance of an account's master data.
 - Fields which are not used can be suppressed.
 - Fields which have an entry that should not be changed can be set to display only (even in change mode)
 - Fields which must have an entry can be made required fields.
 - Fields that can be entered, but are not required, can be set to optional entry.
- Certain fields are grouped together and their field status is valid for the entire group, e. g. interest calculation indicator, interest cycle, and last interest calculation key date.
- The fields "Currency" and "Field status group" are always required fields. Their status cannot be changed.
- Note: Fields which are suppressed may contain values and these values still take effect!





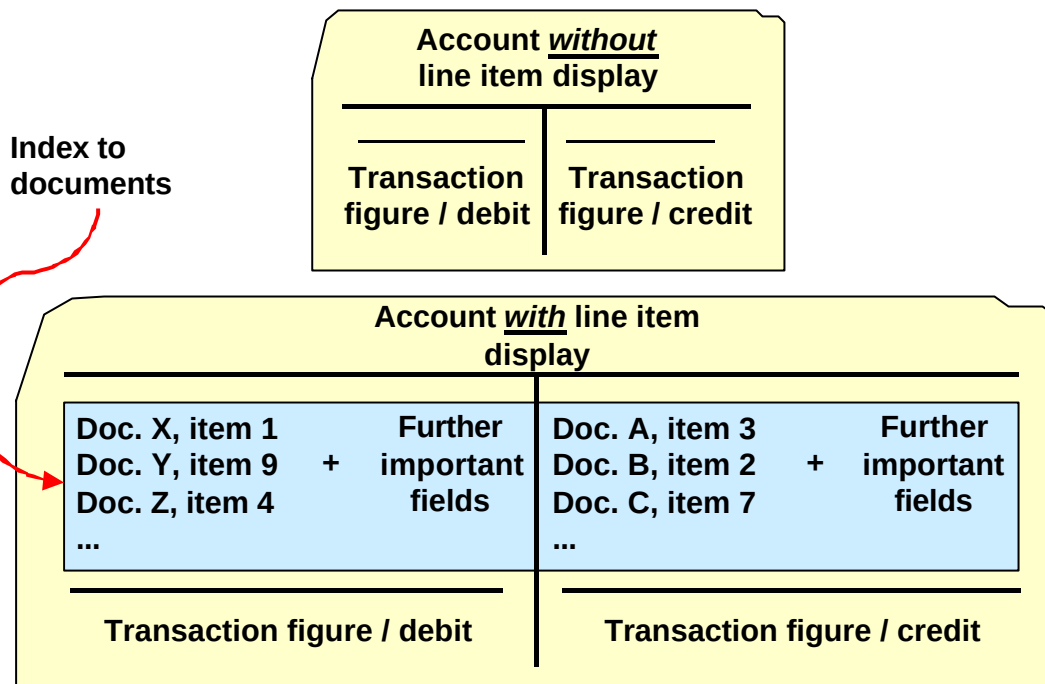
© SAP AG 1999

- The fields displayed on the general ledger master record are not only controlled by the account group, but also by the master data transaction that you are using (**transaction dependent control**) i.e. *create, change, display*. Once the master record is created and you do not want sensitive fields changed, on the *master record change* transaction in customizing, you specify that a certain field is not changeable. For example, you want the currency of your cash account to be GBP and you do not want it to be changed, customize the *master record change* transaction to have the field be display only.
- For each field, the field status definitions from the account group and the transaction are taken into consideration and the one with higher priority is used. The priorities are (starting with the highest):
 - suppress
 - display
 - required entry
 - optional entry
- Fields which are accessed with the transaction *master record display* are always either displayed or suppressed since you cannot make an entry in a display transaction.
- If you do not want to use the transaction dependent field status control, set all field status definitions as optional entry, as this has the lowest priority and will therefore not conflict with the account group control.



© SAP AG 1999

- **Reconciliation accounts** are general ledger accounts assigned to the business partner master records to record all transactions in the sub-ledger.
- Any postings to the sub-ledger accounts automatically updates the balances of the assigned reconciliation accounts. In this way, the general ledger is always up-to-date.
- You define a G/L-account as a reconciliation account by entering the type of reconciliation account that it is into the field "Recon.account for acct type".
 - **D for customers**
 - **K for vendors**
- The reconciliation account is then only valid for the specified account type.
- Typical reconciliation accounts are the accounts "Trade Receivables" and "Trade Payables".
- Note: It is not possible to post to reconciliation accounts directly.



© SAP AG 1999



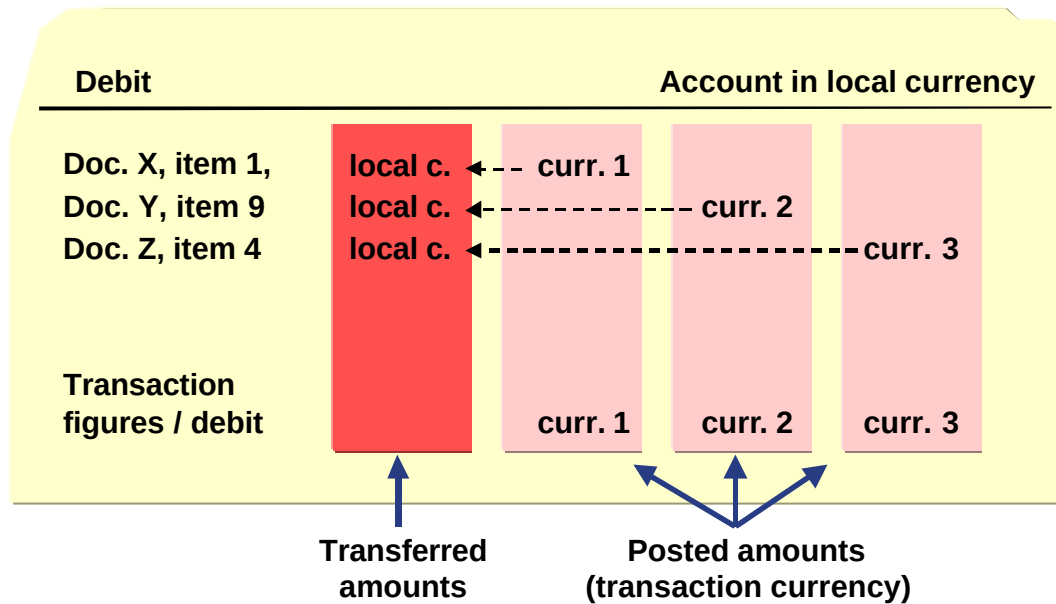
- **Transaction figures** are the sums of line items on the debit or credit side. The **balance** is the difference between the debit and the credit transaction figure.
- The field “**line item display**” is a control field in the company code segment of an account.
 - For accounts without “line item display” only the transaction figures are updated when a document is posted to this account. When a user wants to look at this account on-line, they will only be able to view the balance.
 - For accounts with “line item display” the most important data from the posted line items is stored in a special index table. Because this data is also stored in the documents, it is redundant and needs additional storage and system time. When a user wants to look at this account on-line, they will be able to view both the balance and the individual line item details.
- Because of system resources which are needed by the line item display, it should not be used for accounts where the line item data can be more easily accessed in another way, e.g.
 - Reconciliation accounts (line items are managed in the sub-ledgers)
 - Sales revenue accounts (line items are managed by the SD-application)
 - Material stock accounts (line items are managed by the MM-application)
 - Tax accounts (Tax items make sense only in connection with the document; the tax amounts were already checked when the document was posted.)

Account <u>without</u> open item management			
Doc. X, item 1	+	Further important fields	Doc. A, item 3
Doc. Y, item 9			Doc. B, item 2
Doc. Z, item 4			Doc. C, item 7
...			...
Transaction figure / debit			Transaction figure / credit

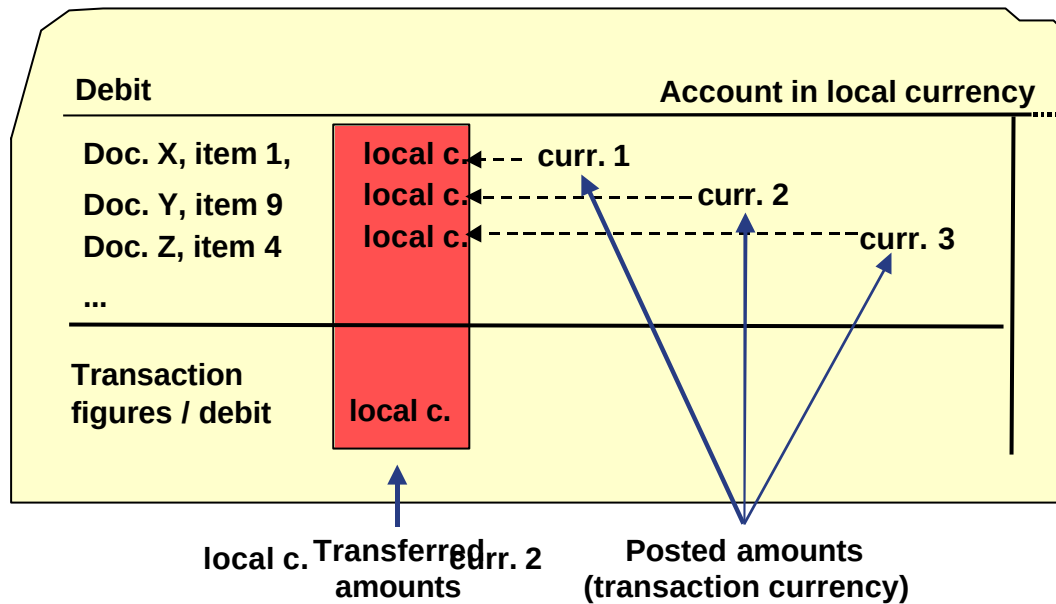
Account <u>with</u> open item management			
Doc. X, item 1	further	☒	Doc. A, item 3
Doc. Y, item 9	+ important	☐	Doc. B, item 2
Doc. Z, item 4	fields	☐	Doc. C, item 7
...			...
Transaction figure / debit			Transaction figure / credit

© SAP AG 1999

- Items in accounts with **open item management** are specified as open or cleared.
- Accounts with open item management must have line item display activated.
- General ledger accounts should be administered with open item management when you need to check whether there is an offsetting posting for a given business transaction. Open and cleared items can be displayed separately, and therefore it is easy to see which business transactions still need to be cleared.
- You should use open item management for:
 - bank clearing accounts,
 - clearing accounts for goods receipt/invoice receipt, and
 - salary clearing accounts.
- You can only set or cancel open item management if the account has a zero balance.

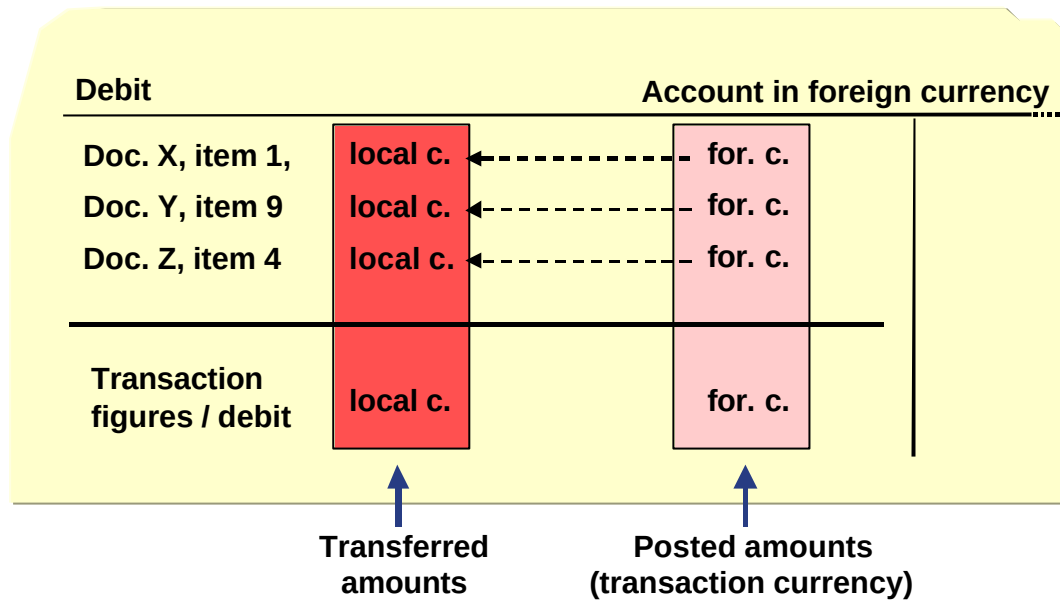


- The account currency can be either
 - the local currency, or
 - a foreign currency.
- The local currency is defaulted as the account currency when a G/L account is created.
- **If the account currency is the local currency, the account can be posted to in any currency.** In the line item, the amount is transferred into the local currency.
- Transaction figures are kept per currency, i.e.
 - local currency (sum of all amounts transferred to local currency)
 - currency 1 (sum of all amounts posted in currency 1, may be the local currency)
 - currency 2 (sum of all amounts posted in currency 2)
 - currency 3 (sum of all amounts posted in currency 3)
 - etc.
- This is valid whether or not line item display is activated.

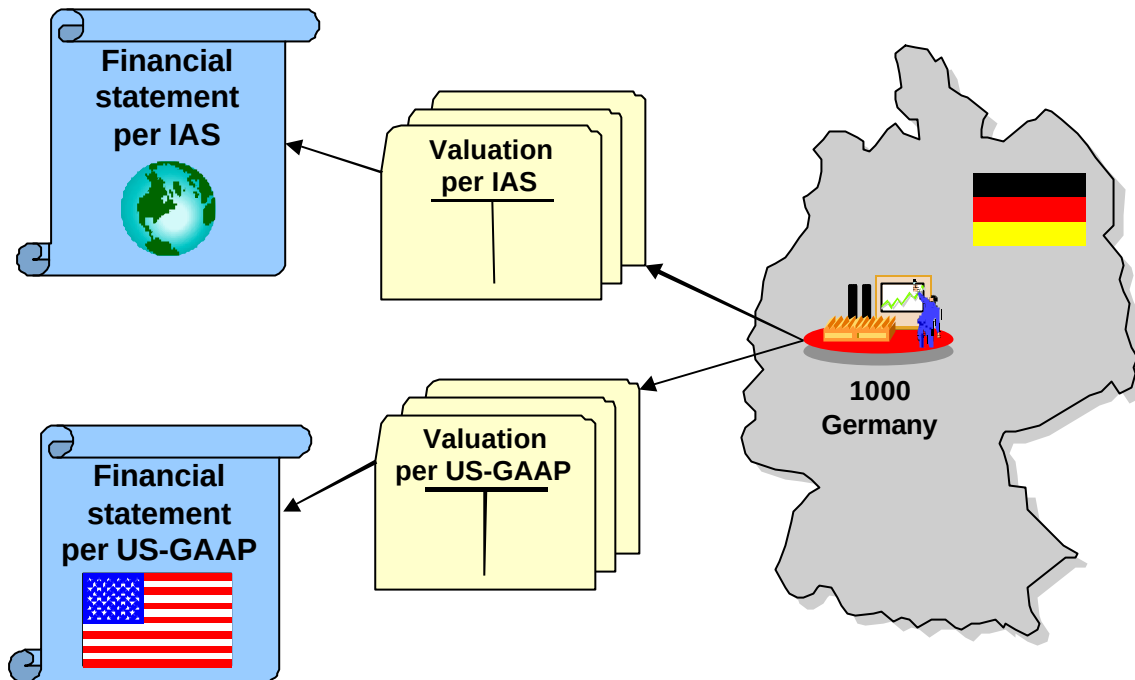


© SAP AG 1999

- If the box **“Only balances in local currency”** is marked in the master data record, **only transaction figures for amounts transferred to local currency are managed.**
- This indicator should be set for clearing accounts from which you wish to be able to clear items simply by zero-balancing the amounts in local currency. **Then no difference postings caused by exchange rate differences have to be made.**
- The indicator has to be set in cash discount and GR/IR clearing accounts.
- It must not be set in reconciliation accounts for customers or vendors.
- The indicator is usually set in balance sheet accounts which are not kept in foreign currencies and not managed on an open item basis.



- Accounts having a **foreign currency** as its account currency can only be posted to in this foreign currency.



- For many companies, it may be necessary to create additional financial statements based on standards other than country-specific requirements, such as IAS or US-GAAP. Reasons for this could be:
 - To gain access to international capital markets
 - To meet the needs of foreign investors
 - To accommodate global restructuring and acquisitions
 - To provide a better overview of the company's position
- Parallel accounting methods can be carried out in the R/3 System by:
 - Using different valuation methods with post to different G/L accounts
 - Using these G/L accounts in various financial statement versions



- **Manual**

- **Two-Step:**

- ◆ **1. Chart of Accounts Segment, 2. Company Code Segment**
 - ◆ **One-Step: Create both segments simultaneously**



- **Copying**

- **Copying an individual GL account with reference to another GL account**
 - **Copy the entire company code segment**
 - **Copy the entire chart of accounts segment**



- **Data Transfer**

- **Upload a new chart of accounts from an external system e.g. flat file**

© SAP AG 1999

- **Manual Creation:**

- With the two step method, the chart of accounts segment is created separately from the company code segment. This allows for creating the GL account only in the chart of accounts or in multiple company codes.
- Use the one step method to create a GL account in a specified company code. Repeat step 2 of the two step method, create in the company code segment, to create the GL account in additional company codes as needed.

- **Creating GL accounts by copying :**

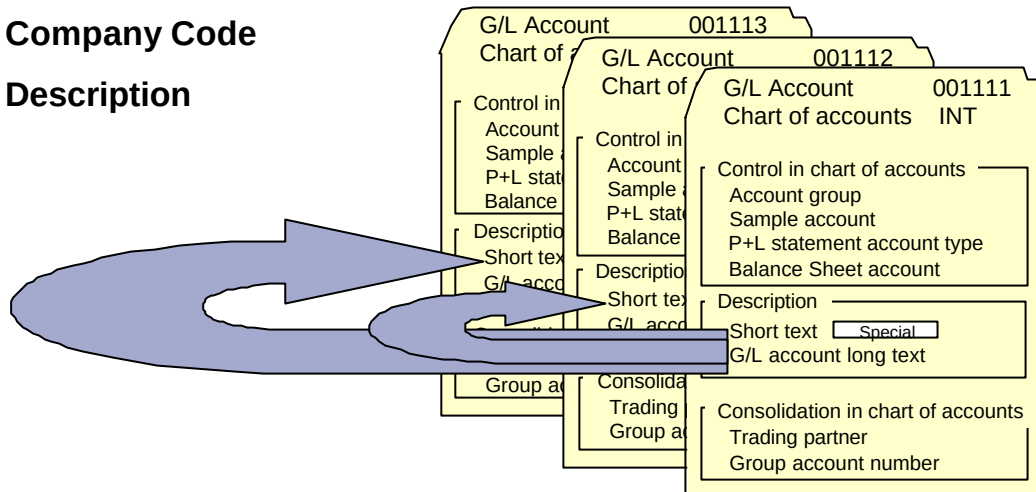
- To create an account that has the same properties as an existing account, i.e. another cash account, create the new account with reference to the existing account and change the account title accordingly.
- If all of the GL accounts in an existing company code are required in another company code, the entire company code segment can be copied to the new company code.
- The entire chart of accounts can be copied into a new chart of accounts as well, including account determination. The financial statement version can also be copied.

- **Data Transfer:**

- To reduce data entry, programs like RFBISA00, Batch Input Interface for G/L Account Master Data, can be modified by the ABAP team to accommodate uploading new chart of accounts information.

You can change collectively the following information:

- Chart of Accounts
- Company Code
- Description



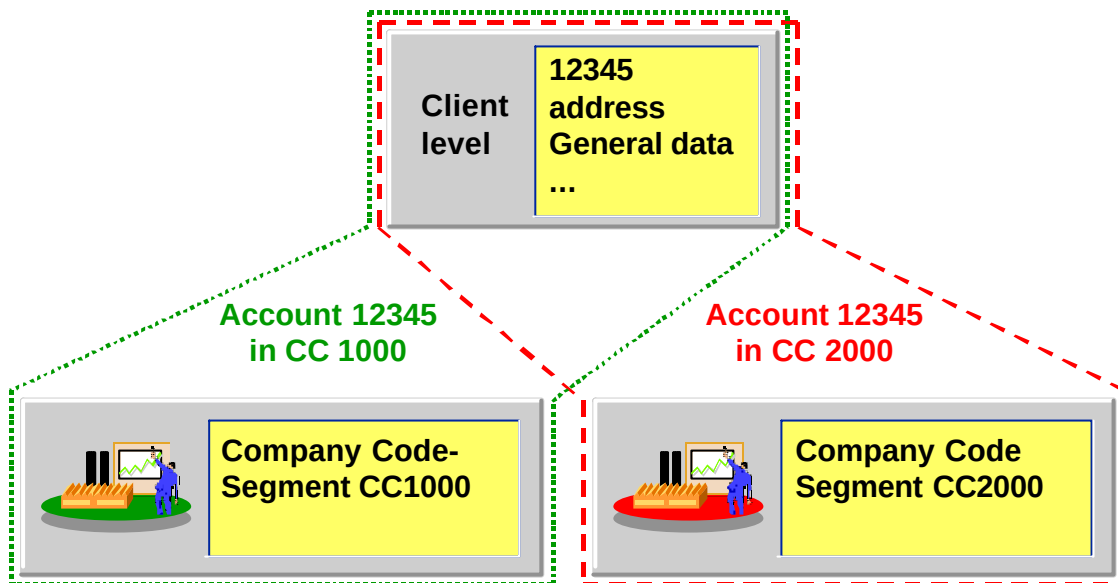
© SAP AG 1999

- The SAP R/3 System provides collective processing functions for the G/L account master.
- You can change the master data in the chart of accounts area, company code specific data or the names of several G/L accounts at the same time. The G/L accounts can be from different charts of accounts.
- You can make changes to the displayed G/L accounts:
 - You can select the fields to be changed
 - You can change the values of the fields displayed. Enter the new values in the header New to replace the existing values. For all G/L accounts selected, the old value is replaced with the new value
- NOTE: Changes to existing G/L accounts are effective once saved and could have extensive consequences. You should thus verify your changes before saving.

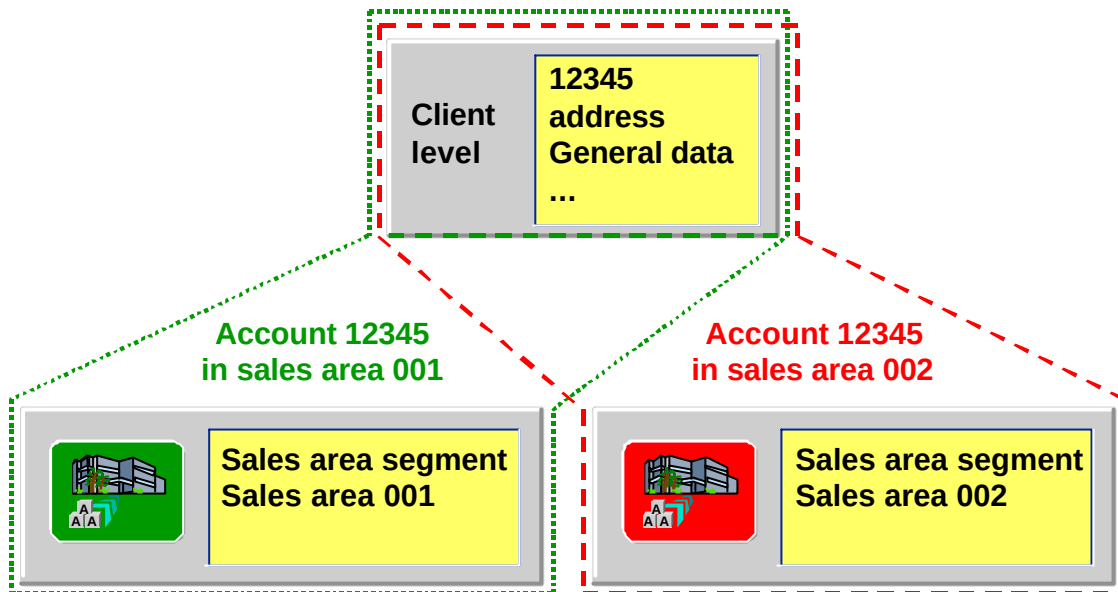


At the conclusion of this topic, you will be able to:

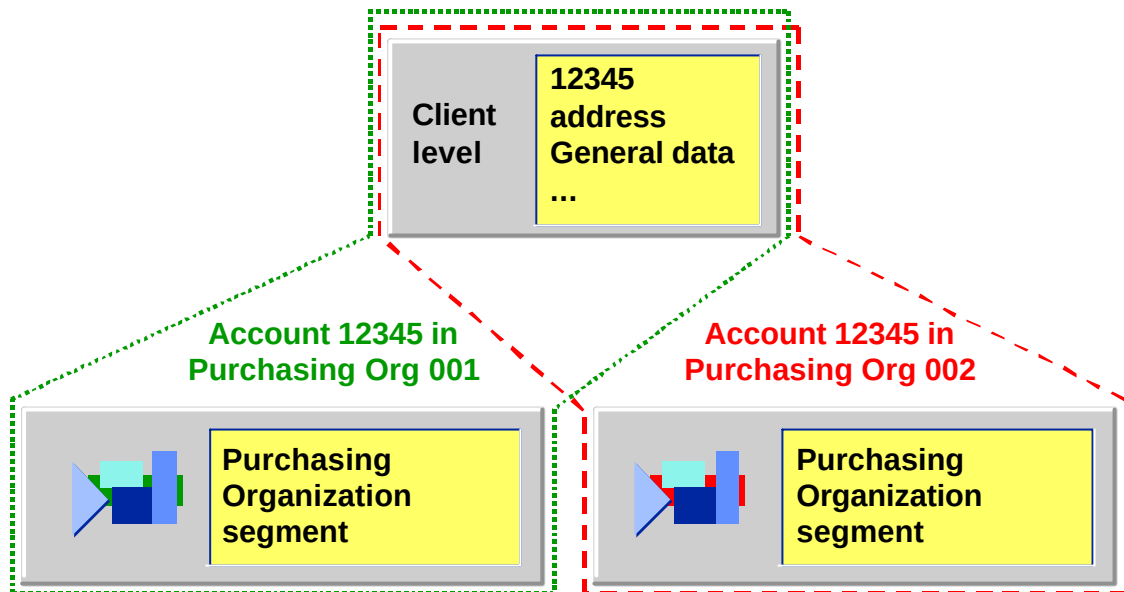
- **describe the structure of customer and vendor accounts**
- **discuss the similarities and differences between customer and vendor accounts**
- **control and maintain customer and vendor accounts**
- **name and explain different relationships between customer/vendor accounts**



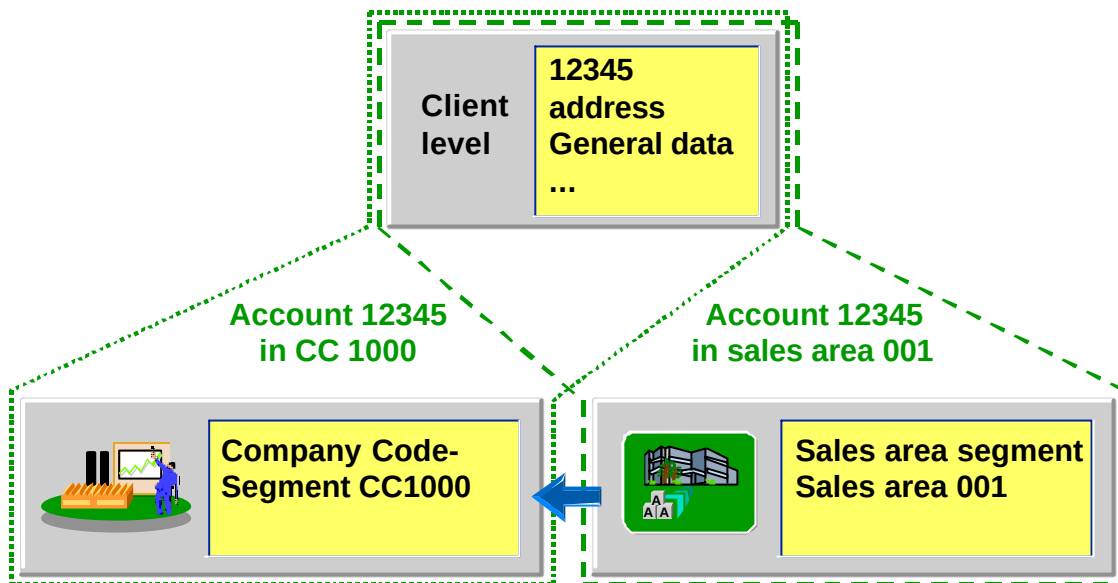
- Like G/L accounts, customer/vendor accounts have two segments:
 - A segment with **general data** on the client level. This data can be accessed throughout the whole organization.
 - A segment with **company code specific data** on the company code level. Any company code who wishes to do business with a specific customer or vendor has to create a company code segment for him. By doing this, a customer/vendor account is created.



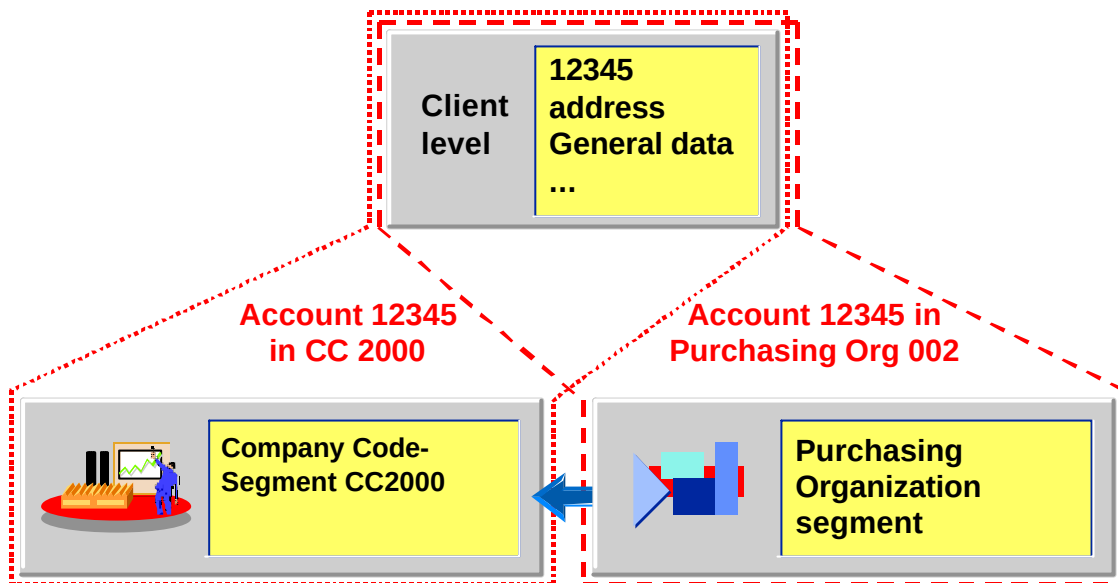
- Because the sales and distribution department also stays in contact with a customer and has to know specific data about this customer, a **sales area segment** can be created for each customer.
- Any sales area which wants to do business with a customer has to create a sales area segment first. The sales area segment contains sales area specific data.



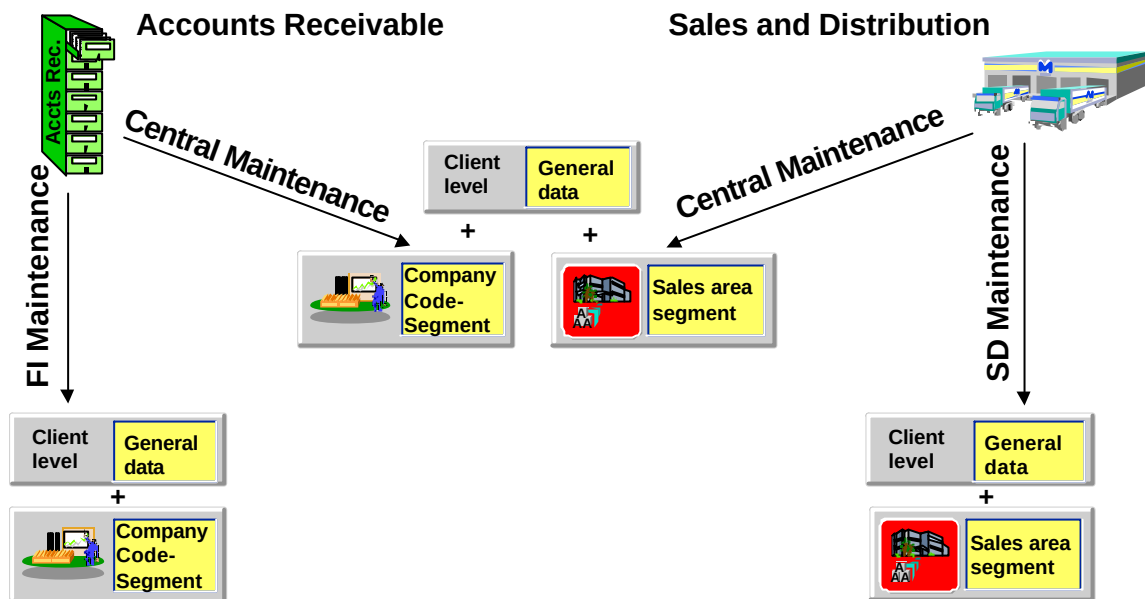
- Just as there is a sales area segment for customers, there are **purchasing organization segments** for vendors.
- Any purchasing organization which wants to do business with a vendor has to create a purchasing organization segment first. The purchasing organization segment contains purchasing organization specific data.



- A **complete customer account** consists of the following three segments:
 - General data at the client level
 - Company code segment
 - Sales area segment
- Usually at a minimum, the sales area segment of the sales area which is assigned to the company code has to be created. Note: There may be other sales areas doing business with the customer as well.
- The account number is assigned to the customer at the client level. This ensures that the account number for a customer is the same for all company codes and sales areas.



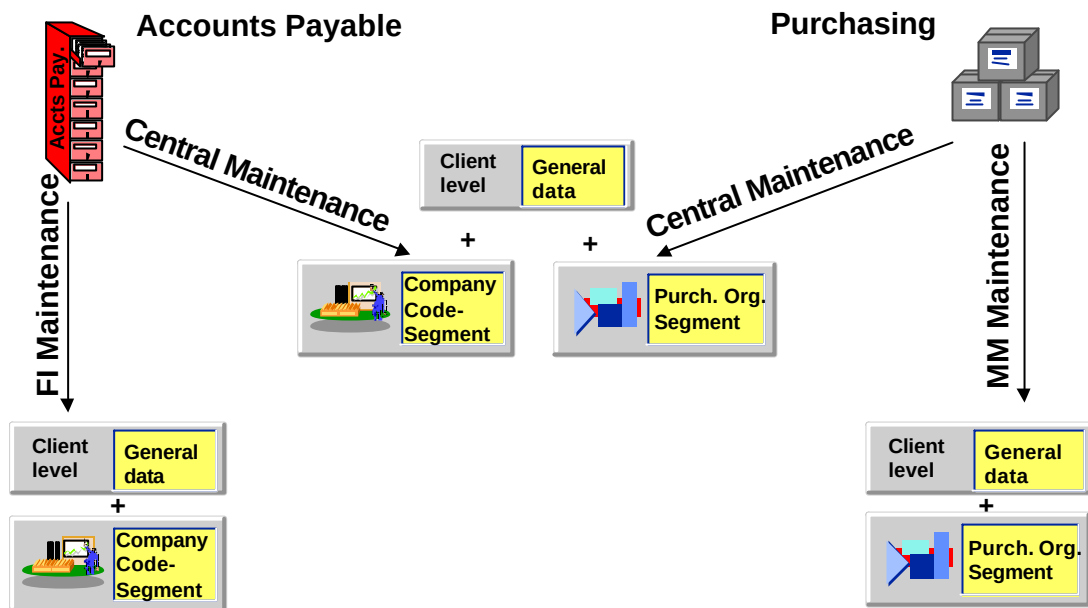
- A **complete vendor account** consists of the following three segments:
 - General data at the client level
 - Company code segment
 - Purchasing organization segment
- Usually at minimum, the purchasing organization segment of the purchasing organization which is assigned to the company code has to be created. Note: There may be other purchasing organizations doing business with the vendor as well.
- The account number is assigned to the vendor at the client level. This ensures that the account number for a vendor is the same for all company codes and purchasing organizations.



- The system offers separate functions for maintaining customer master records depending on the requirements of your organization. They can be **maintained centrally** for all areas or **separately** for Financial Accounting and Sales and Distribution.
- For the rest of this course we will focus just on the FI-side of the customer master record.
- Note: when implementing both Accounts Receivable and Sales and Distribution, members of both of these implementation teams must work together to decide how to configure customer master records and who will be responsible for their maintenance.

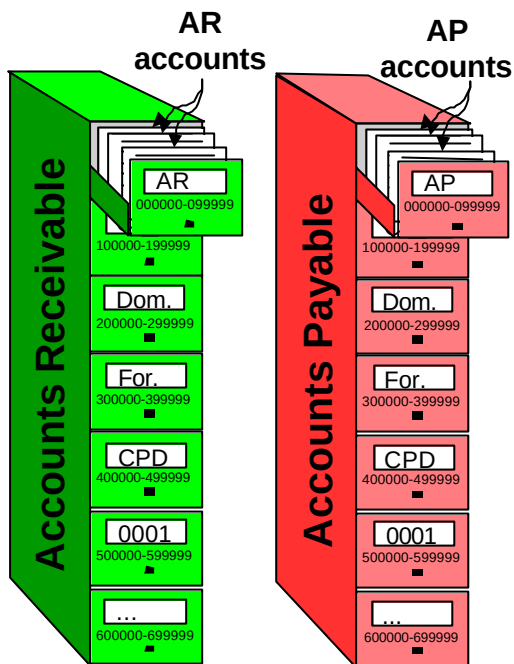
Central Versus De-central Maintenance (AP)

SAP



© SAP AG 1999

- Just as with customer master data, vendor master data can be **maintained centrally** for all areas or **separately** for Financial Accounting and Materials Management.
- For the rest of this course we will focus just on the FI-side of the vendor master record.
- Note: when implementing both Accounts Receivable and Materials Management, members of both of these implementation teams must work together to decide how to configure customer master records and who will be responsible for their maintenance.

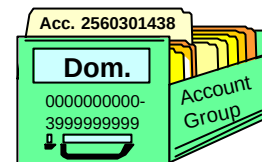
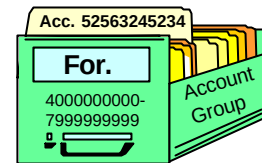
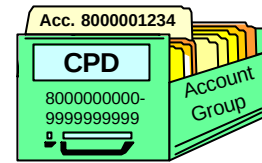
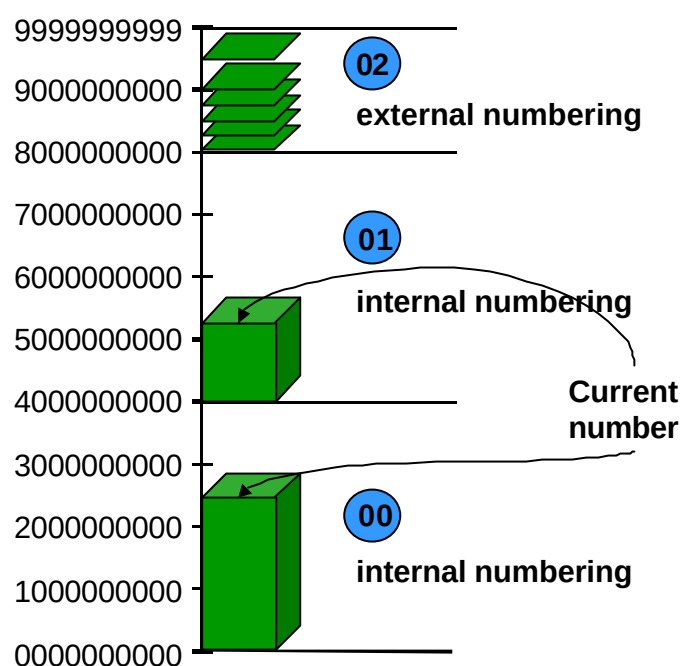


The account group controls:

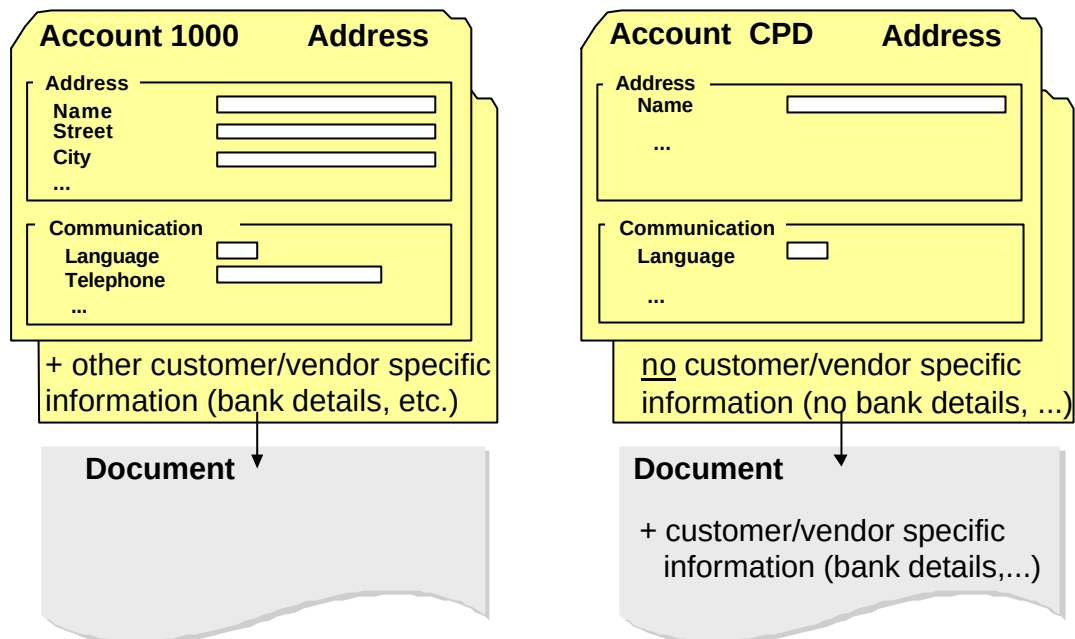
- The number ranges of the accounts,
- The status of the fields in the master record,
- If the account is a one time customer or vendor.

© SAP AG 1999

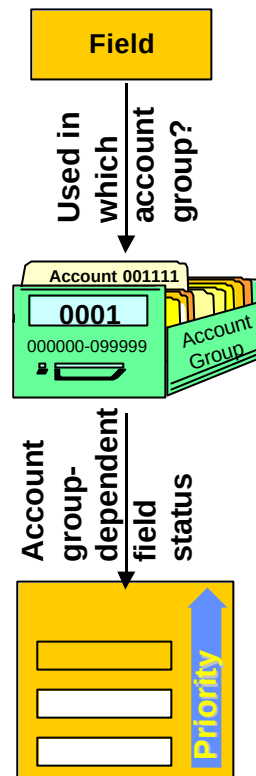
- The account group is used to control the fields displayed on the master record. For example, to ensure that all correspondence has complete address information, alter the field status so that all address fields are marked as “required entry”.
- When creating customer/vendor master records, the account group is entered on the initial create screen. In financial accounting, once the customer/vendor account is created, its account group cannot be changed. However, when using partner functions in sales and distribution, in some cases the account group can be changed from, for example, an ordering address to a ship-to address. Please refer to the SAP Library in Sales and Distribution for more details.

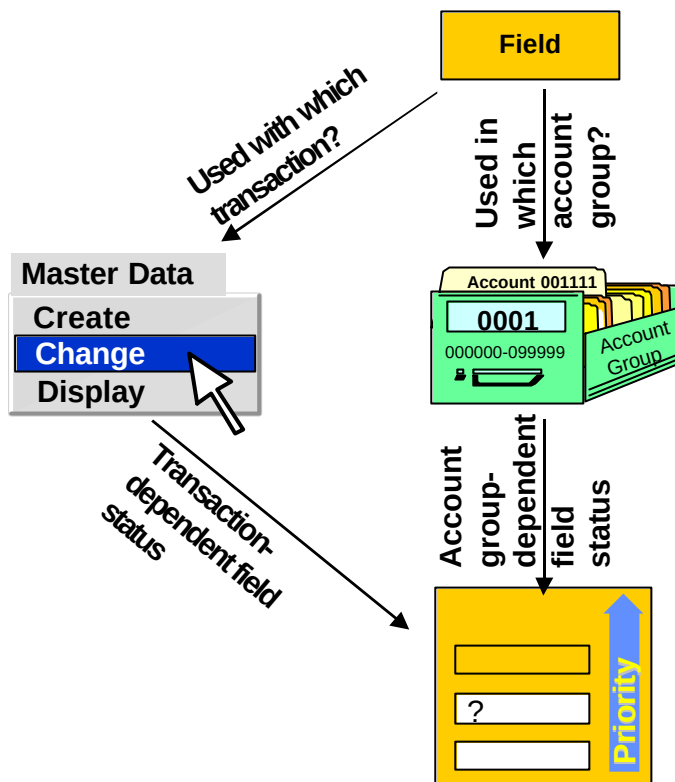


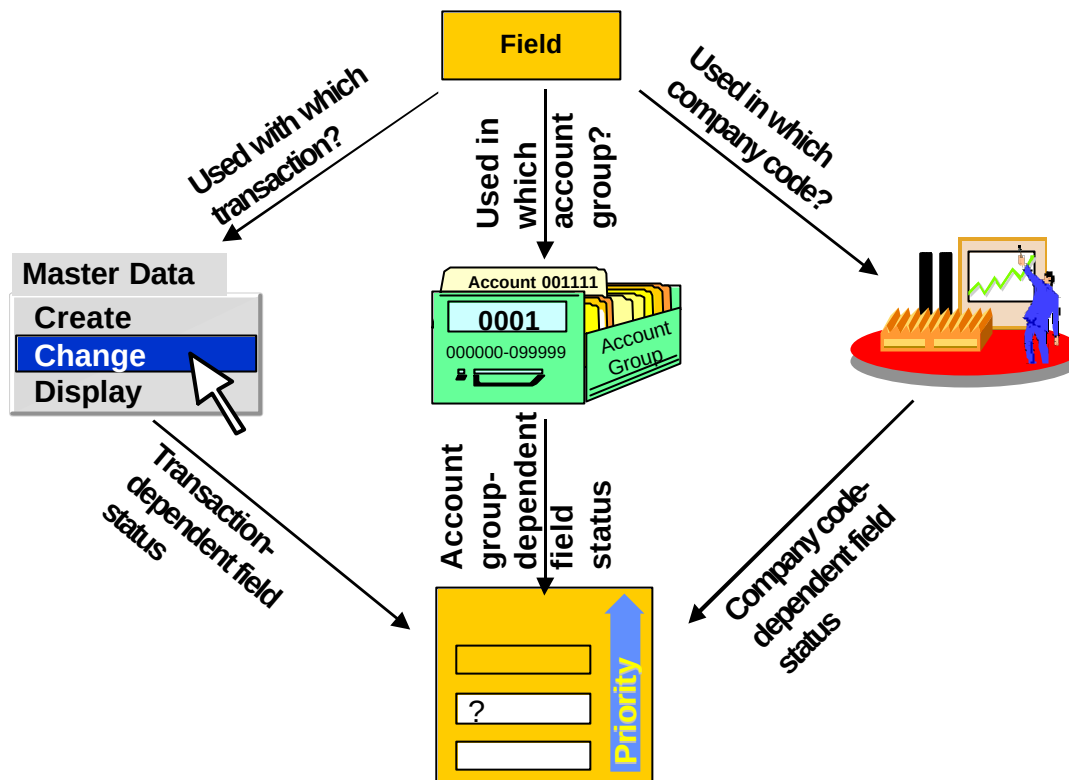
- There are separate number ranges for customer and vendor accounts. The range of possible account numbers is divided into smaller **number ranges**. Number ranges are not allowed to overlap.
- For each number range you can set whether the numbering will be internally or externally assigned. Internal number assignment means that the numbers are assigned by R/3 in sequential order. With external number assignment, the numbers are entered manually by the user creating the master record. External numbers can be alphanumeric.
- With internal numbering for a new account the system always assigns the next number available in the range. Therefore, it can display the "current number" which informs you how many numbers are still left within a given number range.
- With external numbering, the user chooses the account number. Numbers don't have to be assigned in sequence; therefore, a current number cannot be displayed.
- Each number range can be assigned to one or more account groups.



- For all customers or vendors with whom you rarely do business, a special customer and a special vendor master record should be created. Those master records are for **“one-time accounts”**. In contrast to other master records, no data specific to a single customer/vendor is stored in the one-time master record, since this account is used for more than one customer/vendor. Therefore, the customer-specific fields should be suppressed.
- The customer/vendor specific data for one time customers/vendors are entered into the document at the time of posting.

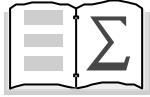






© SAP AG 1999

- The layout of customer/vendor master data screens can be affected by several factors:
- **Account group control** : Usually the field status is controlled only by the *account group*. This way all accounts of one account group will have the same screen layout.
- **Transaction dependent control** : If desired, the field status can also depend on the *master data transaction* “Create”, “Change”, and “Display”. The transaction dependent field status should be set on “display” for the transaction “change” if the field should not be changed after creation, e.g. the field “reconciliation account”.
- **Company code dependent control** : The field status can also be controlled per company code. Fields which are not used in one company code can be suppressed while they are entry fields in others.
- Field status definitions of account groups, the transaction, and company code are combined and the one which has highest priority is used.
- Fields which are accessed with the transaction “display” are always either displayed or suppressed since you cannot make an entry in a display transaction.
- If you do not want to use transaction dependent or company code dependent field status control, set all field status definitions as optional entry since this has the lowest priority and will therefore not conflict with the account group control.



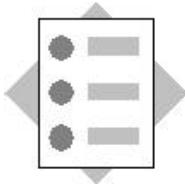
- **G/L accounts consist of a chart of account segment and a company code segment**
- **Customer/vendor accounts consists of general data, company code data and sales/purchasing data.**
- **Account groups control the appearance of master records.**

Exercises



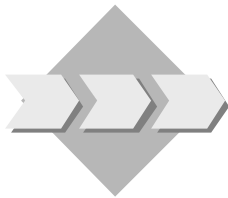
Unit: Create Accounts

Topic: G/L Account Master Data



At the conclusion of these exercises, you will be able to:

- Run the chart of accounts report
- Create the G/L account directory
- Create a G/L account with reference



The IDES group consists of 9 companies that are legal entities. They are set up in the R/3 System as company codes. Each company code has its own complete general ledger, which meets the various country-specific requirements.

In the general ledger, very few daily transactions are completed. Most of the daily transactions are completed in subsidiary ledgers. For this reason, the following exercises are to help you become more acquainted with master records in General Ledger Accounting.

However, in order to learn about the transaction for G/L account postings, you will post an increase in capital for IDES Germany in the next exercise. To do this, you need a new G/L account.

To access General Ledger Accounting:

Accounting → Financial accounting → General Ledger

1-1 The chart of accounts

The general ledger of a company code is set up according to the definition of a chart of accounts.

1-1-1 Display chart of accounts

The chart of accounts used most often by the IDES group is chart of accounts INT. Use a program to view this chart of accounts.

Information system → General ledger reports → Master data → Chart of accounts → SAP minimal variant

1-1-2 Display account in chart of accounts

Access the definition of account 160000 by double-clicking it.

What is the long text of this G/L account in the maintenance language?

Which account group does this account belong to?

- 1-2 Create the following G/L accounts by copying an existing account using the with reference push button

New Account	8009XX	4799XX
Reference account	800200	470000
Reference Company Code	AC##	AC##
Text	Sales revenues Group AC##	Authorized travel expenses AC##
Group account number	312700	312700
Field Status Group	G001	G001
Tax category	only output tax allowed	only input tax allowed
Alternative Account number	None (Blank)	None (Blank)



If the **with reference** push button is not active, follow the menu path **Settings, Start Activity**, and select the "Create GL Account with Reference" radio button.

Select the green arrow to return to the Easy Access Menu and restart the transaction.

Once in the transaction, select **Enter** to display a new window and enter the following information:

Now go back to the SAP Easy Access menu.

Exercises



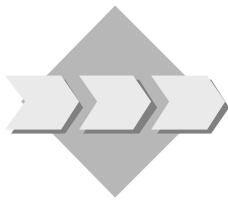
Unit: Create Accounts

Topic: Vendor Master Data



At the conclusion of these exercises, you will be able to:

- Create the list of vendors



Accounting transactions involving vendors are recorded in the accounts payable subledger. The accounts are divided up into account groups so that the large number of vendors can be organized more easily.

To access Accounts Payable:

Accounting → Financial accounting → Accounts payable

2-1 Creating a vendor list

You wish to have the system create an overview of the existing vendor master data by listing this data. You are particularly interested in the accounts in account group KRED.

Information system → Reports for Accounts Payable Accounting → Master data → Vendor List

2-1-1 Create the whole vendor list

Create a list of all vendors in your company code.

Now go back to the SAP Easy Access menu.

Exercises



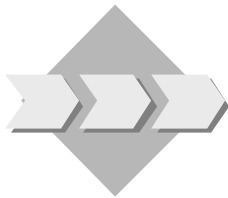
Unit: Create Accounts

Topic: Vendor Accounts



In this exercise you will

- Create vendor account groups
- Create vendor accounts
- Check your knowledge about vendor accounts



Customer and vendor master data are created by the accounting department and are divided into regular and one-time accounts.

Vendor accounts:

- Account number shall be assigned by the clerk
- Both search terms need to be filled in for advanced searching capabilities.
- Sort key, check for double invoice are required entries
- Make the search term and bank account a sensitive field for changes

Please don't change the number ranges since they are valid for all company codes!

- 3-1 Create an account group K## with the description "Vendors ##" for the regular vendor accounts. Do this by copying the account group KRED and configuring K## according to the requirement in the business scenario. Assign the number range XX to the account group. Note: XX is the number range, NOT your group number!
- 3-2 Create an account group 1K## with the description "One-time vendors ##." Do this by copying the account group 0099 and configuring 1K## according to the requirements in the business scenario. Assign the number range 01 to the account group.

- 3-3 Create a regular vendor with the new account group K##. Complete the following fields with the data below:

<i>Search term:</i>	AC##
<i>Group key:</i>	Tafi40
<i>Reconciliation account:</i>	Trade Payables
<i>Cash Management group (Planning group):</i>	A1
<i>Payment terms:</i>	0001

- 3-4 Create an account 110## for one time vendors with the new account group 1K##. Complete the following fields with the data below:

Search term: **AC##**
Reconciliation account: **Trade Payables**
Sort key: **022**
Planning group: **A1**
Payment terms: **0001**

- 3-5 Upon further review of your master records, you find that one of the requirements was not fulfilled: both search terms were not filled out on the vendor master record.

- 1-5-1 Verify that the field was not a required entry on the master record.
1-5-2 Verify that the field was marked a required entry on the account group.
1-5-3 What is the cause of the field not being displayed on the master record? Investigate the transaction dependent field status for creating vendor master records.



Verify the same information for the *Vendor Change* transaction.

- Green arrow back to the overview screen
- Double click on “*Change Vendor (Accounting)*”
- Double-click on “*General data*” to view the field status.
- Double-click on *Address*
- Make sure the *Search Term B* is a required entry
- Save.

- 1-5-4 Investigate why this occurred. Hint: double click on the text icon next to the IMG Activity.

- 3-6 On second thought, you decide that you want to capture the type of vendor in the first search term it is in this e.g., supplies, equipment, etc. and your company code number in the second search term. You realize that this first search term and the bank account number are sensitive fields and want the supervisor to validate any changes to these fields.

- 1-6-1 Make *Search Term A* and the *bank account number* a sensitive field.
1-6-2 Update your vendor master record with the new information
1-6-3 Confirm the changes that your neighbor made to their vendor master record.

- 3-7 A complete vendor account consists of the following parts:
-

3-8 True or false

1-8-1 The customer/vendor accounts must always be maintained centrally.

1-8-2 One number range can only be assigned to one account group..

3-9 _____ number assignment means that R/3 assigns the number automatically.

3-10 You maintain a customer/vendor master record _____ when you create both the FI and SD/MM segments simultaneously.

3-11 General ledger accounts have _____ number assignment, whereas customers and vendor master records can have _____ and _____ number assignment.

3-12 There are _____ sections of the accounting segment of a vendor master record. Bonus: list them

3-13 Check that both vendors you created can be used correctly by posting an incoming invoice.

Which difference do you notice when posting to the one-time vendor?

Exercises



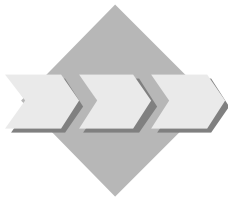
Unit: Create Accounts

Topic: Customer Accounts



In this exercise you will

- Create customer account groups
- Create customer accounts
- Check your knowledge about customer accounts



Customer and vendor master data are created by the accounting department and are divided into regular and one-time accounts.

Customer accounts:

- Account number shall be assigned automatically
- Sort key and payment history record are required entries
- Payment terms always need to be provided by the accounting clerk
-

Please don't change the number ranges since they are valid for all company codes!

- 4-1 Create an account group D## with the description "Customers ###" for the regular customer accounts. Do this by copying the account group KUNA and configuring D## according to the requirement in the business scenario. Assign the number range 02 to the account group.
- 4-2 Create a regular customer with the new account group D##. Complete the following fields with the data below:
- | | |
|--------------------------------|-------------------------------------|
| <i>Search term:</i> | AC## |
| <i>Group key:</i> | Tafi40 |
| <i>Reconciliation account:</i> | Trade Receivables - domestic |
| <i>Payment terms:</i> | 0002 |
- 4-3 A complete customer account consists of the following parts:
-
- 4-4 There are _____ sections of the accounting segment of a customer master record. Bonus: list them

Solutions



Unit: Create Accounts

Topic: G/L Account Master Data

To access General Ledger Accounting:

Accounting → Financial accounting → General ledger

1-1 The chart of accounts

1-1-1 Display chart of accounts

Information systems → General ledger reports → Master data → Chart of accounts → SAP minimal variant

Field name or data type	Values
Chart of accounts	INT

Run report

1-1-2 Display account in chart of accounts

Double-click on line 160000, than select the display symbol.

G/L account long text Trade Payables - domestic

Account Group: General G/L accounts

1-2 Create General Ledger Accounts

Easy Access Menu: Accounting ® Financial accounting ® General ledger ® Master records ® Individual Processing ® Centrally



If the **with reference** push button is not active, follow the menu path **Settings, Start Activity**, and select the “Create GL Account with Reference” radio button.

Select the green arrow to return to the Easy Access Menu and restart the transaction.

Once in the transaction, select **Enter** to display a new window and enter the following information:

Field Name or Data Type	Values
Account number	As provided
Company code	AC##

Select „With reference“ – enter reference number and company code.

Field Name or Data Type	Values
Account group	(only the description will show on screen)
Short text	As provided
Long text	As provided

Select Save.

Now go back to the SAP Easy Access menu.

Solutions



Unit: Create Accounts

Topic: Vendor Master Data

To access Accounts Payable:

Accounting → Financial accounting → Accounts payable

2-1 Creating a vendor list

***Information system → Reports for Accounts Payable Accounting → Master data
→ Vendor List***

2-1-1 Create the whole vendor list

Field name or data type	Values
<i>Company code</i>	<i>AC##</i>

Execute

Solutions



Unit: Create Accounts

Topic: Vendor Accounts

3-1 Create account group for vendors.

IMG: Financial Accounting ® Accounts Receivable and Accounts Payable ® Vendor Accounts ® Master Records ® Preparations for Creating Vendor Master Records ® Define Account Groups with Screen Layout (Vendors)

Select "KRED Vendors."

Edit ® Copy as...

Overtyping the following values:

Field Name or Data Type	Values
Account group	K##
Description	Vendors ##

Double-click on "General data" to edit the field status.

Double-click on Address.

Field Name or Data Type	Values
Search Term B	Required entry

Back and double-click on „Company Code Data“ then double-click on account management

Field Name or Data Type	Values
Sort key	Required entry

Next Group

Field Name or Data Type	Values
Double invoice validation	Required entry

Select Save.

Assign number range to account group.

IMG: Financial Accounting ® Accounts Receivable and Accounts Payable ® Vendor Accounts ® Master Records ® Preparations for Creating Vendor Master

Records ® Assign Number Ranges to Vendor Account Groups

Field Name or Data Type	Values
Group	K##,
Number range	XX

Note: XX is the number range, NOT your group number!

Select Save.

3-2 Create account group for one-time vendors.

IMG: Financial Accounting ® Accounts Receivable and Accounts Payable ® Vendor Accounts ® Master Records ® Preparations for Creating Vendor Master Records ® Define Account Groups with Screen Layout (Vendors)

Select “0099 One-time vendors.”

Edit ® Copy as...

Overtyping the following data:

Field Name or Data Type	Values
Account group	1K##
Description	one-time vendors ##

Select Enter.

Select Save.

Assign number range to account group.

IMG: Financial Accounting ® Accounts Receivable and Accounts Payable ® Vendor Accounts ® Master Records ® Preparations for Creating Vendor Master Records ® Assign Number Ranges to Vendor Account Groups

Field Name or Data Type	Values
Group	1K##
Number range	01

Select Save.

3-3 Create vendor

**Easy Access Menu: Accounting ® Financial accounting ® Accounts payables
® Master records ® Create**

Field Name or Data Type	Values
Vendor	Vendor ##
Company code	AC##
Account group	K##

Select Enter.

Address Tab:

Field Name or Data Type	Values
Name	Your choice. Be Creative!
Street/House Number	Your choice
Search term 1/2	AC##
Search term 2	Vendor last name
Postal Code/City	Your choice
Country/Region	Your country

Goto ® Next screen

Field Name or Data Type	Values
Group	AC200

Goto ® Next screen, "Payment Transactions"

Goto ® Next screen, "Accounting Information, Accounting"

Field Name or Data Type	Values
Recon. Account	Select the drop down box and select Trade Payables
Cash mgmnt group	A1

Goto ® Next screen, "Payment Transactions, Accounting"

Field Name or Data Type	Values
Payt terms	0001

Select Save.

3-4 Create account for one-time vendors.

Accounting ® Financial accounting ® Accounts payables ® Master records ® Create

Field Name or Data Type	Values
Vendor	110##
Company code	AC##
Account group	1K##

Select Enter.

Field Name or Data Type	Values
Name	1 time Vendor ##
Search term 1/2	AC##
Country	Your country

Goto ® Next screen, “Control”

Goto ® Next screen, “Accounting Information, Accounting”

Field Name or Data Type	Values
Recon. Account	Select the drop down box and select Trade Payables – domestic one time suppliers
Sort Key	022
Cash mgmnt group	A1

Goto ® Next screen, “Payment Transactions”

Field Name or Data Type	Values
Payt terms	0001

Select Save.

- 3-5 Upon further review of your master records, you find that one of the requirements was not fulfilled: both search terms were not filled out on the vendor master record.

3-5-1 Change vendor master record.

Easy access menu: Accounting, Financial Accounting, Accounts Payable, Master Records, Change

Field Name or Data Type	Values
Vendor	Vendor ##
Company Code	AC##
Address	Ö

Select Save.

The second search term does not show up on the screen in the Search Terms section. The screen is blank space where the second field should be.

3-5-2 Investigate vendor account group field status.

IMG: Financial Accounting ® Accounts Receivable and Accounts Payable ® Vendor Accounts ® Master Records ® Preparations for Creating Vendor Master Records ® Define Account Groups with Screen Layout (Vendors)

Double click on your account group K##.

Double-click on “General data” to view the field status.

Double-click on Address.

Verify the following data.

Field Name or Data Type	Values
Search Term B	Required entry

3-5-3 Investigate transaction dependent fields status creating vendor master records.

IMG: Financial Accounting ® Accounts Receivable and Accounts Payable ® Vendor Accounts ® Master Records ® Preparations for Creating Vendor Master Records ® Define Screen Layout per Activity (Vendors)

Double click on “Create Vendor (Accounting).”

Double-click on “General data” to view the field status.

Double-click on Address.

Verify the following data. If this is not the entry, make the correction.

Field Name or Data Type	Values
Search Term B	Required entry

Select Save.



Verify the same information for the *Vendor Change* transaction.

- Green arrow back to the overview screen
- Double click on “*Change Vendor (Accounting)*”
- Double-click on “*General data*” to view the field status.
- Double-click on *Address*
- Make sure the *Search Term B* is a required entry
- Save.

3-5-4 Hiding a field has the highest priority, followed by a display field, a required field and then an optional field.

<i>Account Group</i>	<i>Hide</i>
<i>Transaction</i>	<i>Required</i>
<i>Result</i>	<i>Hide</i>

3-6 On second thought, you decide that you want to capture the type of vendor in the first search term it is in this e.g., supplies, equipment, etc. and your company code number in the second search term. You realize that this first search term is a sensitive field and want the supervisor to validate any changes to this field.

3-6-1 Make Search Term A and the Bank account number a sensitive field.

IMG: Financial Accounting ® Accounts Receivable and Accounts Payable ® Vendor Accounts ® Master Records ® Preparations for Creating Vendor Master Records ® Define Sensitive Fields for Dual Control

Select New Entries.

Select the down arrow and double click on Search Term A and the same for Bank account number.

Select Save.

3-6-2 Change vendor master record.

Easy access menu: Accounting, Financial Accounting, Accounts Payable, Master Records, Change

Field Name or Data Type	Values
<i>Vendor</i>	<i>Vendor ##</i>
<i>Company Code</i>	<i>AC##</i>
<i>Address</i>	✓

Select Enter.

Field Name or Data Type	Values
Search term 1	Supplies
Search term 2	AC##
Bank account number	145600778

Select Enter at the information message telling you that your changes need to be confirmed.

Select Save.

3-6-3 Confirm vendor master record changes.

Easy access menu: Accounting, Financial Accounting, Accounts Payable, Master Records, Confirmation of change, Single

Field Name or Data Type	Values
Vendor	Vendor ## of your neighbor
Company Code	GR## of your neighbor

Select Enter.

Select the “Changes to sensitive fields” pushbutton to review the changes. Drill down several times on the field name to see detailed information about the change.

Select the green arrow to the main screen.

Select the Confirm pushbutton to confirm your neighbor’s change.

Select Save.

3-7 **General data**

Company code segment

Purchasing organization segment

3-8 True or false

1-8-1 The customer/vendor accounts must always be maintained centrally.

False. Customer/vendor accounts can be maintained centrally or de-centrally.

1-8-2 One number range can only be assigned to one account group.

False. A number range can be assigned to several account groups.

3-9 **Internal**

3-10 **Centrally**

- 3-11 ***G/L: external***
Customers and vendors: internal and external
- 3-12 ***Seven.***
General Data: Address, Control, Payment Transactions,
Company Code Data: Accounting Info, Payment Transactions, Correspondence,
Withholding Tax (Vendor)
- 3-13 Difference when posting to a One-time vendor
Accounting → Financial Accounting → Accounts payable → Document entry → invoice
The data for the business partner – Address and bank data is required when entering the posting.

Solutions



Unit: Create Accounts

Topic: Customer Accounts

4-1 Create account group for customers.

IMG: Financial Accounting ® Accounts Receivable and Accounts Payable ® Customer Accounts ® Master Records ® Preparations for Creating Customer Master Records ® Define Account Groups with Screen Layout (Customers)

Select “KUNA General customers”

Edit ® Copy as...

Overtyping the following data:

Field Name or Data Type	Values
Account group	D##
Description	Customers ##

Double-click on “Company code data” to edit the field status.

Double-click on Payment transactions.

Field Name or Data Type	Values
Terms of payment	Required Entry

Select Save.

Assign number range to account group.

IMG: Financial Accounting ® Accounts Receivable and Accounts Payable ® Customer Accounts ® Master Records ® Preparations for Creating Customer Master Records ® Assign Number Ranges to Customer Account Groups

Field Name or Data Type	Values
Group	D##
Number range	02

Select Save.

4-2 Create customer.

**Easy Access Menu: Accounting ® Financial accounting ® Accounts receivables
® Master records ® Create**

Field Name or Data Type	Values
Account group	D## (Customers ##)
Company code	AC##
Reference company code	blank

Select Enter.

Address Tab:

Field Name or Data Type	Values
Name	Your choice. Be Creative!
Street/House Number	Your choice
Search term 1/2	AC##
Postal Code/City	Your choice
Country/Region	Your country

Select the Control data tab.

Field Name or Data Type	Values
Group	Tafi40

Select the Company code data pushbutton.

Select the Account management tab

Field Name or Data Type	Values
Recon. Account	Select the drop down box and select Trade Receivables - domestic

Select the Payment transactions tab.

Field Name or Data Type	Values
Terms of payment	0002

Select Save.

4-3 ***General data***

Company code segment

Sales area segment

4-4 Seven.

General Data: Address, Control, Payment Transactions,

Company Code Data: Accounting Info, Payment Transactions, Correspondence,

Insurance (Customer)

Unit Contents:

- **Post a Document**
- **Document Control**
- **Posting Control**



At the conclusion of this unit, you will be able to:

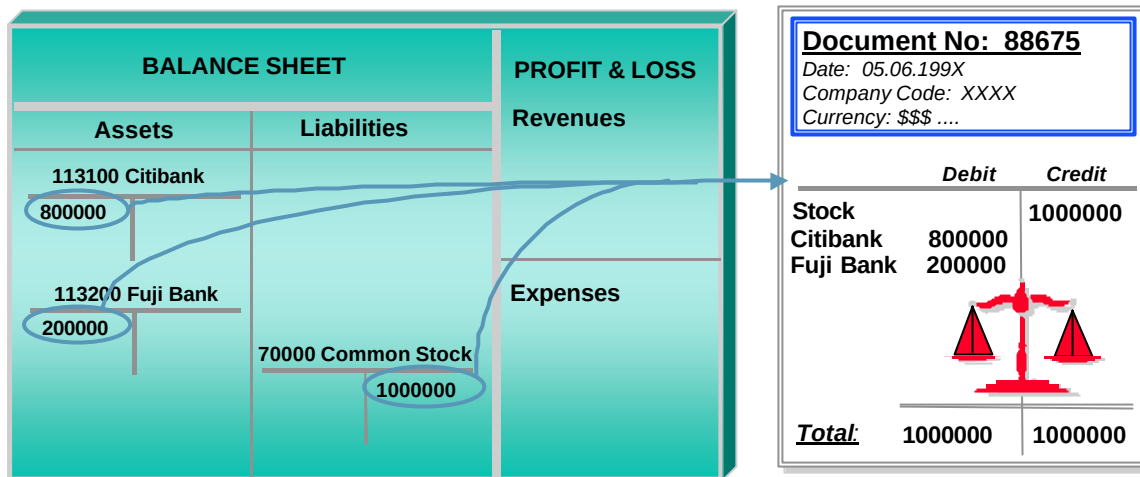
- **Post basic FI-documents**
- **Influence the fields of document header and line items**
- **Open and close posting periods**
- **Set default values**
- **Change Documents**
- **Perform document reversal**
- **Describe how Accounts Receivable is integrated with sales**



- Every day hundreds of financial documents are created in the enterprise. To support the filing of original documents, the documents have to be divided into several categories.
- Different financial business transactions need different data within the documents. Some extra data may even be required for special postings.
- The accounting department wants to be sure that it is impossible to post to a previous posting period.
- Head accountants want to have more posting authority than their staff.

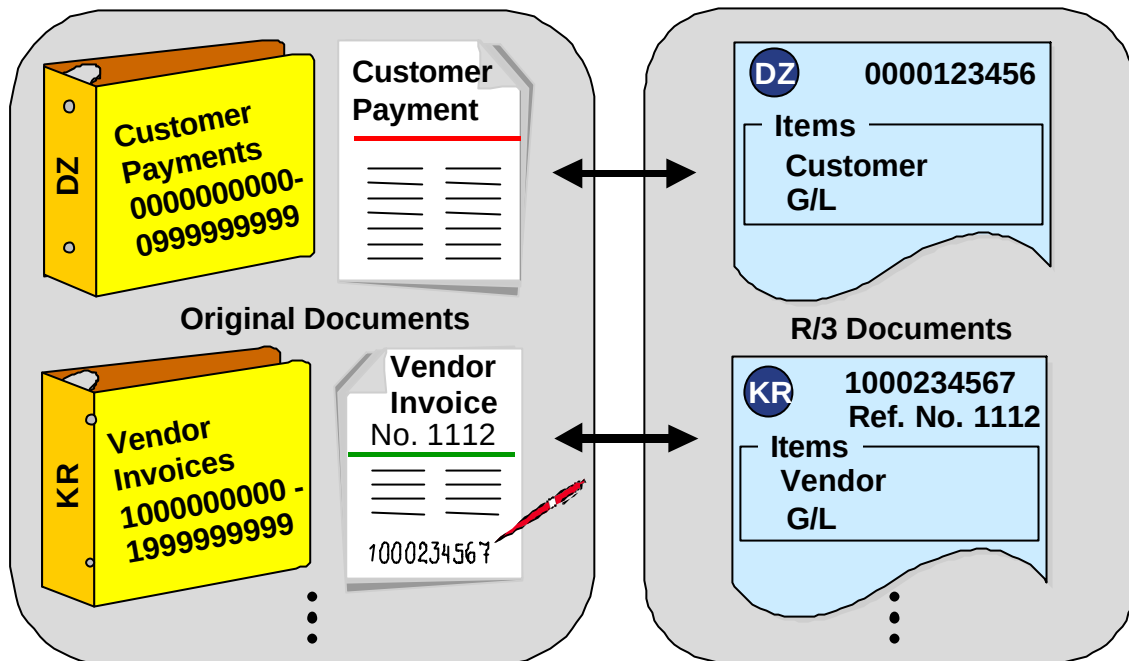
The SAP Document Principle

SAP



© SAP AG 1999

- The R/3 system records at least one document for every business transaction. Each document receives a unique document number.
- R/3 can assign the document numbers (= internal assignment) or the user can assign the number at document entry time (= external assignment).
- A business event might trigger more than one document within R/3. When goods are received from a vendor, a material document is created to keep track of details important to inventory tracking. An accounting document is created to track financially relevant information, such as G/L accounts and amounts.
- Many business events occur throughout R/3 for which a document is created, but no accounting document is produced because there is no financial impact. An example of this would be a purchase order.
- R/3 will link related documents together in the system, to provide a complete picture of any business transaction within the system.

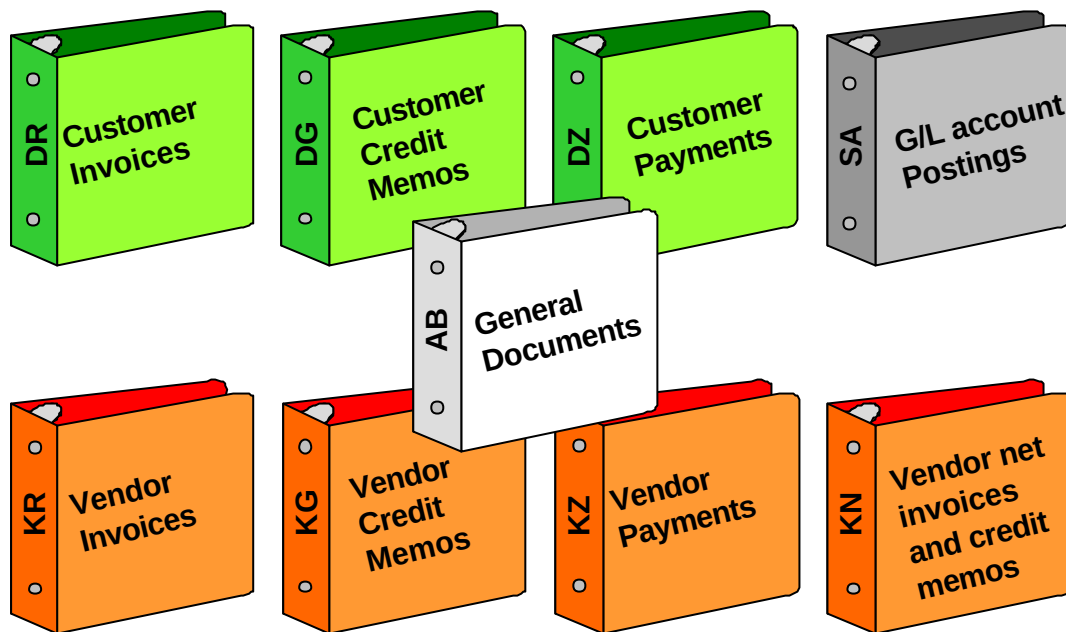


© SAP AG 1999

- The **document type** controls the document header and is used to differentiate the business transactions to be posted, e.g. customer invoice, vendor payments, etc. Document types are defined at the client level and are therefore valid for all company codes. The standard system is delivered with document types which can be used, changed, or copied.
- **Major controls** of document types are:
 - the number range of document numbers, and
 - the account types allowed for posting
- Document type **further controls**:
 - the field status of the header fields “Text” and “Reference Number”, and
 - if invoices are posted with the net method.
- In the procedure recommended by SAP for **filing original documents**, the document type controls document filing. Always store the original documents under the number of the data processing document. If the original document has an external number:
 - enter the external number of the original document into the reference number field in the header of the data processing document, and
 - record the data processing document number in the original document.

Important Standard Document Types

SAP

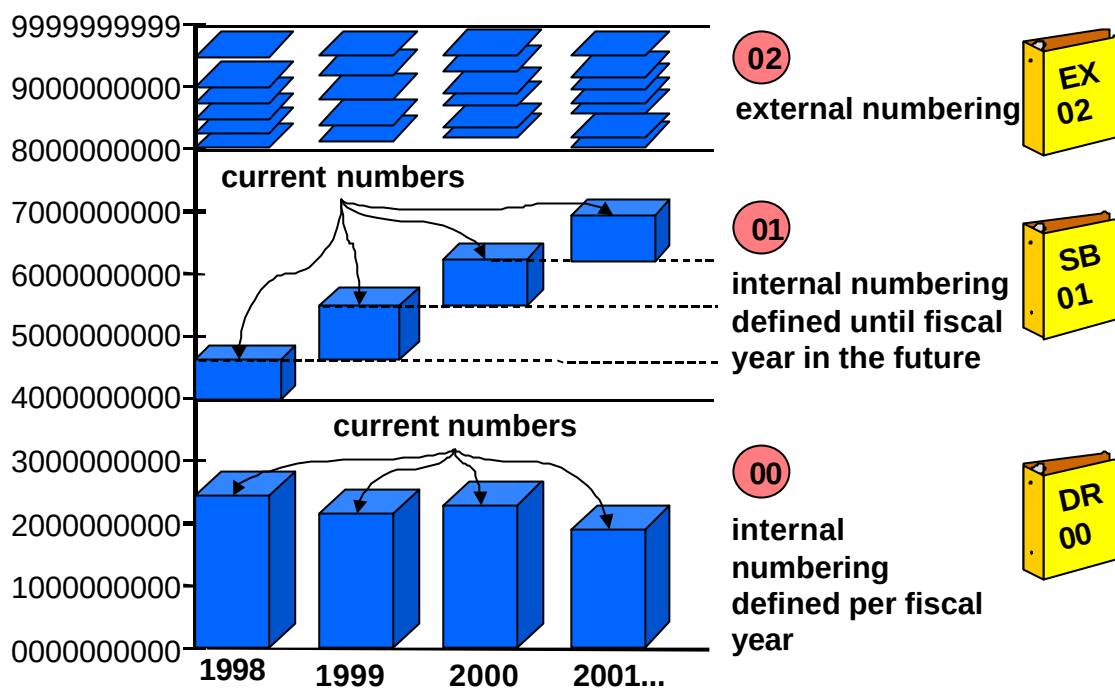


© SAP AG 1999

- Document type AB allows postings to all account types.
- All other document types limit the types of accounts you can post to. Document type DG, for example, allows you to post to customer (D) and G/L accounts (S) only.
- To transfer billing documents from the R/3 billing system, the standard system uses the document types:
 - RV, the default document type for SD billing documents (customer invoices).
 - RE, the default document type for MM billing documents (vendor invoices).
- When internal number assignment is used, the system assigns a new number to each document in the Financial Accounting component. In external number assignment, the system transfers the billing document number to the FI document as long as this number has not already been assigned.
- The payment program uses the document type ZP for its automatic postings.

Document Number Ranges

SAP



© SAP AG 1999

- The **document number range** defines the allowable range in which a document number must be positioned and cannot overlap.
- **Internal numbering:** The system stores the last used document number from the number range in the field “current number” and takes the subsequent number for the next document (examples 00 and 01 above)
- **External numbering:** The user enters the original document number, or the number is transferred automatically from a pre-invoicing system. The numbers usually are not used in sequence and therefore the system cannot store a “current number” (example 02). The numbers may be alphanumeric.
- The document number range has to be defined for the year in which it is used. Document number ranges can be defined:
 - **until a fiscal year in the future:** At the beginning of each fiscal year the system continues to take the next number after the “current number”. It does not restart at the lower limit.
 - **per fiscal year:** At the beginning of each fiscal year the document numbering starts again at the lower limit. This helps to avoid reaching the upper limit of a range.
- One number range can be assigned to several document types.



Detail view

The diagram illustrates the SAP line item detail view with three main sections:

- Account**: Labeled with "1. S, D, K, A, M ?" (Account type).
- Line Item 1 / PK**: The Posting Key (PK) is circled in red, with an arrow pointing to it from the "1. S, D, K, A, M ?" label.
- Amount Tax Code**: Labeled with "2. debit, credit ?" (Debit or credit).
- Additional Details**: Labeled with "3. Field Status ?" (Field status).

Red arrows indicate the flow of control from the PK to the Account, Amount Tax Code, and Additional Details.

The Posting Key has control functions within the line items. It controls:

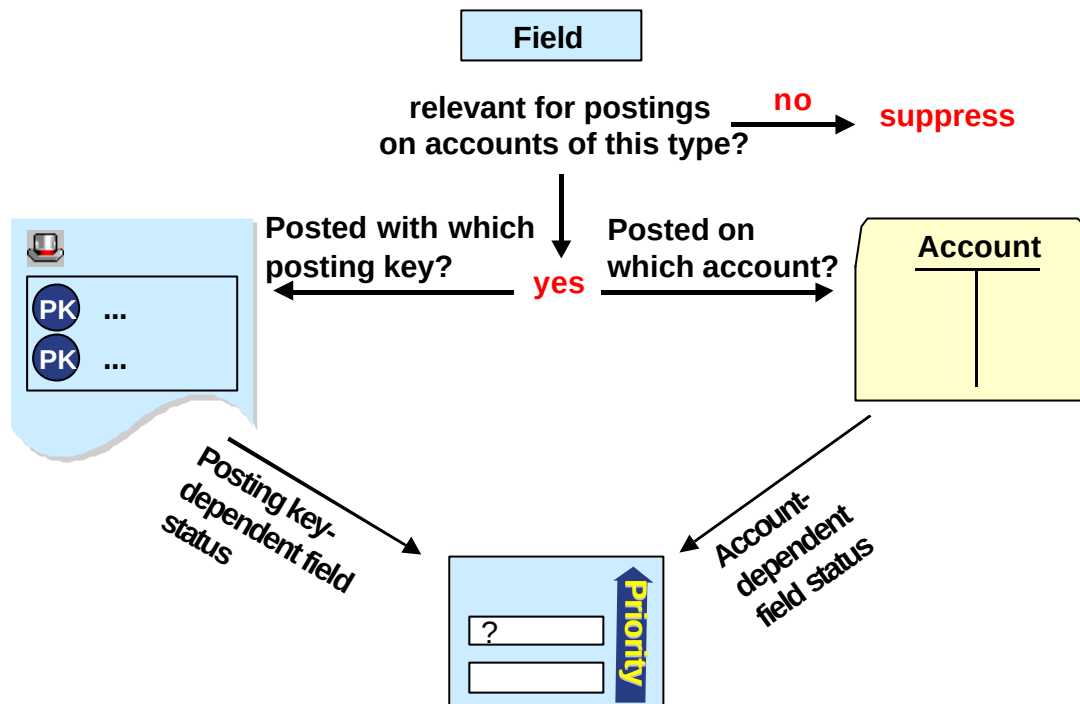
1. on which type of account the line item can be posted to
2. if the item is posted as a debit or credit
3. the field status of additional details

- Like document types, **posting keys** are defined at the client level.
- In addition to the above mentioned control functions, the posting key indicates:
 - whether the line item deals with a **payment transaction** or not. This information is required in analyzing payment history and creating payment notices.
 - whether the **sales** figures of the account should be updated by the transaction, e.g. when posting a customer invoice.
- Posting keys have been enhanced with the new Enjoy SAP functionality. In the standard transactions, posting keys are labeled “debit” and “credit”. In Customizing, R/3 delivers the following default values:
 - For GL Transactions: “debit” is posting key 40, “credit” is posting key 50.
 - For Customer Invoices: “debit” is posting key 01, “credit” is posting key 50.
 - For Vendor Invoices: “credit” is posting key 31, “debit” is posting key 40.

The field status within a FI-document is controlled by three factors...

- **the account type**
- **the field status of the posting key**
- **the field status of the account**

- The text above only applies to the standard entry functions not for special or fast entry functions.

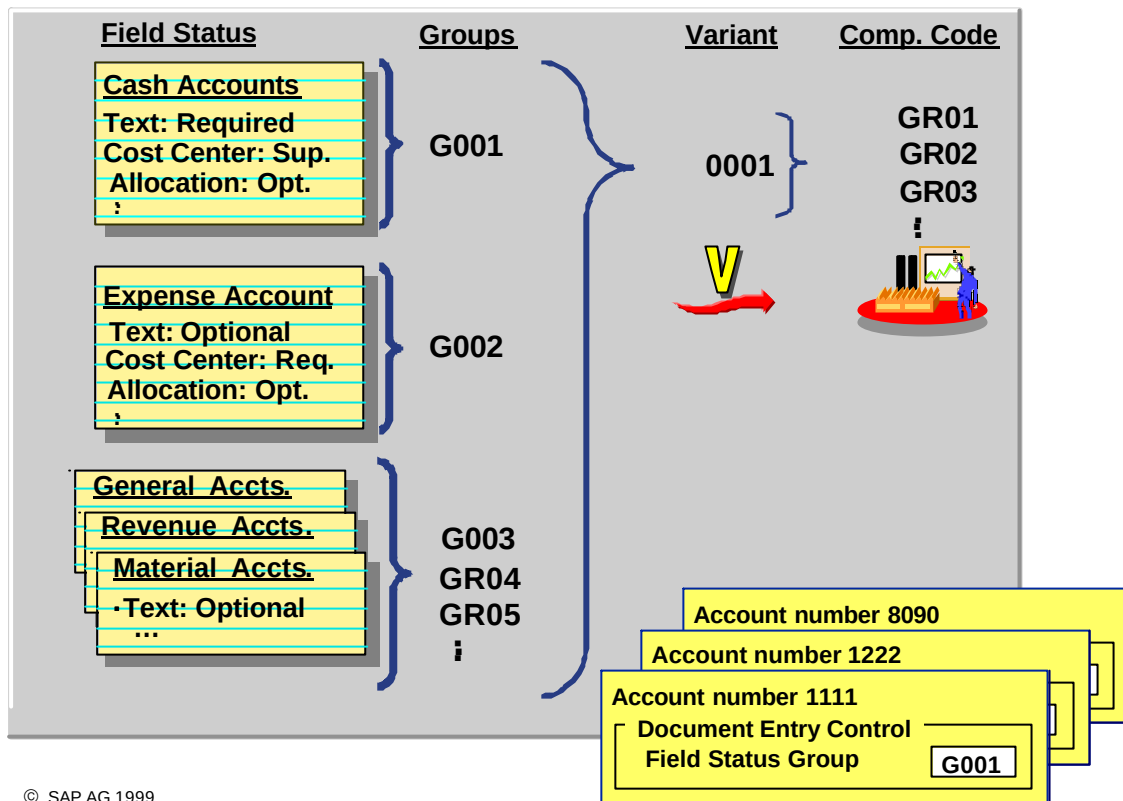


© SAP AG 1999

- During document entry, different fields are displayed depending on the transaction and the accounts used. For example, when posting expenses, a cost center and tax information is usually required. However, when posting cash, this same information is not necessary. These different displays during document processing are controlled by field status.
- As a general rule, you customize the account-dependent field status on general ledger accounts. For customer and vendor processing, you customize the field status on the posting key as necessary.
- Just as in the field status definition in G/L accounts, the field status with the higher priority applies. The priority is shown above.
- **Exceptions** of the rule above:
 - If business areas shall be used, the field **“business area”** has to be ready for input. It is switched on by enabling business area balance sheets for the company code. With the field status, you can only decide if it shall be a required or an optional entry field.
 - **Tax fields** are only ready for entry if the G/L account is set up as tax-relevant.
- The field status definitions ”suppress” and ”required entry” cannot be combined. This combination causes an error.

Field Status Groups

SAP



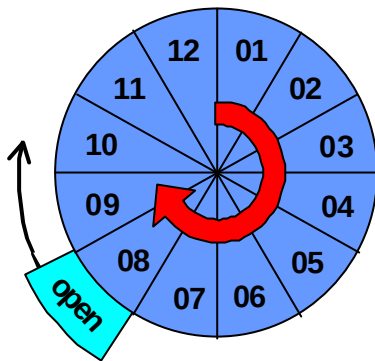
© SAP AG 1999

- For each category of general ledger account, e.g., cash accounts, expense accounts, you need to determine the **status of every document entry field**. Will text be required, suppressed or optional for document entry when using these GL accounts? Will cost center be required, suppressed or optional for document entry when using these GL accounts? Etc. etc.
- These “rules” are grouped into **field status groups** for each category of general ledger accounts.
- Field status groups are assigned on the respective general ledger master records.
- The field status groups are collected under one **field status variant**.
- The field status variant is assigned to your **company code(s)**. No posting can be made until this is complete. Typically, the same field status variant is assigned to all of your company codes so that the same “rules” apply across company codes..
- R/3 delivers a standard set of field status groups. It is recommended to copy the standard delivered field status groups and modify as necessary.
- If a document is posted to a sub ledger account, the field status group of the reconciliation account will apply.

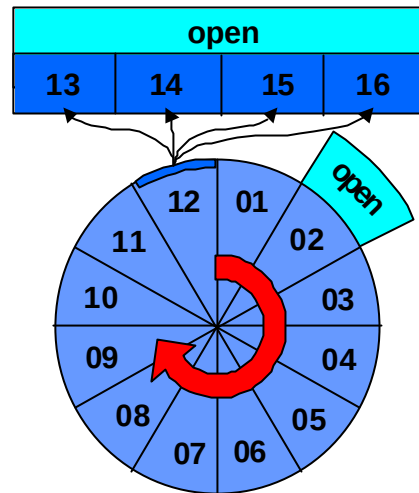
Customers <table><tr><td>01</td><td>11</td></tr><tr><td>02</td><td>12</td></tr><tr><td>03</td><td>13</td></tr><tr><td>04</td><td>14</td></tr><tr><td>05</td><td>15</td></tr><tr><td>06</td><td>16</td></tr><tr><td>07</td><td>17</td></tr><tr><td>08</td><td>18</td></tr><tr><td>09</td><td>19</td></tr></table>	01	11	02	12	03	13	04	14	05	15	06	16	07	17	08	18	09	19	Vendors <table><tr><td>21</td><td>31</td></tr><tr><td>22</td><td>32</td></tr><tr><td>23</td><td>33</td></tr><tr><td>24</td><td>34</td></tr><tr><td>25</td><td>35</td></tr><tr><td>26</td><td>36</td></tr><tr><td>27</td><td>37</td></tr><tr><td>28</td><td>38</td></tr><tr><td>29</td><td>39</td></tr></table>	21	31	22	32	23	33	24	34	25	35	26	36	27	37	28	38	29	39	G/L <table><tr><td>40</td><td>50</td></tr><tr><td>80</td><td>90</td></tr><tr><td>81</td><td>91</td></tr><tr><td>83</td><td>93</td></tr><tr><td>84</td><td>94</td></tr><tr><td>85</td><td>95</td></tr><tr><td>86</td><td>96</td></tr></table>	40	50	80	90	81	91	83	93	84	94	85	95	86	96
01	11																																																			
02	12																																																			
03	13																																																			
04	14																																																			
05	15																																																			
06	16																																																			
07	17																																																			
08	18																																																			
09	19																																																			
21	31																																																			
22	32																																																			
23	33																																																			
24	34																																																			
25	35																																																			
26	36																																																			
27	37																																																			
28	38																																																			
29	39																																																			
40	50																																																			
80	90																																																			
81	91																																																			
83	93																																																			
84	94																																																			
85	95																																																			
86	96																																																			
Assets <table><tr><td>70</td><td>75</td></tr></table>	70	75	Materials <table><tr><td>89</td><td>99</td></tr></table>	89	99	For G/L-Postings out of Materials Management																																														
70	75																																																			
89	99																																																			

- SAP recommends that you use these **standard delivered posting keys**. If you change them or define new posting keys, all tables containing a reference to these keys must also be maintained.
- Posting keys for assets and materials may only be used if the corresponding SAP components are implemented.
- By influencing the field status definitions of posting keys and the field status group, the field status can be made transaction-dependent and account-dependent.
 - Since the **sub ledger** accounts do not have a field status group, differentiation in the sub ledger postings is mainly made by different posting keys. Therefore, there are a lot of posting keys for sub ledger postings.
- In **general ledger** postings differentiation is mainly made by different field status groups. Therefore, only two posting keys (40 and 50) are needed for general ledger postings.

Open posting periods during the fiscal year

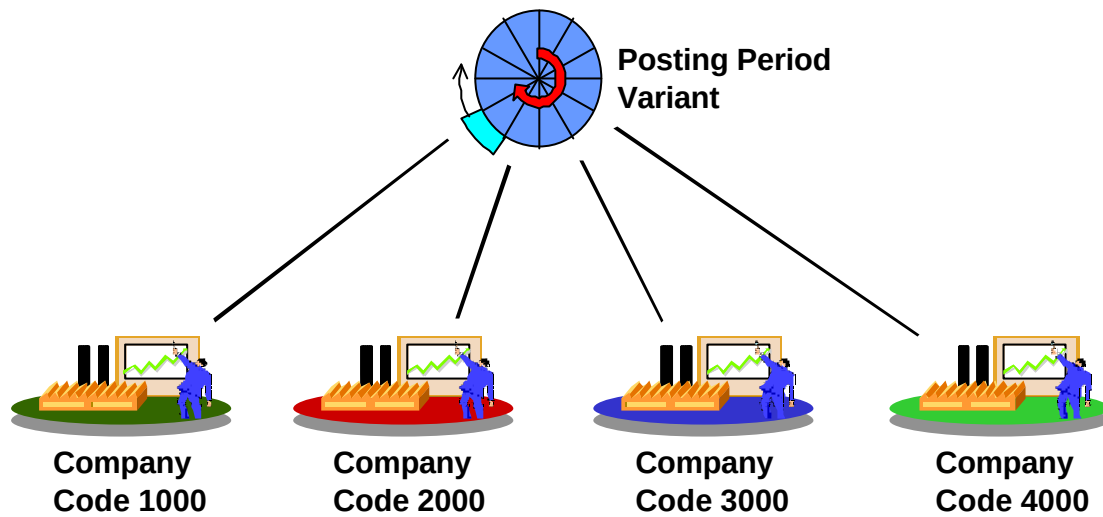


Open posting periods during the closing procedure



© SAP AG 1999

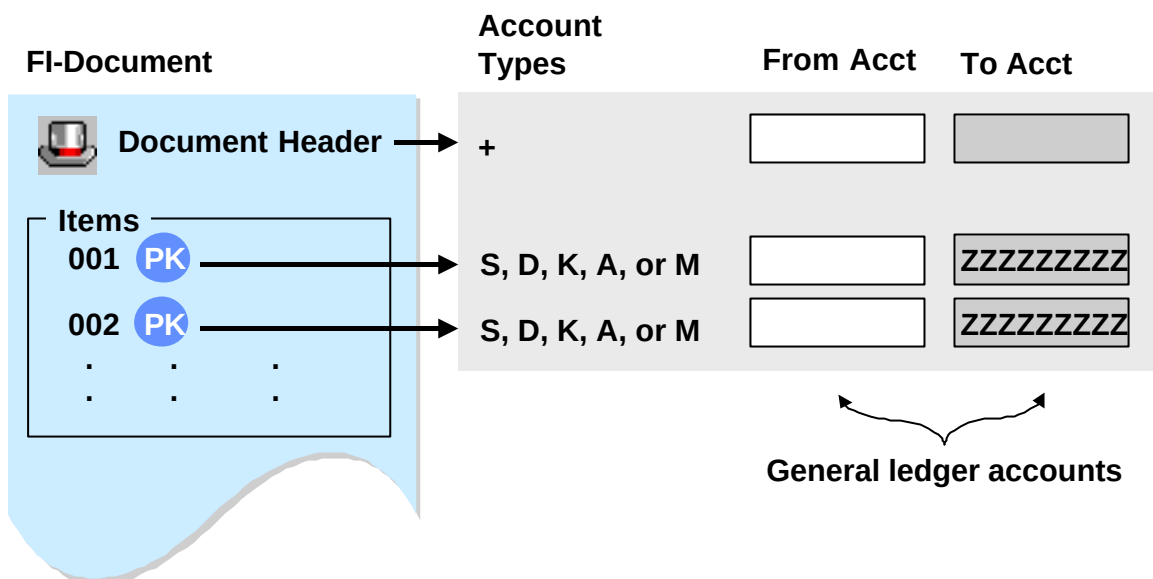
- Posting periods are defined in the fiscal year variant.
- To prevent documents from being posted to a wrong posting period, desired periods can be closed.
- Usually the current posting period is open and all other periods are closed. At the end of a period it is usually **closed** and the next period is **opened**. A period is opened by entering a range into the posting period variant which encompasses this period. It is possible to have as many periods open as desired.
- During the procedure of financial closing, some **special periods** may also be open for closing postings.
- During the time of the closing procedure, **two period ranges** have to be open at the same time. Therefore, two period ranges can be entered in the posting period table.



- Several company codes can use the same **posting period variant**. The closing and opening of periods is then done at the same time for all assigned company codes, thus making period maintenance easier.

Period Checks per Account Type

SAP



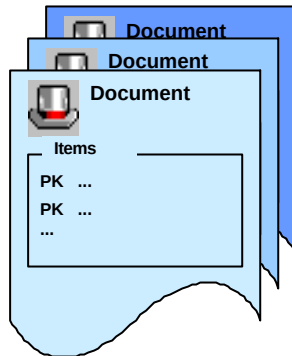
© SAP AG 1999

- At the document header level, R/3 checks the periods that are allocated to the account type “+”. This is the first check. Therefore the account type “+” must be open for all periods which are supposed to be open for any other account type. The account type “+” is the **minimum entry** in the posting period variant.
- Posting periods can be handled differently for different **account types**, i.e. for a certain period, postings on customer accounts may be possible while postings on vendor accounts may not.
- At the line item level, R/3 checks the account type of the posting key to verify that the period is open for the assigned account type.
- The account range always contains G/L accounts. By entering certain reconciliation accounts behind sub ledger account types, these sub ledger accounts can be treated differently than accounts which have a different reconciliation account.

The maximum amounts are defined per company code in “tolerance groups.” This is also where the processing of payment differences is controlled.

Group	Company Code	Currency	
	Upper limits for posting procedures		
	Amount per document		
	Amount per open item account item		
	Cash discount per line item		
		Permitted payment differences	
		...	

- In this section we are focusing on the “Upper limits for posting procedures” within tolerance groups.
- Here, it is possible to enter an **upper limit** for
 - the total amount per document
 - the amount per customer/vendor item
 - the cash discount percentage a user with this tolerance group is able to grant.
- The currency is the company code currency.



- **G/L Account Postings**
- **A/R Invoice Postings**
- **A/R Credit Memo Postings**
- **A/P Invoice Postings**
- **A/P Credit Memo Postings**

- The R/3 Financial module uses one document posting transaction for a lot of different postings, e.g.
 - General Ledger Account Postings
 - Accounts Receivable Invoice Postings
 - Accounts Receivable Credit Memo Postings
 - Accounts Payable Invoice Postings
 - Accounts Payable Credit Memo Postings

Basic FI Posting: Header and 1st Line Item

SAP



Transaction Invoice

Basic Data **Payment** **Tax** **Details** **Notes**

Customer **Account #**

Invoice date 06.06.2000 **Doc. type** DR

Posting date 06.06.2000

Reference

Amount 5 000 **USD**

Tax Amount **I0 AP Tax Exempt**

Text

Company Code IDES **Company Code**

Customer:

Isis T. Greaca
230 Sterling Ave
Chicago IL 60610
United States

Bank Account:
994885992

- The design of the R/3 posting transaction for G/L, A/P and A/R document entry has been changed to enable the user to make postings quicker and easier, with as little training as possible. The new entry transactions display the most important input fields on one screen.
- There is little difference between the G/L posting screen and the A/P and A/R invoice screens.
- You enter the general data for the posting document on the document header section of the screen: document and posting date, text, etc. The document type defaults in for the transaction that is being processing:
 - SA: G/L Posting
 - KR: Vendor Invoice - KG: Vendor Credit Memo
 - DR: Customer Invoice - DG: Customer Credit Memo
- The important input fields are in the foreground on a tab and the fields used less frequently are on the other tabs behind the first tab.
- With A/P and A/R invoices, the business partner account data is entered in this section along with the invoice or credit memo amount. When selecting *enter*, the business partner master data is also displayed such as the account name, address and bank details.
- Additional information about the business partner, such as open line items, can be displayed by selecting the *open items* icon.

Basic FI Posting: Additional Line Items

SAP

Transaction Invoice

Balance \$ 0

Basic Data

Payment

Tax

Details

Notes

Customer

Account #

Invoice date

06.06.2000

Doc. type

DR

Posting date

06.06.2000

Reference

Amount

5 000

USD

Tax Amount

I0 AP Tax Exempt

Text

Company Code

IDES Company Code

Customer:

Isis T. Greaca

230 Sterling Ave

Chicago IL 60610

United States

Bank Account:

994885992

G/L Acct.	Short Text	D/C	Doc. Curr. Amt	Tax Code...
475000	Expense Acct	Debit	5 000	I0
		Debit		
		Debit		

- Enter the line items in the clearly laid-out table on the bottom section of the screen. The field names are clearly labeled and additional information such as the account name is also displayed when the entries are made.
- Select different field or columns and change the size and sequence of the columns and fields. Line items can also be copied.
- At the top of the screen, *Park, Post or Hold*, can be chosen to complete the document entry transaction once the balance is zero.
- The “old” G/L entry transaction is still available by transaction code F-02 or under menu path *General Ledger, Document Entry, Other, General Posting*.
- For more complex transactions, branch to the existing complex posting transaction from the menu, but you cannot return to this initial screen afterwards.
- Users can navigate from a tree structure on the left hand side of the screen. The tree offers a selection of reference documents that users can choose from. The reference documents can be configured to include both a special selection of fields and field values.

System Defaults: - Posting Date

- Document Principle

Accounting Defaults: - Document type and posting key

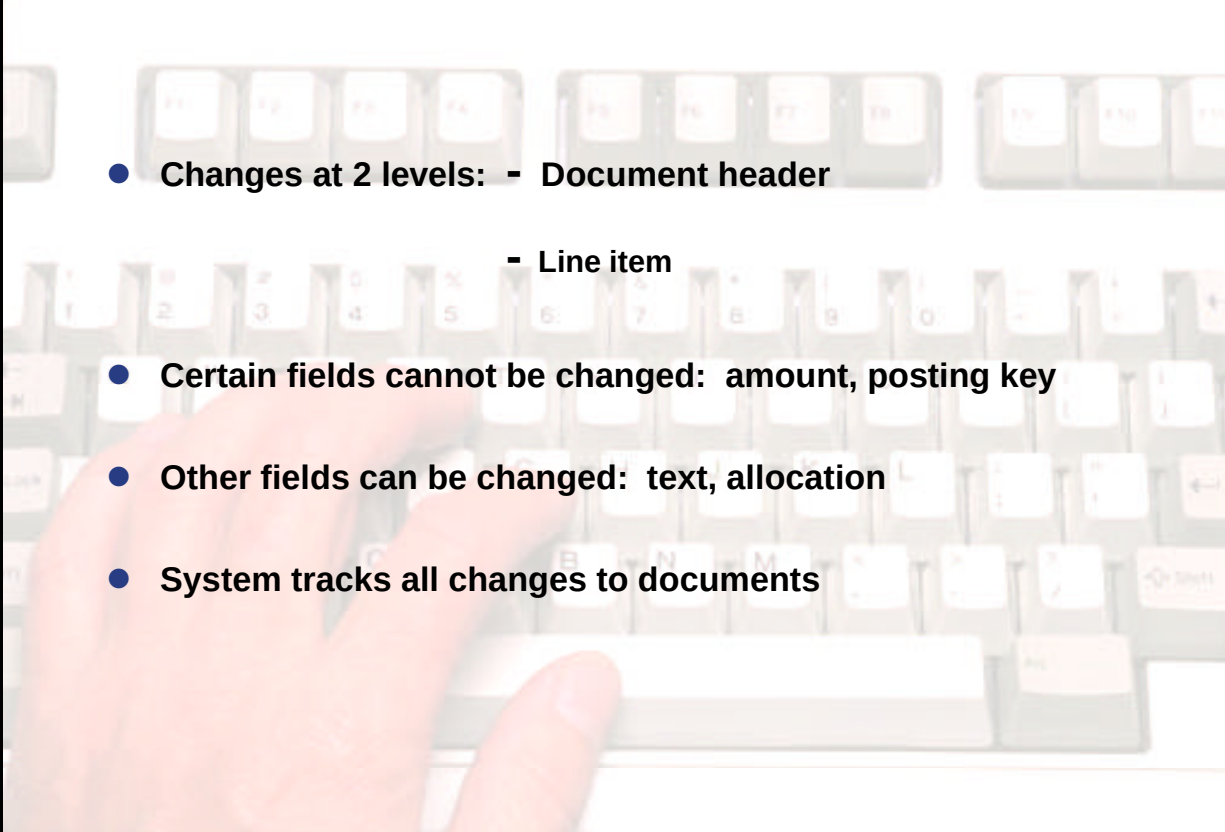
- *Debit / Credit* posting key definitions

- Fiscal year proposal

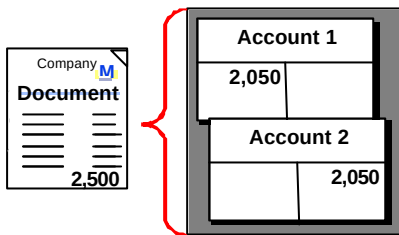
- Value date proposal

- Maximum exchange rate deviation

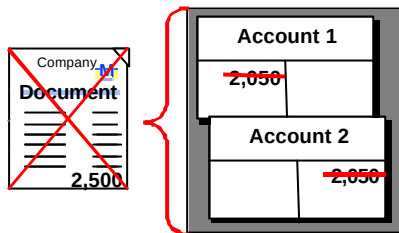
- R/3 provides some basic defaults during document processing. R/3 always proposes the current date as the posting date and the entry date during document processing. However, the entry date cannot be changed.
- R/3 adheres to the “Document Principle”: all documents must balance before they can be posted.
- As you process through various accounting transactions, default document types and posting keys are defined per transaction in customizing. A vendor invoice will have the document type KR; the credit entry will be posted using posting key 31. A customer invoice will have the document type DR; the debit entry will be posted using the posting key 01.
- You can also have R/3 propose the value date and the fiscal year in various accounting transactions.
- At the company code level, specify the maximum exchange rate difference between the exchange rate entered in the document header of a transaction and the rate in the exchange rate table. If the system finds a difference which exceeds the percentage rate specified, a warning message is given. In this way, incorrect entries can be recognized and corrected in time.

- 
- **Changes at 2 levels:**
 - Document header
 - Line item
 - **Certain fields cannot be changed:** amount, posting key
 - **Other fields can be changed:** text, allocation
 - **System tracks all changes to documents**

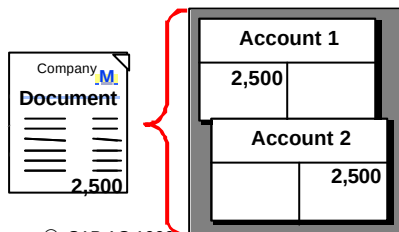
- Users can change documents that have already been posted. However, based on different rules, only certain fields can be changed. These rules are either system imposed or customized.
- Certain fields in both the document header and the line items can be changed.
 - Document header: only the reference number and text fields can be changed
 - Line items: the system does not allow changes to the amount, the posting key, the account or any other fields that would affect the reconciliation of a posting.
- As users make changes to documents, the following information is logged:
 - The field that was changed
 - The new and old values
 - The user who made the change
 - The time and date of the change



- Document entered incorrectly



- Document corrected by Reversal
 - Reverse with a standard reversal posting
 - Reverse with a negative posting



- Document re-entered correctly

© SAP AG 1999

- It is possible for a user to make an input error. As a result, the document created will contain incorrect information. In order to provide an audit of the correction, the user must first **reverse** the **document** in error, and then capture the document correctly.
- The system provides a function to reverse G/L, A/R and A/P documents both individually or in mass.
- A document may be reversed either by:
 - entering a **standard reversal posting** or
 - entering a **negative posting**.
- When reversing a document, a **reversal reason code** must be entered to explain the reversal. The reason code also controls if the reversal date is allowed to be different from the original posting date.
- Documents with cleared items cannot be reversed. The document must first be reset.

Incorrect posting

Account 1	
2050	
2050	0

Account 2	
	2050
0	2050

• Standard reversal posting

Account 1	
2050	2050
2050	2050

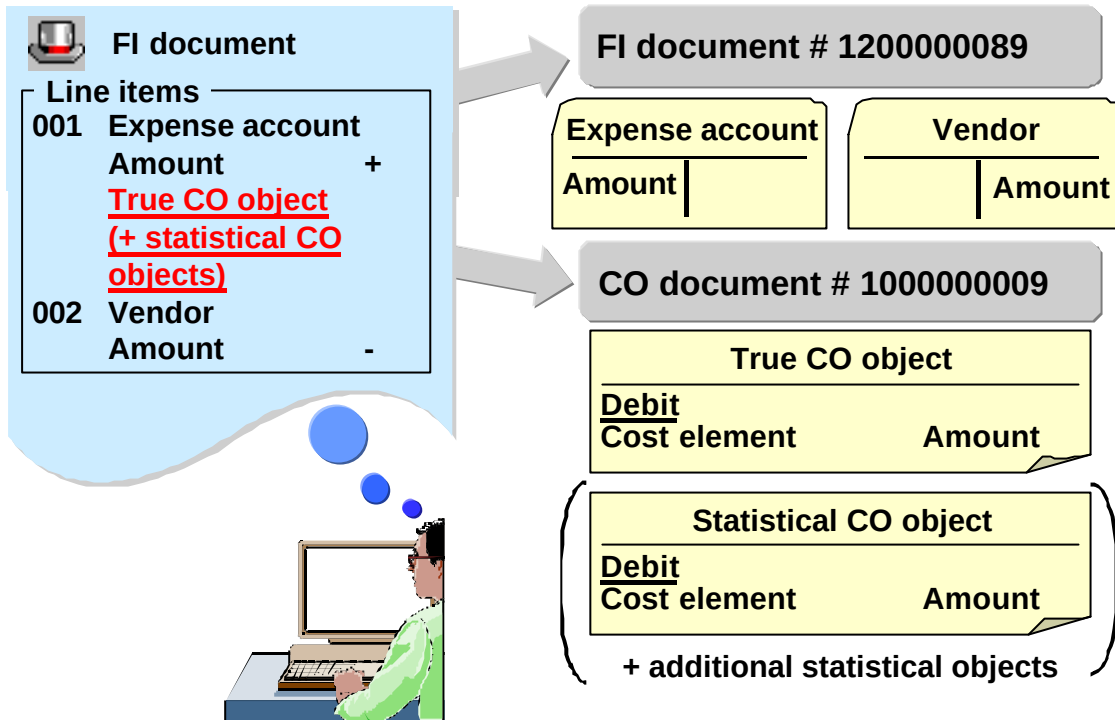
Account 2	
2050	2050
2050	2050

• Negative posting

Account 1	
2050	2050
2050	
-2050	
0	0

Account 2	
2050	2050
	2050
	-2050
0	0

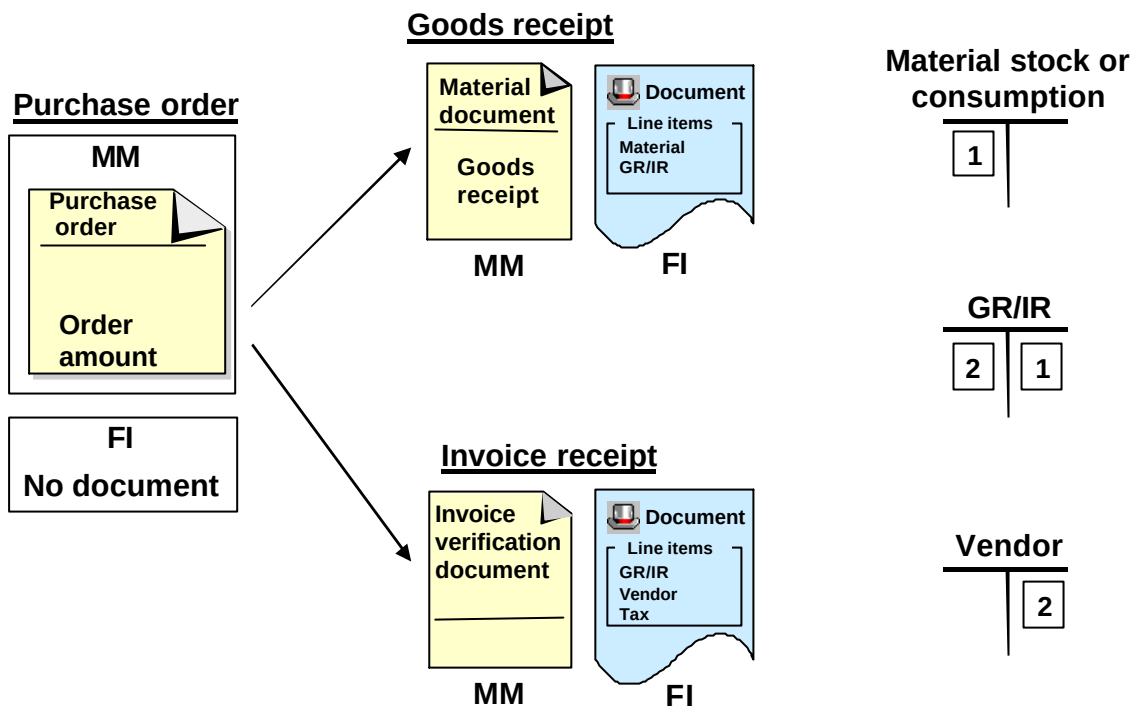
- The **standard reversal posting** causes the system to post the debit in error as a credit and the credit in error as a debit. The standard reversal posting causes an additional increase in the transaction figures.
- The **negative posting** also posts the debit in error as a credit and the credit in error as a debit. This time the posted amount is not added to the transaction figures but it is subtracted from the transaction figure of the other side of the account. This sets the transaction figures back to as they were before the incorrect posting took place.
- Normally the system uses the standard reversal posting to reverse documents. The following requirements have to be fulfilled to perform negative postings:
 - The company code must allow negative postings.
 - The reversal's reason code must be specified for negative postings.
- Negative postings can also be used to perform transfer postings of faulty line items. The item is removed from the wrong account by a negative posting (resetting the transaction figures) and posted to the correct account by a normal posting. This can only be done with a document type that allows negative postings.



- When entering an expense item for an operating expense, you must also enter one true CO object. This means that when the item is posted, a CO document is created as well as an FI document. The CO document posts the costs corresponding to the expense to the true CO object.
- As well as the true CO object, you can also enter additional statistical CO objects to which the costs are statistically posted (which means they are "not allocatable").

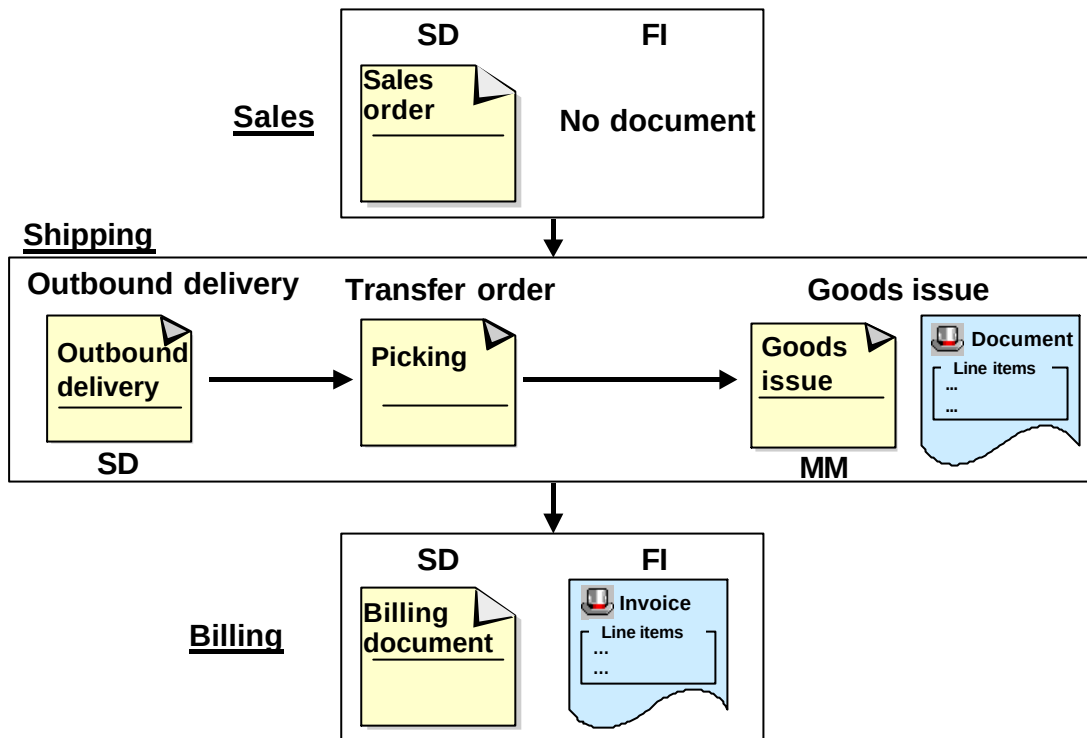
Three-Stage Verification (Standard)

SAP



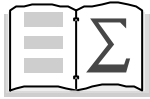
© SAP AG 1999

- The **three-step verification** is the standard procedure for posting procurement transactions in FI. The procedure contains the following three steps:
 - **Creating a purchase order**
This transaction is completed in MM. No postings are made in FI.
 - **Goods receipt**
To update the inventory, a material document is created in MM. At the same time, a document is created in FI, with which the value of the goods is posted to the materials account (debit) and the goods receipt/invoice receipt account (credit) in the general ledger.
 - **Invoice receipt**
The vendor invoice is posted in MM, which automatically creates a document in FI. The FI document contains the invoice amount that is posted to the goods receipt/invoice receipt account (debit) and the vendor account (credit).
- The last two steps can be completed in reverse order, depending on the order the goods and the invoice are received.
- The goods receipt/invoice receipt account ensures that goods were received for each invoice and vice versa.



© SAP AG 1999

- The **sales order** forms the basis of the sales process. Once a customer has placed an order, a sales order must be created at the start of the process. The sales order is generated at the distribution chain level. The ordered items can be from different divisions. The sales order is a document in SD and does not cause any postings in Financial Accounting. When the sales order has been entered, the system carries out an availability check for the required delivery date.
- On the day of shipping, an **outbound delivery document** is created. Billing for the delivery can only take place when the goods have been taken from the warehouse stock and posted as a goods issue.
- The warehouse management function is used for **picking**. A transfer order has to be created, which generates the pick order. The requested goods are taken from the warehouse and prepared for delivery.
- The goods to be delivered are posted as a **goods issue**. A goods issue document is created in MM, and an accounting document is created in FI so that the goods issue is posted to the correct G/L accounts.
- The last stage in the sales process is **billing**. A billing document is created in SD, and a printed invoice is sent to the customer. At the same time, a document is created in FI so that the receivables and revenues can be posted to the correct accounts.



Participants should be able to:

- **Post basic FI-documents**
- **Influence the fields of document header and line items**
- **Open and close posting periods**
- **Set default values**
- **Change Documents**
- **Perform document reversal**
- **Describe how Accounts Receivable is integrated with sales**

Exercises



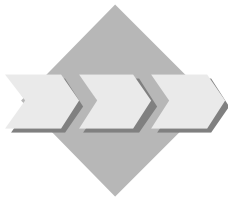
Unit: Daily Processing

Topic: Basic FI Documents



In these exercises you will:

- Post basic FI documents



Now that you completed the configuration of document control according to the client's needs, the client has asked to test your specifications. He asks you to post some basic FI documents for this purpose.

General Ledger Postings

- 1-1 General ledger account posting
5 000 units cash of local currency are drawn from the house bank account and put into petty cash. Post this transaction.
- 1-2 Books for the next training course are supplied for the administration cost center, and the vendor is paid on delivery from petty cash. The value of the books is LC 1070.00. The invoice includes 7% input tax. Choose the option "calculate tax" for the posting.

Note the document number on your data sheet.



Select the Tree Off pushbutton to have the journal entry fill the entire screen.

- 1-3 Your domestic vendor has sent you an invoice to the value of LC 1,255.10 for office supplies which you purchased. The net amount is LC 1081.98 and the tax amount is LC 173.12 (16%). Post this transaction in the R/3 System. Please assign a cost center.

Document date and Posting Date	06 of the previous month
Document type	KR
Expense	476000
Reference	55293/94

Note the document number on your data sheet.

- 1-4 A portion of the material received was damaged and for this reason you received a credit memo to the value of LC 122.10 including 16% input tax. Please assign it to a Cost Center .Post the credit memo using the following information:

Document date and Posting Date	10 of the previous month
Document type	KG
Expense	476000
Reference	60201/94

Note the document number on your data sheet.



Select the pushbutton to have the journal entry fill the entire screen.

Outgoing invoice and credit memo

- 1-5 Your domestic customer has purchased goods to the value of LC 1,500 (including 16% VAT). Post the invoice using the following information:

Document date and Posting Date	01 of the previous month
Document type	DR
Revenue	800200
Payment terms.	14 days 3%, 30 days 2%, 45 days net

- 5-6 You have made a mistake when rendering the accounts and have charged the customer for too great an amount. You have consulted the customer and have agreed that you will issue a credit memo to be offset against the invoice. Post a credit memo for LC 36.25 (including 16% VAT).

Document date and Posting Date	02 of the previous month
Document type	DG
Revenue	800200
Reference	Invoice number generated above

Note the document number on your data sheet.



Select the *Tree Off* pushbutton to have the journal entry fill the entire screen.

- 1-7 Which difference do you notice comparing the postings of the credit memos?

Line item display– Optional exercises

- 1-8 Analyze the R/3 General Ledger Account Balance Display screen, then list 4 types of totals which can be obtained from the online display. Use the Accounts Receivable reconciliation account 140000 in your company code for the current year as selection parameters when executing the program.
- 1-9 The parameter selection on the G/L Account: Initial Screen Balances Display allows the user to view balances by company code and year. Check the toolbar when displaying the balances to see what other selection criteria can be used for displaying online data.
- 1-10 Proceed to the Balances Display Initial Screen in the Accounts Receivable sub-module. Display the balances for your customers for the current year. What is the current balance owed by your customers?
- 1-11 How can you branch to the individual line items from this display?

Solutions



Unit: Daily Processing

Topic: Basic FI Documents

General ledger posting.

1-1 *Easy Access Menu: Accounting ® Financial Accounting ® General Ledger ® Document Entry ® G/L account posting*

If prompted, enter your Company code, AC##, then select Enter.



Select the *Tree Off* pushbutton to have the journal entry fill the entire screen.

Field Name or Data Type	Values
Basic data	
<i>Doc. Date</i>	<i>current date</i>
<i>Posting date</i>	<i>current date</i>
First item	
<i>G/L acct</i>	<i>Petty Cash 100000</i>
<i>D/C</i>	<i>Debit</i>
<i>Doc. currency amount</i>	<i>5000</i>
Second item	
<i>G/L acct</i>	<i>House Bank G/L Account113100</i>
<i>D/C</i>	<i>Credit</i>
<i>Doc. currency amount</i>	<i>5 000</i>

Document ® Simulate

Review your document. Double click on a line item to view or change line item details.

Select Post to save your document. Document number: _____

1-2 Books - Invoice

Easy Access Menu: Accounting ® Financial Accounting ® General Ledger ® Document Entry ® G/L account posting

Choose the screen variant “with cost center”

If prompted, enter your Company code, AC##, then select Enter.



Select the *Tree Off* pushbutton to have the journal entry fill the entire screen.

Field Name or Data Type	Values
Basic data	
G/L account	petty cash 100000
Invoice date	current date
Posting date	current date
Amount	1070
Currency	Company code currency
Calculate tax	Ö
Tax Code	V2 (if required)
Items	
G/L acct	Training costs 476400
D/C	Debit
Doc.currency amount	1070
Tax code	V2
Cost center	T-A20A##

Document ® Simulate

Review your document. Double click on a line item to view or change line item details.

Select Post to save your document. Document number: _____

Incoming Invoice and credit memo

- 1-3 **Easy Access Menu: Accounting ® Financial Accounting ® Accounts payable ® Document entry ® Invoice**

Field Name or Data Type	Values
Basic data	
Account	T-F00A00
Invoice date	06 th of previous month
Posting date	06 th of previous month
Amount	1,255.10
Currency	Company code currency
Calculate tax	Ö
Tax Code	VN
Items	
G/L acct	Office supplies 476000
D/C	Debit
Doc.currency amount	1,255.10
Tax code	VN
Cost Center	T-A20A##

Record your Document # _____

- 1-4 **Easy Access Menu: Accounting ® Financial Accounting ® Accounts payable ® Document entry ® Credit Memo**

If prompted, enter your Company code, AC##, then select Enter.

Enter the necessary data



Select the *Tree Off* pushbutton to have the journal entry fill the entire screen.

Outgoing invoice and credit memo

- 1-5 **Easy Access Menu: Accounting ® Financial Accounting ® Accounts receivable ® Document entry ® Invoice**

Field Name or Data Type	Values
Basic data	
Customer	T-F00A00
Invoice date	01 st of previous month
Posting date	01 st of previous month
Amount	1500
Currency	Company code currency
Calculate tax	Ö
Tax Code	AN
Items	
G/L acct	800200
D/C	Credit
Doc. currency amount	1500
Tax Code	AN

Document ® Simulate

Review your document. Double click on a line item to view or change line item details.

Select Post to save your document. Document number: _____

- 1-6 Customer credit memo

Easy Access Menu: Accounting ® Financial Accounting ® Accounts receivable ® Document entry ® Credit memo

If prompted, enter your Company code, AC##, then Select Enter.



Select the *Tree Off* pushbutton to have the journal entry fill the entire screen.

Field Name or Data Type	Values
Basic data	
Customer	T-F00A00
Document date	02 nd of previous month
Posting date	02 nd of previous month
Amount	36,25
Currency	Company code currency
Calculate tax	Ö
Tax Code	AN
Items	
G/L acct	800200
D/C	Debit
Doc. currency amount	36,25
Tax Code	AN
select the Payment tab	enter the invoice number you previously created, in the field invoice ref

Document ® Simulate

Review your document. Double click on a line item to view or change line item details.

Select Post to save your document. Document number: _____

- 1-7 Which difference do you notice comparing the postings of the credit memos?
If the document number of the invoice is entered – the credit memo gets the payment terms of the invoice so that both items are due on the same day. If the invoice number is not entered, then there are no payment terms and the credit memo is due immediately.

Line Item Display– Optional exercises

- 1-8 Analyze the R/3 General Ledger Account Balance Display screen, then list 4 types of totals which can be obtained from the online display. Use the Accounts Receivable reconciliation account 140000 in your company code for the current year as selection parameters when executing the program.

Accounting ® Financial Accounting ® General Ledger ® Account ® Display Balances

- 1. Periodic Debit Totals***
- 2. Periodic Credit Totals***
- 3. Periodic Debit/Credit Totals***
- 4. Periodic Balances***
- 5. Opening Balance for Year***
- 6. Closing Balance for the Specified Year***

- 1-9 The parameter selection on the G/L Account: Initial Screen Balances Display allows the user to view balances by company code and year. Check the toolbar when displaying the balances to see what other selection criteria can be used for displaying online data.

The data can be viewed by business area and currency type. Hit the icon to view the desired data..

- 1-10 Proceed to the Balances Display Initial Screen in the Accounts Receivable sub-module. Display the balances for your customers for the current year. What is the current balance owed by your customers?

Accounting ® Financial Accounting ® Accounts Receivable ® Account ® Display Balances

The current balance will vary depending on transactions entered.

- 1-11 How can you branch to the individual line items from this display?

Three additional data display options available from this screen are Line Item Display, Sales, and Special G/L Transactions.

Double-click on the required information (line item), for example for the period, debit or credit, period balance, cumulative balance, or the overall account balance.



Users can display line item detail supporting account balances of general ledger accounts, vendors and customers online within the corresponding sub-module of R/3, by choosing the *Account* option from the sub-module main menu.



Unit **Organizational Units**

Unit **Master Data**

Unit **Event Based Postings**

Unit **Periodic Allocations**

Unit **Planning**

Unit **Variance Analysis**

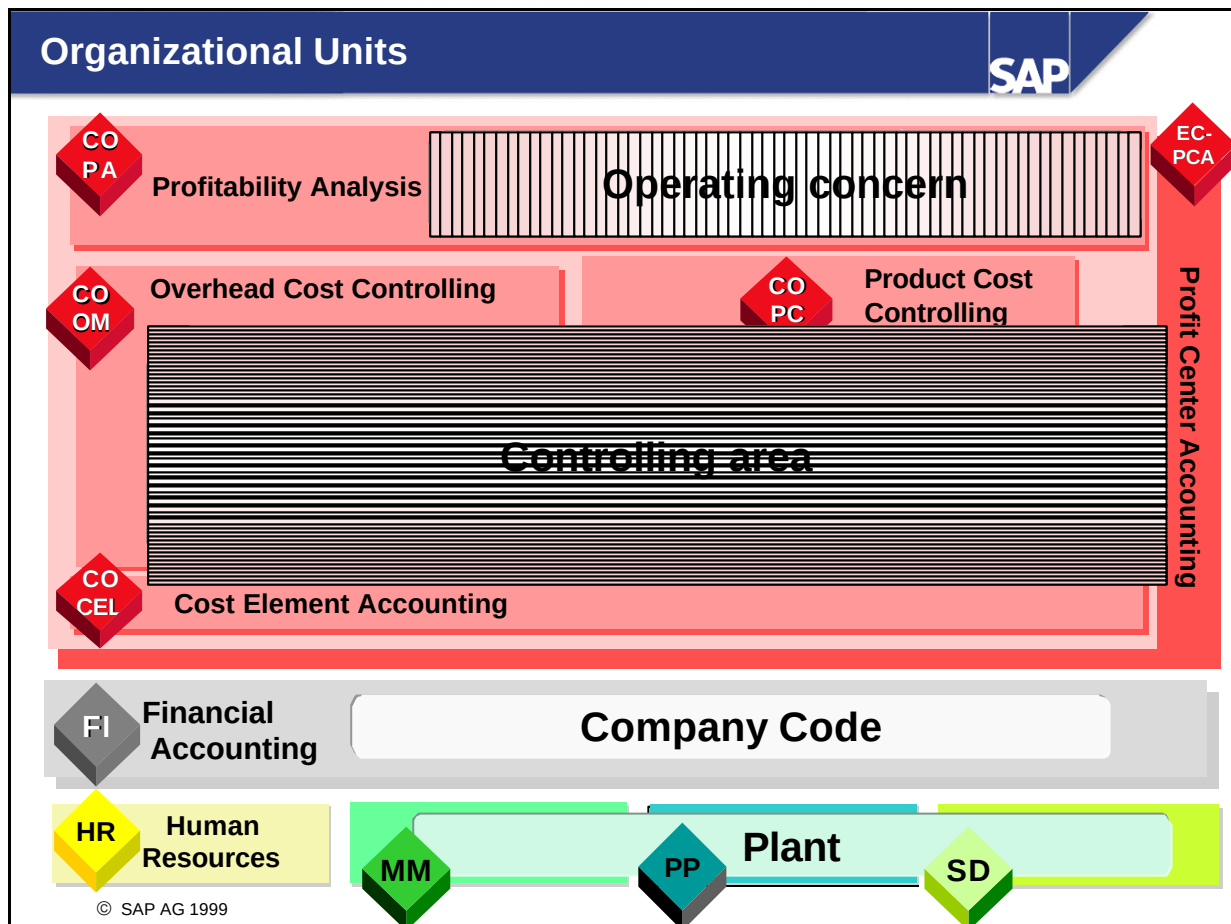
Content:

- **Organizational Units**

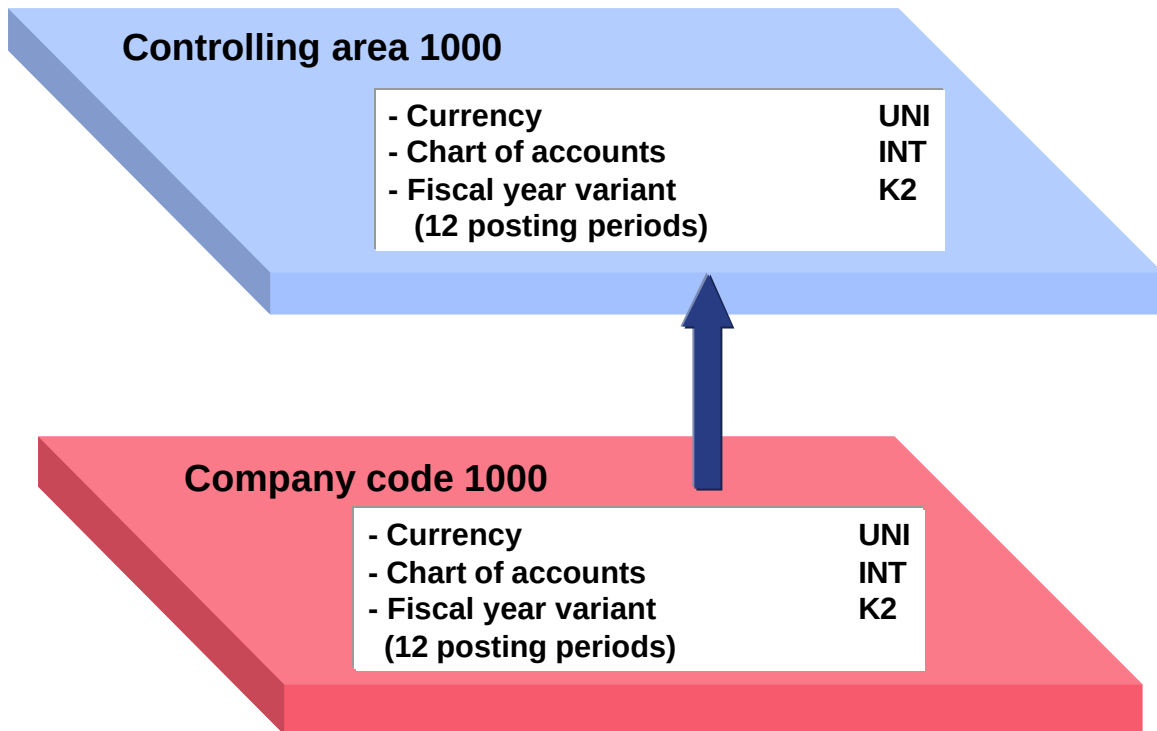


At the conclusion of this unit, you will be able to:

- **Describe the organizational units on which Controlling is based**
- **Explain the options available for configuring organizational units in Overhead Cost Controlling**

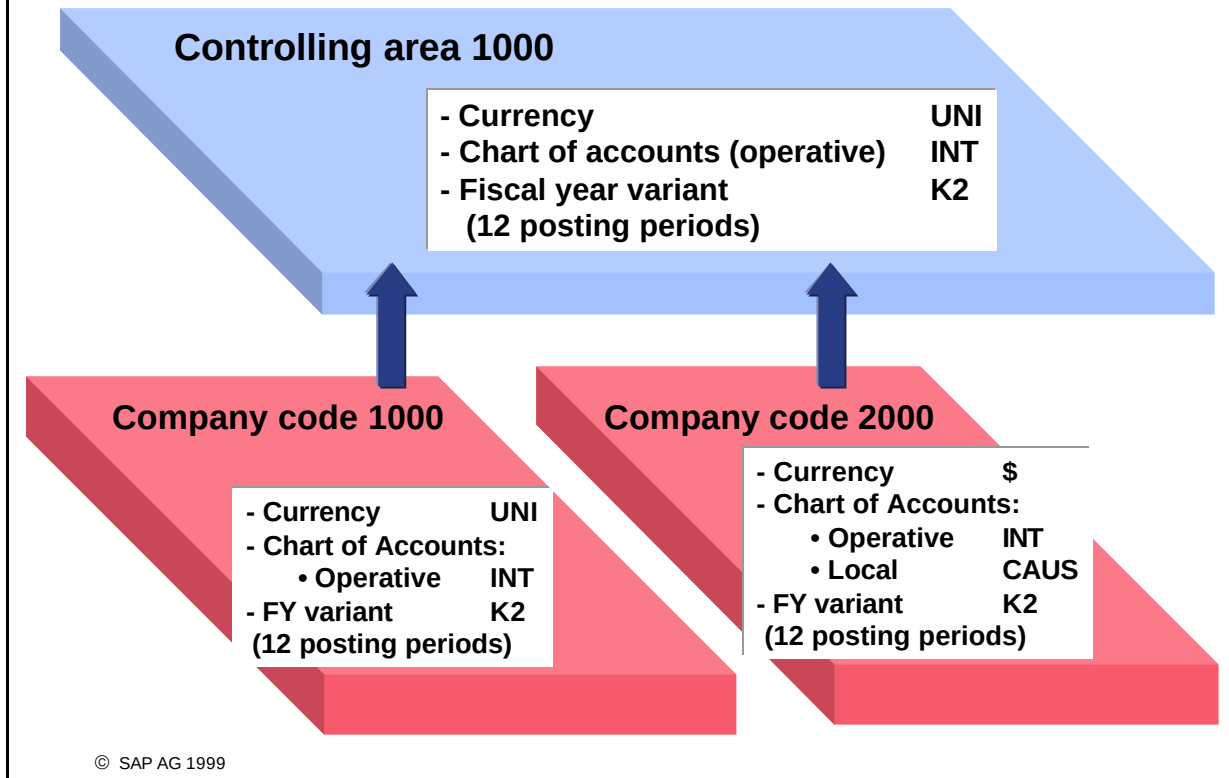


- The **operating concern** is the highest reporting level for profitability and sales and marketing controlling, and the central organizational unit in Profitability Analysis (CO-PA) used to segment and structure the market.
- **Controlling areas** structure the internal accounting operations of an organization within Controlling. They represent closed units that are used to calculate costs. All internal allocations relate solely to objects that belong to the same controlling area.
- **Company codes** are independent accounting units within FI. They represent the smallest organizational units for which an account group can be set up for the purposes of external reporting. External reporting covers the entry of all relevant business transactions and the generation of every document required for financial reports like the balance sheet and the profit and loss statement.
- The **business area** is an organizational unit within Financial Accounting that represents a particular level of operations and managerial area within a company. You can assign Financial Accounting transactions to a particular business area. In Financial Accounting (FI) you can generate internal balance sheets and profit and loss statements on the basis of business areas.
- The **plant** is an organizational unit within Logistics. It is used to break an organization down according to production, procurement, plant maintenance, and material planning considerations. Plants are used in Materials Management, in Logistics, and in Production Planning and Control. In a plant either materials or goods are manufactured, or services are provided.

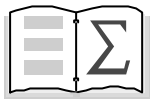


© SAP AG 1999

- This is a structure that contains identical views for Financial Accounting and Cost Accounting. The controlling area corresponds to the company code.
- You can use the following three **currencies** in Controlling for analysis purposes in the information system:
 - **Controlling area currency**
If the assignment is 1:1, you can only use the company code currency as the controlling area currency. The controlling area is managed using the controlling area currency.
 - **Object currency**
An object currency is defined for each account assignment object in CO. If the assignment is 1:1, you can define an object currency for the account assignment object other than that used for the controlling area or company code.
 - **Transaction currency**
This is used for posting a CO document.
- You need to use the same **chart of accounts** in Controlling and in the assigned company code.
- The **fiscal year variants** for the company code and the controlling area can have a different number of special periods, but must have the same number of posting periods. The period limits for the fiscal year variants must also match up. In FI, special periods are used for adjustment postings at year-end closing, or for revaluation. If FI has been set up with four special periods, but CO with only one, then the postings for the second, third, and fourth special periods in FI are posted to the first special period in CO. If there is no special period in CO, the FI postings in the special period are posted to the last posting period in CO.



- If you assign more than one company code to one controlling area, then your cost accounting can be **cross-company code**. You can make allocations in CO that are related to more than one company code. Reconciliation postings may be necessary, and can be made using the reconciliation ledger.
- Three **currencies** are provided for your valuation
 - **Controlling area currency**
The controlling area and the company codes may differ for cost accounting that is cross-company code. For a controlling area, you can define a currency that is the same as the currency for a company code, but you can also use an additional currency in CO.
 - **Company code currency**
In cost accounting that is cross-company code, you can only choose any object currency if all (!) of the assigned company codes have the same currency, which must be the same as the the controlling area currency. Otherwise, the system automatically assigns the company code currency to the account assignment object as an object currency.
 - **Transaction currency**
Documents are posted to CO in the transaction currency.
- The **operational chart of accounts** is used by Financial Accounting and Cost and Revenue Element Accounting. As well as the operative chart of accounts you can also have a chart of accounts that is country-specific (different account numbers), and is structured according to the legal requirements of its country.
- The **fiscal year variants** in the controlling area and the company codes can have a different number of special periods. The number of posting periods must be the same.



You are now able to:

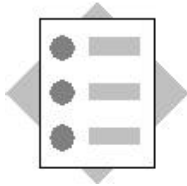
- **Describe the organizational units on which Controlling is based**
- **Explain the options available for configuring organizational units in Overhead Cost Controlling**

Exercises



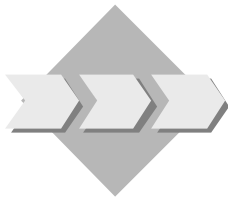
Unit: Organizational Units

Topic: Organizational Units



At the conclusion of these exercises, you will be able to:

- Display the company codes assigned to controlling area 1000.
- Check which control indicators are activated in the controlling area
- Explain different settings in the controlling area



A new department was formed in the IDES subsidiary in Germany. This department deals with enterprise consulting for installation and implementation of software.

1-1 Your consulting department is assigned to controlling area 1000-CO Europe, where there are settings already in use that you wish to check.

1-1-1 Which assignment control (controlling area : Company code 1:1, or 1:n) has been set in the basic data?

1-1-2 Use the F1 key to call up more information on the fiscal year variant. Do the number of special periods in company codes and the controlling area have to be the same?

1-1-3 Check whether Cost Center Accounting, Profit Center Accounting, and commitments management are activated in controlling area 1000.

1-1-4 How many company codes are assigned to controlling area 1000?

- 1-2 Another enterprise would like to install the R/3 CO module. There is currently only one company code, meaning that the enterprise would be displayed using a controlling area:company code 1:1 assignment. However, it can be seen that the enterprise will expand significantly, including abroad. You would therefore need to integrate new company codes into the controlling area. Which settings for assignment control and currency (type) would you have to make to enable new company codes to be added to the controlling area later on?



In the following exercises, you will be working in Customizing, and in various applications. To facilitate this, it is recommended that you open several windows (sessions) (**System ® Create session**). You can switch from one session to another at any time.



You can optimize user-friendliness by adding frequently-used menu paths to your favorites.



Unit: Organizational Units

Topic: Organizational Units

The following menu path abbreviations are used in the solution:

Customizing path:

**IMG: Tools ® Accelerated SAP ® Customizing ® Edit Project ® Display Icon
SAP Reference IMG**

Cost Center Accounting path:

CCA: SAP Menu ® Accounting ® Controlling ® Cost Center Accounting

**1-1 IMG: Controlling ® General Controlling ® Organization ® Maintain
Controlling Area ® Maintain Controlling Area**

- 1-1-1 Select controlling area 1000, and display the detail screen. Cross-company code cost accounting has been selected for this controlling area.
- 1-1-2 It is possible to have a different number of special periods. The number of posting periods must be the same. The period limits for the fiscal year variants must match up.
- 1-1-3 In controlling area 1000, go to the *Activate components/control indicators* screen. Cost Center Accounting, Profit Center Accounting, and commitments management are activated.
- 1-1-4 Switch to the *Assignment of Company Code(s)* view for controlling area 1000. Four company codes (1000, 2000, 2100, 2300, and more company codes for the exercises) are assigned to controlling area 1000.

- 1-2 The assignment control in the controlling area must be set to *Cross-company code cost accounting*, although you initially only assigned one company code. The currency type controls how the currency is determined for the controlling area. To enable other company codes that are to be assigned to the controlling area to have different (local) currencies, select currency type 30 (group currency). This must be set up as the first local or parallel currency in the company codes. This guarantees data transfer for FI/CO, and future additions can be made without any problems.
- To enable all currencies in the controlling area to be updated, you need to set the *All currencies* control indicator.

Unit Contents:

- Cost elements
- Cost centers
- Activity types
- Statistical key figures

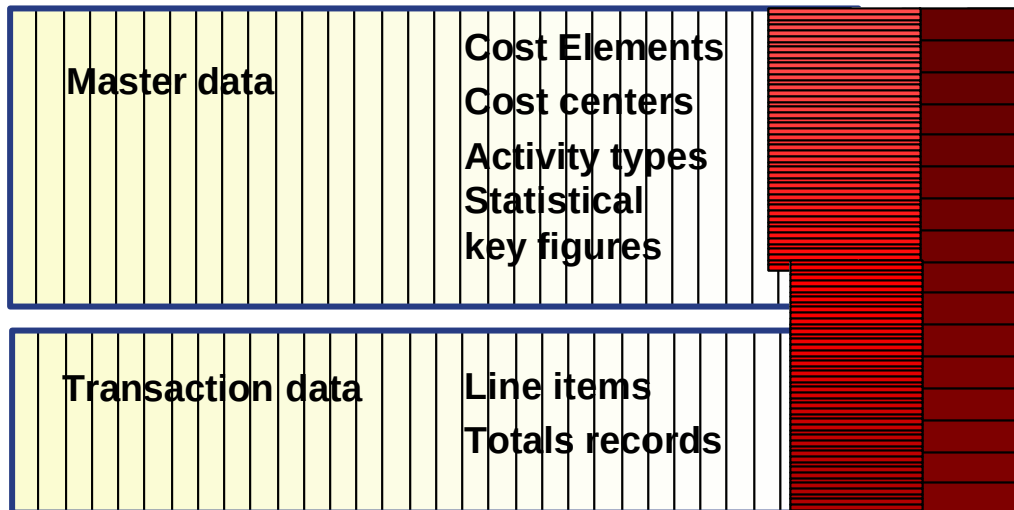
At the conclusion of this unit, you will be able to:



- **Describe how best to structure the standard hierarchy**
- **Create cost centers**
- **Distinguish between G/L accounts and cost elements**
- **Create cost elements in Controlling, and explain alternative methods for creating them**
- **Create activity types and plan manual prices for them on different cost centers**
- **Create statistical key figures**
- **Update master data using collective processing**
- **Explain the time dependencies of master data**
- **Create master data groups and explain how they are created**



- The manager of the Controlling department outlines the cost center structure of the organization, together with the respective management areas. You are to portray this structure in the system as a standard hierarchy. You need to assign each cost center to this structure to portray all of your enterprise.
- Financial Accounting informs you that the company codes are set up. In Controlling you can now start creating corresponding cost elements.
- The consultants that work for your company need to be able to settle the services that they provide to customers directly to a cost object (internal order). You want to allocate the services of junior and senior consultants separately.
- You want to use statistical key figures as the tracing factor for repostings and allocations at period end.
- Although master data remains relatively constant for long periods of time, some maintenance will be required as the enterprise grows and changes. You familiarize yourself with the variety of tools that exist for this purpose.

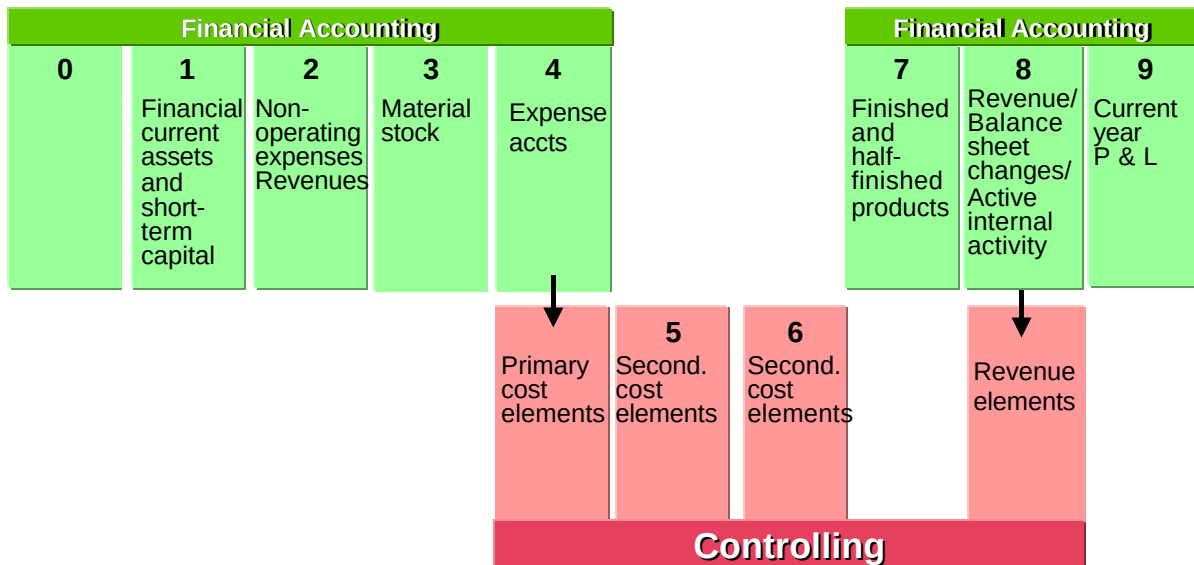


- In Overhead Cost Controlling, there is a difference between master data and transaction data.
- **Master data** is information that remains unchanged over a long period of time.
- **Transaction data** are used in the short-term and are assigned to master data.
- **Cost elements** describe the origin of costs. Cost elements are defined as either primary or secondary. Primary cost elements arise through the consumption of production factors that are sourced externally. Secondary cost elements arise through the consumption of production factors that are provided internally (that is, by the enterprise itself).
- **Cost centers** represent areas of responsibility/management areas that generate and influence costs.
- **Activity types** categorize production and service activities provided by a cost center to the organization and used for allocating costs of internal activities to the originators of the costs.
- **Statistical key figures** (values that describe a cost center) are used as the basis (tracing factor) on which to make allocations (assessments, distributions) and to analyze statistical key figures.

The Chart of Accounts

SAP

Example: International Chart of Accounts

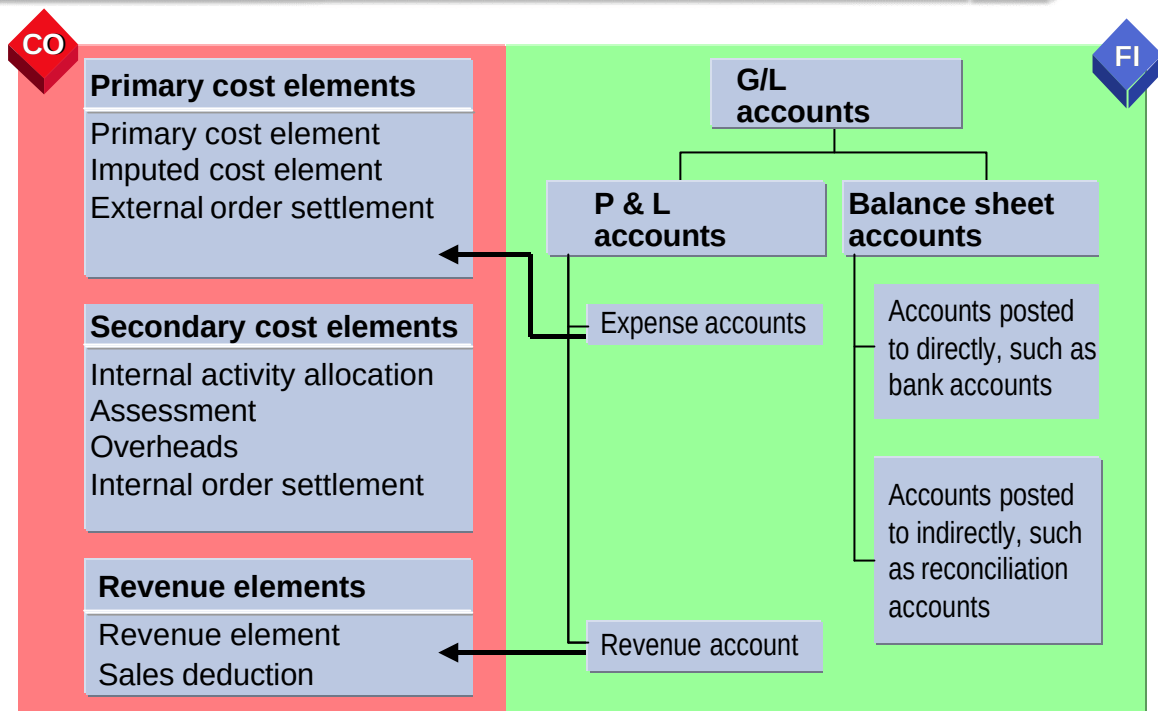


© SAP AG 1999

- The **chart of accounts** contains all the general ledger (G/L) accounts belonging to Financial Accounting.
- From the cost controlling viewpoint, a **circular system** exists because the expense and revenue accounts in Financial Accounting correspond to **primary cost and revenue elements** in Controlling, and because postings in FI are passed on in realtime to Cost and Revenue Element Accounting (CO-OM-CEL).
- In addition, it is only in Controlling that you can create **secondary cost elements**. These are used to record internal value flows like activity allocations, assessments and settlements.

The Cost Element

SAP



© SAP AG 1999

- The integrated nature of the R/3 System means that you need to create expense accounts in **Financial Accounting** with corresponding primary cost elements in Controlling. This ensures that you can reconcile expenses in FI with primary costs in CO. Before you can create primary cost elements in CO, you first need to create them as G/L accounts in FI.
- To be able to post to a **primary cost element**, you require a cost-carrying object (such as a cost center) to identify the origin of the costs. Examples of primary cost elements are material costs and salary costs.
- **Secondary cost elements** are used exclusively in CO to identify internal cost flows such as assessments or settlements. They do not have corresponding general ledger accounts in FI and are defined in CO only.
- When you analyze revenues in cost controlling, the R/3 System records them as revenue elements. **Revenue elements** are primary cost elements.
- When you create a cost element, you must assign a **cost element** category. This assignment determines the transactions for which you can use the cost element. For example, category 01 (general primary cost elements) is used for the standard primary postings from Financial Accounting or Materials Management.



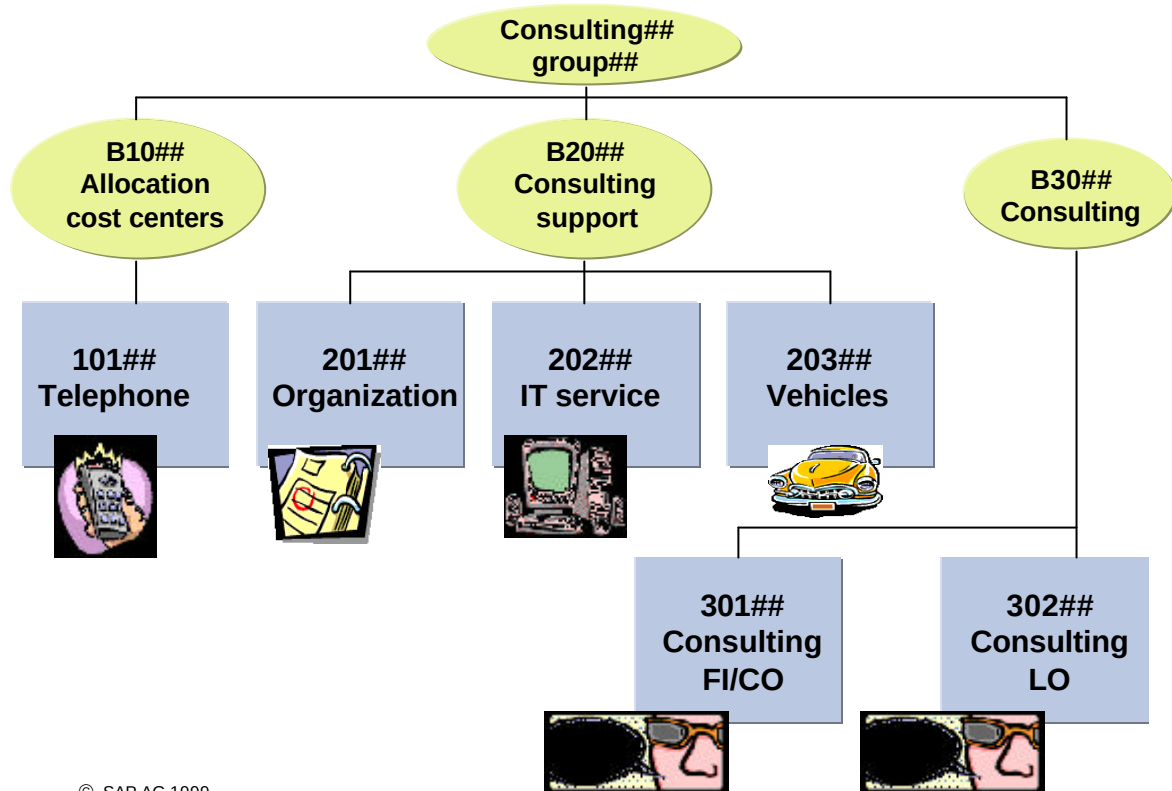
Default settings

Fr. Account	To Account	Acct cat.	Description
400000	415000	01	Primary cost element
.			
.			
.			
510000		42	Assess. cost element

- You can create cost elements automatically by making **default settings** that are used to specify the cost element, or cost element interval that you wish to create. You also specify categories for the cost elements.
- You only create **primary cost elements** if the chart of accounts contains the corresponding G/L account. The R/3 system uses the name from the master data for G/L accounts in FI for the cost element. However, you can change this name in CO.
- **Secondary cost elements** are created for all specified cost elements, and the name is taken from the cost element category.
- Once you have entered the default settings, you create the cost element in the **background**.

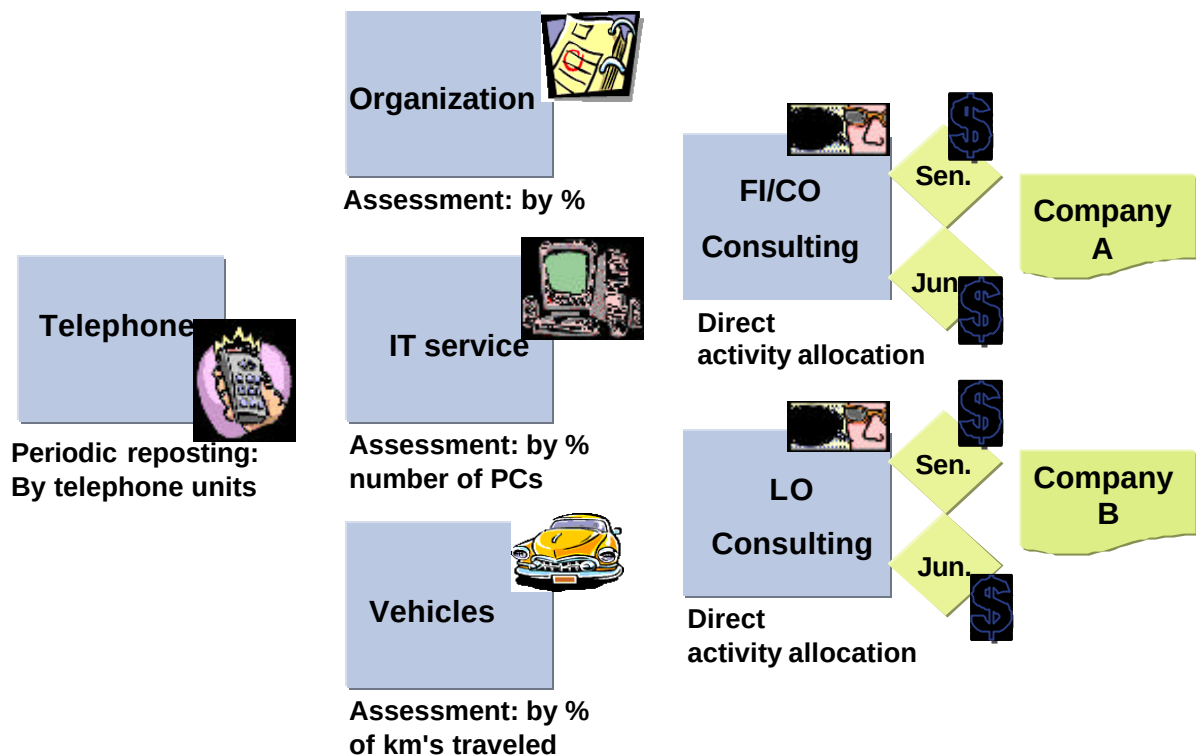
Cost Center: Structuring Example

SAP



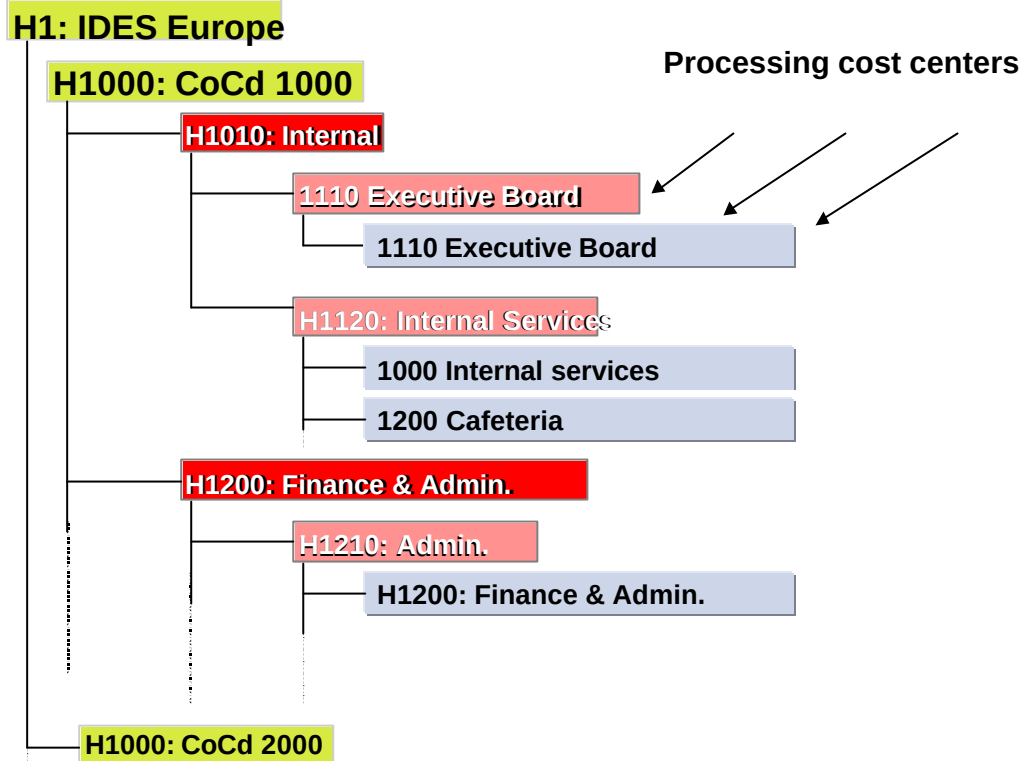
Cost Center: Allocation Scenario

SAP



© SAP AG 1999

- The overview shows which methods the individual cost centers in your exercise enterprise want to use for their own credit purposes. You need secondary cost elements to make an assessment or a direct activity allocation. You can create these in the exercise in this unit.



© SAP AG 1999

- **Cost centers** are the locations at which costs are incurred. You can set up cost centers based on functional requirements, distribution criteria, activities provided, geographical factors, and/or areas of responsibility.
- For overhead cost controlling, you combine cost centers of similar types, according to whether they perform decision-making, supervisory (checking), or managerial functions. You create a **cost center standard hierarchy** to represent these different types of cost center in a structured form.
- Each level or **node of this standard hierarchy** represents a cost center group.
- You can **create or change cost centers** either by using the appropriate function from the menu, or when maintaining the standard hierarchy.
- If you want to assign a cost center to another part of the hierarchy, you can do so when maintaining the standard hierarchy area by simply **reassigning the cost center**. In other words, you do not need to make changes to your cost center master data.
- You can change the **assignments of the organizational units** company code, business area, or profit center during the course of a fiscal year under only if the following conditions hold:
 - The currency of the new company code is the same as that of the old company code.
 - You post plan data only in the given fiscal year.
 - The cost center is not assigned to a fixed asset, a work center or a HR master record.

1

Which cost centers?

- Cost center group
- Cost center interval
- Selection variant

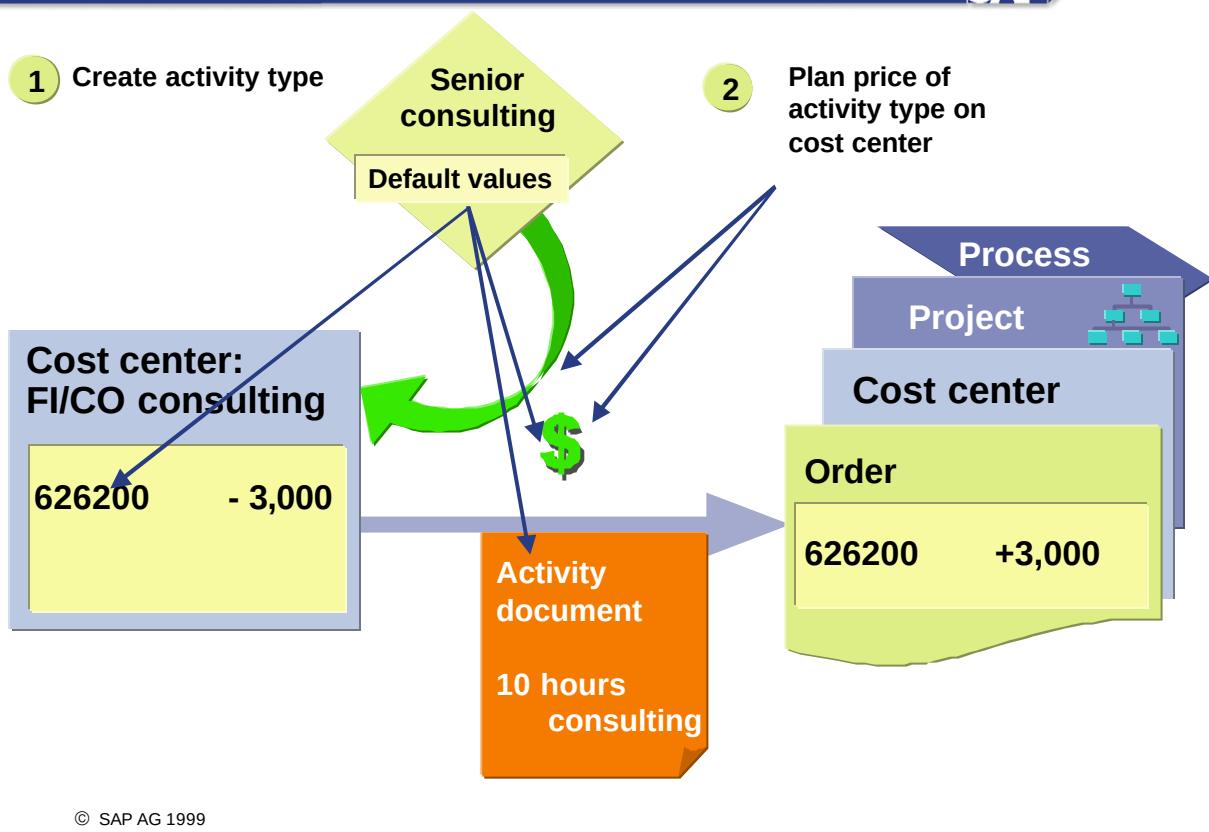
2

Which master data fields?

Change cost center: Collective processing					
ListVar +		ListVar -			
CO area	1000				
Valid from	01/01/1950 to 12/31/9999				
List variant: Name					
M	Cost center	Description	Cat	CoCd	BA
☐	1110	Executive Board	U	1000	9900
☒	1200	Canteen	U	1000	9900
☐	2300	Purchasing	U	1000	9900
☐	.	.	.	.	.
☐	.	.	.	.	.

© SAP AG 1999

- The SAP R/3 System provides you with collective processing functions for **cost center master data**.
- You can select **cost centers** by entering intervals, groups or selection variants, maintain all fields (except customer-specific additional fields), create groups using selected cost centers, or switch from collective to individual processing of master data lists
- You can also use collective processing to change or delete **statistical key figures**.
- **Cost elements and activity types** can only be displayed or deleted under collective processing.
- You can create your own **list variants** for collective processing. The list variant determines the master data fields that can be processed. You can change the list variant during processing.
- The **list display** functions for cost elements, cost centers, activity types, and business processes have been improved. In the **list display of master data** you can sort and filter data in the same way as is possible when using the ABAP list viewer.
- To make it easier to make selections at a later date, you can combine the objects displayed into **groups**.



- The activity type classifies the specific activities that are provided by one or more cost centers **within a company**.
- If a cost center provides activities for other cost centers, orders, processes, and so on, then this means that its resources are being used. The costs of these resources need to be allocated to the receivers of the activity. Activity types serve as **tracing factors** for this cost allocation.
- In an **internal activity allocation**, the quantity of the activity, such as the number of repair hours, is entered into the R/3 System. The system calculates the associated cost based on the activity **price** and generates a debit to the receiver and a credit to the sender for both the quantity and costs. Internal activity is allocated using **secondary cost elements**, which are stored in the master data of the activity types as default values.
- You can restrict the **use of the activity type** to certain types of cost centers by entering the allowed cost center categories in the activity type master record. You can enter up to eight allowed cost center categories, or leave the assignments "unrestricted" by entering an asterisk (*).
- The **activity type category** is used to determine whether, and how an activity type is entered and allocated. For example, you can allow some activities to be allocated directly, but specify for others that they are either not allocated, or allocated indirectly only.

Activity Output/Price Planning			
Year	2000		
Periods	1 to 12		
Cost center	30100 FI/CO consulting		
Acty type	Acty price	Price unit	L
Sen.	300	00001	☐
consulting			☐
			☐
			☐



- To enable internal activity allocation, you need to specify which cost centers provide which activity types at what **price**. You do this in the R/3 System by planning the activity output/prices for a cost center. Cost center/activity output planning functions here in the same way as an additional master record.
- For direct activity allocation, you enter the quantity of the activity to be allocated manually. To enable both costs and activity to be allocated, the R/3 System has to value the activity quantity allocated at the price specified by the sender for this activity type. For a direct activity allocation, the plan price for the combination "cost center/activity type" is used for this calculation.
- You can enter the planned **price** either manually, or have it calculated by the system automatically within planning. If you want to set the price manually, you need to set the price indicator to 3 (manual). You can use this procedure if your price calculation is not complex, for example where the prices required for your rates are determined within your organization and do not depend on internally produced activities, or where the rate depends on the prices of external suppliers and not on the costs of the cost center. Automatic calculation of plan prices is covered in course AC412.

Statistical key fig. Months	Employee (fixed value)	Telephone units (total value)
01	—	4500
02	—	5000
03	100	5000
.	.	6000
.	.	—
.	.	—
10	100	—
11	100	—
12	100	—
	83.3 (average)	20500 (total)

- Statistical key figures such as number of employees or length of phone calls, are **statistical** values that describe cost centers, profit centers, and overhead orders. They can also describe a value for a particular activity provided by a cost center, such as the number of employees who make repairs at the transport cost center (an activity-dependent statistical key figure).
- You can post both **plan** and **actual** statistical key figures.
- You can use statistical key figures as the **tracing factor** for periodic transactions such as distribution or assessment, and for key figure analysis.
- You define statistical key figures as a fixed value or as a totals value:
- The **fixed value** (such as "employees") is carried over from the period in which it is entered to all subsequent periods of the same fiscal year. You need enter a new posting only if the value changes. The fiscal year total is the average of the period totals.
- You post the **totals value** (for example "telephone calls") only to the period in which it was entered. For totals values, the fiscal year total is the total of all period values.
- You can transfer statistical key figures from the **Logistical Information System (LIS)** by assigning a key figure from the LIS to a statistical key figure in Cost Center Accounting.



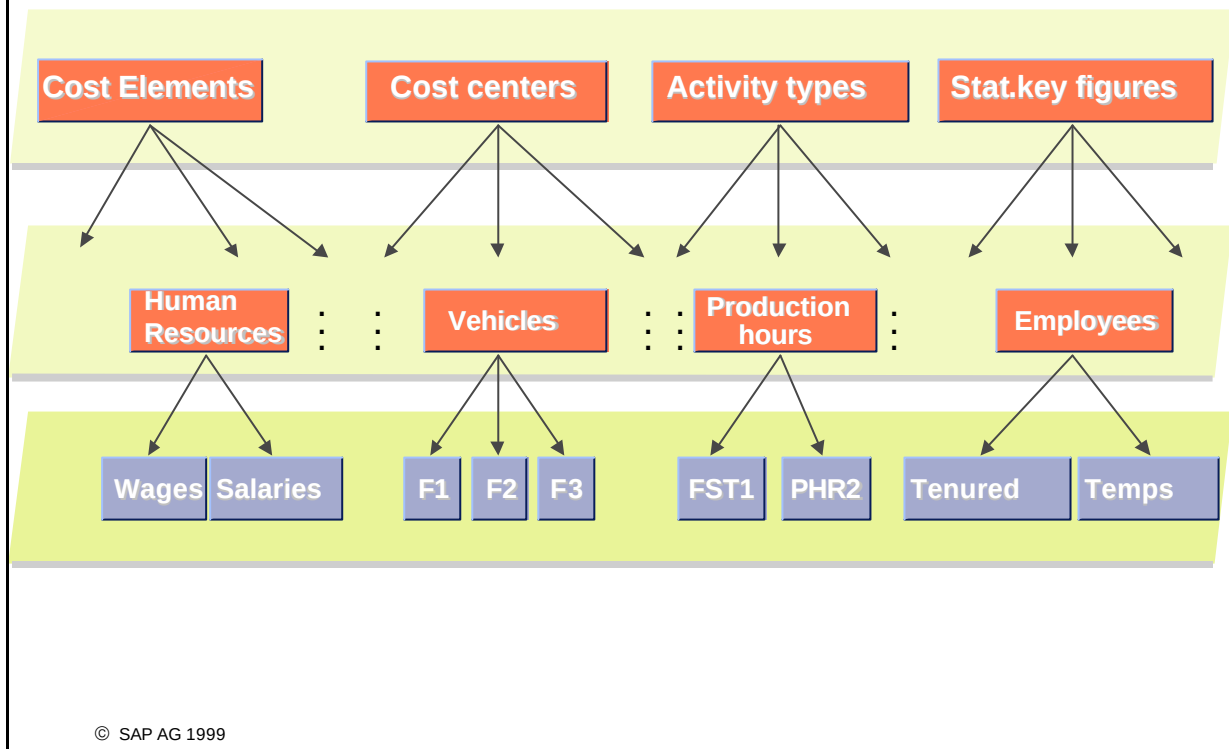
CCtr: FI/CO consulting

Valid from 01. Jan. . . . to 31. Dec. . .

Period under consideration: Resp. person

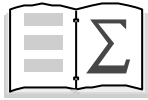
Jan. 1 . .	-	Jun. 30 . .	Conrad
Jul. 1 . .	-	Dec. 31 . .	Reece

- You can store **master data fields** for cost centers, cost elements, and activity types as **time-based**. If you change one of these fields for a particular timeframe, the system creates a new master record containing the new master record for this period. This means that several database records are maintained for each individual master record. In the above example, the "Responsible person" field is time-dependent, meaning that you are able to enter the different cost center managers as they change over time.
- You specify whether individual fields are time-based in **Customizing**. Certain fields, such as the assignment of a cost center to a company code, a business area, or to a profit center, are defined by SAP as time-dependent and this time cannot be reduced if you have made actual postings to this cost center in the current fiscal year. Since time-dependent data storage can result in large volumes of data, you should define only important fields as time-dependent.
- The **Cost center assignment to the standard hierarchy area** is a non-time-dependent field. This means that when you change the assignment due to the current assignment, the system prepares historic and current cost center information.
- If you want to **extend the validity period of a master data record**, access master data maintenance and create a master record for the extended period in question. To avoid filling out the same master data fields, you can copy from the existing master record.



- You use master data groups to summarize the various types of master data in Cost Center Accounting for **analysis, planning, and allocation** purposes.
- You can use these groups to process more than one master data record in one transaction, for example when planning or in **reporting**. For example, you can plan all the cost elements used by your cost center by specifying the corresponding cost element group. You could also specify your cost center group if you wanted to create a report containing the results of all the cost centers for your area.
- The master data group function enables you to create a **hierarchical structure**. Master data is then assigned to the groups at the lowest level, and then summarized in groups belonging to the higher levels. You can create as many hierarchical groups as your business requires.
- The **cost center standard hierarchy** is a special type of cost center group. All cost centers in a controlling area must be assigned to the standard hierarchy. Alongside the standard hierarchy, you can use the functions in group maintenance to create any number of alternative cost center hierarchies.
- You can create new master data groups by using existing groups as a template from which to copy.

You are now able to:



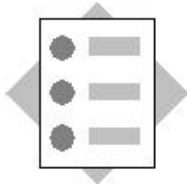
- **Describe how best to structure the standard hierarchy**
- **Create cost centers**
- **Distinguish between G/L accounts and cost elements**
- **Create cost elements in Controlling, and explain alternative methods for creating them**
- **Create activity types and plan manual prices for them on different cost centers**
- **Create statistical key figures**
- **Update master data using collective processing**
- **Explain the time dependencies of master data**
- **Create master data groups and explain how they are created**

Exercises



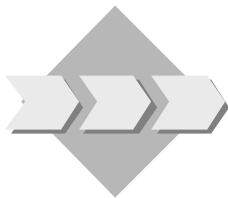
Unit: Master Data

Topic: Cost Centers



At the conclusion of these exercises, you will be able to:

- Display the standard hierarchy
- Create the cost centers for the consulting department



The organization structure of your consulting department is already displayed in the standard hierarchy of the controlling area. The six cost centers that you planned for your department are assigned to the corresponding hierarchy nodes. The diagram on the next page shows an overview of the assignment of the cost centers in the standard hierarchy.

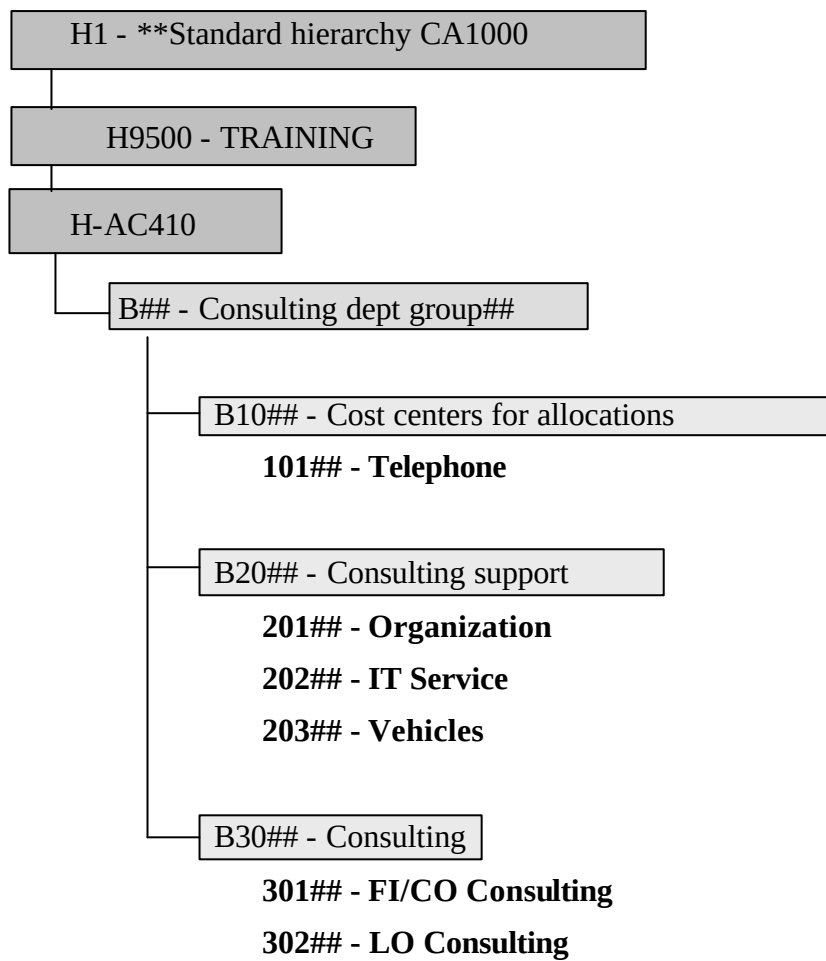
Symbols

Hierarchy nodes

Cost center

= PC- or workcenter number

Overview of the standard hierarchy of the consulting department



- 1-1 Display the standard hierarchy of your consulting department. Check whether all costs are created as outlined by the diagram above.
- 1-2 Create the cost centers for the consulting department. The cost centers are valid **from the first day of the current fiscal year** until the defaulted end date. All cost centers are assigned to the German subsidiary (**company code 1000**)
- 1-2-1 Create "**Telephone**", "**Organization**", "**IT Service**", and "**FI/CO Consulting**" cost centers directly from the standard hierarchy, using the diagram above. When you create the master data for each cost center, use the following information:

Hierarchy Area	Cost Center	Cost Center Name	Person Responsible	Cost Center Category	Business Area	Profit center
B10##	101##	Telephone	Smith	9 - Allocations cost center	IS## Internal service	1402 Administration
B20##	201##	Organization	Jones	4 - Administration	IS## Internal service	1402 Administration
B20##	202##	IT Service	Brown	2 - Service cost center	IS## Internal service	1400 Internal service
B30##	301##	FI/CO Consulting	Greene	8 - Consulting	8000 External service	1600 External service

- 1-2-2 To reduce the amount of data to be entered, copy the cost center "IT Service" when you create the "**Vehicles**" cost center, and copy the "FI/CO Consulting" cost center to create the "**LO Consulting**" cost center. Remember to change the name of the cost center and the person responsible each time.

Reference Cost Center	Cost Center	Cost Center Name	Person Responsible	Cost Center Category	Business Area	Profit Center
202##	203##	Vehicles	Rose	2 - Service cost center	IS## Internal service	1400 Internal service
301##	302##	LO Consulting	Chang	8 - Consulting	8000 External service	1600 External service

- 1-2-3 Display any cost center. Which currency does it have? Where does this entry come from in the master data for cost centers?

- 1-2-4 Display the control indicators for this cost center. Where does the information displayed come from? Can it be changed in the master data?

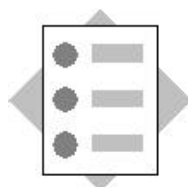
- 1-2-5 Since all of your cost centers are created in **company code 1000**, and are in the **UNI object currency**, you do not wish to display this information on the overview screen in the standard hierarchy.

Exercises



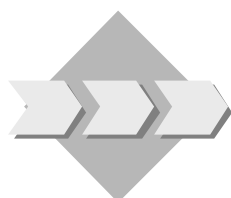
Unit: Master Data

Topic: Cost Elements



At the conclusion of these exercises, you will be able to:

- Create secondary cost elements in Controlling



At the end of the period, you want to move the costs of the "Organization", "IT Service", and "Vehicles" cost centers to the consulting cost centers. These cost centers then allocate the cost of their consulting services to internal orders using direct activity allocation, which act as cost objects for the services used by each company. You need secondary cost elements for assessment and direct activity allocation.

- 2-1 Create the secondary cost elements. The cost elements are valid **from the first day of the current fiscal year** until the **defaulted end date**.

2-1-1 Create the assessment cost elements, using the following information.

Cost element	Name	Description	Cost element category
6300##	Assessment org. ##	Organization group ##	42
6310##	Assessment IT Serv##	IT Service group ##	42
6311##	Assessment vehicles ##	Vehicles group ##	42

2-1-2 Create the cost elements that you need for allocating the consulting activities, using the following information.

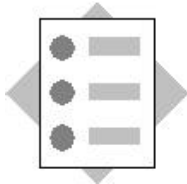
Cost element	Name	Description	Cost element category
6261##	Junior consulting ##	Junior consulting group ##	43
6262##	Senior consulting ##	Senior consulting group ##	43

2-2 Use the online help to define primary and secondary cost elements. What is the prerequisite for creating primary cost elements or revenue elements?



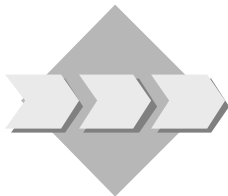
Unit: Master Data

Topic: Activity Types



At the conclusion of these exercises, you will be able to:

- Create activity types
- Plan prices for activity types



The consultants from the new consulting department allocate the consulting services that they provided, using direct activity allocation to internal orders. These orders act as cost objects for the services provided to a company. You need to create master data for each activity type. As these activities (consulting hours) also have to be valued, you must plan prices for each activity type on the cost centers. If the consultants enter the consulting hours provided to a company, then the cost center is credited with the amount that is calculated by multiplying the number of consulting hours by the price. At the same time, the cost object is debited with this amount. When setting the price, use the normal market hourly rates for consulting.

- 3-1 You want to analyze the consulting hours of senior and junior consultants separately. Therefore you create two activity types for allocating the consulting hours. The activity types are valid **from the first day of the current fiscal year**. Accept the **defaulted end date**.
- 3-1-1 Create the activity type **J## (junior consulting ##)**. The activity type is measured in hours, and is only used by cost centers from cost center category **8** (consulting). For the allocation, choose activity type category **1**, which supports direct activity allocation. The allocation cost element is **6261##**. Set the price manually.
- 3-1-2 Create the activity type **S## (senior consulting ##)**. Use the activity type **J##** as a template. Change the name, description, and allocation cost element (**6262##**). Keep the remaining data.

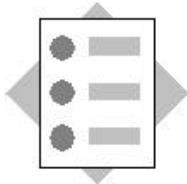
- 3-2 Junior and senior consultants work for the "FI/CO Consulting" cost center, as well as for the "LO Consulting" cost center. Specify the prices for the activity types.
- 3-2-1 You enter prices using the planning menu. Choose the **SAPEASY** planning profile first.
- 3-2-2 In the **1-261 planning layout** (price planning, simple layout), plan the prices for activity type **J##** on the consulting cost centers (cost center group **B30##**). Plan the prices for **all periods of the current fiscal year in version 0**. Choose the form-based entry.
- 3-2-3 An hourly rate of **200** is set for a junior consultant on both cost centers, **301##** (FI/CO Consulting), and **302##** (LO Consulting).
- 3-2-4 Plan the prices for the consulting hours for the senior consultant **S##** on the consulting cost centers (cost center group **B30##**). Plan the prices for **all periods of the current fiscal year in version 0**. Choose the form-based entry.
- 3-2-5 An hourly rate of **300** is set on cost **301##** (FI/CO Consulting). Senior consultants in the **LO** area (cost center **302##**) currently charge an hourly rate of **280**.

Exercises



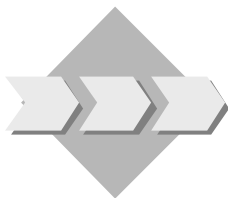
Unit: Master Data

Topic: Statistical Key Figures



At the conclusion of these exercises, you will be able to:

- Create statistical key figures



At the end of the period, the "Telephone", "Organization", "IT Service", and "Vehicles" cost centers allocate their costs to the cost centers that incurred the costs. Statistical key figures can be used as a base for these allocations.

4-1 Create the statistical key figures that are used as tracing factors for the periodic allocations in the consulting department.

4-1-1 The "Telephone" cost center uses the number of telephone units on the cost centers as a tracing factor in allocation. The "IT Service" cost center uses the number of PCs currently in use as a tracing factor. The "Vehicles" cost center uses the number of kilometers traveled for its allocations. Decide which category type is appropriate for each statistical key figure (fixed value or total value).

Number of telephone units: _____

Number of PCs _____

Number of KMs traveled: _____

4-1-2 Can fixed values be changed during the fiscal year?

4-1-3 Define the **TELE##** statistical key figure for the number of telephone units. The unit of measure is pieces (**PCs**).

4-1-4 Define the **PC##** statistical key figure for the number of PCs currently in use on the cost centers. The unit of measure is pieces (**PCs**).

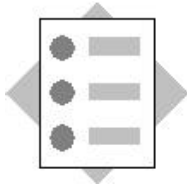
4-1-5 Define the **KM##** statistical key figure for the number of kilometers traveled. The unit of measure is kilometers (**KM**).

Exercises



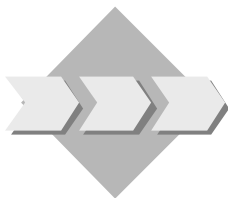
Unit: Master Data

Topic: Global Functions For Master Data



At the conclusion of these exercises, you will be able to:

- Create master data groups
- Change the cost center manager for a certain period of time
- Use collective processing



To avoid having to enter every single receiver for the definition of the periodic allocations, create cost center groups that contain the receivers for each allocation. However, prior to this, ensure that the receivers are not already in the standard hierarchy as a group (= node).

A cost center manager is taking a year off to bring up a baby. During this time, another member of staff will take over the cost center.

The master data for the cost centers is to be checked and maintained. To guarantee speedy processing, use the collective processing function.

- 5-1 The table below provides an overview of the allocation relationships that arise at the end of a period.

Cost center	Allocated to
101## (Telephone)	201##, 202##, 203##, 301##, 302##
201## (Organization)	202##, 301##, 302##
202## (IT service)	201##, 301##, 302##
203## (Vehicles)	301##, 302##

Check in the standard hierarchy to see whether there is a group (node) that you can use, or whether you need to create another cost center group.

For the allocation of which cost centers will you have to create different cost center groups?



It is also possible to use cost center intervals instead of groups. However, this is not possible during the course due to the current numbering of the cost centers.

- 5-2 Create a cost center group that will be used as the receiver for the periodic reposting of the telephone costs.

Create cost center group **PU-TELE## (periodic reposting, telephone ##)**. Assign the **B20##** and **B30##** groups to this group.

- 5-3 Create the cost center groups for the assessment.

5-3-1 Create the **ASSE-IT## (assessment IT service ##)** cost center group. Assign cost centers 201## (Organization ##), 301## (FI/CO Consulting), and 302## (LO Consulting) to this group.

5-3-2 Create the **ASSE-ORGA## (assessment organization ##)** cost center group using the **ASSE-IT##** group as a reference. Delete cost center **201##** and add cost center **202##** (IT service), so that the group contains cost centers 202##, 301##, and 302##.

Optional Exercises: 5-4 to 5-6

5-4 Make time-dependent changes to the master data for the cost centers.

5-4-1 Mrs Rose will be absent from work for exactly **12 months as of the beginning of the next period**. Mr. Riccardo will take over her position as cost center manager for cost center **203##** (Vehicles) during this time. Change the master data for this period of time.

5-4-2 Call up cost center 203## again (Vehicles).
How many different periods of time are displayed?
Why is more than one period of time displayed?

5-5 To check and maintain the cost center master data, you want to use collective processing.

5-5-1 You want to use collective processing to check whether the cost centers in the **B##** consulting department have been released for actual and plan postings, and if necessary, change them. In the display, scroll to the appropriate list variant.

5-5-2 You also want to maintain communication data on the consulting cost centers. There are no fields included for this in the list variants for the standard system. Define list variant **COM##** with one row, named "**Telephone and fax##**" using these columns:

Selection / Cost center / Telephone-1 / Fax number

When you save the list variant, you create a change request named "**USER AC410##**". Save your entry.



You can save changes to customizing settings in a change request, and thus transport them to other R/3 systems or clients.

5-5-3 Activate the list variant.

5-5-4 Use collective processing for the consulting cost centers (**B3##** group), with your list variant **COM##**. Maintain the following data:

Cost center **301##** (FI/CO Consulting), tel. no. 123, fax no. 321

Cost center **302##** (LO Consulting), tel. no. 456, fax no. 654

5-6 You want to change the PU_TELE## cost center group to automatically include all new consulting cost centers (cost center type eight), regardless of assignments to particular hierarchy nodes.

5-6-1 Create selection variant **8 ## ("Consulting cost centers")**, that selects all cost centers in cost center category **8** (consulting). Enter your **user** in the *Created by* field as another selection criteria.

5-6-2 From the **PU-TELE##** cost center group (**periodic reposting telephone ##**) remove the **B30##** node and instead, assign selection variant **8**.

Which cost centers are assigned to the PU-TELE## group using the selection variant?

5-6-3 Test the functions of the selection variant by creating a new consulting cost center **303## (consulting-basis)** using the cost center **301##** FI/CO Consulting as a **reference**. Only change the cost center name, and then save your entry.

5-6-4 Display the **PU_TELE##** cost center group, and break down the selection variant. Which cost centers are assigned to the group using the selection variant?

5-6-5 Delete the **303##** cost center again for the entire period of time.

5-6-6 What could be the reason that not all groups are created with selection variants?

Solutions



Unit: Master Data

Topic: Cost Centers

1-1 *Cost Center Accounting ® Master data ® Standard hierarchy ® Display*

The organizational structure of the consulting department appears under node H-AC410. Expand the individual nodes under your group (B##).

1-2

1-2-1 *Cost Center Accounting ® Master data ® Standard hierarchy ® Change*

Place your cursor on the hierarchy area B10## to which the cost center is to be assigned and choose *Edit ® Create cost center*

Field name or data class	Values
<i>Cost center</i>	<i>101##</i>
<i>Valid from</i>	<i>01/01/current fiscal year</i>
<i>to</i>	<i>12/31/9999</i>
<i>Name</i>	<i>Telephone</i>
<i>Person responsible</i>	<i>Smith</i>
<i>Cost center category</i>	<i>9</i>

Choose "Organization" to enter the data on the organizational units.

Field name or data class	Values
<i>Company code</i>	<i>1000</i>
<i>Business area</i>	<i>IS##</i>
<i>Profit center</i>	<i>1402</i>

Save your data.

Repeat the procedure to create the other cost centers, assigning them to the appropriate individual hierarchy areas.

1-2-2 ***Cost Center Accounting ® Master data ® Cost center ® Individual processing ® Create***

Field name or data class	Values
<i>Cost center</i>	203##
<i>Valid from</i>	01/01/current fiscal year
<i>to</i>	12/31/9999
<i>Reference cost center</i>	202##
<i>Controlling area</i>	1000

On the "Basic data" screen, change the name of the cost center and that of the manager (person responsible).

Field name or data class	Values
<i>Name</i>	<i>Vehicles</i>
<i>Responsible person</i>	<i>Rose</i>

Save your data.

Repeat as for cost center 302##, using cost center 301## as the reference.

1-2-3 ***Cost Center Accounting ® Master data ® Cost center ® Individual processing ® Display***

Enter a cost center you created. In this case, the object currency is taken from the company code. In company code 1000, the local currency is UNI.

1-2-4 Choose *Control*. Control indicators are default values that are taken from the cost center category. They can be changed in the master data.

1-2-5 ***Cost Center Accounting ® Master data ® Standard hierarchy ® Change ® Column configuration*** icon.

Deselect the indicators for the company code and the object currency.

Solutions



Unit: Master Data

Topic: Cost Elements

2-1 *Cost Center Accounting ® Master data ® Cost element ® Individual processing ® Create secondary*

2-1-1

Field name or data class	Values
<i>Cost element</i>	6300##
<i>Valid from</i>	01/01/current fiscal year
<i>To</i>	12/31/9999
<i>Name</i>	Assessment org. ##
<i>Description</i>	Assessment for organization group ##
<i>Cost element category</i>	42

Save your data.

Repeat this procedure to create the other cost elements.

2-1-2

Field name or data class	Values
<i>Cost element</i>	6261##
<i>Valid from</i>	01/01/current fiscal year
<i>To</i>	12/31/9999
<i>Name</i>	Junior consulting##
<i>Description</i>	Junior consulting group ##
<i>Cost element category</i>	43

Save your data.

Repeat as for **cost element 6262##** (use **6261##** as the reference).

2-2 A cost element classifies an organization's valuated consumption of production factors within a controlling area. A cost element corresponds to a cost-relevant item in the chart of accounts.

A distinction is made between primary cost elements, that arise through the use of externally procured goods, and secondary cost elements, which represent values flows within CO.

Primary cost elements must be defined as G/L accounts before they can be created within a controlling area.

Solutions



Unit: Master Data

Topic: Activity Types

3-1 *Cost Center Accounting* ® *Master data* ® *Activity type* ® *Individual processing* ® *Create*

3-1-1

Field name or data class	Values
<i>Activity type</i>	<i>J##</i>
<i>Valid from</i>	<i>01/01/current fiscal year</i>
<i>to</i>	<i>12/31/9999</i>
<i>Name</i>	<i>Junior consulting ##</i>
<i>Activity unit</i>	<i>Hrs</i>
<i>Cost center categories</i>	<i>8</i>
<i>Activity type category</i>	<i>1</i>
<i>Allocation cost element</i>	<i>6261##</i>
<i>Price indicator</i>	<i>3</i>

Save your data.

3-1-2 Create the **activity type S##** accordingly - using **J##** as the reference.
Change the name and allocation cost element, but retain the other data.

Save your data.

3-2

3-2-1 *Cost Center Accounting: Planning* ® *Set planner profile*

Field name or data class	Values
<i>Planner profile</i>	<i>SAPEASY</i>

Confirm profile icon.

3-2-2 *Cost Center Accounting* ® *Planning* ® *Activity output/prices* ® *Change*

Field name or data class	Values
<i>Version</i>	<i>0</i>
<i>From period</i>	<i>1</i>
<i>To period</i>	<i>12</i>
<i>Fiscal year</i>	<i>The current year</i>
<i>Cost center - group</i>	<i>B30##</i>
<i>Activity type</i>	<i>J##</i>
<i>Entry</i>	<i>Form-based</i>

Goto ® *Overview screen*

3-2-3 *On the overview screen*

Field name or data class	Values
<i>Total price</i>	<i>200</i>
<i>Price unit</i>	<i>00001</i>

Goto ® *Next combination (cost center 302##)*

Field name or data class	Values
<i>Total price</i>	<i>200</i>
<i>Price unit</i>	<i>00001</i>

Save your data.

3-2-4 *Cost Center Accounting* ® *Planning* ® *Activity output/prices* ® *Change*

Field name or data class	Values
<i>Version</i>	<i>0</i>
<i>From period</i>	<i>1</i>
<i>To period</i>	<i>12</i>
<i>Fiscal year</i>	<i>The current year</i>
<i>Cost center - group</i>	<i>B30##</i>
<i>Activity type</i>	<i>S##</i>
<i>Entry</i>	<i>Form-based</i>

3-2-5 ***On the overview screen***

Field name or data class	Values
<i>Total price</i>	<i>300</i>
<i>Price unit</i>	<i>00001</i>

Goto ® Next combination (cost center 302##)

Field name or data class	Values
<i>Total price</i>	<i>280</i>
<i>Price unit</i>	<i>00001</i>

Save your data.

Solutions



Unit: Master Data

Topic: Statistical Key Figures

4-1 *Cost Center Accounting ® Master data ® Statistical key figures ® Individual processing ® Create*

4-1-1 You enter and post totals values only in the relevant posting period. Starting from the entry period, fixed values are updated for the entire fiscal year.

Telephone units	total value
PC's	fixed value
Mileage	total value

4-1-2 You can change fixed values during the fiscal year by entering the new value in the appropriate period. Data is then updated for the following periods as of the date this new value was entered.

As the name suggests, fixed values are statistical key figures, the posting value of which is always constant. However, values such as these still need to be adjustable to reflect changes within the enterprise. Such changes could include hiring additional employees or assigning smaller office space for a cost center.

4-1-3

Field name or data class	Values
<i>Statistical key figure</i>	<i>TELE##</i>
<i>Name</i>	<i>Telephone units</i>
<i>Statist.key figure unit</i>	<i>Piece(s)</i>
<i>Key figure category</i>	<i>Totals values</i>

Save your data.

4-1-4

Field name or data class	Values
<i>Statistical key figure</i>	<i>PC##</i>
<i>Name</i>	<i>PC's</i>
<i>Statist.key figure unit</i>	<i>Piece(s)</i>
<i>Key figure category</i>	<i>Fixed values</i>

Save your data.

4-1-5

Field name or data class	Values
<i>Statistical key figure</i>	<i>KM##</i>
<i>Name</i>	<i>Kilometers traveled</i>
<i>Statist.key figure unit</i>	<i>KMs</i>
<i>Key figure category</i>	<i>Totals values</i>

Save your data.

Solutions



Unit: Master Data

Topic: Global Master Data Functions

5-1 *Cost Center Accounting ® Master data ® Standard hierarchy ® Display*

Cost center 101## (Telephone), 201## (Organization) and 202## (IT service)

5-2

5-2-1 *Cost Center Accounting ® Master Data ® Cost center group ® Create*

Field name or data class	Values
Cost center group	PU_TELE##

Choose the **Hierarchy** icon

Description	Periodic reposting telephone##
-------------	--------------------------------

Edit ® Cost center group ® Lower level

B20##

Edit ® Cost center group ® Same Level

B30##

Save your data.

5-3 *Cost Center Accounting ® Master data ® Cost center group ® Create*

5-3-1

Field name or data class	Values
Cost center group	ASSE-IT##

Choose the **Hierarchy** icon.

Description	ASSE-IT Service ##
-------------	--------------------

Edit ® Cost center ® Insert cost center

Cost center	201##
Cost center	301##
Cost center	302##

Save your data.

5-3-2

Field name or data class	Values
<i>Cost center group</i>	ASSE-OR##
<i>Reference cost center group</i>	ASSE-IT##
<i>Description</i>	Assessment organization ##

Choose the **Hierarchy** icon.

Position your cursor on **cost center 201##**.

Edit ® Select ® Remove icon

Place your cursor on the **upper node ASSE-OR##**.

Edit ® Cost center ® Insert cost center

Field name or data class	Values
<i>Cost center</i>	202##

Save your data.

5-4

5-4-1 **Cost Center Accounting ® Master data ® Cost center ® Individual processing ® Change**

Field name or data class	Values
<i>Cost center</i>	203##

Enter

® Edit ® Analysis period ® Other analysis period

<i>Valid from</i>	<i>First day of the next period of the current fiscal year</i>
<i>Valid until</i>	<i>12 months later</i>

Select the **Choose** icon.

<i>Person responsible</i>	<i>Riccardo</i>
---------------------------	-----------------

Save your data.

5-4-2 **Cost Center Accounting ® Master data ® Cost center ® Individual processing ® Display**

Field name or data class	Values
Cost center	203##

Enter

The system displays 3 data records for selection. The "Person responsible" field is managed on a time-dependent basis, meaning that for a new analysis period, the system stores the master data as a separate data record.

5-5

5-5-1 **Cost Center Accounting ® Master data ® Cost center ® Collective processing ® Change**

Field name or data class	Values
Cost center group	B##
Valid from	01/01/current fiscal year
to	12/31/9999
List variant	SAP01

Cost center list ® Execute

Display ® Next list variant (SAP02 standard, two-line)

5-5-2 **IMG: Controlling ® Cost Center Accounting ® Master Data ® Cost Centers ® Define List Variants for Group Processing ® Variant ® New variant ® Create**

Field name or data class	Values
Variant	COM##
Name	Telephone and fax ##
Number of lines	1

Enter

Under "Possible fields", place your cursor on *Selection*.

Edit ® Choose

Confirm the output length.

Repeat this procedure for the fields "Cost center", "Telephone 1" and "Fax number".

Save your data.

The system displays the "Enter change request" dialog box. Choose the **Create request** icon.

Field name or data class	Values
<i>Description</i>	<i>List variant COM##</i>

Save your data.

Enter

5-5-3 **Variant ® Existing variant ® Activate**

5-5-4 **Cost Center Accounting ® Master data ® Cost center ® Collective processing ® Change**

Field name or data class	Values
<i>Cost center group</i>	<i>B30##</i>
<i>Valid from</i>	<i>01/01/current fiscal year</i>
<i>To</i>	<i>12/31/9999</i>
<i>List variant</i>	<i>COM##</i>

Enter the following values.

Cost center	Telephone 1	Fax number
301##	123	321
302##	456	654

Save your data.

5-6

5-6-1 **IMG: Controlling ® Cost Center Accounting ® Master Data ® Cost Centers ® Define Selection Variants for Cost Centers**

Field name or data class	Values
<i>Variant</i>	<i>8-##</i>

Variants ® Create

<i>Cost center category</i>	8
<i>Created by</i>	Your user

Edit ® Attributes

<i>Description</i>	<i>Consulting cost centers</i>
--------------------	--------------------------------

Save your data.

5-6-2 **Cost Center Accounting ® Master data ® Cost center group ® Change**

Field name or data class	Values
Cost center group	PU-TELE##

Choose the **Hierarchy** icon.

Position your cursor on the B30## node.

Select button.

Remove button.

Position your cursor on the B20## node.

Edit ® Cost center group ® Same level ® Possible entries (using F4 help)

Carry over the settings and select "Top nodes only" and "With selection variants".

Choose the selection variant (8-##) you created.

Cost center group	.8-##
-------------------	-------

Save your data.

Extras ® Expand selection variant

You use the selection variant to assign the cost center group to consulting cost centers 301## and 302##.

5-6-3 **CCA: Master data ® Cost center ® Individual processing ® Create**

Field name or data class	Values
Cost center	303##
Valid from	01.01. current fiscal year
to	12/31/9999
Reference cost center	301##
Name	Basis consulting

Save your data.

5-6-4 **CCA: Master data ® Cost center group ® Display**

Choose the **Hierarchy** icon.

Place your cursor on the 8-## node.

Extras ® Expand selection variant

Cost centers 301##, 302##, and 303##

5-6-5 **CCA: Master data ® Cost center ® Individual processing ® Delete**

Field name or data class	Values
<i>Cost center</i>	<i>303##</i>
<i>Valid from</i>	<i>01.01. current fiscal year</i>
<i>to</i>	<i>12/31/9999</i>
<i>Test run</i>	<i>Deselect</i>

Execute icon.

- 5-6-6 If you use a group that was created with a selection variant, this slows system performance because a selection run always takes place.

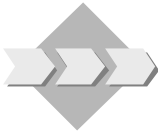
Content:

- **CO Document Number Assignment**
- **Entering Primary Postings**
- **Reports in Cost Center Accounting**
- **Account Assignment Help**
- **Adjustment Postings**
- **Automatic Commitment and Funds Reservation**
- **Direct Activity Allocation**

At the conclusion of this unit, you will be able to:



- Use transactions in the original applications and understand how these transactions affect reporting in Cost Center Accounting
- Run totals reports and line item reports and explain additional functions in the information system.
- Describe the configuration options that facilitate postings.
- Adjust original postings made to incorrect cost centers.
- Explain automatic commitments and funds reservations
- Allocate activity, and correct activity allocations.



- For each CO posting, the system creates a document, to which a unique number is assigned. One of the CO project team shows you how he/she grouped the CO business transactions and then assigned them to document number ranges.
- To check the FI/CO interface, you post some documents on a preliminary basis.
- You want to display the data on the cost centers using different reports. Investigate the reports reports contained in the standard system.
- You explain the various reporting tools to the other members of the CO project, to show their flexibility.

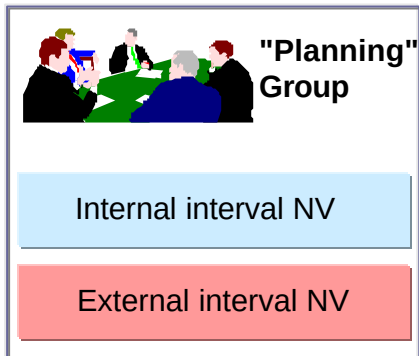


- **Posting documents from HR and MM are often very extensive. Try to devise as easy ways as possible to correct faulty account assignments in CO.**
- **As you require information on future payment commitments in your cost center, consider the use of commitments.**
- **You want to enter all (consulting) activities, which you provide for a customer, on a cost object. You can use this to create the billing documents.**



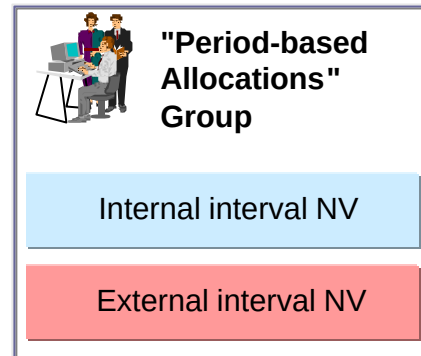
Transaction: Planning costs (RKP1)
Planning cost elements (RKP2)

⋮

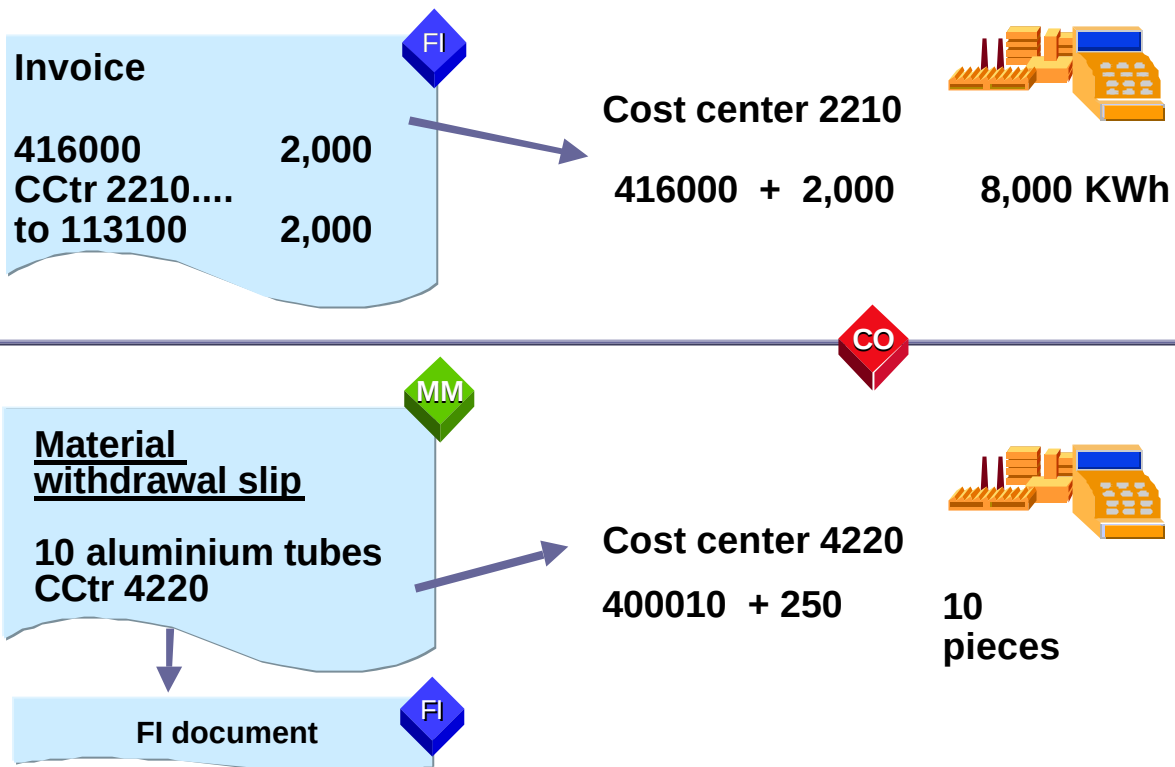


Actual accrual calculation (KAZI)
Periodic repostings (RKIB)

⋮



- The various activities that change an object (such as, a cost center, or an order) appear in the R/3 system as **business transactions**.
- You need to define **number intervals** for all business transactions that generate CO documents. It is possible to copy document number intervals from one controlling area to another.
- There are two steps to **issuing number intervals for documents**:
 - You group more than one transaction together. If you want to assign a different number interval to each transaction, you can create a group for each transaction.
 - You assign the group to an internal or external number interval. This enables you to use one group of number intervals for similar transactions.
- You define number intervals for CO documents **independently of fiscal year**. The document numbers can be assigned in ascending order.
- SAP recommends that you create different **number interval groups** for actual and plan transactions. This ensures that reorganization programs that run separately for actual and planning data also reset the number intervals separately.



- You can enter primary costs either **directly in Financial Accounting** (as for an invoice in Accounts Payable) or they can be generated **from other applications** (as for a goods movement in Materials Management) and then transferred to FI. These business transactions (events) generate FI documents that are required for purposes of external reporting within Accounting. These documents are stored in a central document file for external accounting documents. FI documents contain at least two line items and must balance to zero.
- Line items are also written **in Controlling** for these business transactions if they are also posted to CO account assignment objects (such as cost centers). The CO posting is often a one-sided entry, as only the income statement postings are posted to CO. The line items record the business transaction from a cost controlling standpoint, and are managed in a CO line item file. In addition, the R/3 System summarizes all line items to form totals records, which in turn are stored in a CO totals record file.

Account Assignment Logic - Posting to Cost Center

SAP

Financial Accounting

Data entry

Costs: 100
Cost center 2300

Controlling

Derivation

Costs: 100
Cost center 2300
Profit center 1400

Posting

True

Statistical

Cost center

Profit center

© SAP AG 1999

- Cost and revenue postings in CO can trigger subsequent true and statistical postings:
 - **True postings** can be processed, and can be allocated or settled with other controlling objects. Only true postings (and only one) can be made to CO. This is where the information is, that is used transferred to FI for reconciliation purposes.
 - **Statistical postings** are only used for information purposes. You can make as many statistical postings as you wish.
- The **account assignment object** determines whether a posting is statistical or true, in other words, the account assignment is either a true or statistical object. For example, the master data of an overhead cost order are used to determine whether the order is true or statistical. Only true postings are made for a true order, and likewise, only statistical postings are made for a statistical order. The cost center is the exception to this rule. You can make true and statistical postings for a cost center.
- If you want to post CO costs, you need to use the source document (for example, from the vendor invoice, or the withdrawal document) to identify the corresponding **true CO account assignment object**. You can enter additional **statistical objects**, or the system can derive them. In this simple example, the cost center is entered into the FI document, so that the true CO posting can be made. The system transfers the profit center from the master data for the cost center, for the statistical posting.
- You always make **statistical** postings to the **profit center**.

Account Assignment Logic - Posting to Cost Center and Order

SAP

Financial Accounting

Data entry

1

Costs: 100
Cost center 2300
Order (true) 40010

2

Costs: 100
Cost center 2300
Order (stat.) 40010

Controlling

Derivation

Costs: 100
Cost center 2300
Order (true) 40010
Profit center 1400

Costs: 100
Cost center 2300
Order (stat.) 40010
Profit center 1400

Posting

True

Order

Cost center

Statistical

Cost center

Profit center

Order

Profit center

© SAP AG 1999

- During posting, only a true **account assignment** object can be transferred. The only exception to this rule is the account assignment to a cost center, and an additional, true account assignment object. In this case, the system always updates the cost center statistically. If you specify a true order and a cost center in the posting row as described in the example above, then the true posting is made for the overhead cost order. Statistical postings are entered for the cost center and the profit center. However, if the order is only statistical, then it is posted to as such, and the cost center receives true postings.
- You can analyse **statistical postings to cost centers** in the *Cost centers: Actual/Plan/Variance* report (scroll down in the report).
- You can **only** assign **one object type** to each posting row. This means that you cannot post the same transaction row to more than one cost center, or order, and so on.

Financial Accounting

Data entry

Revenue: 100
Cost center 2300
Profit. segment X

Controlling

Derivation

Revenue: 100
Cost center 2300
Prof. segment X
Profit center 1400

Posting

True

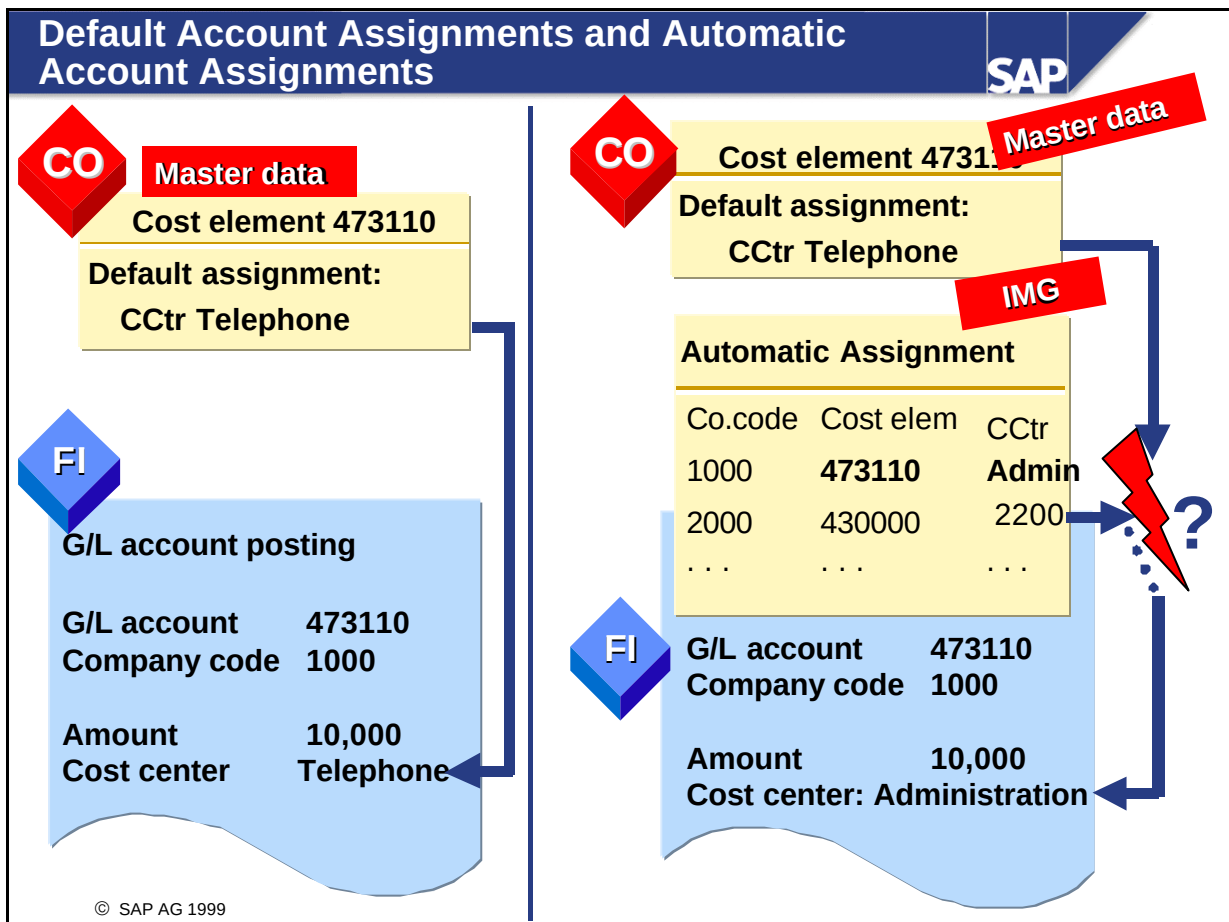
Profitability
segment

Statistical

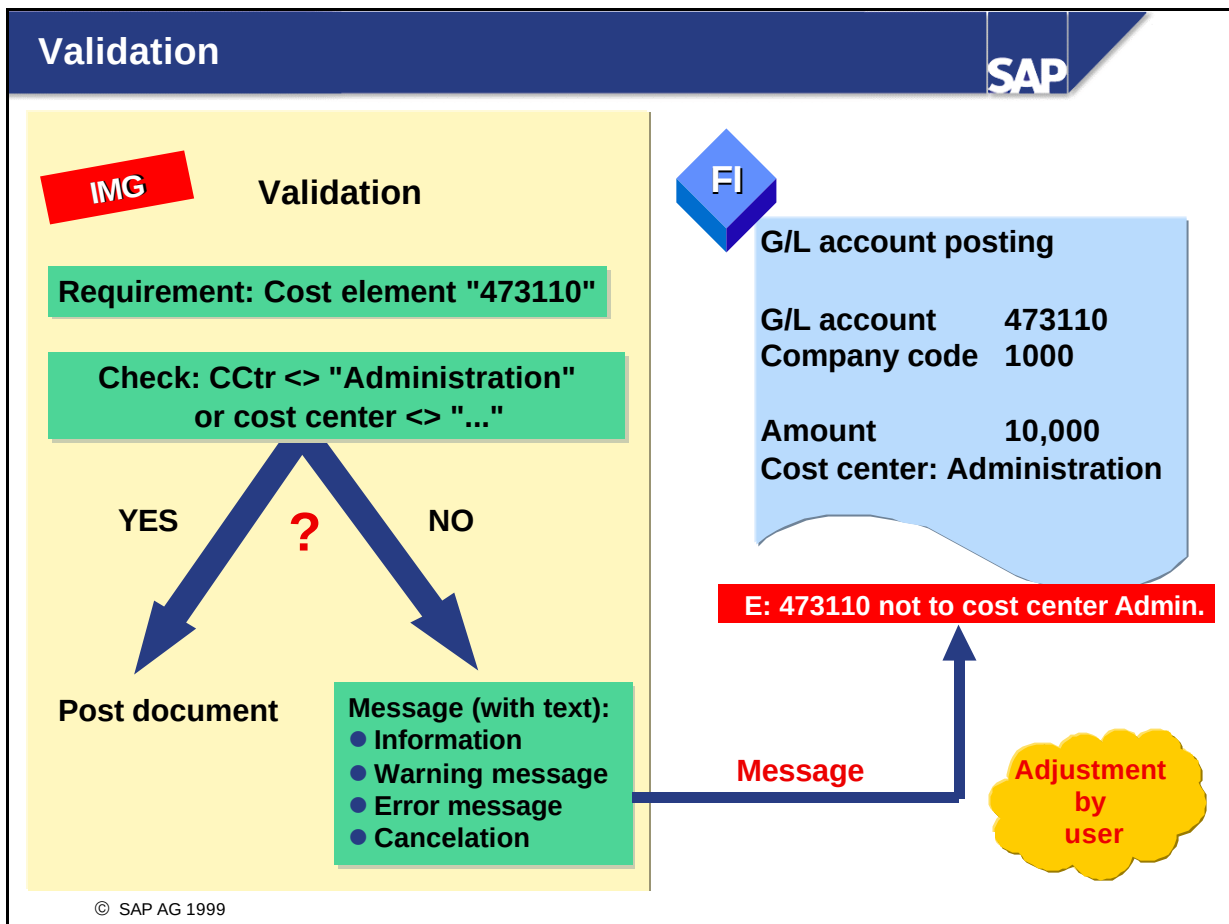
Cost center

Profit center

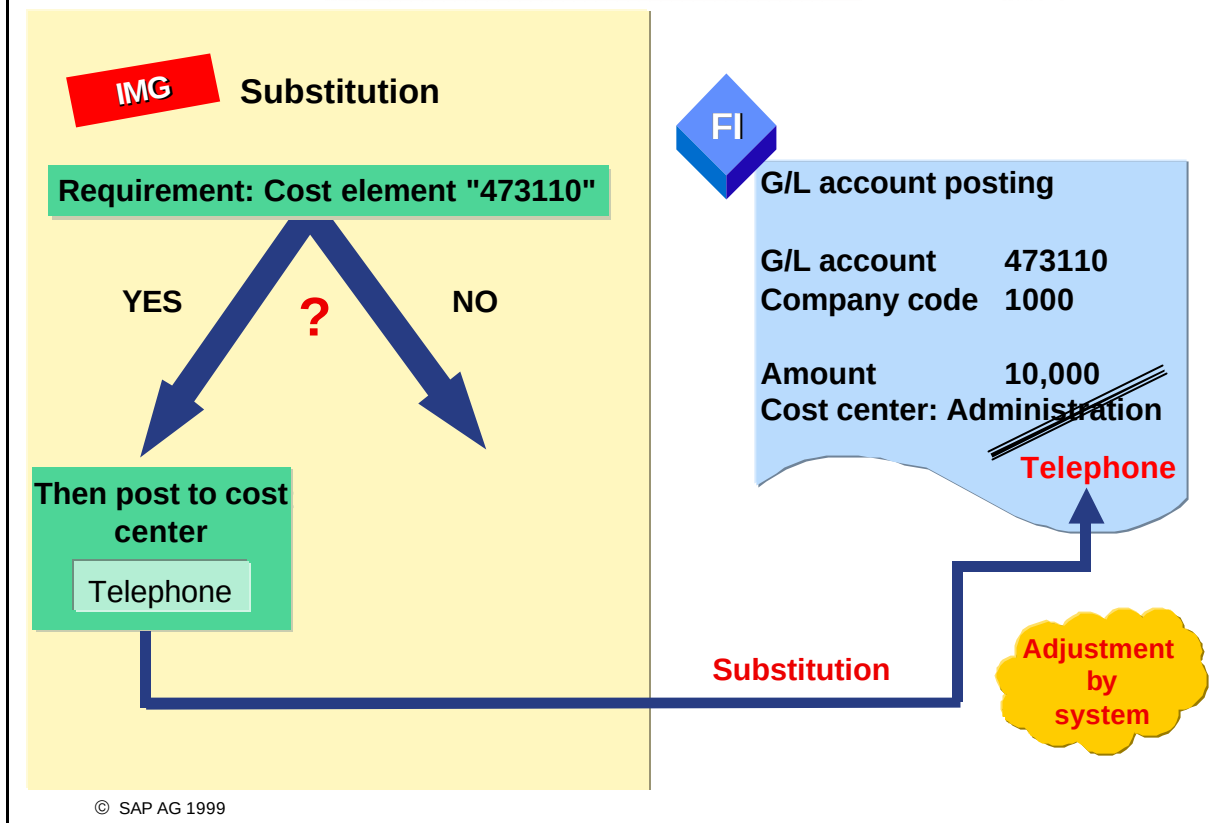
- **Revenues** can only be posted as true postings to a profitability segment, sales order, sales project, or to a true order that can have revenues. Revenue postings to the profit center are statistical, the same as for cost postings.
- Revenues can also be recorded as **statistical** values on **cost centers**.



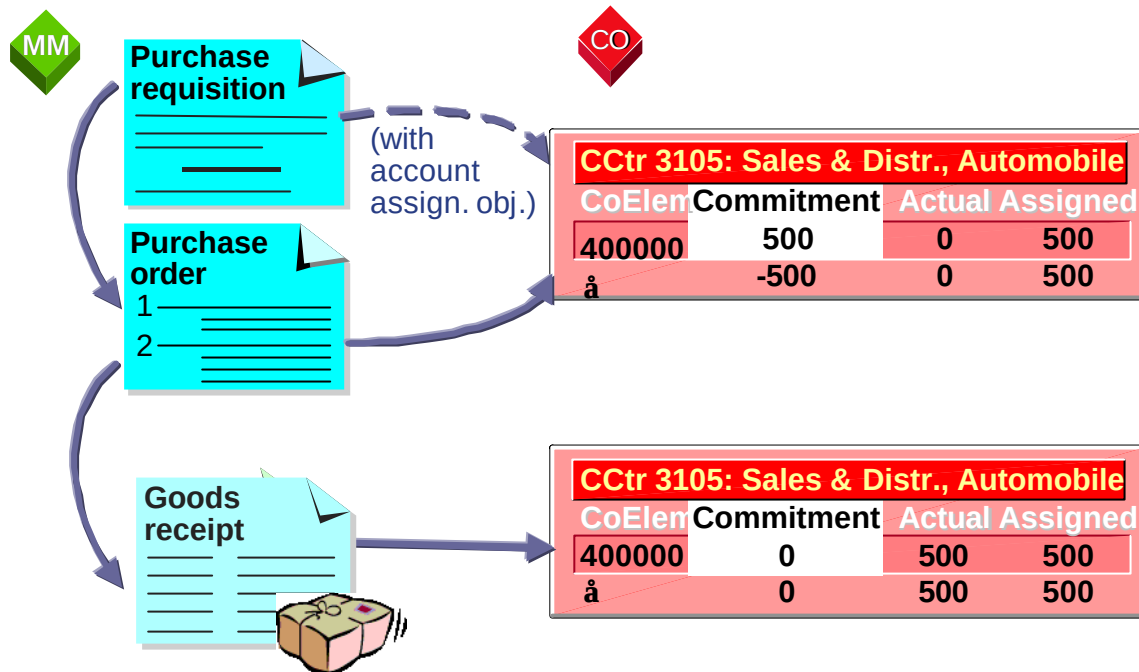
- You can define automatic account assignments or default account assignments for postings to primary cost elements. The **R/3 System** then automatically **includes** the specified (additional) account assignment for the primary postings you make. You define automatic and default account assignments for cost elements that you always post to a particular cost center. You can also define the assignment of an overhead order or profit center to a cost element. Whether automatic or default, the account assignments are default values that can be overwritten in the application.
- Automatic or default account assignments are required for primary cost elements used in automatically-generated postings such as price differences, exchange rate differences, and discounts.
- You enter the **default account assignment** in the **cost element master record**. Here, you enter the account assignment at controlling area level and at account level.
- You enter **automatic account assignments** in **Customizing** in the activity "Automatic Account Assignment". You can enter the account assignments at different levels:
 - Controlling area, account, and company code
 - Controlling area, account, company code, business area and/or valuation area
 - Profit center
- When the system is deriving the information, it determines the most detailed account assignment, so it reads the entries in Customizing first. If the system does not find any data here, then it uses the master data for cost elements. The assignment objects defined for automatic account assignments therefore take **priority** over the additional account assignments for the default account assignment.



- You can increase the accuracy of the CO data by using validation and substitution. In validation and substitution, the R/3 System **checks** whether the **data entered** meets one or more of the conditions that you defined. These checks take place during data entry, thereby ensuring that only valid data is posted.
- You create validations and substitutions for the controlling area and for a particular event. An **event** is a particular point in transaction processing. The following events have been defined for the CO component:
 - The "line item" (0001) event uses data from the CO document header (COBK) and the CO coding block (COBL). It controls the posting in both external accounting and in CO.
 - The "document header" (0100) event uses data from COBK and affects only manual CO postings such as repostings or activity allocations.
 - The "CO internal posting: Sender/Empfänger" (0002) event is only used for CO internal postings, and is used for checking sender-receiver relationships in periodic allocations.
- You use validation to carry out validity checks on objects such as cost elements or cost centers. If the conditions you specified for executing business transactions are not met, the R/3 System displays a user-defined **message**. This could be a warning, error, or information message, or the system stops your posting with immediate effect.



- You can also carry out **validation checks** when making substitutions. However, if your condition is met for a substitution, the R/3 System substitutes the values with others defined by you, without informing the user of this change.
- An additional event - the **order event** (0010) is defined for substitutions. This is used only for collective processing of order master data.
- If you have defined a substitution that contradicts a validation condition, the system informs you of this by displaying a message. We can therefore say that validation has **priority**, or is "stronger" than substitution.



© SAP AG 1999

- Commitments are payment obligations that are not entered into the accounts, but at a future date lead to actual costs. They are incurred in the purchasing function, in the "Materials Management" component:
 - The internal communication for a purchasing request is known as a **purchase requisition** (from the ordering party to the purchaser). A purchase requisition is a provisional obligation, that can be changed at any time. You do not need to assign a CO object to a purchase requisition row. If you do not do so, then the commitment is not displayed in CO.
 - A **purchase order** is a contractual agreement specifying that goods or services from a vendor will be taken under certain, agreed conditions. Therefore, a purchase order is a binding obligation, as it is based on a contractually fixed agreement. For a purchase row that is assigned to a cost element, you need to specify a CO object, so the commitment is also displayed in CO.
- If you create a **purchase order with reference to a purchase requisition**, the commitment is reclassified (as a purchase order commitment) in CO.
- The **commitment is reduced** by processing goods receipts against the purchase order. Actual costs are posted to the CO object. This business transaction is continued until the purchase order is processed, and the commitment amount is zero.
- You need to activate **commitments management** in the controlling area in CO. Additionally, the cost center may not be locked for commitments (locking indicator).
- Commitments are not reduced when you create an **outline agreement**. These are only incurred when you create the contract release order (contract), or goods release order (scheduling agreements).



Cost center: 2100 Finance and Administration

420000 (salaries) -3,400

Cost center: 2200 Personnel

420000 (salaries) +3,400

Reposting
3,400

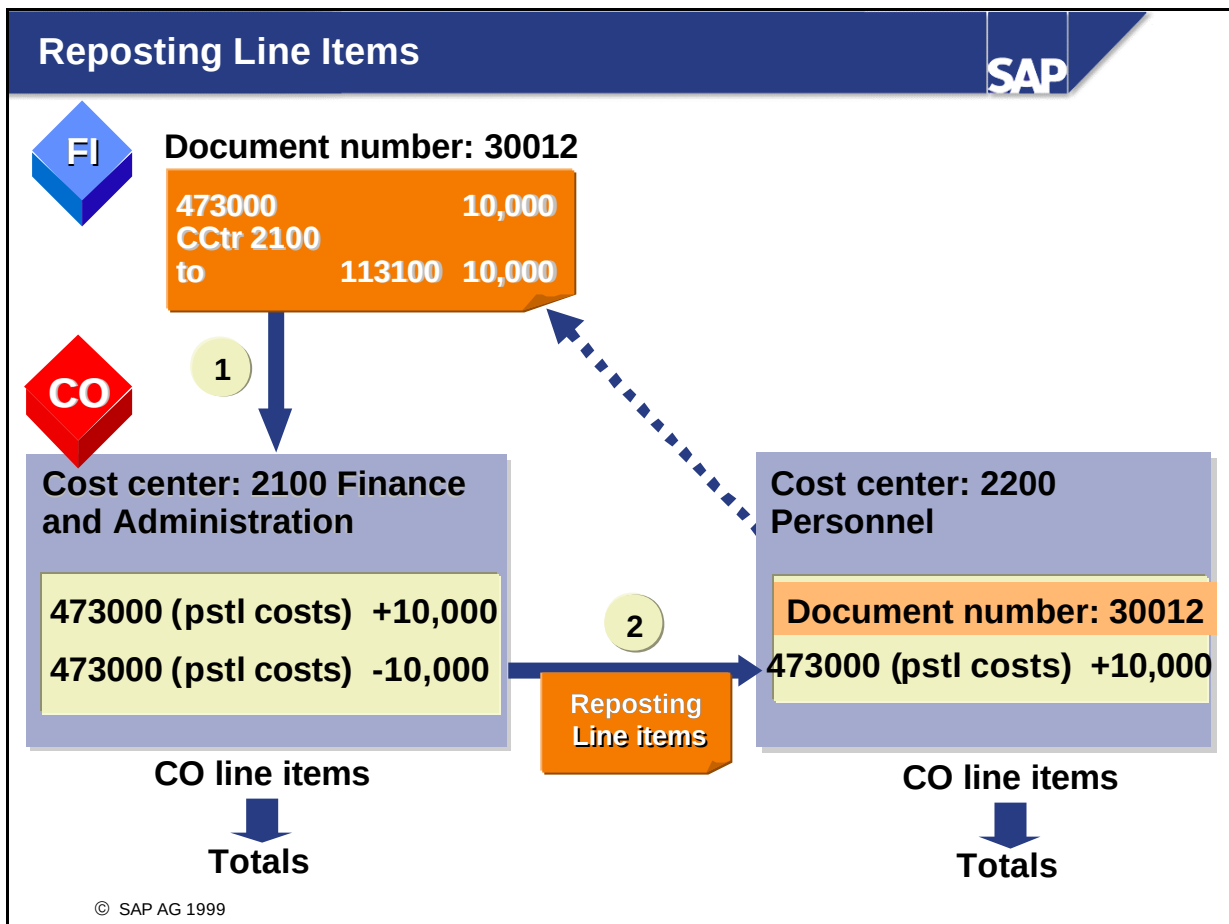
CO line items

Totals

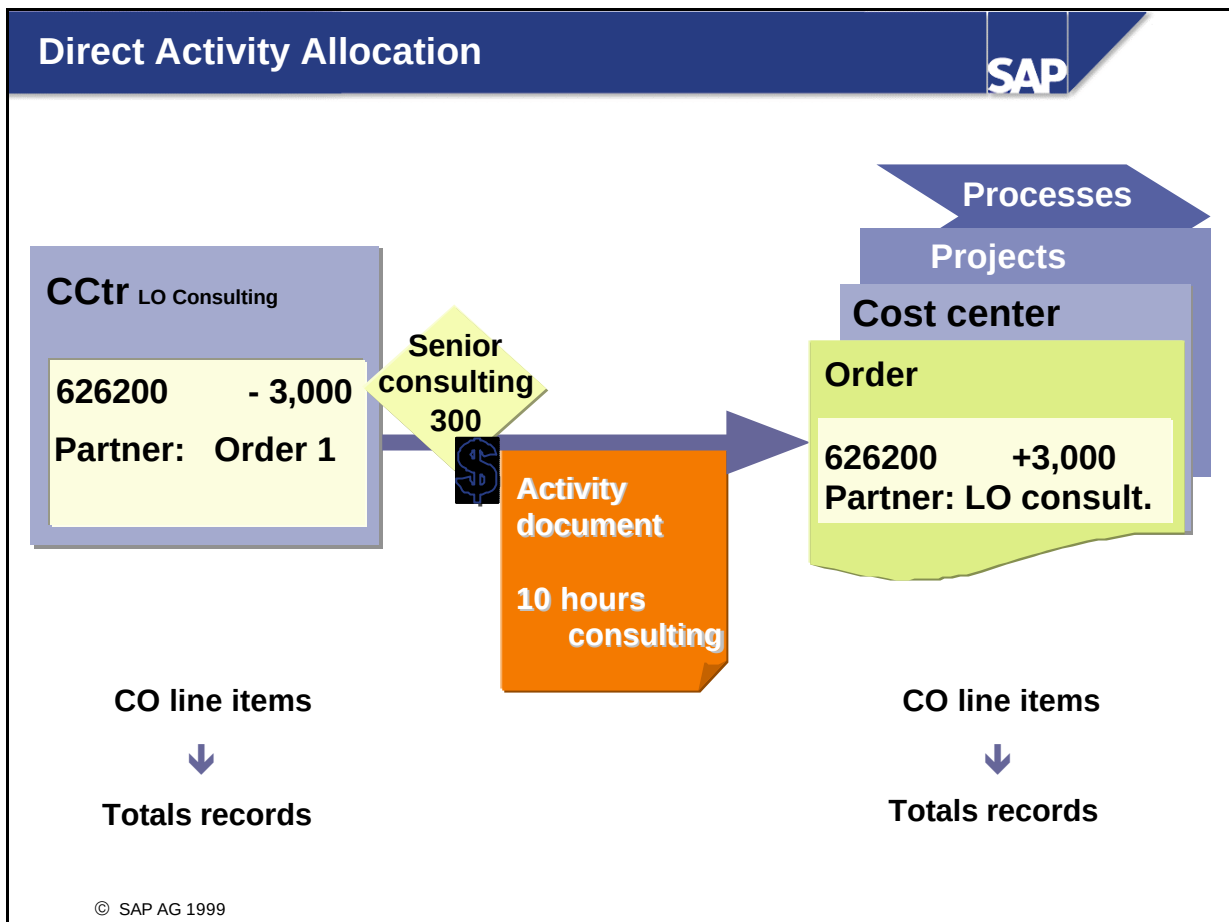
CO line items

Totals

- You can manually repost primary costs and revenues using event-based repostings. You use this function mainly to **adjust** (correct) posting errors.
- When you make an internal reposting, the **primary costs** are reposted (under the original cost element) to a receiving order. If the original transaction is posted using an incorrect cost or revenue element, the transaction must be corrected in the original application component in order to ensure reconciliation between external and internal accounting.
- Note that **no sender check** is made, in other words the system does not check whether the costs you repost actually exist on the sending cost center. This means that negative costs may appear on the sending cost center.
- The business transaction is documented by means of line items on the sender side and receiver side.
- You can use the system to make event-based repostings automatically. Following a collective posting in FI that was assigned to a clearing cost center, these automatic repostings are used to post the values in Controlling to the actual originators of the costs. For example, salary postings from the personnel department can be posted in their entirety to a clearing cost center, thus keeping the number of postings in FI to a minimum. This collective posting is transferred to CO. In order that the salary information can be used in CO, the costs have to be assigned to the responsible cost centers. The reposting credits the clearing cost center and debits the originator of the costs by the appropriate amount.



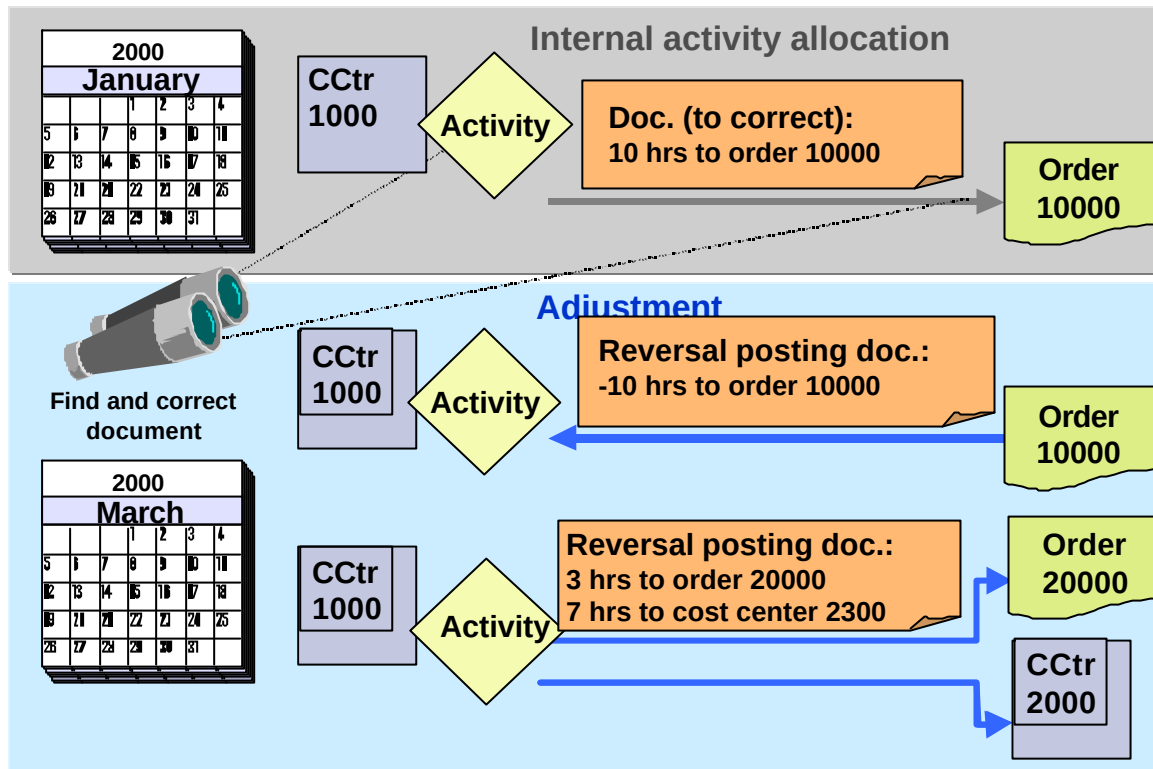
- The function for reposting line items enables you to repost specific line items from CO documents. This function is designed to enable you to **correct** primary postings that you assigned to the **wrong accounts**. To do this, the CO document must contain a reference to the original FI document.
- Reposting line items is the equivalent of a reversal on the **sender object**.
- You can also enter more than one **receiver object**.
- Reposting line items creates CO documents which, unlike event-based repostings of costs, always contain a **reference to the FI document**. As a result, you can trace a line item reposting back to the original Financial Accounting document.
- If you repost a line item in CO, the original **account assignment object** remains noted in the FI document. To correct the account assignment object in the FI document, you will need to reverse the FI document. If you have already carried out a line item reposting in CO for this document, you will first need to reverse this reposting before you can reverse the document in FI.



- Direct activity allocation enables business services provided to be measured, entered, and allocated.
- You need to create the corresponding (measurable) tracing factors in the R/3 system. These are known as **activity types** in Cost Center Accounting. To directly allocate activity, create an activity type (activity type category 1 = manual entry, manual allocation).
- If you want to enter a direct activity allocation, enter the cost center that provides the activity (sender cost center), the object that receives the activity (receiver), the type (activity type), and the quantity of the activity provided. Note that only one cost center from the sender can be allocated to an internal activity allocation. The receiver can be any true Controlling object (such as, a cost center, an order, a project, and so on).
- To directly allocate activity, you need to define which cost centers are to provide which activity types, by **planning activity output**.
- During direct activity allocation, the sender cost center is credited, and the receiving cost objects are debited. Debiting and crediting are executed a **secondary cost element** (category "43"). Debiting and crediting are the activity provided, multiplied by the activity price.
- The **cost element** used for direct allocation of internal activity is derived directly from the master data for the activity type. The cost element cannot be changed in the allocation transaction.
- Direct activity allocation is recorded by line items on the sender side and receiver side.

Reposting Direct Activity Allocation

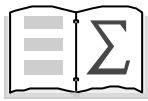
SAP



© SAP AG 1999

- Reposting internal activity allocation is used to **adjust** posting fields.
- A **search function** is available, which provides you with the documents you are looking for.
- The **total quantity** of the allocated activity must remain the same, although you can allocate the quantities to different receivers.
- You can make adjustments in **periods**, but not in the same period from which the document to be adjusted originates. However, the fiscal year must remain the same.
- You can repost the following documents for direct activity allocation:
 - Documents entered manually into cost accounting
 - CO documents for confirmations (from Production Planning and Controlling)
 - CO documents for time entry (time sheet)
- Reposting creates a reference in the reposting document to the CO source document.

You are now able to:



- **Use transactions in the original applications and understand how these transactions affect reporting in Cost Center Accounting**
- **Run totals reports and line item reports and explain additional functions in the information system**
- **Describe the configuration options that facilitate postings**
- **Adjust original postings made to incorrect cost centers**
- **Explain automatic commitments and funds reservations**
- **Allocate activity, and correct activity allocations.**

Exercises



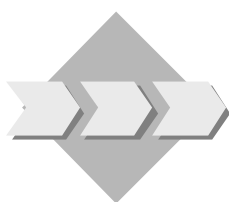
Unit: Event-Based Postings

Topic: Entering Primary Postings



At the conclusion of these exercises, you will be able to:

- Enter primary postings in Financial Accounting, with account assignment to cost centers.



Your project team has completed master data maintenance. You can now assign the expenses in Financial Accounting as costs to the cost centers in Controlling.

- 1-1 Enter the general ledger account postings into Financial Accounting using company code **1000**, **today's date** and the **UNI** currency. Choose the screen variant "**With cost center**", and post the following data:

G/L account	Dr/Cr	Amount	Tax code	Cost center
473120 (telephone usage costs)	Debit	8,000	V0	101##
430000 (salaries)	"	5,000		201##
"	"	20,000		202##
"	"	20,000		203##
"	"	200,000		301##
"	"	150,000		302##
476000 (office supplies)	"	3,000	V0	301##
476100 (IT supplies)	"	15,000	V0	202##
475000 (vehicle costs)	"	100,000	V0	203##
476400 (training costs)	"	12,000	V0	301##
"	"	15,000	V0	302##
113100 (Bank)	Credit	548,000	---	---

Ensure that you note down the document number. _____

Exercises



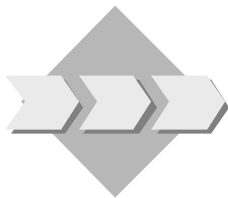
Unit: Event-Based Postings

Topic: Reports in Cost Center Accounting



At the conclusion of these exercises, you will be able to:

- Make user settings for report selection.
- Check the expenses posted in Financial Accounting to each cost center in Controlling, in summary and line item reports.
- Navigate between different cost centers in a cost center report.
- Define an individual display variant in the report.



You want to display the expenses posted in FI to the cost centers using different reports. You also want to use some reporting tools that reduce workload in reporting, and enable flexible evaluation of information.

- 2-1 You often call up reports that have the same selection criteria. To simplify the process, you can store these criteria as default values.
- 2-1-1 Store controlling area **1000** in the user settings, the **current period** as the *Reporting period* in the **current fiscal year**, and version 0, as *Further entries*.
- 2-1-2 Call up the *Cost Centers: Plan/Actual/Variance* report. Check whether your selection criteria are transferred from the user settings.
- 2-2 Display the costs from the exercise activity on general ledger account posting in the report.
- 2-2-1 Run the *Cost Centers: Plan/Actual/Variance* report for cost center group **B##** in controlling area Europe (**1000**), in the **current period** and for plan version **0**.
- 2-2-2 The report provides an overview of the costs in the entire consulting department. Use the variation function to display the costs of different cost centers. Then go to the summary report in cost center **301##** (FI/CO Consulting).

2-2-3 Call up the *Actual line items* for a report row. Which additional information on the cost element do you receive compared to the specifications in the summary report?

2-2-4 Display the original FI document. How many line items are on the FI document?

2-2-5 Display the cost accounting document for the same CO line item. How many line items are on the cost Accounting document?

What causes the difference between the CO and the FI document?

Remain in the line item display.

2-3 Define the display variant in the line item report according to your requirements.

2-3-1 As you do not enter any quantities when posting, delete the *Total quantity entered* and *Posted unit of measure* columns, then include other columns of your choice.

2-3-2 Save your display variant as **Display##**, choosing a description. Indicate the variant as *User-specific*. This ensures that only you can use this display variant.

2-3-3 Call up *Choose display variant* to check whether your variant is available for selection, as well as the SAP display variants.

Exercises



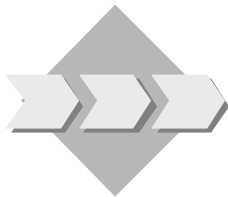
Unit: Event-Based Postings

Topic: Reposting Line Items



At the conclusion of these exercises, you will be able to:

- Make corrections by reposting line items
- Provide arguments for why error postings should be corrected in FI and in CO.



In the project team, you have agreed to correct error postings in CO or FI after discussion with the Financial Accounting department. You post a line item in CO to become familiar with the function, and the way that information is presented. You would also like to check whether it is possible to reverse the document in FI, if the adjustment has already been made in CO.

- 3-1 Repost the costs for office supplies (cost element 476000) to the "Organization" cost center that were assigned during the first exercise in this unit to the "FI/CO Consulting" cost center.
- 3-1-1 Repost the line items for your **document from exercise 1-1** (you noted down the document number) in company code **1000**, and in the **current** fiscal year.
- 3-1-2 Post the **07** (3,000.00 to the 301## cost center) posting item to the **201##** cost center (Organization).
- 3-2 Check the result of the reposting.
- 3-2-1 Go into the *Cost Centers: Actual/Plan/Variance* report for the **current period**, plan version **0**. Then run the report for the receiver cost center **201##** (Organization).
- 3-2-2 Display the *actual line items* for the *cost centers* in report row **476000** Office supplies. Call up the source document for the line item. Which cost center is displayed as the sender for cost element 476000 on the document?
- _____
- _____
- 3-2-3 How can you ensure that the correct receiver cost center 201## (Organization) is displayed on the FI document also?
- _____
- _____
- _____

- 3-3 Check whether it is possible to reverse the document in FI (reversal reason 01), even though the error posting was already corrected in CO.

Reversal: Yes/No

Reason: _____

- 3-4 When is it useful to correct the error posting in FI , and when in CO?

- 3-5 A staff member from the project team is less experienced with the reposting function than you are, and would like to know the following: A newly opened cost center has not yet been debited with primary costs. Is it still possible to repost costs from this cost center to another cost center?

Is it possible to repost line items from this cost center?

Exercises



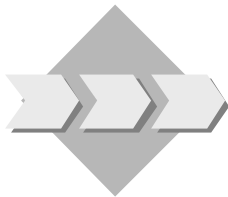
Unit: Event-Based Postings

Topic: Direct Activity Allocation



At the conclusion of these exercises, you will be able to:

- Debit the corresponding cost objects (direct activity allocation) with the consultant activities



In your project team, you have agreed that the consultants who work for a company are to directly debit the cost objects set up for this once a week. For each company customer, the CO-OPA team (overhead cost orders) has already set up an internal order as a cost object. On this internal order, you can analyze to what extent each company has used consulting activity from the consulting department.

4-1 The consultants enter the number of consulting hours that they have worked for different projects.

4-1-1 The internal orders that already exist in the system act as cost collectors (consulting company A and consulting company B). The consultants normally enter their activity themselves, and thus trigger direct activity allocation. For test purposes, enter the consulting activity for the consultants, using **today's** date in version **0**, with screen variant **Order**. Now post the following data in the list entry:

Sender cost center	Activity type	Receiver order	Total quantity
301## (FI/CO Consulting)	J##	Consulting company A	800
301## (FI/CO Consulting)	S##	Consulting company A	1000
302## (LO Consulting)	J##	Consulting company B	600
302## (LO Consulting)	S##	Consulting company B	800

4-1-2 Display all the screen variants for direct activity allocation again in the match-code. Why is the sender category never mentioned in the entry variant name, but the receiver object is?

4-2 Check the postings (for direct activity allocation) in reports in Cost Center Accounting.

4-2-1 Call up the *Cost Centers: Actual/Plan/Variance* report for the **current period** and in plan version **0**. Run the report for cost center **301##** (FI/CO Consulting).

4-2-2 Page down to display the allocated quantities.

4-2-3 Display the *actual line items for cost centers* for the report row in the secondary cost element **6262##** (senior consulting ##), or **6261##** (junior consulting ##). Go to the display variant *Secondary Costs: Activity allocation*.

4-2-4 Why is it not possible to display the prices used for allocation in the report?

4-2-5 Call up the *Cost Centers: Activity Prices* report for the cost center group **B30##** in version **0** for **all periods in the current fiscal year**, to obtain an overview of all the prices.

Solutions



Unit: Event-Based Postings

Topic: Entering Primary Postings

1-1 **Accounting ® Financial** Accounting → General Ledger → Document entry → G/L account posting.

Field name or data class	Values
<i>Document date</i>	<i>Today's date</i>
<i>Currency</i>	<i>UNI</i>

Screen variant: **“With cost center”**

G/L Account	Dr/Cr	Amount	Tax Code	Cost Center
473120 (telephone costs)	Debit	8,000	V0	101##
430000 (salaries)	"	5,000		201##
"	"	20,000		202##
"	"	20,000		203##
"	"	200,000		301##
"	"	150,000		302##
476000 (office supplies)	"	3,000	V0	301##
476100 (IT supplies)	"	15,000	V0	202##
475000 (vehicle costs)	"	100,000	V0	203##
475400 (training costs)	"	12,000	V0	301##
"	"	15,000	V0	302##
113100 (Bank)	Credit	548,000	-	-

Save your data and note down the document number.



Unit: Event-Based Postings

Topic: Reports in Cost Center Accounting

2-1

2-1-1 *Accounting* ® *Controlling*® *Cost Center Accounting* ® *Information system*
® *User settings*.

Basic data

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>

Reporting timeframe

<i>Fiscal year</i>	<i>The current year</i>
<i>Period</i>	<i>The current period</i>

More details

<i>Plan version</i>	<i>0</i>
---------------------	----------

Save your data.

2-1-2 *Cost Center Accounting* ® *Information system* ® *Reports for Cost Center Accounting* ® *Plan/Actual Comparisons* ® *Cost Centers: Actual/Plan/Variance*.

2-2

2-2-1

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center (values)</i>	<i>B##</i>

Program ® Execute

2-2-2 *Navigation on/off* icon

In the navigation list, choose **cost center 301##**.

2-2-3 Place your cursor on a report row.

Settings ® Rep./Rpt interface or double-click on the report row.

Choose the *Cost Centers: Actual Line Items* report.

Additional information:

- a) From which line items the overall total for the cost element results
- b) The offsetting account of the posting in question

2-2-4 Position your cursor on a line item.

Environment ® Source document or double-click on report row.

12 Line items

2-2-5 Position your cursor on a line item.

Environment ® Accounting documents ® Cost accounting doc. ® Expand document.

11 Line items

The credit posting to the balance sheet account is not relevant to controlling and is therefore not transferred to CO.

2-3

2-3-1 **Settings ® Display variant ® Current.**

Select *Total quantity* and *Posted unit of measure*.

® Icon **Right arrow “Hide selected fields”**

Switch to the *Hidden Fields* list and select the fields you require.

® **Left arrow “Show selected fields”** icon.

Choose the **Copy** icon.

2-3-2 **Settings ® Display variant ® Save...**

Field name or data class	Values
<i>Display Variant</i>	<i>Display##</i>
<i>Description</i>	
<i>User-specific</i>	<i>Select</i>

Transfer further settings.

Save your data.

2-3-3 **Settings ® Display variant ® Choose...**

Solutions



Unit: Event-Based Postings

Topic: Reposting Line Items

3-1

3-1-1 *Cost Center Accounting* ® *Actual postings* ® *Repost line items* ® *Enter*.

Field name or data class	Values
<i>Document number</i>	<i>See exercise 1.1</i>

3-1-2 In line item 07, change account assignment 1 from:

Cost center 301## to cost center 201##.
Save your data.

3-2

3-2-1 *Cost Center Accounting* ® *Information system* ® *Reports for Cost Center Accounting* ® *Plan/Actual Comparisons* ® *Cost Centers: Actual/Plan/Variance*.

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center (values)</i>	<i>201##</i>

Program ® **Execute**

3-2-2 Position your cursor on report row **cost element 476000**.

Settings ® **Rep./Rpt interface or double-click on the report row**.

Select the *Actual Line Items* report.

Position your cursor on the line item with the reposting amount 3000.

Environment ® **Source document or double-click on report row**.

Cost center 301##

3-2-3 Reversal of incorrectly assigned posting in FI and reposting to cost center 201##

3-3 **Accounting ® Financial Accounting ® General Ledger ® Document ® Reverse ® Individual reversal.**

Field name or data class	Values
Document number	See exercise 1.1
Company code	1000
Fiscal year	1999
Reversal reason	01

Save your data.

Error message: Reverse CO reposting document first.

3-4 If you want the **correct receiver cost center to be displayed in the accounting document**, you must reverse the document in FI; otherwise you can repost the document in CO.

3-5 **Manual reposting of costs is possible** ® no check on sender

Reposting of line items is not possible ® no line item posted.

Solutions



Unit: Event-Based Postings

Topic: Direct Activity Allocation

4-1

4-1-1 *Cost Center Accounting* ® *Actual postings* ® *Activity allocation* ® *Enter*.

Field name or data class	Values
<i>Document date</i>	<i>Current</i>
<i>Version</i>	<i>0</i>
<i>Posting date</i>	<i>Current</i>
<i>Screen variant</i>	<i>Order</i>

<i>Sender cost center</i>	<i>Activity type</i>	<i>Receiver order</i>	<i>Activity provided</i>
<i>301##</i>	<i>J##</i>	<i>CONS. COMP A</i>	<i>800</i>
<i>301##</i>	<i>S##</i>	<i>CONS. COMP A</i>	<i>1000</i>
<i>302##</i>	<i>J##</i>	<i>CONS. COMP B</i>	<i>600</i>
<i>302##</i>	<i>S##</i>	<i>CONS. COMP B</i>	<i>800</i>

Save your data.

4-1-2 Position your cursor on the *Screen variant* field

Choose F4 to view the list of possible entries.

You cannot select the sender category on the screen variant because activities can only be allocated by cost centers.

4-2 **Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost Centers: Actual/Plan/Variance.**

Field name or data class	Values
<i>Controlling area</i>	1000
<i>Fiscal year</i>	1999
<i>From period</i>	Current
<i>To period</i>	Current
<i>Plan version</i>	0
<i>Cost center</i>	301##

Program ® Execute.

Page down to the last page.

4-2-2 Position your cursor on the report row for cost element 6262##.

Settings ® Rep./Rpt interface, or double-click on the report row.

Choose the *Actual Line Items* report

Settings ® Display variant ® Choose....

Display variant *Secondary costs: Activity allocation*

4-2-3 You can allocate different activity types at different prices using a secondary cost element.

It follows that you cannot determine the activity (and the price for this activity) on the basis of the cost element.

4-2-4 **Cost Center Accounting ® Information System ® Reports for Cost Center Accounting ® Prices ® Cost Centers: Activity prices.**

Field name or data class	Values
<i>Cost center group</i>	B30##
<i>Activity type(s)</i>	J##
Multiple selection icon	S##

Copy icon.

<i>Version</i>	0
<i>Fiscal year</i>	1999
<i>Period from</i>	Current
<i>Price unit</i>	1

Program ® Execute.

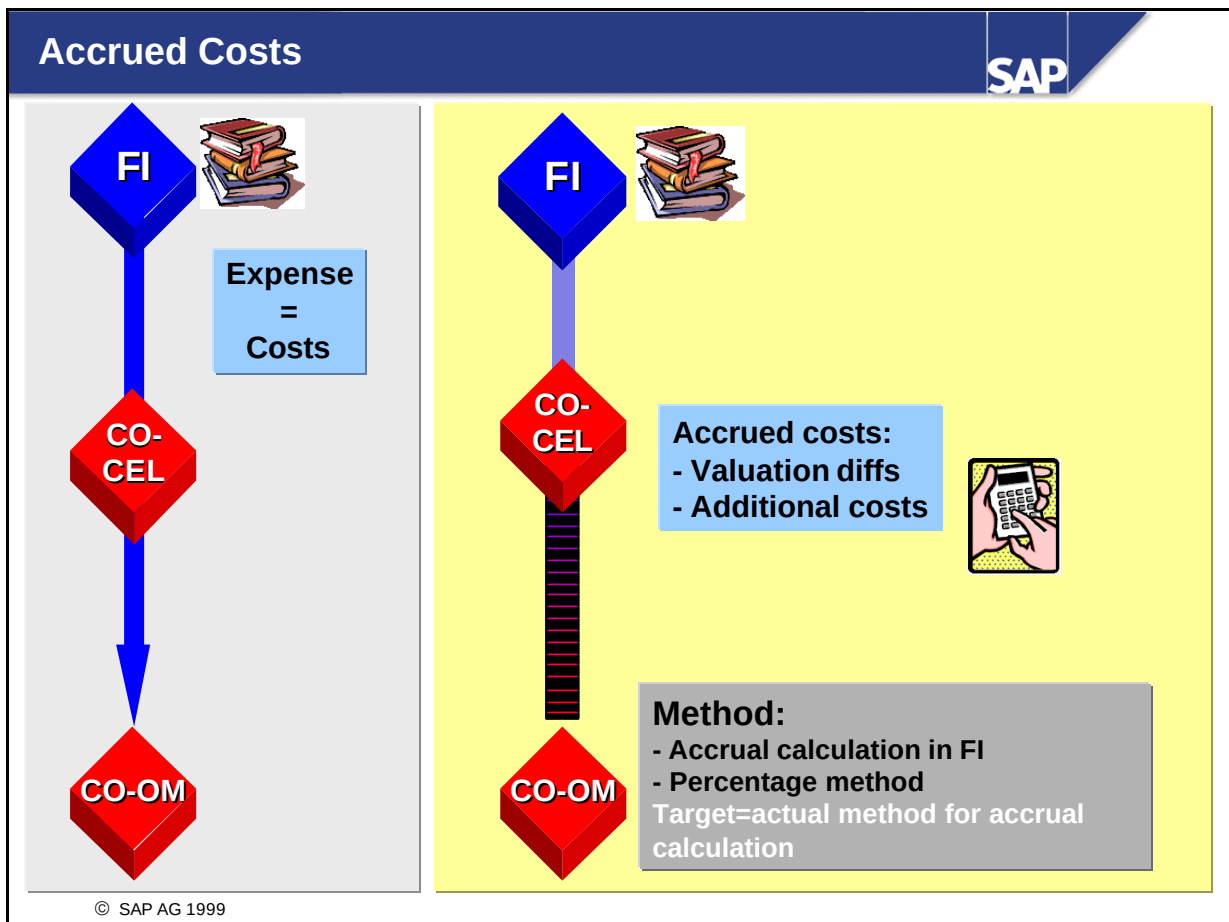
Content:

- **Accrual calculation**
- **Entering statistical key figures**
- **Periodic repostings**
- **Cost allocations**



At the conclusion of this unit, you will be able to:

- **Explain accrual calculation**
- **Describe how to create an overhead structure**
- **Enter statistical key figures**
- **Demonstrate periodic reposting, distribution, and assessment and the differences between them**
- **Define and execute periodic repostings, distributions, and assessments using the cycle segment method**



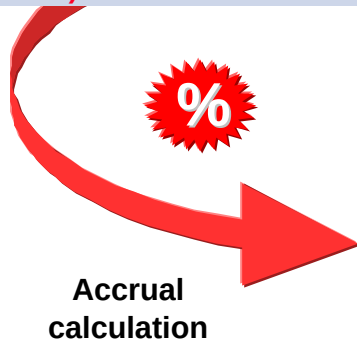
- The value of all goods and services used is recorded as **expense** for each period.
- By contrast, the values of all used goods and services that are incurred during the creation of your own ("typical") business activity are recorded as costs for each period.
- The **nonoperating expense** is not recorded in CO as costs.
- **Accrued costs** do not have a corresponding expense in FI. They are only accrued for cost-accounting purposes. Two types are differentiated between:
 - **Valuation differences** which have corresponding expenses of a difference amount (for example, cost-accounting depreciation, imputed interest, and so on).
 - **Additional costs** do not have a corresponding expense (for example, management salary, accrued rents, and so on)
- To enable you to enter accrued costs, the SAP R/3 system provides different **methods**:
 - Percentage method
 - Plan=actual method
 - Target=actual method
- To avoid periodic cost fluctuations in Cost Center Accounting, you should distribute irregular expenses to the relevant periods. This business transaction is the **accrual calculation**. You can **calculate accrual in FI** using a recurring entry transaction, and transfer the costs to CO. In FI, you calculate accrual if you want to create monthly balances for example. Or you **calculate accrual in CO** only. This causes accrued costs, as the accrued costs correspond to expenses of a different amount in the periods.

Percentage Method

SAP

Cost center

	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec
Labor costs	12,000	12,000	12,000	12,000	....	....	....	....	....	....	....	....
Accrued Premiums (10% of labor costs)	1,200	1,200	1,200	1,200	....	....	....	....	....	....	....	14,400



Accrual object (cost center or order)

Period	Act. costs
01	- 1,200
02	- 1,200
03	- 1,200
04	- 1,200
05	- 1,200
06	- 1,200 + 15,000
...	
12	- 1,200
Balance:	+ 600

Paid premiums:
15,000

© SAP AG 1999

- To calculate accrued costs, use the percentage method. This is based on a percentage overhead, which is related to a cost element or a cost element group.
- Unlike **accrual calculation with a recurring entry** in FI, this method has the advantage that the accrued costs are calculated using the actual costs. The percentage method, for example, is useful for accrual calculations for labor costs relevant to salaries, such as premiums.
- When accrual is calculated, the system debits the cost centers with the accrual cost amounts. At the same time, a user-defined accrual object (cost center, or internal order) is credited. The actual costs that arose are posted to the results analysis object, so that all of the balances that exist between expenses in FI and accrued costs in CO are calculated, analyzed, and settled to profitability analysis.
- You create a primary **accrual cost element** (cost element category = 3) to process the accrual calculation.

Definition of the Percentage Method

SAP

i-B2

Calculation base

420000 dir. labor costs

421000 indir. labor

Overhead structure

Row	Base	Overhead	Description	Fr.	To	Credit
10	i-B1		Salaries			
20	i-B2		Wages			
30	.	i-Z1	Accrued premiums	10	20	E1
40	.	.	.	.	.	.
50	.	.	.	.	.	.

i-Z1

Overhead rates

Plan 10%

Actual 10%

E1

Accrual objects

"Accrued premiums" order

Cost element 433000 (premium)

Cost element
category 3

© SAP AG 1999

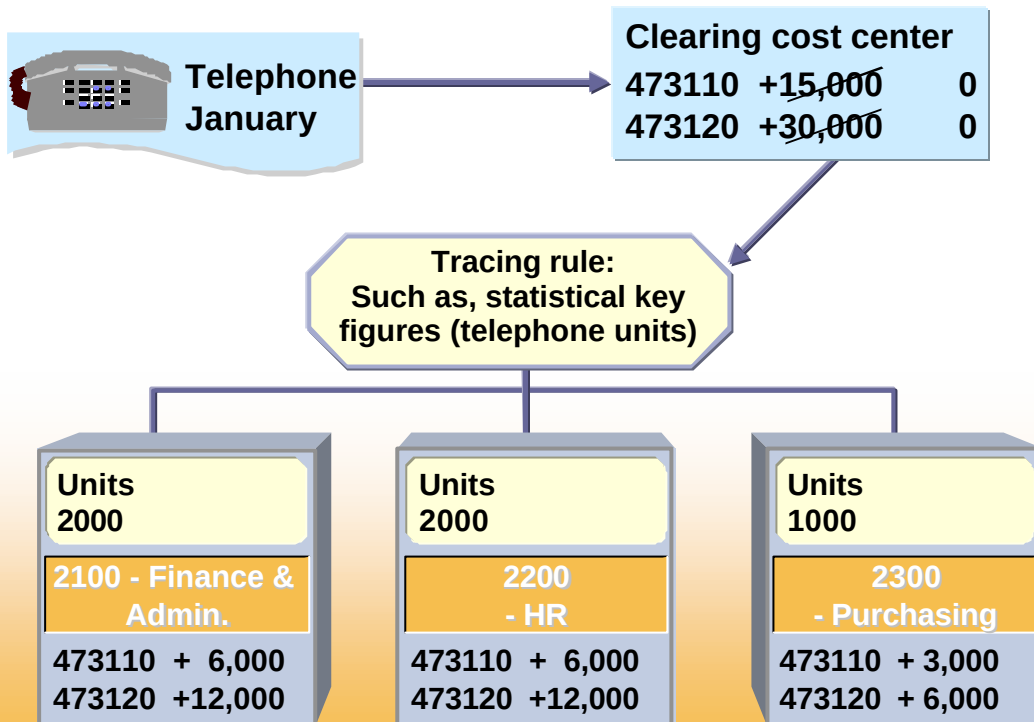
- You create an overhead structure to define the accrual calculation. You need to store the following keys for the accrual calculation:
 - **Base**
Which cost element bases are to be used for applying overhead rates?
 - **Overhead**
How high should the percentage overhead be?
 - **Credit**
Which cost element should be used for posting the overhead? Which cost center or internal order (accrual object) is to be credited?
- If you assign **dependencies** to the overhead key, then you can specify conditions under which the overhead is calculated for a cost center. Depending on the cost element, you can, for example, post different overheads to different cost centers. You can add user-defined dependencies to those in the SAP R/3 standard system.
- In customizing, you can assign an overhead structure within a client to any **controlling area**. This **assignment** is made based on validity time periods, although you can change the assignment at any point in time.
- You can have an overhead structure for actual accrual calculations, and for each version for planned accrual calculation in your controlling area, for any period of time required.



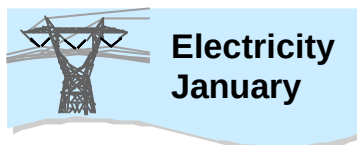
Cost center 1000 - Service

	Periods	1	2	3	...	12
Cat. 01 →	PCs	20 →	20 →	20 →		20
Cat. 02 →	Telephone units	1500				
		↑ Posting period				

- You can enter statistical key figures as a **tracing factor** for periodic allocations, or for **creating key figures** in reporting. The costs from the allocation cost center "Telephone" can be allocated using the statistical key figure of "Telephone units" for example. If you enter "Employees" as a statistical key figure, then you can provide a report on the cost centers, on the level of HR costs for each employee.
- A decisive factor for statistical key figures, is the way in which you create them as master records.
 - **Fixed values** (category 01) are updated from the corresponding posting period onwards, in all of the following posting periods of the fiscal year. This takes place, assuming that fixed values do not change over a longer period of time.
 - **Totals values** (category 02) are only entered for each current period. They change from period to period, and therefore need to be re-entered in each posting period.
- You can also enter statistical key figures especially for an activity type on a cost center (**statistical key figures that are activity-dependent**).



- Periodic reposting is used as a **posting aid**.
- **Primary postings** (such as, telephone costs) are collected on an **allocation object** (cost center, overhead cost order, business process, WBS element, or cost object) to restrict the number of FI postings as much as possible. These costs are allocated during period-end closing to the corresponding Controlling objects, using a key defined by the user.
- The **receivers** for an assessment can be a cost center, WBS element, internal order, or cost object. You can restrict the number of receiver categories in customizing.
- You can only repost primary costs. During this process, the **original cost element** remains the same.
- **Line items** are posted for the sender as well as for the receiver, enabling the allocation to be recorded exactly. The system does not save the information from the clearing cost center in totals records during a periodic reposting. This enables it to save memory when storing the data records.
- Periodic repostings can be **reversed** and repeated as often as required.



Energy cost center

416100 +23,000

416110 + 5,000

416100 - 23,000

416110 - 5,000

Tracing rule:
For example,
fixed percentages

30%

20%

50%

1000 - Service

416100 +6,900

416110 +1,500

1220 - Vehicles

416100 +4,600

416110 +1,000

3200 - Marketing

416100 +11,500

416110 +2,500

- Distribution was created to transfer primary costs from a sender cost center to receiving controlling objects. During distribution, only cost centers or business processes can be used as **senders**.
- A distribution **receiver** can be a cost center, WBS element, internal order, cost object, or a business process. You can restrict the number of receiver categories in customizing.
- **Primary postings** (such as, energy costs) are collected on a cost center, and allocated at the end of the period by means of the user-defined key.
- You can only distribute primary costs. During this process, the **original cost element** remains the same.
- **Line items** are posted for the sender as well as for the receiver, enabling the allocation to be recorded exactly.
- You can **reverse** distributions as often as required.
- You use the **Cycle-Segment method** to define sender-receiver relationships.

Comparison: Periodic Reposting and Distribution

SAP

Periodic reposting

Information from

Distribution

● Summ. rep.: CCtr Telephone

Cost element	Act. costs
473120	15,000 0
Debit	...
* Credit	...

● Summ. rep.: CCtr Telephone

Cost element	Act. costs
473120	15,000
Debit	...
* Credit	...

● Partner in totals record

CElem/Partner	Act. costs
	15,000 0
* Credit	...

● Partner in totals record

CElem/Partner	Act. costs
Admin.	15,000
* Credit	...

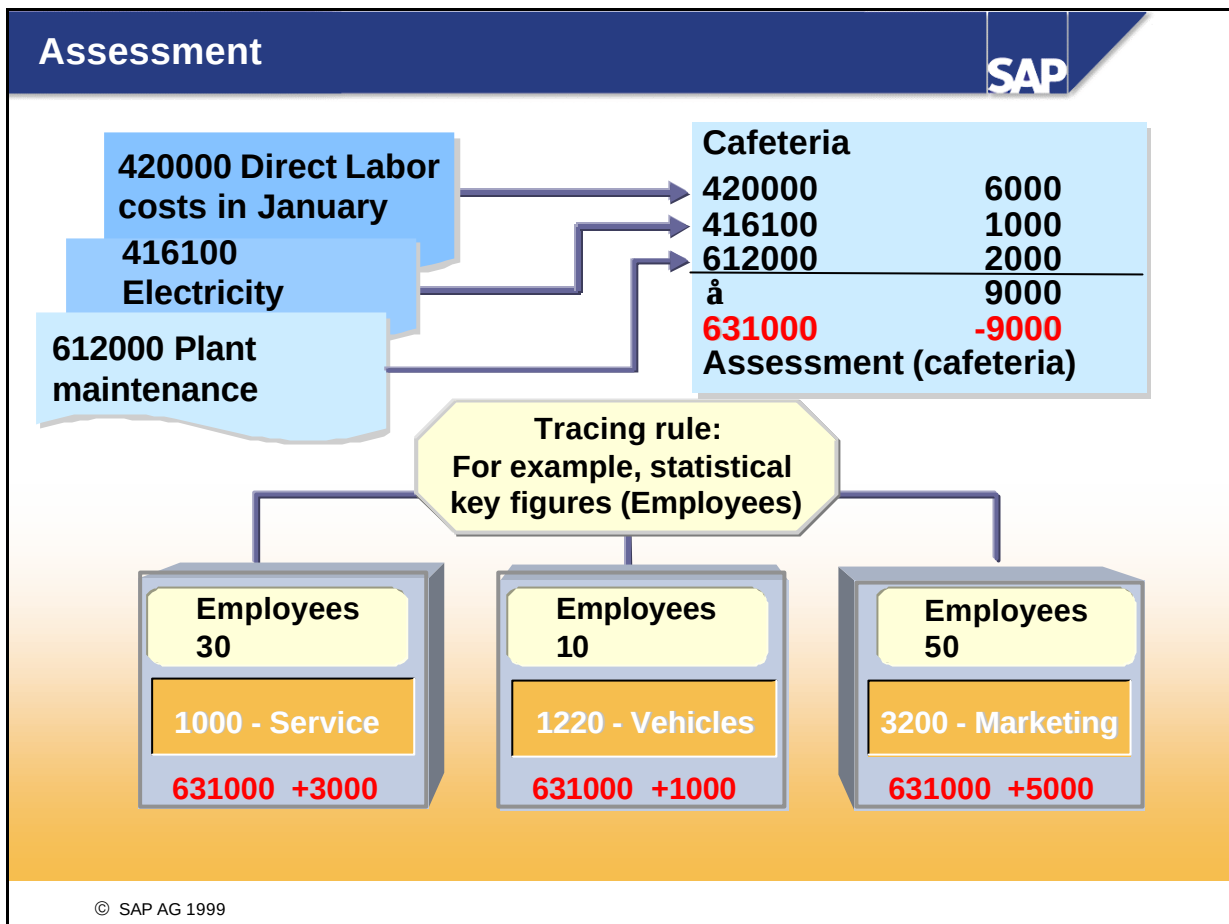
Performance

No credit line on the sender cost center

One credit line on the sender cost center for each receiver cost center, and each cost element.

© SAP AG 1999

- Differences between periodic reposting and distribution are due to information content and performance.
- For periodic reposting, no separate credit record is written on the sender for the cost element in the summary report. Instead, the **totals record** for the cost element is reduced on the debit side, which means that the original debit amount can no longer be checked there ("unclean credit"). However, during distribution, the system writes a totals record for the credit ("clean credit"). The information on the receiver is the same for periodic reposting and distribution ("clean debit").
- Compared with periodic reposting, during distribution, the system also updates the **partner** in the totals record for the sender. This means that the partner can be displayed in the information system on the totals record level.
- As fewer totals records are written during periodic reposting, **performance** is better than during distribution. See customizing for an example with figures that illustrates this aspect. Under utilities, make settings for the SAPscript text display, then call up the text by choosing Periodic reposting, Distribution, or Assessment from the menu.

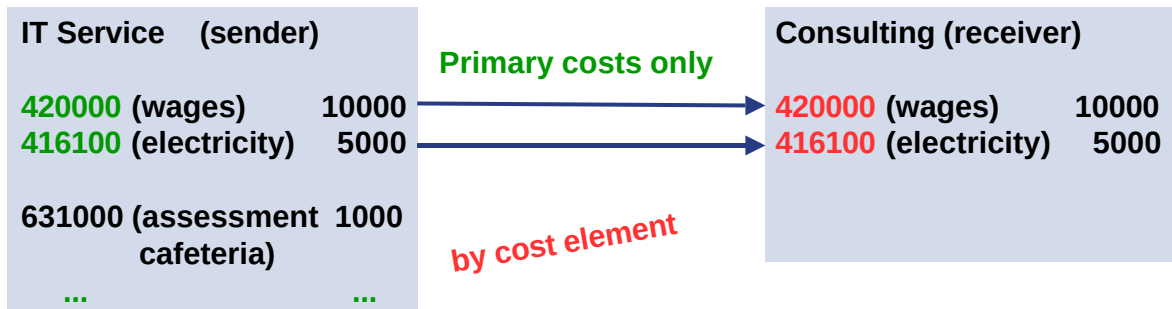


- Assessment was created to transfer primary and secondary costs from a sender cost center to receiving controlling objects. During assessment, cost centers or business processes can be used as **senders**.
- The **receivers** for an assessment can be a cost center, WBS element, internal order, cost object, or a business process. You can restrict the number of receiver categories in customizing.
- **Primary and secondary postings** are allocated at the end of the period by means of the user-defined key.
- During assessment, the original cost elements are summarized into **assessment cost elements** (secondary cost element category = 42). As the system writes fewer totals records, the assessment has a better performance than periodic reposting and distribution.
- Line items are posted for the sender as well as for the receiver, enabling the allocation to be recorded exactly. The system does not display the original cost elements in the receivers. Therefore, assessment is useful if the cost drilldown for the receiver is not important, for example, as in the case of the allocation for the "cafeteria" cost center.
- Similar to distribution, the **partner** is updated in the **totals record** during distribution.
- You can **reverse** assessments as often as required.
- You use the **Cycle-Segment method** to define sender-receiver relationships.

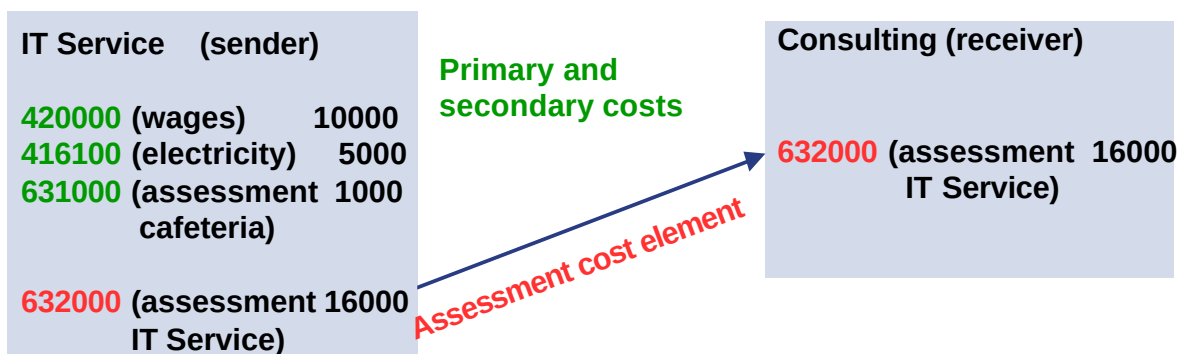
Overview: Periodic Reposting, Distribution, and Assessment

SAP

● Periodic reposting and distribution

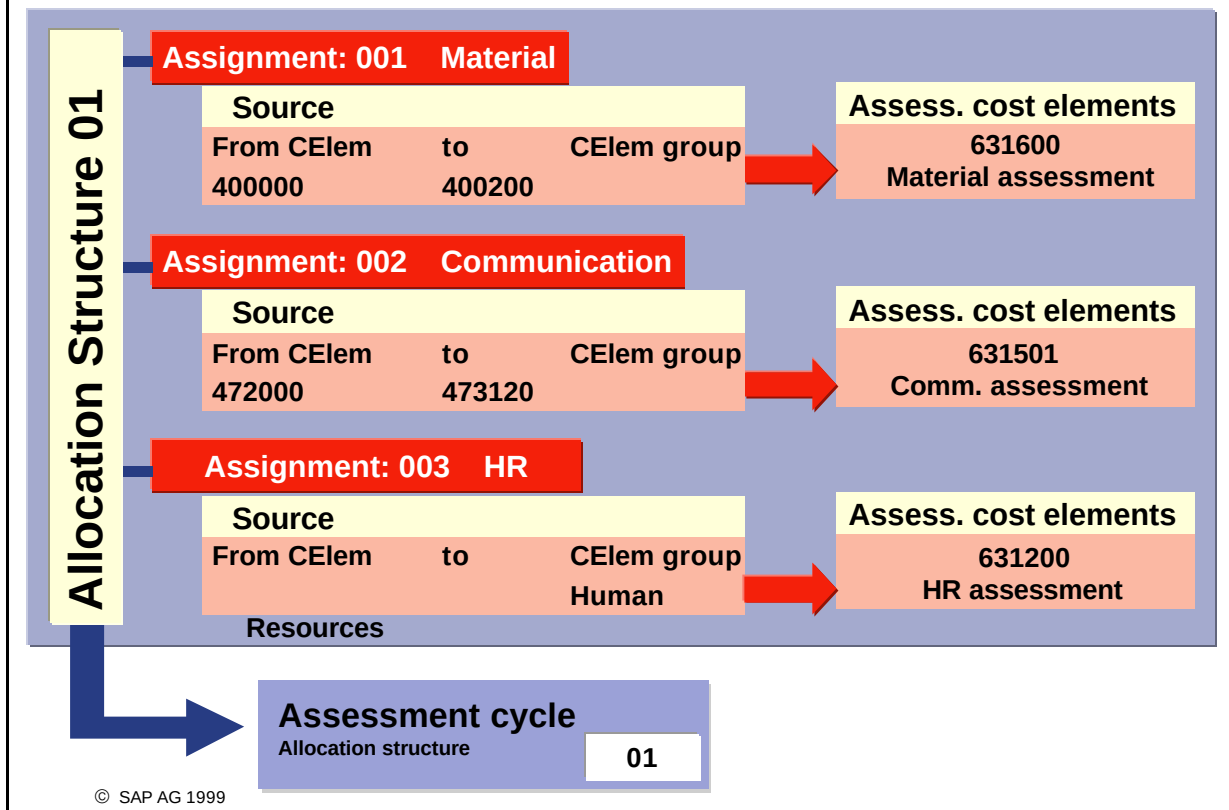


● Assessment

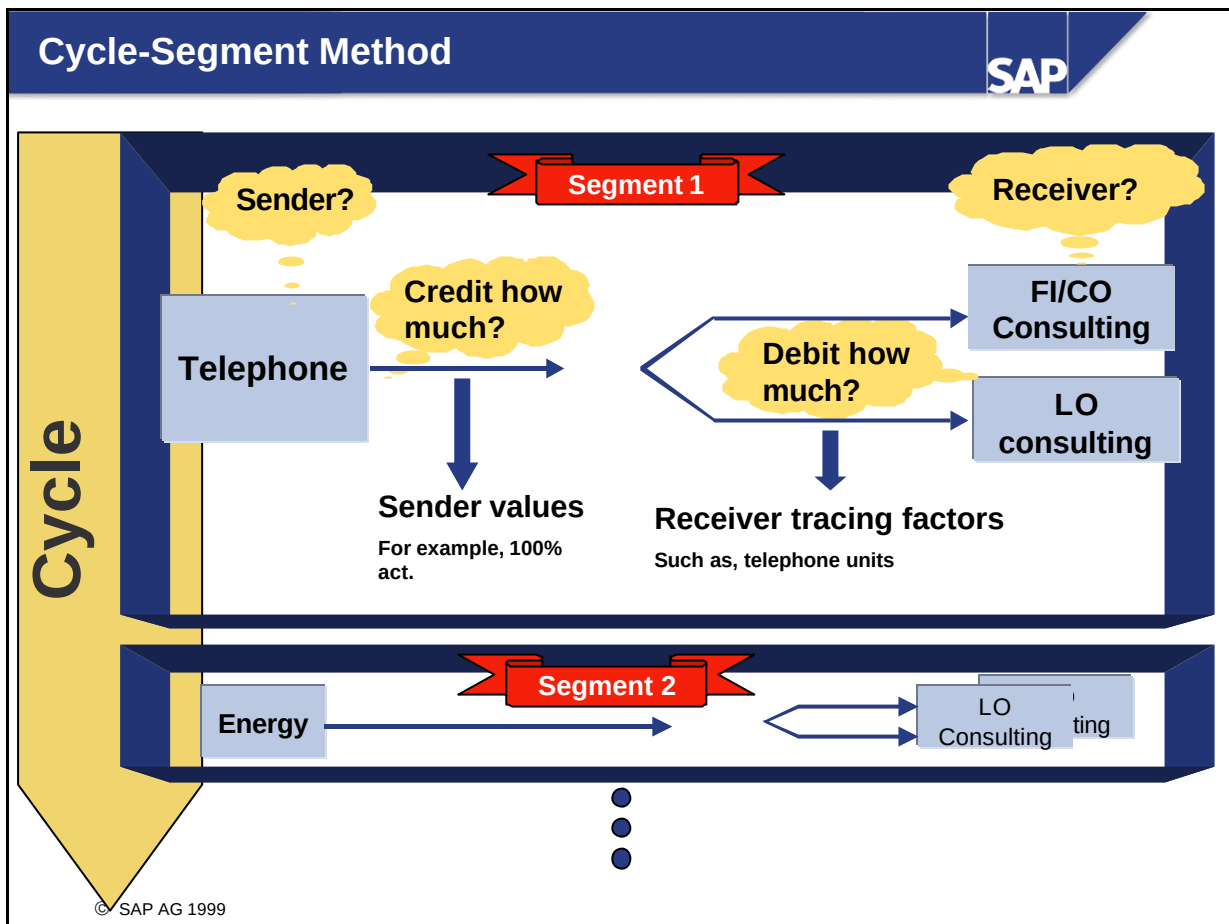


© SAP AG 1999

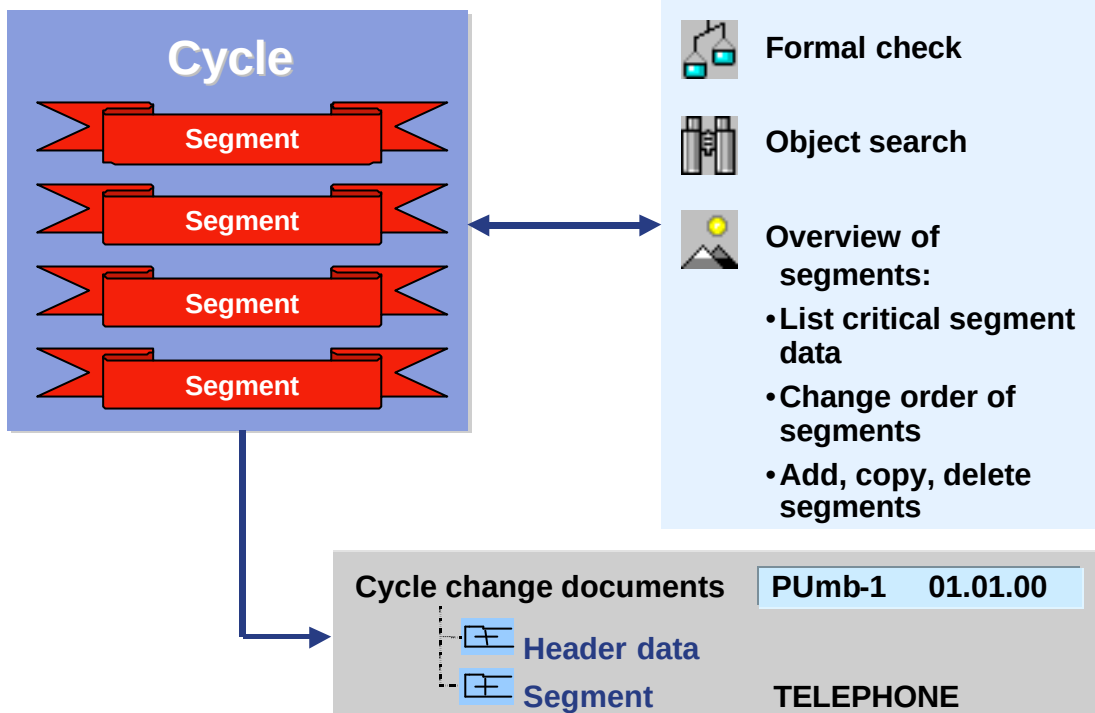
- You can only use **periodic reposting and distribution** for primary cost elements. The costs are transferred to the receivers using the original cost element, so they are transferred to the primary cost elements of the receiver. Secondary cost elements remain on the sender.
- The **assessment** allocates primary as well as secondary costs. The information on the original primary cost elements for the sender is lost because the costs are allocated using an assessment cost element (category 42). You can use more than one assessment cost element for differentiation purposes.
- For **performance reasons**, periodic reposting of the distribution is recommended, as the system does not write any sender/receiver relationships on the totals records level for this. Assessment has the best performance as costs from different primary and secondary cost elements can be totaled in one posting to the assessment cost element.



- For a clear picture of the costs that are to be assessed, you can summarize individual cost elements or cost element intervals into different assessment cost elements.
- Before release 4.5A, it was only possible to assign one assessment cost element to each segment. You now decide **in each segment** whether to assign a single assessment cost element, or an allocation structure.
- In the **allocation structure** you can define which cost elements are to be allocated under which assessment cost elements. Therefore, you do not need to create more than one segment to obtain information on the source of the costs to be assigned.
- In the allocation structure, you can assign single cost elements, cost element areas, or cost element groups to an assessment cost element.
- If required, you can go to the maintenance for allocation structures from the **segment maintenance**, to display, change, or create an allocation structure.

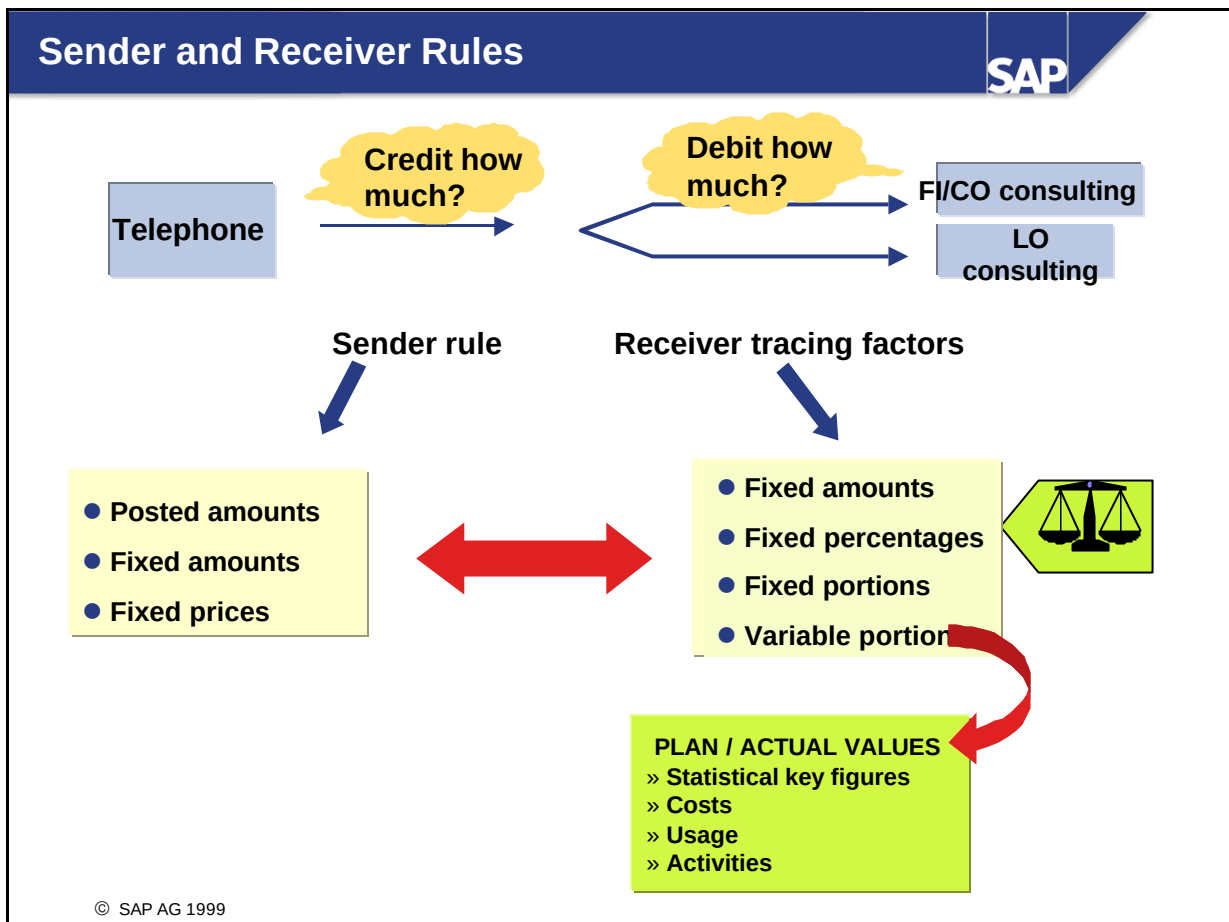


- **The cycle-segment method described below is used for defining periodic reposting and also for defining distribution and assessment.**
- To display the allocation relationships between the senders and receivers in the system, you need to make the following entries:
 - Which object(s) were the costs allocated from?
 - Which object(s) were the costs allocated to?
 - Which costs should be allocated?
 - How are the costs distributed among the receivers?
- In a **segment**, cost centers, with allocation values based on the same rules, are combined with receiver objects that have tracing factors based on the same rules. The "Telephone" cost center allocates the telephone costs based on telephone units for example. If another rule is to be used for an allocation, you need to create a separate segment. The "Energy" cost center allocates the energy costs based on heated office space (square meters) to the administration and consulting cost centers for example.
- Several segments are grouped into a **cycle**. You can define a cycle for the entire controlling area. Due to system performance and the allocation logic, it is recommended that you create more than one cycle and process them sequentially. Likewise, you create separate cycles for plan and actual allocations.



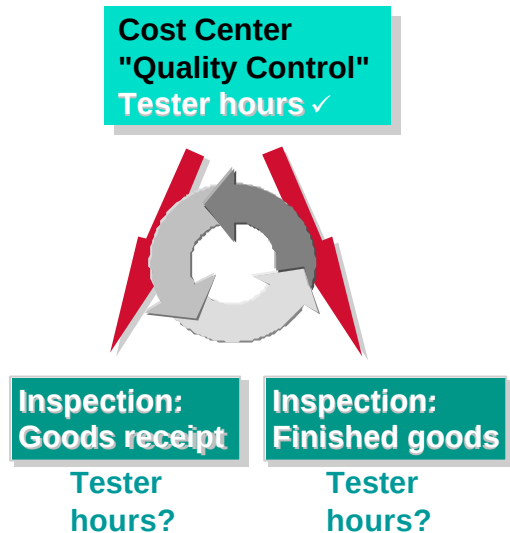
© SAP AG 1999

- The **formal check** function enables you to test an individual cycle prior to an update run. You can use the error log to help you correct faulty segments and iterative relationships (Customizing). The system checks for example whether the total of percentage rates adds up to 100%, or whether the fixed value rules are the same for both senders and receivers.
- The system uses the **object search** to display the cycle using the field values you selected (cost center, activity type and so on) and to display the segment in which the values searched for arise. If you wish, you can call up the corresponding segment using the field value.
- You use the **Segment overview** function to display all the segments used in a cycle. If you want to display a particular segment, you can use the search function to search for this segment within the cycle. You can use maintenance functions to move segments in the segment overview list; this alters the sequence of the segments when carrying out the allocation run.
- You can **sort** and **add** segments in a cycle in line with your requirements.
- You can display the **change documents** for cycle maintenance. The system logs cycle and segment information or settings including:
End date of the cycle, date the cycle was last changed, name of the last person to make a change, segment name, sender rule, receiver rule, sender percentage rate, assessment cost element, and so on.

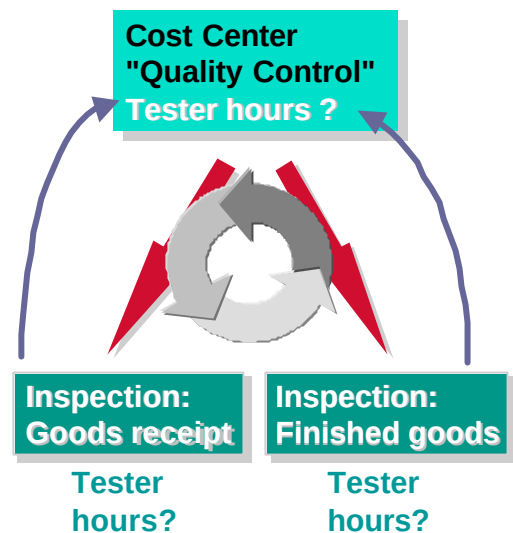


- You can combine sender and receiver relationships using the rules above.
- **Sender values** can be posted values, fixed amounts, as well as fixed prices. If you use posted amounts, you can work with plan and actual values. You can specify a percentage under 100%, which leaves a corresponding amount on the sending cost center. For example, on the cafeteria cost center, this enables you to take into account that the cafeteria employees also use the resources in the cafeteria.
- On the **receiver side**, you can store fixed amounts, fixed percentages, fixed portions, and variable portions as rules.
- The **tracing factor of the variable portion** identifies a posted value on the cost center as an allocation base. Moreover, you specify whether the variable portion is to consist of costs, consumption, statistical key figures, or activities. You can use plan or actual values as an allocation base.

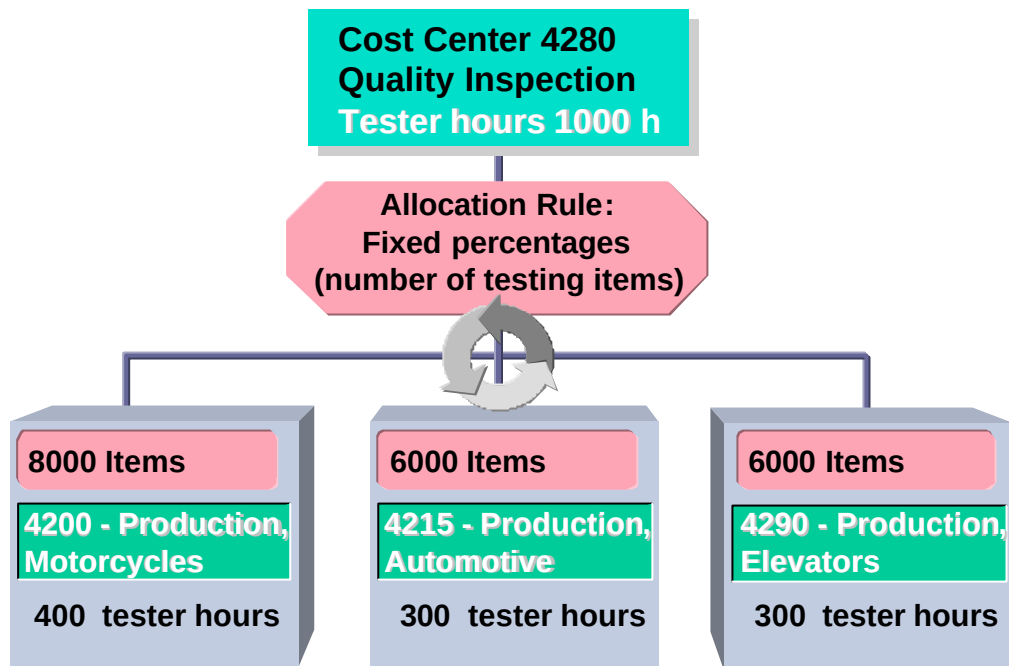
Activity quantities can be determined for the sender object



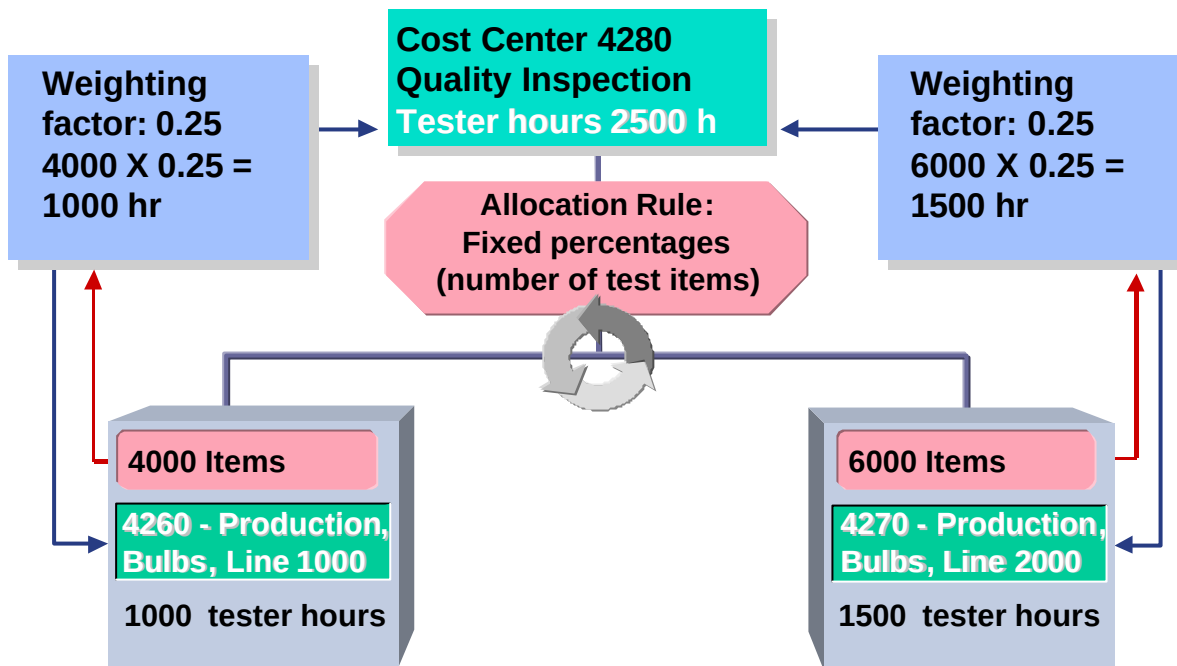
Activity quantities cannot be determined for the sender object



- Indirect activity allocation automatically assigns activity quantities in actual and plan. In contrast to direct activity allocation, you define keys (tracing factors) to allocate activities to the receivers.
- Indirect activity allocation, like the other periodic allocation methods, uses segments and cycles in order to define sender and receiver relationships. You set the processing method for each segment individually, which means a cycle can include multiple methods.
- In the indirect activity allocation framework, costs are allocated under an internal activity allocation cost element (secondary cost element category 43). The cost element assignment defaults from the activity type master record to the cost center/activity type plan, where it may be overwritten.
- Cost centers serve as senders in an indirect activity allocation. The receivers on an indirect activity allocation can be other cost centers, WBS elements, internal orders, cost objects or business processes.
- Depending on the category of the activity type to be allocated, you can choose between two different allocation approaches:
 - You manually enter the sender activity quantity.
 - The R/3 System inversely determines the sender activity quantity based on rules that you define.

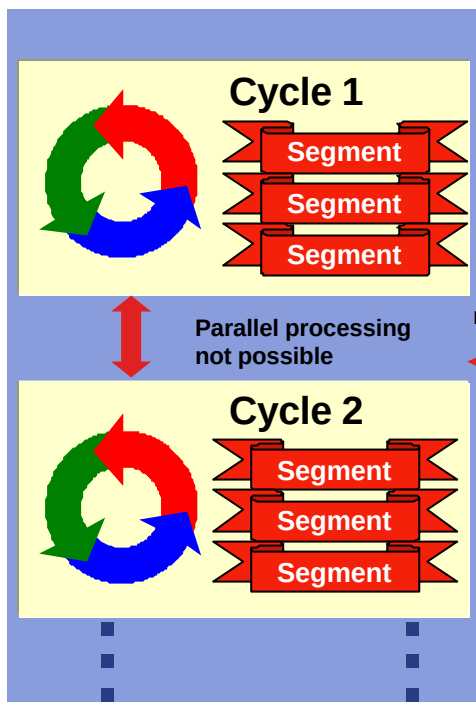


- For most activity types, you can determine the total activity quantity provided by the sending cost center. You use an indirect activity allocation to distribute these posted activity quantities from the senders to the receivers as defined in the segments of the indirect activity allocation cycle.
- For activities which can be measured and posted on a sender object, you create a manual entry, indirect allocation (activity type category 3) activity type. You enter the activity to the sender cost center with an event-based posting.
- You generate the posting to the receivers by executing the indirect activity allocation. The allocation segment must use the sender rule “posted quantities”. Any receiver rule other than fixed quantities may be used.
- For example, although you measure the time your inspectors spend on the “tester” activity, you do not measure the time spent testing items for each production cost center. You therefore know the sender total activity quantity, but not the individual receiver values. However, you can relate this activity to the number of tested items for each production cost center, information which is available as a statistical key figure from the Logistics Information System (LIS). Using the indirect activity allocation, you allocate the total tester activity (in hours) to the receiving cost centers based on each cost center’s proportion of the total number of tested items.

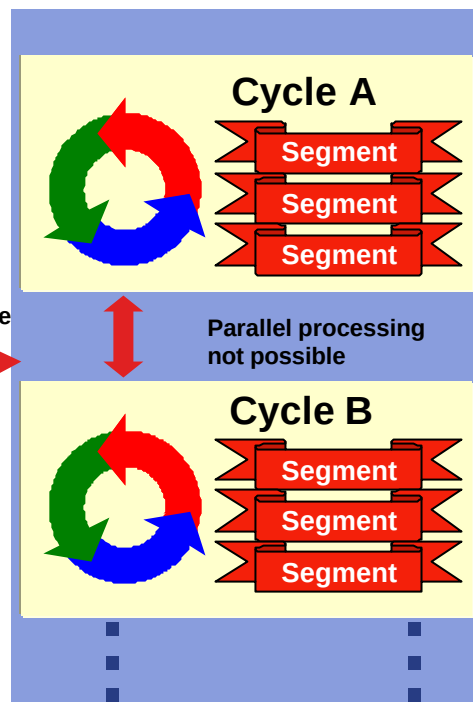


- For activity types where produced quantities cannot be determined, or determined only after a great deal of effort, executing the indirect activity allocation determines both the sender and receiver activity quantities with the following approaches:
 - With receiver tracing factors
 - With explicit entries in the segment definition (as a sender or receiver fixed quantity)
- For this form of indirect activity allocation, you create a category 2 activity type (inverse determination, automatic allocation). The corresponding segment must use either the sender rule “quantities calculated inversely” in combination with any receiver rule, or the identical sender and receiver rules “fixed quantities”. If you use sender rule “quantities calculated inversely”, you can enter sender-specific weighting factors (default value = 1) to define the relationship between the tracing factor unit of measure and the activity type unit of measure.
- For example, it may be difficult for you to measure the time your testers spend performing a specific test because of the variety of activities in which they are involved. Again, you can relate this activity to the statistical key figure describing the number of items tested for each production cost center. By performing sample measurements, you determine that it takes on average 15 minutes (0.25 h) to test an item, and you establish this as your sender weighting factor. With this data, the system calculates the allocation of tester hours to each production cost center and the total tester hours performed.
- You can also establish receiver-specific weighting factors where the activity type/tracing factor relationship is not consistent for all receivers. In our example, you would use this approach if the time to test items for “Production 4260” is not the same as the time to test items for “Production 4270”.

Cycle flow group 1

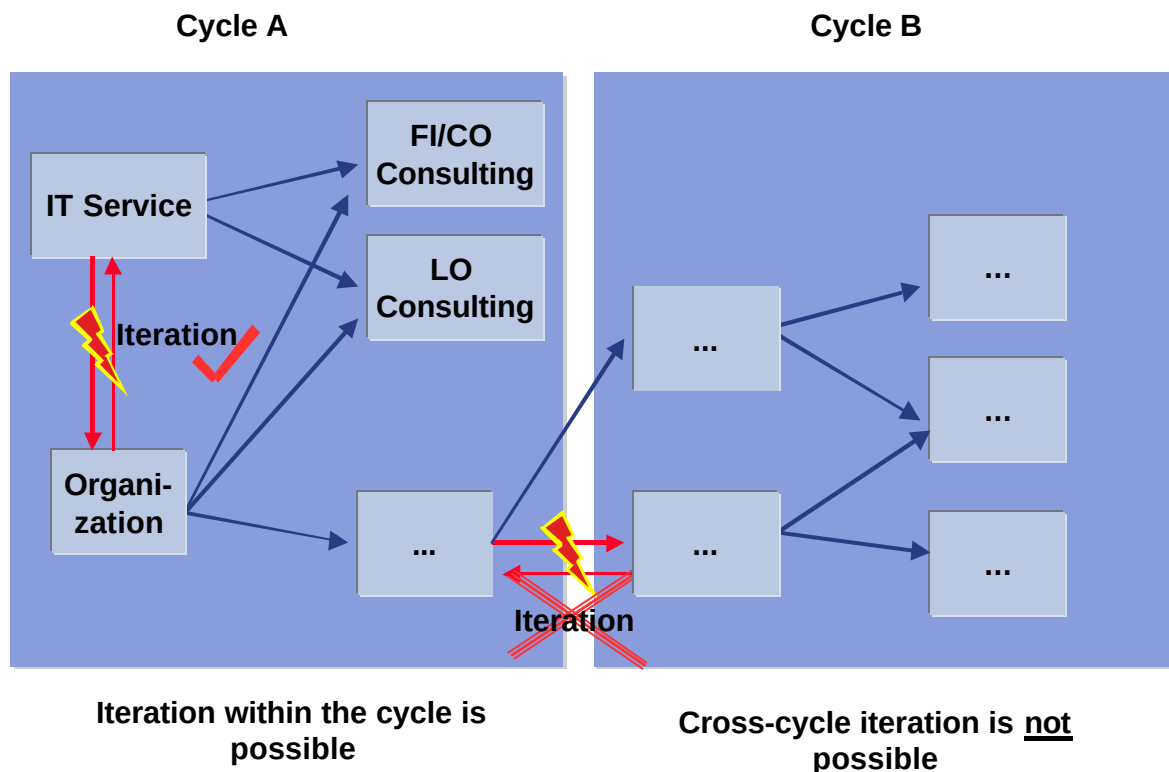


Cycle flow group 2



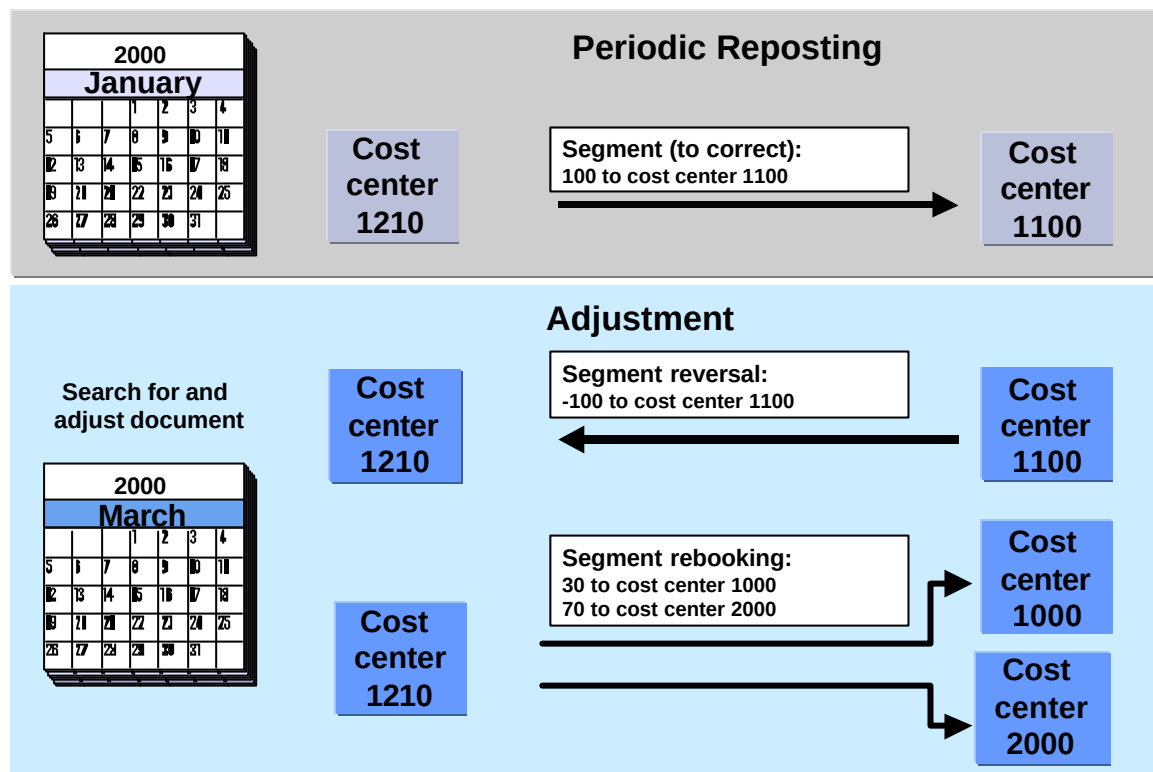
Parallel
not possible

- If you wish to be more **economical** with the **allocation process**, you can create separate cycles. If a cycle contains an error, then you only need to repeat that cycle, and not the entire process. You can also create a modular allocation process, in which the allocations are processed separately.
- A **dependent cycle** uses the results from the previous cycle. You need to execute dependent cycles in the correct order, to enable the values to be processed correctly. You can enter more than one cycle, and the order in which they are to be processed, on the execution screen.
- **Independent cycles** can be processed in parallel if they have the same allocation type. To do this, you need to assign the cycles to various cycle flow groups in the header data of the cycle. You cannot process cycles in a cycle flow group in parallel. You can only start cycles that belong to different cycle flow groups in different modes at the same time, or if you use background processing.
- Once processing is complete, you can check for errors using a **processing log**. You can analyze all of the errors that occurred, using the information provided by the R/3 system.



© SAP AG 1999

- The **segment relationships** within a cycle can be defined so that repostings and allocations of cost centers with different segments (a cost center is also a cost receiver) take place. Cost centers that were already credited can thus be debited during cycle processing. To guarantee that the cost centers are definitely credited, the R/3 System **iteratively** processes all the sender and receiver relationships defined in a cycle. The segments are run until each sender is credited as defined by the sender value.
- If you deactivate the iteration indicator in the cycle header, the system processes the segments in their sequence. This type of processing is faster than iterative processing.
- **Cycles cannot iterate** with each other, even if the cycles are the same type. Therefore when you create a cycle, ensure that cost centers with the same allocation relationships are processed in the same cycle.

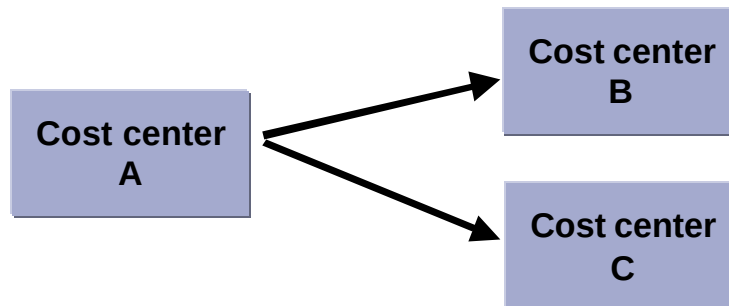


© SAP AG 1999

- Many organizations have to change allocations from past periods. They need to change allocations belonging to prior periods. Audit corrections, information that is received after period-end closing, and simple errors, mean that corrections are necessary even months after allocations were finished. **Segment reversal and rebooking** involves taking segments from a previous period and posting a new allocation in the current period (using corrected reference data from the previous period).
- The **segment reversal** deletes the allocation postings for the selected segment by reposting the results with reversed +/- signs. The data for the current period-end closing transaction is not changed.
- **Segment reversal and rebooking** deletes the allocation but retains the component data. If required, you can correct data from the previous period for a particular segment or segments. You can change statistical key figures, switch round +/- signs, select different receivers, and make any other corrections necessary. You can use the rebooking functions only in combination with the reversal function: a separate transaction for rebookings does not exist.
- Although the period that is to be reversed is normally closed, this does not have to be the case. However, allocations belonging to the previous period must have used the cycle and the segments, and the **current period** must **not** be closed. You do not need to repeat period-end closing for the previous periods; reporting remains consistent for all the periods in question.
- Segment adjustment is possible for assessment, distribution, and for periodic repostings. Note that individual segments are reversed and rebooked, but not whole cycles. **Iterative relationships** between cycles are not included. This could cause inconsistencies and errors if you do not reverse and rebook iterative segments at the same time.

Reversing and Reposting Segments: Example

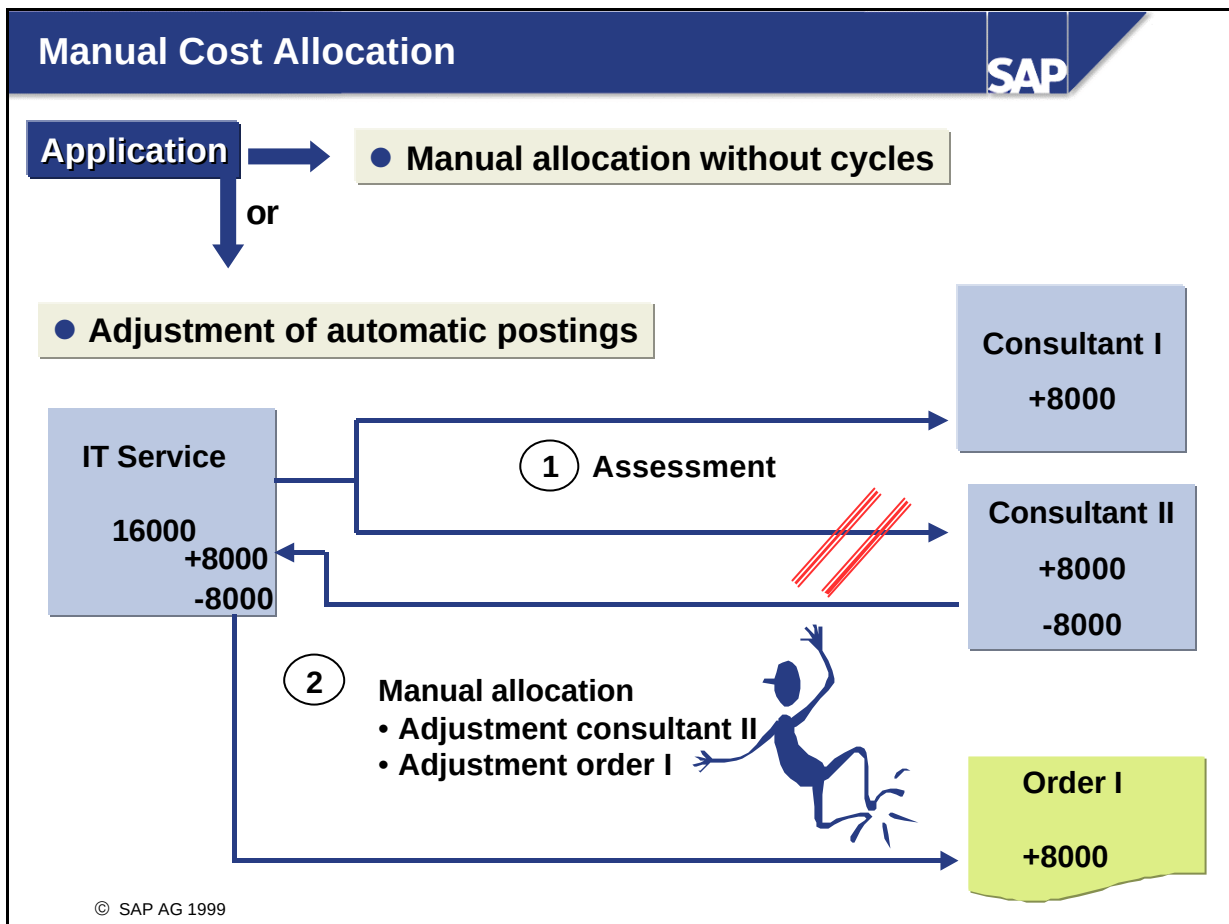
SAP



		Periods for Periods			Adjustment ReversalReposting		Standard reposting
	CCtr	Jan. 98	Feb. 98	Mar. 98	April 98		April 98
Tracing factor	B	50%	50%	50%	50%	75%	75%
	C	50%	50%	50%	50%	25%	25%
Posted values	A	- 100	- 100	- 100	+ 300	- 300	- 100
	B	+ 50	+ 50	+ 50	- 150	+ 225	+ 75
	C	+ 50	+ 50	+ 50	- 150	+ 75	+ 25

© SAP AG 1999

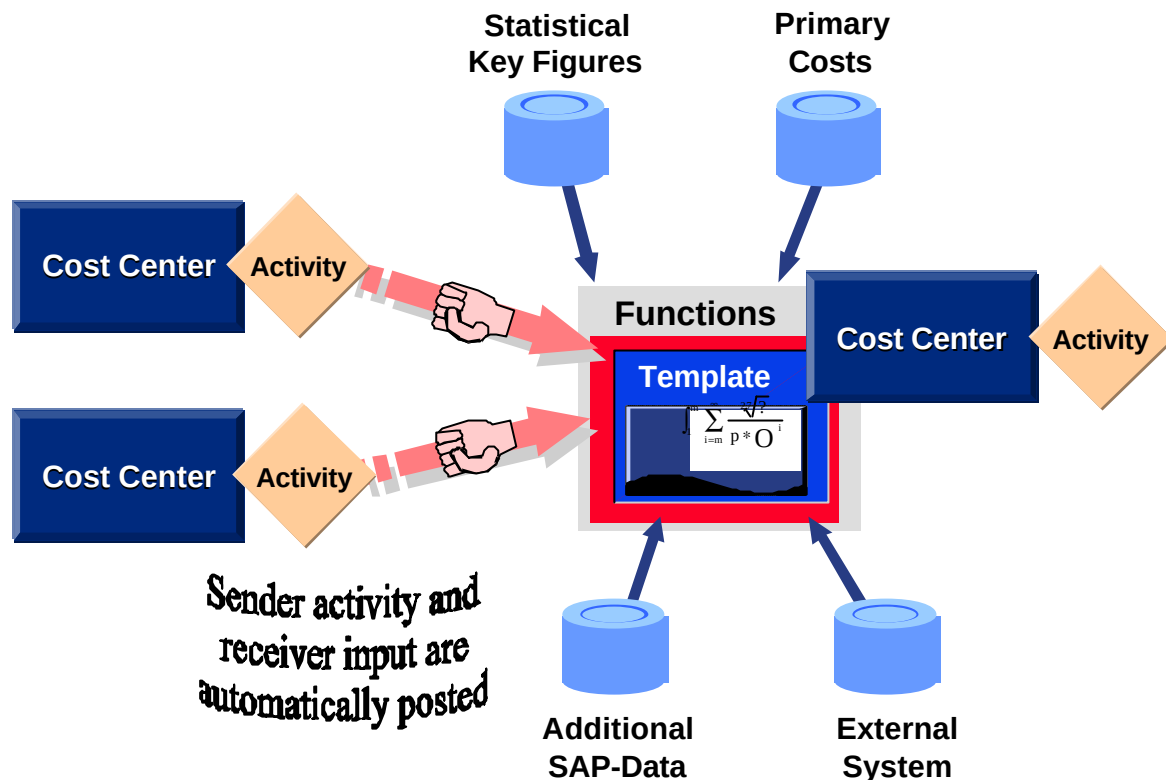
- In the above **example**, cost center A reposts its costs to cost centers B and C. Percentage rates are entered as tracing factors.
- Between January and March cost center A posts its costs of \$100 in equal parts to cost centers B and C. In April, however, an employee sees that the allocation bases were incorrect. The reposting is to be made, with a 75% portion for cost center B, and 25% for cost center C. You have to reverse the reposting allocation for the closed periods (January through March).
- Reversing the segments in April deletes the allocations that were made between January and March from cost center A to cost centers B and C. Cost center A is debited with $3 \times \$100 = 300$. Cost centers B and C are each credited with $3 \times \$50 = \150 . (the adjustment is posted in April and not in the original posting period.)
- The segment reposting in April is a corrected reposting for the three previous periods using the new tracing factor. Cost center A is credited with \$300. Cost center B is debited with $(75\% \text{ of } 1000) \times 300 = \225 . Cost center B is debited with $(25\% \text{ of } 1000) \times 300 = 75$.
- The standard reposting for April is now made on the basis of the new tracing factor.



- Manual cost allocation lets you post primary and secondary costs manually. Unlike the reposting of costs, which reduces the original debit line on the cost center, under manual cost allocation, a separate credit line is written to the sender.
- You can avoid having to make time-consuming settings in Customizing by using manual cost allocation **for simple allocations**. Manual cost allocation also lets you **adjust** incorrect secondary postings and import data from external systems. Such adjustments do not involve a reversal, but a new allocation.
- You can use manual cost allocation for all cost element categories. An exception to this is category 43 (allocation of activities/processes) which may only be used for activity allocation. **Senders and receivers** include cost centers, internal orders, WBS elements, business processes, networks, activities, customer orders, cost objects, and real estate objects.
- Note that you can use manual cost allocation for **actual data** only.
- If you carry out **period-based allocation** following manual allocation, ensure that all the cost elements used in the manual posting are contained in the allocation scheme for automatic allocation. Costs that are debited to a cost center by manual cost allocation cannot be further debited using periodic reposting. Periodic repostings are used only to correct postings, and should be carried out before the allocations (manual or automatic) take place.

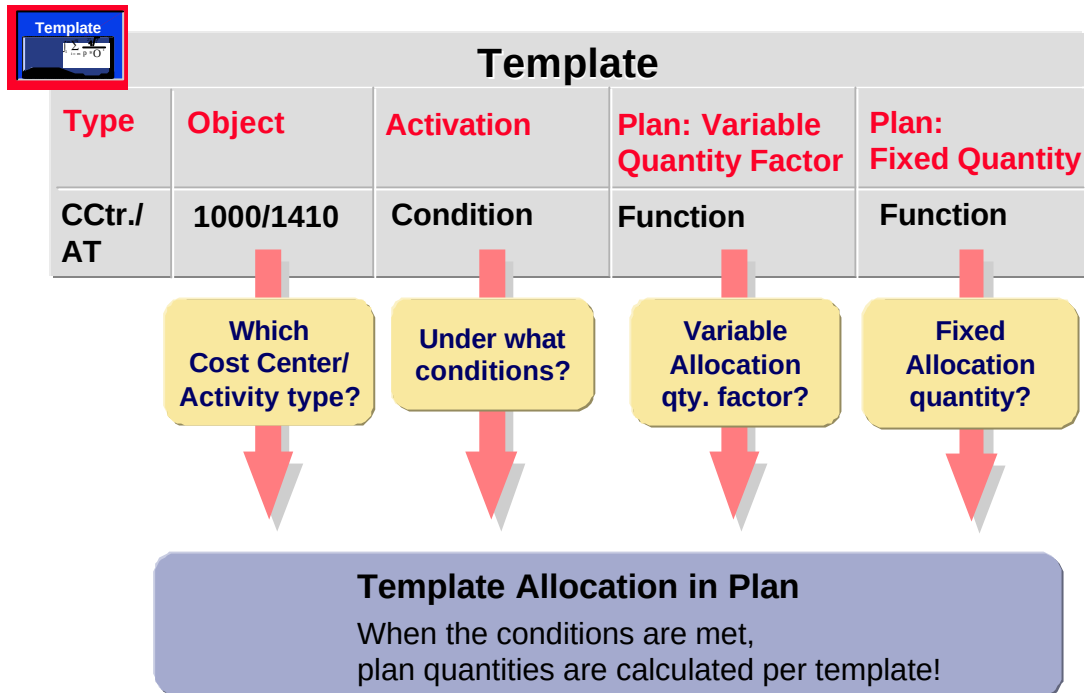
Template Allocation in Actual

SAP



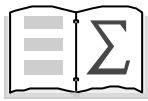
© SAP AG 1999

- The **template allocation** is used to calculate the quantities that are consumed from each individual receiver cost center.
- The cost calculations are products of the quantities and the prices.
- To calculate the needed data, the **template** uses R/3 **standard or user-defined functions**. The templates make it possible to **reference specific field contents** and to **carry out complex algorithms using operative data** from the R/3 system.
- The template allocation can be made to a cost center as activity independent or dependent.
- A requirement for the template allocation to a cost center is to assign a template of the cost center, which occurs when you enter the template in the master data of the corresponding cost center.
- You can base the allocation on periods or fiscal years.
- For template allocations, receiver objects can be cost centers, cost center/activity types, profitability segments, cost objects and business processes.



- The **template** is a **dynamic tool** that uses formulas and Boolean (true/false) logic to calculate values on a table (row/column) structure.
- You can enter an object yourself (for example, cost center 1000 / activity type 1410) in the **object column**, or you can have the system determine this for you during the time of evaluation (for example, the cost center of a specific cost center category).
- You can use it to **set the value** of an item to active or inactive, to define **conditions** that are checked during the evaluation or to set requirements for allocations.
- During the activity independent template allocation, the variable quantity factor determines the planned sender-output quantity by multiplying the output quantity of the receiver object with the variable factor. You can enter a constant value for the factor, or allow the system to calculate it automatically during the time of evaluation. The fixed planned quantities represent fixed consumption quantities that you enter as constant values or allow the system to calculate automatically during the time of evaluation.

You are now able to:

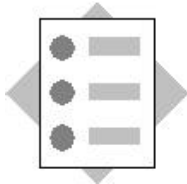


- **Explain accrual calculation**
- **Describe how to create an overhead structure**
- **Enter statistical key figures**
- **Demonstrate periodic reposting, distribution, and assessment and the differences between them**
- **Define and execute periodic repostings, distributions, and assessments using the cycle segment method**

Optional Exercises

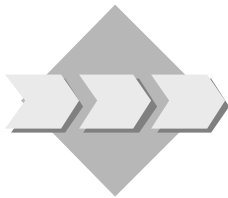


Unit: Period-End Closing Topic: Accrual Calculation



At the conclusion of these exercises, you will be able to:

- Explain accrual calculation
- Describe how to create an overhead structure



The project team has not decided whether the accrual for salary-related costs should be calculated in FI or CO. You are to contribute to this decision, and explain the way the percentage method works to the other team members.

1-1 Describe the accrual calculation process.

1-1-1 Explain what **base cost elements** are.

1-1-2 Which three entries are required to complete the overhead structure definition?

1-1-3 Why do you have to define an accrual object?

1-1-4 Is an overhead structure required for each company code?

1-2 Examine the overhead structure ID-EU2 that is assigned to controlling area CO Europe (1000) for actual accrual calculation.

1-2-1 Identify the bases assigned to the overhead structure, as well as the cost elements contained in these bases.

Base	Cost elements

1-2-2 What is the percentage for actual overhead for the *Overtime salary* row for company code 1000?

1-2-3 What is the accrual cost element for the *Overtime salary* row for company code 1000, business area 8000 (external services)?
Also, identify the type of accrual credit object and write down the accrual object number.

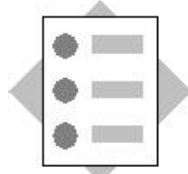
1-2-4 Would any overtime wage or salary costs need to be accrued, based on the actual postings that you have made for your cost center?

Exercises



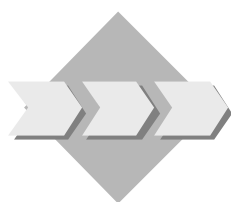
Unit: Period-End Closing

Topic: Entering Statistical Key Figures



At the conclusion of these exercises, you will be able to:

- Enter statistical key figures that will be used as the basis for periodic allocations.



The costs on the "Telephone" cost center are to be allocated to all of the other consulting cost centers using periodic reposting. The number of telephone units assigned to each cost center is used as the basis for the allocation. The costs from the "IT Service" and "Vehicles" cost centers are allocated to the appropriate cost centers, based on the number of PCs in use, and the number of kilometers traveled respectively. You have to enter these statistical key figures before allocating the costs.

2-1 Enter the statistical key figures that you will need as allocation bases for period-end closing tasks.

2-1-1 Use **today's date** as the document date, and the **cost center** screen variant. Remain in the list entry, and post the following data:



You can speed up data entry by using the *Fill column* function (updates the statistical key figure in the column), and the *Reset column* (resets the statistical key figures from the row in which the cursor is placed).

Cost center	Statistical key figures	Quantity
201## (Organization)	TELE##	10.000
202## (IT service)	TELE##	10.000
301## (FI/CO Consulting)	TELE##	20.000
302## (LO Consulting)	TELE##	40.000
201## (Organization)	PC##	2
202## (IT service)	PC##	5
301## (FI/CO Consulting)	PC##	18
302## (LO Consulting)	PC##	12
301## (FI/CO Consulting)	KM##	66.000
302## (LO Consulting)	KM##	33.000

- 2-1-2 Check the effects of this posting in the current and following periods in the report. Call up the *Statistical Key Figures: PeriodBreakdown* report for **all periods** in the **current fiscal year** and plan version **0**. Run the report for the consulting cost center group (**B##**).

Why are values also entered in the periods following the current period for the statistical key figure PC##?

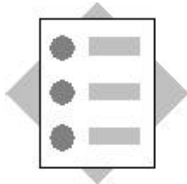
- 2-1-3 Use the navigation function to display the statistical key figure amounts for the **FI/CO Consulting (301##)** cost center.

Exercises



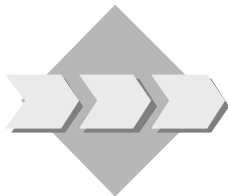
Unit: Period-End Closing

Topic: Periodic Reposting



At the conclusion of these exercises, you will be able to:

- Define a periodic reposting
- Assign a periodic reposting to a cycle run group, and run the cycle.



The costs on the "Telephone" cost center are to be allocated to all of the other cost centers in the consulting department, using periodic reposting. The number of telephone units assigned to each cost center is used for the allocation. To enable more than one cycle of a particular allocation type to run at the same time in the organization, you need to assign them to different cycle run groups.

- 3-1 Create a cycle with a segment to repost the costs from the *Telephone* cost center to the other cost centers in the consulting department.
 - 3-1-1 First of all, check the *Cost Centers: Actual/Plan/Variance* report to see if the telephone costs of 8000 UNI (cost element **473120**) were correctly posted for the **current period**
 - 3-1-2 Create periodic reposting cycle **PU##** for use with actual data. This cycle's starting date is the **first day of the current fiscal year**. Name the cycle **Period Reposting Telephone ##**.
 - 3-1-3 Add a segment **Telephone** with a description **to all cost centers ##**. Repost all of the **actual amounts** for the period (**100%**). Use variable portions as tracing factors. These should be actual statistical key figures.
 - 3-1-4 Call up the *Sender/receiver* tab page. The "Telephone" cost center (**101##**) is the sender for your allocation. Repost the telephone costs, cost element **473120**. The **PU-TELE##** cost center group is the receiver of the allocation.
 - 3-1-5 Call up the *Receiver tracing factor* tab page. Enter **TELE##** (number of telephone units) as the statistical key figure. Return to the header data of the cycle. Save the cycle with **checks**.
Remain in the header data of the cycle
 - 3-1-6 To enable all of the cycles created in the course to be run at the same time, you must assign the cycles to different run groups. Create run group **Gr##**, and name it **PU Grp##**. Save the cycle. When you save the cycle, the system automatically assigns it to run group **Gr##**.
Call up the cycle run group again, and display the overview.

3-2 Run the cycle for periodic reposting.

3-2-1 Run your cycle PU## as a test run for the **current period**. Select processing with *Detailed lists*.

3-2-2 Display the sender information for the PU## cycle. How was the sender base calculated?

3-2-3 Display the receiver information for the PU## cycle. Next, display the line items for the cycle. Why does the receiver list only have half as many rows as the line item list?

3-2-4 Execute the periodic reposting in an *update run* to post the credits and debits. To do this, deselect the *Test run* checkbox.

3-3 Check the results of the periodic reposting.

3-3-1 Call up the *Cost Centers: Actual/Plan/Variance* report for the **current period**, and in version **0**. Run the report for the sender cost center **101##** (Telephone).

Which debit is displayed?

How many credit records were written?

3-3-2 Display the *Cost Centers: Actual line items* report for cost element **473120** (telephone costs)

3-3-3 Call up the *Cost centers: Breakdown by Partner* report for cost element **473120**. Which information does it provide you on the partner(s) for the periodic reposting?

3-3-4 Call up the *Cost Centers: Actual/Plan/Variance* report for cost center **202##** "IT Service".
Ensure that the telephone costs do not come from a primary posting but are a result of periodic reposting.

3-3-5 Call up the *Cost centers: Breakdown by Partner* report for cost element **473120**. Is the (partner) sender for the costs visible?

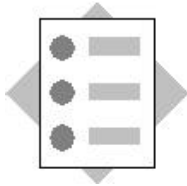
Is the partner information important in this case?

Exercises



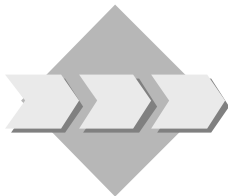
Unit: Period-End Closing

Topic: Cost Allocations



At the conclusion of these exercises, you will be able to:

- Define and execute an assessment cycle with more than one segment
- Explain segment iteration
- Use different functions for segment and cycle management.



Most cost centers in your organization will be credited using assessment. During this process, cost centers are debited simultaneously. Since more than one cost center is involved in assessment, you prefer clearer, more convenient display and use of the data quantities.

- 4-1 Explain to the project team members why you did not choose distribution to credit the "Telephone" cost center. Distribution would also have transferred the primary costs.
- 4-2 Create an assessment cycle with more than one segment to credit the "Organization", "IT Service", and "Vehicles" cost centers.

- 4-2-1 Create cycle **ASSE##** in the actual data. This cycle's starting date is the **first day of the current fiscal year**. Name the cycle **Assessment-consulting-Dept##**. **Deselect** the **Iterative** indicator. Define a segment for each of the different assessment relationships.

1. Segment

- Add a segment **Orga##** with the description **Assessment 201## by percentage**. The allocation cost element is **6300##**. **100%** of the posted **actual costs** are to be assessed using **fixed percentages**.
- Choose the *Sender/Receiver* tab page. The **201##** cost center (organization) is the sender for the assessment. The system allocates all of the cost elements in the **4000000 to 650000** interval. The **ASSE-OR##** cost center group is the receiver for the assessment.
- Choose the *Receiver tracing factor* tab page. The "Organization" cost center uses **60%** of its time and resources for FI/CO Consulting (301##), **30%** for LO Consulting (302##), and the remaining **10%** for the "IT Service" cost center (202##).

2. Segment

- Add a segment **IT-SERV##** with the description **Assessment 202## by PC**. The allocation cost element is **6310##**. **100%** of the posted **actual costs** are to be assessed using **variable portions** of the actual statistical key figure.
- Choose the *Sender/Receiver* tab page. The **202##** cost center (IT Service) is the sender for the assessment. The system allocates all of the cost elements in the **4000000 to 650000** interval. The **ASSE-IT##** cost center group is the receiver of the allocation.
- Choose the *Receiver tracing factor* tab page. Enter the statistical key figure **PC##** as a tracing factor for your allocations.
- Since the consultants are often out of the office, their PCs require fewer repairs than the PCs in the "Organization" cost center. You can include this on the *Rec. wght factors* tab page. For the **201##** cost center (**Organization**), enter a factor of **300**, as repair expenses for the PCs on that cost center are three times higher.

3. Segment

- Add a segment **Vehic##** with the description **Assessment 203## by km number**. The allocation cost element is **6311##**. **100%** of the posted **actual costs** are to be assessed using **variable portions** of the actual statistical key figure.
- Choose the *Sender/Receiver* tab page. The **203##** cost center (Vehicles) is the sender for the assessment. The system allocates all of the cost elements in the **4000000 to 650000** interval. The consulting cost centers (cost center group **B30##**) are the receivers of the allocation.
- Choose the *Receiver tracing factor* tab page. Enter the statistical key figure **KM##** as a tracing factor for your allocations. Go to the segment header, make a formal check, and save your entries.

4-2-2 To enable all of the cycles created in the course to be run at the same time, you need to assign the cycles to different run groups. Create run group **Gr##**, and name it **Gr##**. (As this is a different allocation category than in the previous exercise, the name Gr## can be used again). Save the cycle.

4-3 Before you make the assessment, call up the *Cost Centers: Actual/Plan/Variance* report for the **current period**, and version **0**. Run the report for the consulting cost center group **B20##**. Which amounts will be allocated from the 201## (Organization), 202## (IT Service), and 203## (Vehicles) cost centers?

201## (Organization)_____

202## (IT
Service)_____

203## (Vehicles)_____

4-4 Run the actual cycle for the assessment.

4-4-1 Run the **ASSE##** cycle for the **current period**, with detail lists. Select *Test run*.

4-4-2 Display the segments. What does the figure 3 signify in column R?

4-4-3 Call up the receivers for each segment. Note down each receiver cost center.

Receivers for segment **ORGA##**:

1. _____ 2. _____ 3. _____

Receivers for segment **IT-SERV##**

1. _____ 2. _____ 3. _____

Receivers for segment **VEHIC##**:

1. _____ 2. _____ 3. _____

4-4-4 Note down the debit entries posted to cost centers **201##** (Organization) and **202##** (IT Service).

201## (Organization) debits 202## (IT Service) with _____

201## (IT Service) debits 202## (Organization) with _____

4-4-5 The 202## (IT Service) cost center allocates its costs based on the number of PCs. Although the 201## (Organization) cost center has only got two PCs, a tracing factor of **6** is displayed. Provide an explanation for this.

4-4-6 Run the cycle in an **update run** to post the allocations.

4-5 Check the result of the assessment in the report.

4-5-1 Call up the *Cost Centers: Actual/Plan/Variance* report for the **current period** and in version **0**. Run the report for the consulting cost center group **B20##**.

Although a 100% credit (sender rule) was defined for all the cost centers in the assessment cycle, not all of the cost centers are fully credited. Which were not fully credited?

4-5-2 Why were these cost centers not fully credited?

(See the notes for exercise 4-4-3)

4-6 Now execute the assessment with iteration of the segments.

4-6-1 Reverse the assessment results of the **ASSE##** cycle first from the previous activity. Execute the reversal in an **update run**.

4-6-2 Now change the **ASSE##** cycle by selecting the **Iterative** indicator in the header data. Save the cycle.

4-6-3 Run the **ASSE##** assessment cycle again in an **update run**.

4-6-4 Call up the sender information and note down the sender amounts for the **201## (Organization)** and **202## (IT Service)** cost centers.

201## (Organization):_____

202## (IT Service):_____

Compare the numbers with those from exercise 4.3. What do you notice?

4-6-5 Call up the line items. Note down the debit amounts that were posted to cost centers **201## (Organization)** and **202## (IT Service)**.

201## (Organization) debits 202## (IT Service) with_____

201## (IT Service) debits 202## (Organization) with_____

Compare the numbers with those from exercise 4-4-4.

What causes this difference?

4-6-6 Optional Exercise: 4-6-6

Use the following graphic and tables to track the iteration manually. The graphic already contains the receiver tracing factors for allocation of the **201## (Organization)**, and **202## (IT Service)** cost centers. Complete the tables.



The amounts can be determined without using a calculator. Any small variances that may arise in the result calculated by the R/3 system are not important for understanding the exercise.

201## (organization)

60% to 301## (FI/CO Consulting)

30% to 302## (LO Consulting)

10% to 202## (IT Service)

	Actual costs from the sender	Cost debit from 202## (IT Service)	Tracing factor	Allocation to 202## (IT Service)
1. Run	9,000	---	10%	
2. Run	---		10%	
3. Run	---		10%	
4. Run	---		10%	
Σ			10%	

202## (IT service) Tracing factors

18 → 301## (FI/CO Consulting)

12 → 302## (LO Consulting)

6 → 201## (Organization)

	Actual costs from the sender	Cost debit from 201## (Organization)	Tracing factor	Allocation to 201## (Organization)
1. Run	36,000		1/6	
2. Run	---		1/6	
3. Run	---		1/6	
4. Run	---		1/6	
Σ			1/6	

- 4-7 Check the result of the assessment in the *Cost Centers: Actual/Plan/Variance* report for the **current period**, and in version **0**. Run the report for the consulting cost center group **B20##**.
Go to each individual cost center. What do you notice?

Optional Exercise Activity: 4-8-6

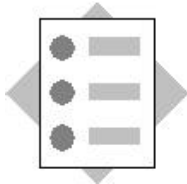
- 4-8 CO employees that were not directly involved in the definition of the cycles would like to have a brief overview of the allocation relationships. Demonstrate the options provided by the R/3 system for this to your colleagues.
- 4-8-1 Call up the *Cycle overview*. Place the cursor on the assessment cycle **ASSE##** in the tree structure for cycles, and call up the cycle information.
- 4-8-2 Display the previous processing for the **current period**. Choose the display with reversal. You can display the line items by double-clicking on the document number.
- 4-8-3 Return to the cycle overview. Check the cycle definition (*Start date, end date, cycle run group, iteratively* indicator) for the other course participants. On the *Selection criteria* tab page, select the **Actual assessment cycle** course type, and the **ASSE01** to **ASSE18** cycles. (Increase the screen for the cycle structure screen to the right.)

Exercises



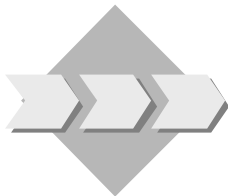
Unit: Period-End Closing

Topic: Cost Allocations



At the conclusion of these exercises, you will be able to:

- Create an allocation structure.



You feel that using an assessment that incorporates only one assessment cost element does not provide enough detail. As the assessment receiver, you require more detailed information on the source of the cost elements, such as, personnel or material costs. However, you would like to avoid defining ten separate segments simply use ten assessment cost elements to credit a cost center. An allocation structure enables you to use more than one assessment cost element in a segment.

- 5-1 In the future, you want the assessment of the "Vehicles" cost center to be more detailed, using two assessment cost elements. These are, assessment of personnel costs, and assessment of material costs. Define an allocation structure.
- 5-1-1 Create two assessment cost elements: **6316## (Assess. Vehic-Mat##)**, and **6317## (Assess. Vehic-Pers##)**, using cost element category **42**.
- 5-1-2 In customizing, define an allocation structure with the following text: **Material and personnel costs**. To name the structure, choose the first letter of the alphabet (**A**) if you are in group 01, **B** if you are in group 02, **J** if you are in group 10, and so on.
- 5-1-3 Define the assignment number **01**, with the text **Vehicle material costs**, and the assignment number **02**, with the text **Personnel costs**. For each assignment, specify which primary cost elements are to be allocated with which assessment cost element.
- 5-1-4 Select *Assignment 01*, and go to the *Source* definition. You want to allocate all vehicle costs (**from cost element 475000**). Cost element **6316## (Asses. Vehic.-Mat##)** is to be used as the assessment cost element for allocating the vehicle costs.
- 5-1-5 Select *Assignment 02*, and go to the *Source* definition. You want to allocate all personnel costs (**from cost element 420000 to 431000**). Cost element **6317## (Asses. Vehic.-Pers##)** is to be used as the assessment cost element for allocating the personnel costs.

5-2 You want to familiarize yourself with the way the allocation structure works.

5-2-1 Reverse the assessment results of the **ASSE##** cycle first from the previous activity.

5-2-2 Now call up your actual **ASSE##** cycle up in the change mode. Call up the *Segment overview*. Copy the **VEHIC##** segment, and insert a copy. Name the new segment **VEHIC##NEW**. This is where you enter your allocation structure. As there are now two segments for assessment of the vehicles cost center, the system credited the cost center more than 100%. Therefore, you must either **delete** the old segment VEHIC##, or set the **locking indicator** in the segment header. If you set the locking indicator, the segment definition is retained, but is not included in the cycle run. Save your changes.

5-2-3 Run the **ASSE##** assessment cycle again in an update run.

5-2-4 Call up the sender information. Although only three cost centers are involved in the assessment, four rows are displayed in the sender list. Provide an explanation for this.

5-3 Check the result of the assessment in the report of a receiver. Call up the *Cost Centers: Actual/Plan/Variance* report for the **current period**, and in version **0**. Run the report for cost center **302# (LO Consulting)**.

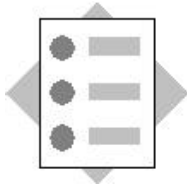
Which additional information do you now have on the receiver cost center?

Optional Exercises



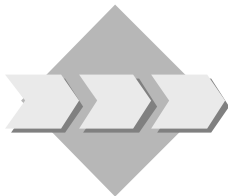
Unit: Period-End Closing

Topic: Reconciliation Ledger



At the conclusion of these exercises, you will be able to:

- Make a reconciliation posting



In the project team, you decided that Controlling is to always be reconciled with Financial Accounting with regard to business areas. This means that in FI, you want to follow up cross-business area postings that you made in Controlling during allocations.

- 6-1 Before reconciliation, examine the cost flows that apply to all of the business areas and require reconciliation.
- 6-1-1 In Cost Element Accounting under the cost flow node, call up the *Cost elements: Allocation between business areas* report, for the **current period** in controlling area **1000**. Run the report for the business areas that are in the **8000** to **IS##** interval.
- 6-1-2 If you receive a warning message about a threshold value, deactivate the threshold setting. If no message is displayed, continue with the next step.
- 6-1-3 Choose Variation. Set the business area to **IS## Internal Services group ##**, and the partner business area to **8000 External Services** to display the cost flows between these two business areas. When you exit the report, save the layout settings if you changed the threshold value.

6-2 Execute the reconciliation postings to FI for your business area **only**.

6-2-1 Execute the reconciliation postings in company code **1000**, and for the **current period**. You want to *select reconciliation postings interactively*. Run the program in an *update run*, and choose *Detail lists*.

6-2-2 Select all rows that contain business area (BusA) **8000**, and partner business area (PaBA) **IS##** or vice versa in their columns. Execute the reconciliation posting. Avoid selecting the postings of another group at all costs.

6-3 Check the costs that were reconciled.

6-3-1 Under the cost flow node, call up the *Cost elements: Allocation between business areas* report, for the **current period** in controlling area **1000**. Run the report for the business areas that are in the **8000** to **IS##** interval.

6-3-2 Choose Variation. Set the business area to **IS## Internal services group ##**, and the partner business area to **8000 External services** to display the cost flows between these two business areas.

In what way does the displayed report differ from that in activity 6-1?

6-3-3 To check whether any reconciliation postings are still open, call up the *Overview: Cost flows* report for company code **1000**, in the **current period**. Deactivate the *Line item statements* and *Reconciliation posting*. Only call up the *postings that were not reconciled*.

Solutions



Unit: Period-End Closing

Topic: Accrual Calculation

1-1

1-1-1 Base cost elements used as a calculation basis for overheads.

1-1-2 Base cost element(s), overhead rates, accrual object(s);

1-1-3 To credit a cost center periodically, using an accrual cost element, you need to specify an accrual object as a receiver for the offsetting entry. This accrual object in CO is also a debit object in FI, as the actual (unique) expense posting is assigned to the accrual object. As a result, the periodic accruals in CO are balanced by the posting to an expense account in FI on the accrual object.

1-1-4 An overhead structure is assigned to a controlling area. You can create an overhead structure for actual accrual calculation and for each plan version. You can then assign this to the controlling area.

1-2 **IMG: Controlling ® Cost Center Accounting ® Actual Postings ® Period-End Closing ® Accrual Calculation ® Percentage Method ® Maintain Overhead Structure ® Goto ® CO Area Overview**

Expand the *Actual accrual calculation* node in controlling area 1000

Place the cursor on the current actual accrual calculation.

Goto ® Choose overhead structure

1-2-1 Double-click on each base.

Field name or data class	Cost elements
Base A-B1	420000 – 421000

Goto ® Back

Base A-B2	430000
-----------	--------

Goto ® Back

1-2-2 Double-click on overhead **IZ 21** in row 50 (Overtime salary)-

The actual overhead rate in company code 1000 is 2.50%

1-2-3 Double-click this row in the credit column.

The accrual cost element for company code 1000 and business area 8000 is 431000.

Accrual object is order 9AEUDE8000_P.

1-2-4 **CCA: ® Information system ® Reports for Cost Center Accounting ® Plan/Actual comparisons ® Cost Centers: Actual/Plan/Variance**

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center group</i>	<i>B##</i>

Program ® Execute

Overtime wage refers to overhead base A-B1, and in turn to cost elements 420000-421000. These cost elements have as yet had no postings, so no costs have been accrued.

Overtime salary refers to overhead base A-B2, which contains cost element 430000. As salary postings were made, an accrual run would lead to overtime salary costs being posted.

Solutions



Unit: Event-Based Postings

Topic: Entering Statistical Key Figures

2-1

2-1-1 CCA: ® Actual postings ® Statistical key figures ® Enter

Field name or data class	Values
Document date	Current
Posting date	Current
Screen variant	Cost center

Cost center	Statistical key figure	Total quantity
201## (Organization)	TELE##	10.000
202## (IT service)	TELE##	10.000
301## (FI/CO Consulting)	TELE##	20.000
302## (LO Consulting)	TELE##	40.000
201## (Organization)	PC##	2
202## (IT service)	PC##	5
301## (FI/CO Consulting)	PC##	18
302## (LO Consulting)	PC##	12
301## (FI/CO Consulting)	KM##	66.000
302## (LO Consulting)	KM##	33.000

Save your data.

2-1-2 **CCA: ® Information system ® Reports for Cost Center Accounting ®
More reports ® Statistical key figures: Period drilldown**

Field name or data class	Values
<i>Controlling area</i>	1000
<i>Fiscal year</i>	Current
<i>From period</i>	1
<i>To period</i>	12
<i>Plan version</i>	0
<i>Cost center group</i>	B##

Program ® Execute

The PC## statistical key figure is defined as a fixed value, and is updated as such from the entry period to the following period of the fiscal year.

2-1-3 **Navigation on/off icon**

Expand **node B##** in the navigation.

Click on **cost center 301##**.

Solutions



Unit: Period-End Closing

Topic: Periodic Reposting

3-1

3-1-1 *Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost Centers: Actual/Plan/Variance*

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center</i>	<i>101##</i>
<i>Cost element</i>	<i>473120</i>

Program ® Execute

3-1-2 *CCA: Period-end closing ® Single functions ® Periodic reposting ® Extras ® Cycle ® Create*

Field name or data class	Values
<i>Cycle</i>	<i>PU##</i>
<i>Start date</i>	<i>01.01. current fiscal year</i>

Enter

<i>Text</i>	<i>Period. Reposting Telephone ##</i>
-------------	---

3-1-3 *Edit ® Attach segment*

Field name or data class	Values
<i>Segment name field 1</i>	<i>Telephone</i>
<i>Segment name field 2</i>	<i>To all cost centers ##</i>

Sender values	
<i>Rule</i>	<i>Posted amounts</i>
<i>Portion in %</i>	<i>100</i>
<i>Actual values</i>	<i>Select</i>
Receiver tracing factors	
<i>Rule</i>	<i>Variable portions</i>
<i>Variable portions type</i>	<i>Actual statistical key figures</i>
<i>Scaling of negative tracing factors</i>	<i>No scaling</i>

3-1-4 Choose the *Sender/Receiver* tab page.

Field name or data class	Values
Sender	
<i>Cost center</i>	<i>101##</i>
<i>Cost element</i>	<i>473120</i>
Receiver	
<i>Cost center group</i>	<i>PU-TELE##</i>

3-1-5 Choose the *Receiver tracing factor* tab page.

Field name or data class	Values
Selection criteria	
<i>Statistical key figure</i>	<i>TELE##</i>

Goto ® Header data

Cycle ® Save cycle ® With check

Save your data.

Confirm the *Customizing order* dialog box.

3-1-6 **Goto ® Cycle run group**

Create group icon

Field name or data class	Values
<i>Run group field 1</i>	<i>Gr##</i>
<i>Run group field 2</i>	<i>PU Grp ##</i>

Confirm your entries.

Save your data.

Goto ® Cycle run group

Cycle run group overview icon.

Expand G##.

3-2

3-2-1 **CCA: Period-end closing ® Single functions ® Periodic reposting**

Field name or data class	Values
<i>Period</i>	<i>Current</i>
<i>Fiscal year</i>	<i>Current</i>

Select *Test run* and *Detail lists*.

<i>Cycle</i>	<i>PU##</i>
--------------	-------------

Periodic Reposting ® Execute

3-2-2 **Goto ® Sender**

The sender base is the total of the statistical key figure TELE## on all receiver cost centers. (80.000).

3-2-3 Return to the basic list.

Goto ® Receiver Check the list.

Return to the basic list.

Goto ® Line items

The receiver list only contains the debits posted to the receiver cost centers.
The line item list also displays the credit postings on the sender cost center.

3-2-4 Return to the initial screen for periodic repostings.

Click on *Test run* to deactivate this setting.

Periodic repostings ® Execute

3-3-1 **Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost Centers: Actual/Plan/Variance**

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center</i>	<i>101##</i>

Program ® Execute

There is **no debit** on cost center **101##**.

The system did **not** write any **credit records**.

3-3-2 Place your cursor on the report row for **cost element 473120##**.

Settings ® Rep./Rpt interface, or double-click on the report row

Choose the *Cost centers: Actual line items* report.

3-3-3 Return to the summary report.

Place your cursor on report row cost **element 473120##**.

Settings ® Rep./Rpt interface, or double-click on the report row

Choose the *Cost centers: Breakdown by partner* report.

The report does not provide any information on the receivers since the partners are not updated in the totals record during periodic reposting.

3-3-4 **Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost Centers: Actual/Plan/Variance**

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center</i>	<i>202##</i>

Program ® Execute

Place your cursor on the report row for **cost element 473120**.

Settings ® Rep./Rpt interface, or double-click on the report row

Choose the *Cost centers: Actual line items* report.

Settings ® Display variant ® Current

List: Hidden fields

Select *Transaction*.

Left arrow "Show selected fields" icon.

Copy icon.

3-3-5 Return to the summary report.

Place your cursor on report row **cost element 473120**.

Settings ® Rep./Rpt interface, or double-click on the report row

Choose the *Cost centers: Breakdown by partner* report.

You do **not** receive any information on the sender of the costs.

In this case, the partner information is of no importance, since the partner can be identified by the cost element.

Solutions



Unit: Period-End Closing

Topic: Cost Allocations

4-1 The sender cost center does not require any information on the amount of the original debit.

Senders and receivers do not require any partner information.

Lower use of system resources.

4-2

4-2-1 **CCA: Period-end closing ® Single functions ® Allocations ® Assessment ® Extras ® Cycle ® Create**

Field	Values
Cycle	ASSE##
Start date	01/01/ current fiscal year

Execute or **Enter** icon.

Text	Assessment consulting dept ##
Iterative indicator	Deselect
Version	0

1. Segment

Edit ® Attach segment

Segment name field 1	Orga##
Segment name field 2	Assessment 201## by percentage
Assessment cost element	6300##
Sender values	
Rule	Posted amounts
Portion in %	100
Actual values	Select

Receiver tracing factors	
Rule	Fixed percentages

Switch to the *Sender/receiver* tab page.

Sender	
<i>Cost center</i>	201##
<i>Cost element</i>	From 400000 to 650000
Receiver	
<i>Cost center group</i>	ASSE-OR##

Switch to the *Receiver tracing factor* tab page.

Receiver	Percentage portion
202##	10
301##	60
302##	30

2. Segment

Edit ® Attach segment

<i>Segment name field 1</i>	IT-SERV##
<i>Segment name field 2</i>	Assessment 202## by PC number
<i>Assessment cost element</i>	6310##
Sender values	
<i>Rule</i>	Posted amounts
<i>Portion in %</i>	100
<i>Actual values</i>	Select
Receiver tracing factor	
<i>Rule</i>	Variable portions
<i>Variable portion type</i>	Actual statistical key figures)

Switch to the *Sender/receiver* tab page.

Sender	
<i>Cost center</i>	202##
<i>Cost element</i>	From 400000 to 650000
Receiver	
<i>Cost center group</i>	ASSE-IT##

Switch to the *Receiver tracing factor* tab page.

Field	Values
<i>Statistical key figure</i>	PC##

Switch to the *Rec.wght.factors* tab page.

Receiver	Factor per 100
201##	300

3. Segment

Edit ® Attach segment

<i>Segment name field 1</i>	Vehic##
<i>Segment name field 2</i>	Assessment 203## by km number.
<i>Assessment cost element</i>	6311##
Sender values	
<i>Rule</i>	Posted amounts
<i>Portion in %</i>	100
<i>Actual values</i>	Select
Receiver tracing factors	
<i>Rule</i>	Variable portions
<i>Variable portion type</i>	Actual statistical key figures

Switch to the *Sender/receiver* tab page.

Sender	
<i>Cost center</i>	203##
<i>Cost element</i>	From 400000 to 650000
Receiver	
<i>Cost center group</i>	B30##

Switch to the *Receiver tracing factor* tab page.

Field	Values
<i>Statistical key figure</i>	<i>KM##</i>

Goto ® **Header data**

Formal check icon.

Save your data.

4-2-2 In the header data of the ASSE## assessment cycle.

Goto ® **Cycle run group** ® **Create group** icon.

Field	Values
<i>Run group field 1</i>	<i>Gr##</i>
<i>Run group field 2</i>	<i>Gr ##</i>

Confirm your entries.

Save the cycle.

4-3 **Cost Center Accounting** ® **Information system** ® **Reports for Cost Center Accounting** ® **Plan/Actual Comparisons** ® **Cost Centers: Actual/Plan/Variance**

Field name	Values
<i>Controlling area</i>	1000
<i>Fiscal year</i>	Current
<i>From period</i>	Current
<i>To period</i>	Current
<i>Plan version</i>	0
<i>Cost center group</i>	B20##

Navigate to each individual cost center in the variation menu.

The following will be allocated:

Cost center	201##	9,000
Cost center	202##	36,000
Cost center	203##	120,000

4-4-1 **Cost Center Accounting: Period-end closing ® Single functions ® Allocations ® Assessment.**

Field name	Values
<i>Period</i>	<i>Current</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Test run</i>	<i>Select</i>
<i>Detail lists</i>	<i>Select</i>
<i>Cycle</i>	<i>ASSE##</i>

Assessment ® Execute

4-4-2 **Goto ® Segment**

Column R displays the receiver rule stored in each segment. (F1 help)
3 signifies fixed percentages as the tracing factor.

4-4-3 Place your cursor on the given segment.

Goto ® Receiver

Repeat for each segment.

Receivers for segment ORGA##	202##	301##	302##
Receivers for segment IT-SERV##	201##	301##	302##
Receivers for segment VEHIC##	---	301##	302##

4-4-4 From the basic list

Goto ® Line items

201## debits 202## with 900.00

202## debits 201## with 6,000.00

4-4-5 Receiver tracing factors that are defined using the *Variable portions* rule can be assigned with different weighting factors.

This weighting factor, when multiplied with the tracing factor, enables you to take in to account differences in costs caused by the individual receivers.

Cost center 201## has 2 PCs that incur maintenance expense that is three times higher than for other cost centers, since they are used far more than other cost centers' PCs. Due to the weighting factor of 300, the tracing factor for assessment is increased from two to six.

4-4-6 **CCA: Period-end closing ® Individual functions ® Allocations ® Assessment.**

Field name	Values
<i>Period</i>	<i>Current</i>
<i>Fiscal year</i>	<i>Current</i>
Test run	Deselect
<i>Detail lists</i>	<i>Select</i>
<i>Cycle</i>	<i>ASSE##</i>

Assessment ® Execute

4-5

4-5-1 **CCA: Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost Centers: Actual/Plan/Variance**

Field name	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center group</i>	<i>B20##</i>

Cost center 201## Balance + 6,000

Cost center 202## Balance + 900

4-5-2 Cost centers 201## and 202## make allocations to each other. Since the assessment cycle was not defined iteratively, only one allocation run takes place to credit the sender cost centers. Debits that arise from the assessment remain on the receiver cost centers.

4-6

4-6-1 **Cost Center Accounting: Period-end closing ® Single functions ® Allocations ® Assessment.**

Field name	Values
<i>Period</i>	<i>Current</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Test run</i>	<i>Deselect</i>
<i>Detail lists</i>	<i>Select</i>
<i>Cycle</i>	<i>ASSE##</i>

Assessment ® Reverse

Enter

4-6-2 **Extras ® Cycle ® Change**

ASSE## cycle **Enter**

Select the *Iterative* indicator in the cycle header data.

Save your data.

4-6-3 Switch to the initial screen for assessment (**Goto ® Back**).

Field name	Values
<i>Period</i>	<i>Current</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Test run</i>	<i>Deselect</i>
<i>Detail lists</i>	<i>Select</i>
<i>Cycle</i>	<i>ASSE##</i>

Assessment ® Execute

4-6-4 **Goto ® Sender**

The following was allocated:

Cost center 201## 15,254.24

Cost center 202## 37,525.42

Due to iteration, the credit amounts on each sender cost center are higher.

Goto ® Basic list

4-6-5 **Goto ® Line items**

201## debits 202## with 1,525.42

202## debits 201## with 6,254.24

Both cost centers are credited 100%. This is because the initial debit on each cost center from the first iteration of the assessment cycle was allocated again by the iterative cycle flow.

- 4-6-6 During the first run, cost center 201## (Organization) debits cost center 202## (IT Service) with 900.00. Due to this, cost center 202## must allocate 36,900.00. Of this amount, 6,150.00 is redebited to cost center 201## (Organization). During the second run, cost center 201## (Organization) allocates 6150, of which 610 is debited to cost center 202## (IT Service). Cost center 202## (IT Service) in turn, redebits cost center 201## (Organization) with 1/6 of that amount.

201## (Organization)

60% to 301## (FI/CO Consulting)

30% to 302## (LO Consulting)

10% to 202## (IT Service)

	Actual costs from the sender	Cost debit from 202## (IT Service)	Tracing factor	Allocation to 202## (IT Service)
1. Run	9,000	---	10%	900
2. Run	---	6,150	10%	615
3. Run	---	102.50	10%	10.25
4. Run	---	1.71	10%	0.17
---	---	0.03	---	---
Σ		6,254.24	10%	1,525.42

202## (IT service) Tracing factors

18 → 301## (FI/CO Consulting)

12 → 302## (LO Consulting)

6 → 201## (Organization)

	Actual costs from the sender	Cost debit from 201## (Organization)	Tracing factor	Allocation to 201## (Organization)
1. Run	36,000	900	1/6	6,150
2. Run	---	615	1/6	102.50
3. Run	---	10.25	1/6	1.71
4. Run	---	0.17	1/6	0.03
Σ		1,525.42	1/6	6,254.24

4-7

4-7-1 **CCA: Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost centers: Actual/Plan/Variance.**

Field name	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center group</i>	<i>B20##</i>

Program ® Execute

All cost centers are completely credited.

4-8

4-8-1 **CCA: Period-end closing ® Single functions ® Allocations ® Assessment ® Extras ® Cycle ® Display overview**

Expand the "ASSE##" node.

Click on the *Cycle information* tab page.

4-8-2 **Edit® Processed to date**

Field name	Values
<i>Period</i>	<i>Today's date</i>
<i>Fiscal year</i>	<i>Current</i>

Execute icon.

Edit ® Display ® With reversal ® Edit ® Choose

If you double-click on each document number, the line item view appears.

4-8-3 **Return to the cycle overview (Goto ® Back).**

Click on the *Selection criteria* tab page.

Field name	Values
<i>Cycle type</i>	<i>Actual assessment</i>
<i>Cycle</i>	<i>ASSE01 – ASSE18</i>

Under **Extra selection criteria**, choose *Start date*, *End date*, *Cycle run group*, *iterative*.

Execute selection icon.

Collapse the subtree, and expand the screen for the cycle structure tree to the right.

Solutions



Unit: Period-End Closing

Topic: Cost Allocations

5-1

5-1-1 *Cost Center Accounting* ® *Master data* ® *Cost element* ® *Individual processing* ® *Create secondary*

Field name or data class	Values
<i>Cost element</i>	6316##
<i>Valid from</i>	01/01/ current fiscal year
<i>To</i>	12/31/9999
<i>Name</i>	Assess. Vehic-mat ##
<i>Cost Element Category</i>	42

Save your data.

Use the reference to create cost element 6317## (Assess. Vehic-Pers##).
Change the name and description.

5-1-2 *IMG* ® *Controlling* ® *Cost Center Accounting* ® *Actual Postings* ® *Period End Closing* ® *Assessment* ® *Maintain Allocation Structures* ® *Edit* ® *New Entries*

Field name or data class	Cost elements
<i>Structure</i>	<i>See exercise</i>
<i>Text</i>	<i>Material and personnel costs</i>

Save your data.

5-1-3 Select the structure and switch to the *Dialog Structure* tree.

Double-click on *Assignments*.

Edit® New entries

Assignments	Text
01	Vehicle material costs
02	Personnel costs

Save your data.

5-1-4 Select *Assignment 01*, and switch to the *Dialog Structure* tree.

Double-click on *Source*.

Field name or data class	Cost elements
Cost element from	475000

Go to the *Dialog Structure* tree.

Double-click on *Assessment cost element*

Edit® New entries

Assessment cost element	6316##
-------------------------	--------

Save your data.

5-1-5 Return to *Assignments* (Goto → Back).

Select *Assignment 02*, and switch to the *Dialog Structure* tree.

Double-click on *Source*.

Field name or data class	Cost elements
Cost element from	420000
Cost element to	431000

Go to the dialog structure tree.

Double-click on *Assessment cost element*

Edit® New entries

Assessment cost element	6317##
-------------------------	--------

Save your data.

5-2-1 **CCA: Period-end closing ® Single functions ® Allocations ® Assessment.**

Field name	Values
Period	Current
Fiscal year	Current
Test run	Deselect
Detail lists	Select
Cycle	ASSE##

Assessment ® Reverse

Enter

5-2-2 **CCA: Period-end closing ® Single functions ® Allocations ® Assessment ® Extras ® Cycle ® Change**

Field	Values
Cycle	ASSE##
Start date	01.01 current fiscal year

Enter icon.

Goto ® Overview segments

Select the VEHIC## segment.

Copying Segments icon. **Enter**

Insert segments icon.

Name	VEHIC##NEW
------	------------

Select the new segment.

Double-click to go to the segment maintenance.

Place the cursor in the field for the assessment cost element.

Assessment cost element	Delete
Allocation structure	Enter chosen name

Save your data.

Goto ® Overview segments

Select the VEHIC## segment.

Choose icon

Set the **Lock indicator** (to the right of the segment name row).

Save your data.

5-2-3 Go to the initial screen for the actual assessment.

Goto ® Back (2x)

Field name	Values
<i>Period</i>	<i>Current</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Test run</i>	<i>Deselect</i>
<i>Detailed lists</i>	<i>Select</i>
<i>Cycle</i>	<i>ASSE##</i>

Assessment ® Execute

5-2-4 ***Goto ® Sender***

The sender list differentiates by sender cost element.

In the allocation structure, two assessment cost elements were defined to credit cost center 203##. These cost elements are listed separately in the sender list.

5-3 ***Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost Centers: Actual/Plan/Variance***

Field name	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>From period</i>	<i>Current</i>
<i>To period</i>	<i>Current</i>
<i>Plan version</i>	<i>0</i>
<i>Cost center</i>	<i>302##</i>

Program ® Execute

The report contains information on the content of the debit for cost center 302##, with vehicle costs that are allocated using two assessment cost elements, due to the allocation structure.

Cost center 302## is debited by the vehicles cost center, mainly due to material costs.



Unit: Period-End Closing

Topic: Reconciliation Ledger

6-1

- 6-1-1 **Controlling** ® **Cost Element Accounting** ® **Information system** ®
Reports for cost and revenue element accounting ® **Cost Flow** ® **Cost Elements: Allocations Between Business Areas.**

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Period</i>	<i>Current</i>
Group selection	
<i>Values</i>	<i>8000 to IS##</i>

Program ® **Execute**

- 6-1-2 **Edit** ® **Threshold value**

Deselect **Active**.

- 6-1-3 If the variation menu is not shown, activate it using:

Navigation on/off icon

Click on the *Variation: Characteristics* field, on **Trdg part.BA**.

Click on the *Variation: Bus. Area* field, on **IS##**.

The report now displays the cost flows between business area 8000, and partner business area IS##.

6-2

6-2-1 **Controlling ® Cost Element Accounting ® Actual postings ® Reconciliation with Financial Accounting.**

Field name or data class	Values
<i>Company code</i>	1000
<i>Period</i>	Current
<i>Fiscal year</i>	Current
<i>Processing</i>	Select reconciliation postings interactively
<i>Test run</i>	Deselect
<i>Detail lists</i>	Select

Reconciliation postings ® Execute

6-2-2 Select the document rows.

Reconcile selected documents with Financial Accounting icon.

6-3

6-3-1 **Controlling ® Cost Element Accounting ® Information system ® Reports for cost and revenue element accounting ® Cost flow ® Cost elements: Allocations between business areas.**

Field name or data class	Values
<i>Controlling area</i>	1000
<i>Fiscal year</i>	Current
<i>Period</i>	Current
Group selection	
<i>Values</i>	8000 to IS##

Program ® Execute

6-3-2 If the variation menu is not shown, activate it using:

Navigation on/off icon

Click on the *Variation: Characteristics* field, on **PaBA**.

Click on the *Variation: Bus. Area* field, on **IS##**.

The values from the *Reconcil.* column, are now under *Rec. post.* This means that the reconciliation posting was made in FI.

6-3-3 **Controlling ® Cost Element Accounting ® Information system ® Reports for cost and revenue element accounting ® Cost flow ® Cost flow overview.**

Field name or data class	Values
<i>Company code</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Period</i>	<i>Current</i>
Settings	
<i>Line item statement</i>	<i>Deselect</i>
<i>Reconciliation document</i>	<i>Deselect</i>
<i>Non-reconciled only</i>	<i>Select</i>

Program ® Execute

Content:

- **Planning configuration**
- **Planning process**
- **Planning aids**

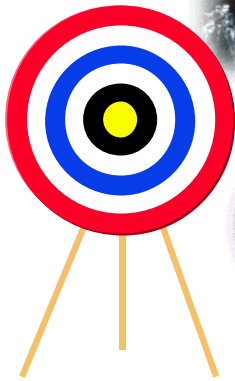


At the conclusion of this unit, you will be able to:

- **Describe the purpose of cost center planning and the function of versions**
- **Explain the use of planning layouts and planner profiles**
- **Execute a manual planning process**
- **List the options available under automatic planning**
- **Describe final planning activities**
- **Explain the planning aid provided by the SAP R/3 System**
- **Set up a planning layout and a planner profile as you require**



- Having configured your system so that all actual (as opposed to plan) transactions run as you require, your project team now turns to configuring the planning functions.
- The project team has decided to plan its enterprise data as recommended by SAP. You want to run this process in test mode first.
- To simplify and hasten the entry of planning data, you want to implement different aids to planning in the future.
- To optimize data entry, you consider creating enterprise-specific planning layouts.



Planning of future business activities and consideration of changing business circumstances



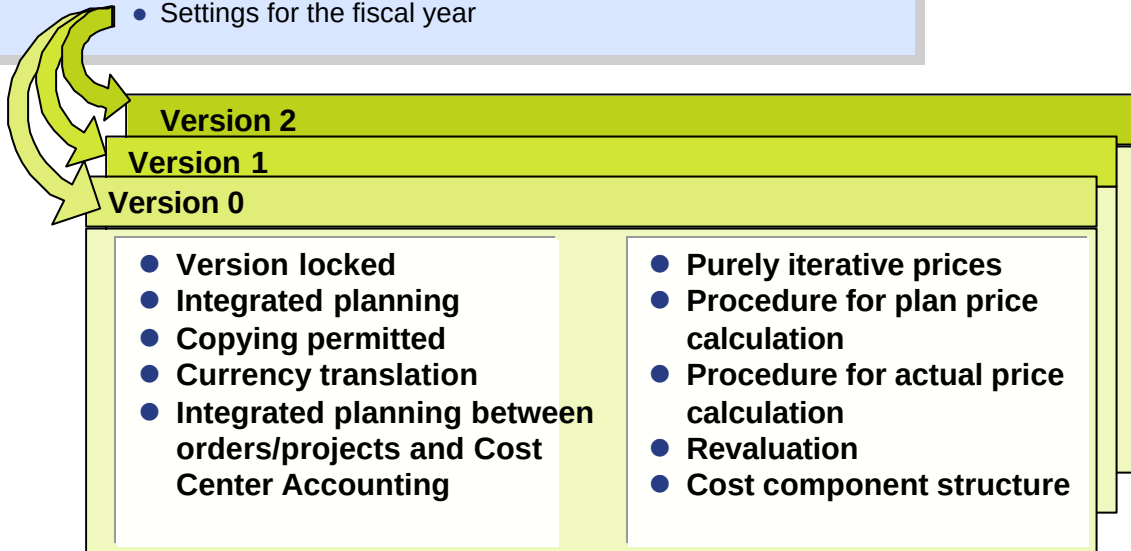
Forecasting to set periodic controlling standards for:

- **Valuation of internal activities**
- **Monitoring efficiency using “plan / actual” & “target / actual” variance analyses**

- Planning is used to set organizational goals. The comparison of actual operating results with the plan can identify variances that serve as signals to take corrective measures in the business operations.
- There are several basic goals in planning:
 - Plan the structure of the company's future operations for particular periods
 - Create benchmarks for controlling the business transactions within an accounting period
 - Monitor efficiency after completion of the accounting period by means of plan/actual and target/actual comparisons
 - Give a basis for valuation of organizational activities, through estimating the unit cost of performing a given activity in a given period
- To achieve these goals, the R/3 System offers a wide variety of options from which to choose.

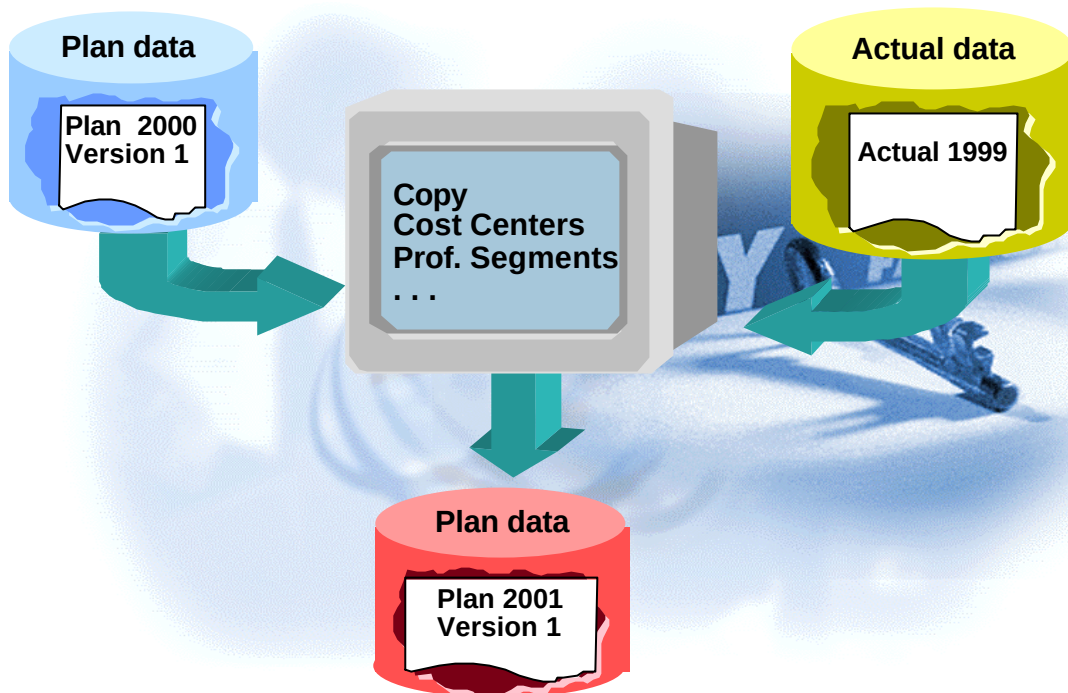
- **Defining versions: General settings**

- Settings in operating concern
- Settings for Profit Center Accounting
- Settings in controlling area
 - Settings for the fiscal year



© SAP AG 1999

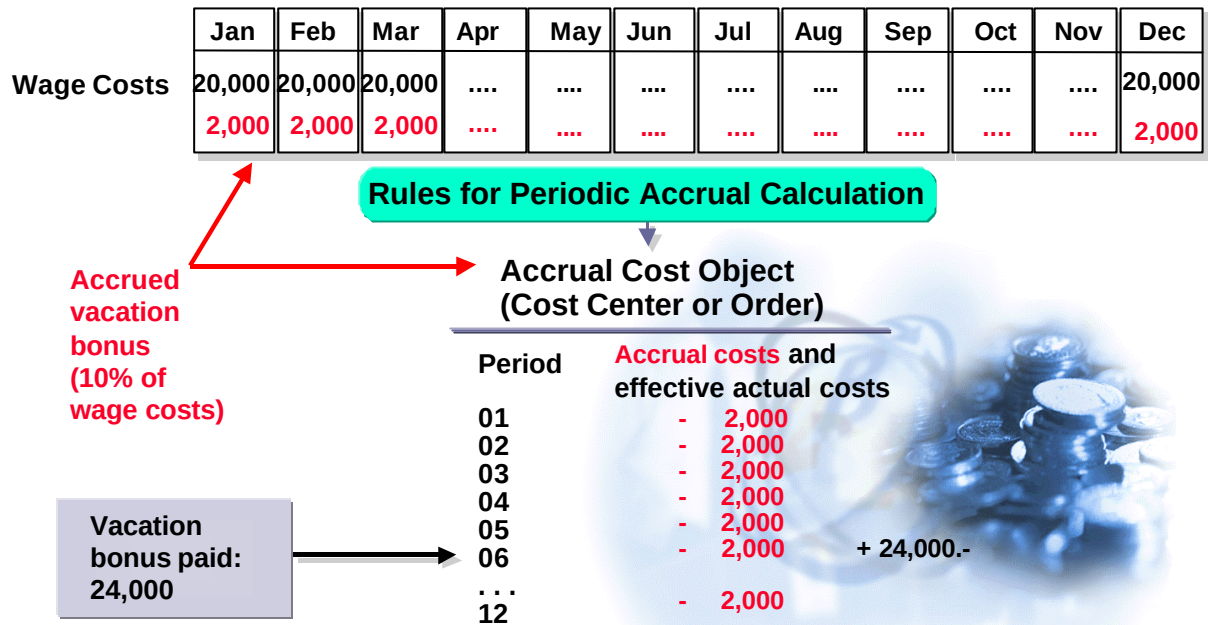
- **The definition of a version** applies for the whole of Controlling. This ensures that your data remains consistent if you use the version in different applications, for example in both Overhead Cost Controlling and in Profitability Analysis (integrated planning).
- You define Controlling versions **centrally** and add application-specific settings for Profitability Analysis, Profit Center Accounting, and Overhead Cost Controlling.
- You can plan your cost centers in as many CO versions as you wish. Each version in the R/3 System is tailored to particular planning requirements.
- When you create a controlling area, the R/3 System automatically creates **version 0**, valid for five fiscal years. You can also create **alternative versions** for, for example, positive or negative scenarios.
- When referring to **actual postings**, the R/3 System always uses **version 0**. Alternative versions can relate only to saving planning data in Cost Center Accounting.



- You can use the tool Copy Planning if you want to reuse large parts of your manual cost center planning from a previous year for your current planning, or to copy plan values within a fiscal year to a different period, or to generate alternate plan versions.
- Similarly, the tool Copy Actual to Plan allows you to utilize previous actual cost center data as the reference for creating new plan data.
- To use the Copy Planning function, select a reference version and a target version.
- You can copy plan data:
 - Within fiscal years, periods, versions, and cost centers
 - Between different cost centers, fiscal years, periods, and versions
- You may select any set of values. For example, you may limit the selection of data to a particular cost center, or you can select all cost centers. You can also choose to copy all plan data, or select only particular types of planning data.
- With the Revaluation planning tool you can increase or decrease planning results on a percentage basis. Therefore you can combine the Copy Planning and Revaluation functions to create several plan versions. This may be useful after copying the plan data from the previous year or for producing best-case and worst-case scenarios within a year. Plan line items are recorded during revaluation execution.
- You may undertake as many revaluations of cost center and cost element planned values as required. The percentages within a revaluation can be changed as often as desired. Repeated executions with changed percentages cancel the old plan line items and always use the original initial value.

Accrual Calculation: Percentage Method

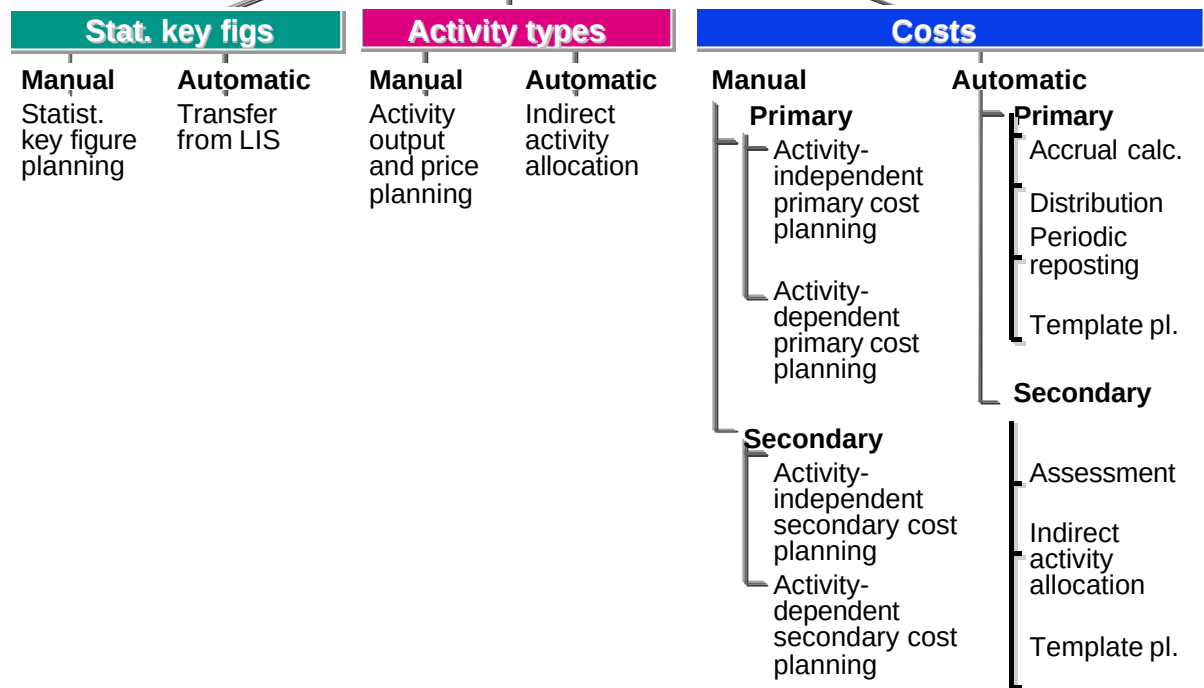
SAP



© SAP AG 1999

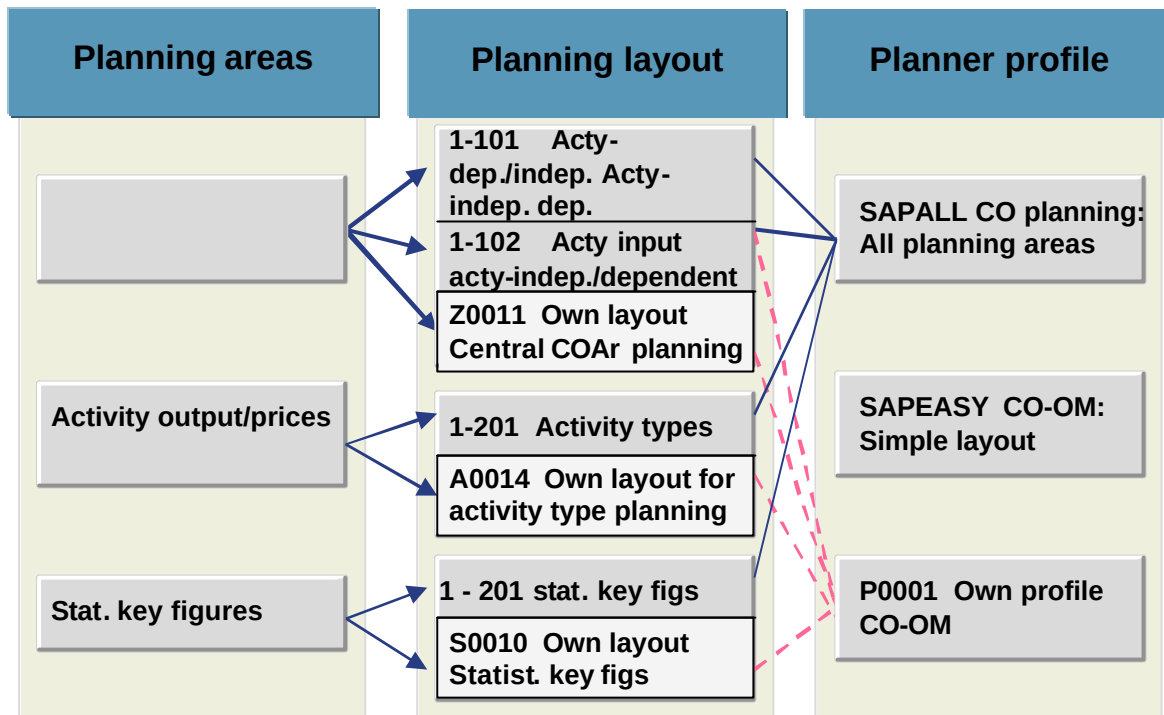
- The percentage method is used to determine accrued costs on the basis of a percentage rate applied to a reference cost element or group of cost elements.
- The advantage of this method, when compared with accrual calculation using a recurring entry in FI, is that accrued costs are determined on the basis of actual costs. The percentage method is useful, for example, in accrual calculation of non-wage labor costs such as vacation bonuses.
- In accrual calculation, the amounts of the accrued costs are debited to the cost centers. Simultaneously, an accrual object defined by you (a cost center or internal order) is credited. The actual costs are also posted on the accrual object in order to calculate, analyze, and allocate any balances between expenses from FI and accrued costs from CO.
- You create an accrual cost element (cost element category 3) to process the accrual calculation. In addition, you must create an overhead structure that defines the various components of the accrual calculation, and identifies the accrual object that will be credited as each periodic posting is made.

Scope of planning in Cost Center Accounting



© SAP AG 1999

- When planning cost centers, you need to differentiate between:
 - Planning statistical key figures
 - Planning activity output and prices
 - The value and quantity-based cost planning of primary and secondary costs, as well as Revenue planning.



© SAP AG 1999

- You enter planning data in Controlling using entry screens, the layout of which you can define in Customizing. These screens are known as **planning layouts**.
- There are three **planning areas** in Cost Center Accounting:
 - Cost elements/activity input
 - Activity output/prices
 - Statistical key figures
- For each planning area, you create at least one **planning layout**. You can use planning layouts to define the characteristics (cost center, cost element and so on) for which you want to enter plan values, and set up the appropriate value columns. SAP provides numerous predefined standard layouts.
- You use **planner profiles** to control the planning process. In a given planner profile, you can assign any number of planning layouts to any number of planning areas.
- The R/3 System contains **standard planner profiles** and standard planning layouts that cover almost every conceivable planning situation. You can use the SAPALL planner profile to plan for the three planning areas using a number of SAP standard layouts. SAP provides the planner profile SAPEASY for situations where a simple planner profile is required. You can also define your own planner profiles.
- You can carry out both **centralized** (planning of a single cost element for all cost centers for example) and **decentralized planning** (for example, planning of all cost elements on a single cost center). The type of planning depends on way your company is organized. You can combine both methods, enabling you for example to plan your personnel costs centrally, and have all other costs planned locally by the cost center managers.

Defining Planning Layouts


- Fixed header rows
- Fixed lead columns
- Variable column width
- Exchangeable columns



Cost Element Planning

Fiscal year
Periods **to**
Cost element

Cost Center	Name	Planned costs	Version
1000	IT Service	50,000	1
1200	Vehicles	10,000	1
...	...	...	...
...	...	...	...

© SAP AG 1999

- To enable easy and ergonomic entry of the planning data, structuring the planning layout is very flexible. You can use the Report Painter to define planning layouts. This transaction corresponds to creating reports with the Report Painter.
- A planning layout contains a header and several lead and value columns.
- You enter the selection criteria in the **header**, and specify which characteristics are displayed in the header area. The characteristics are predefined in the SAP system for each planning area.
- In the **lead column**, you define the characteristics that you want to plan for. In activity-independent cost planning, you only require a lead column for cost elements. For activity-dependent cost element planning, you need to define two lead columns, one for the activity types, and one for the cost elements.
- When you define **value columns** you have various options:
 - You can create columns either with a key figure and with characteristics, or with characteristics only. Key figures are included in your standard SAP system. Fixed plan costs are an example, or variable plan costs in the controlling area currency, consumption, price and total actual costs.
 - A formula column is a value column that consists of values from predefined columns.
 - In an attribute column, you can choose the unit, the distribution key, and the activity attribute. The unit and the distribution key should be created as an additional field for a column.

Defining Planner Profiles

SAP

Planner profile: SAPALL

Planning area: Cost center: Cost elements and activity input

Item	Layout	Description
□ 1	1-101	Cost elements, independent or dependent of activity
□ 2	1-102	Activity input, independent or dependent of activity
□ 3	1-102P	Process entry, independent or dependent of activity
□ 4	1-104	Primary / secondary order costs
□ 5	1-104P	Primary / secondary order costs, process

Changing cost element planning

Layout: 1-101



Cost center:
Cost element:



Changing activity input planning

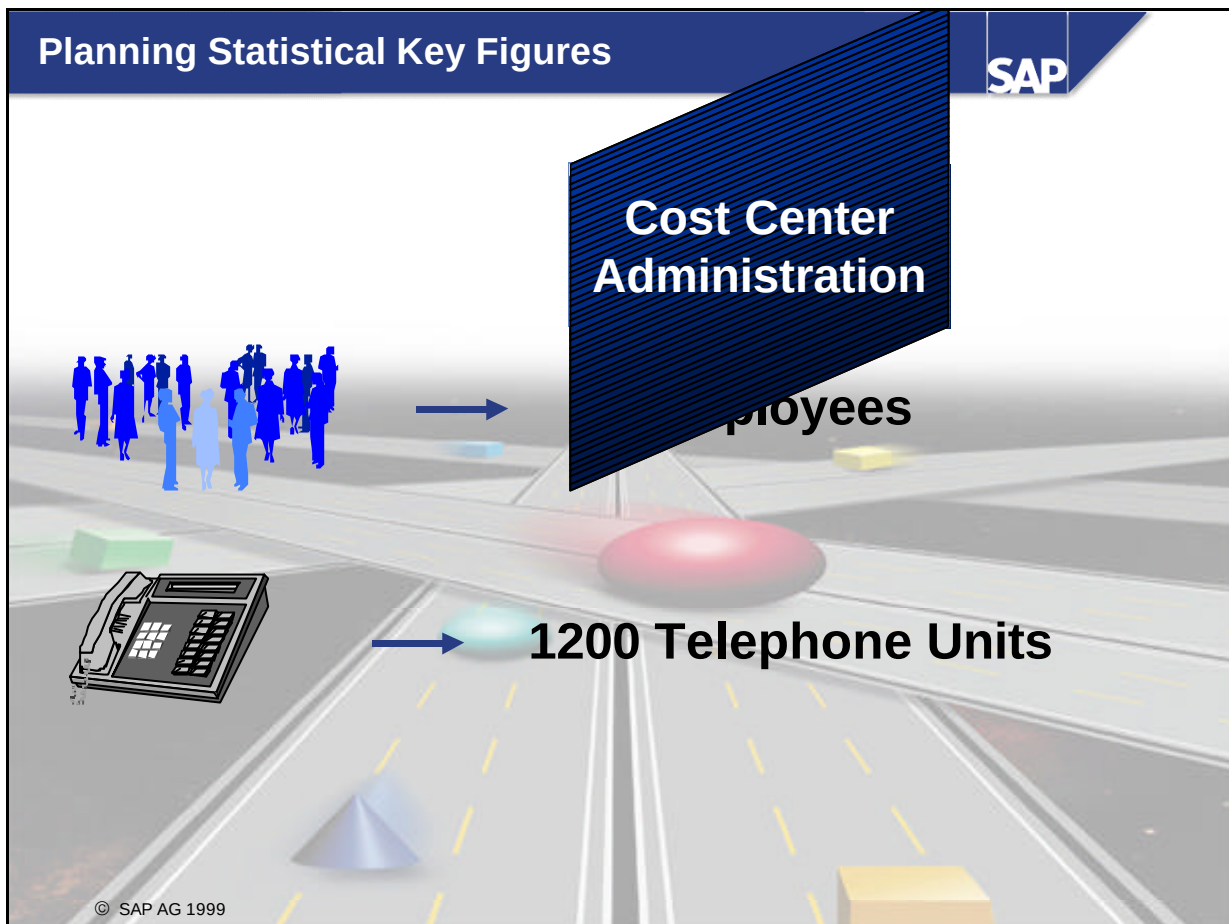
Layout: 1-102



Cost center:
Sender cost center:
Sender activity type:

© SAP AG 1999

- In the **planner profile**, you can assign more than one planning layout to each planning area. You use the item number to specify the order of the planning layout in the planning area.
- In the planner profile, you can specify the following planning conditions:
 - You use the **default parameters screen** to enter default values in the planner profiles for a planning layout, and to specify that they may not be overwritten by the user. It is possible to use the same planning layout more than once and assign different default values to it.
 - By assigning an **authorization group** to another planner profile, you can control the planning authorizations. This is particularly important for decentralized planning. You can ensure that the planning is restricted to the given area.
- For manual planning in different planning areas, you can change the planning layout during your planning meeting. You can go to the next assigned planning layout in the initial screen, or in the overview screen, by using the "Next layout" and "Previous layout" function.
- You can define a planner profile with settings for overhead cost planning, profitability analysis, and Profit Center Accounting.

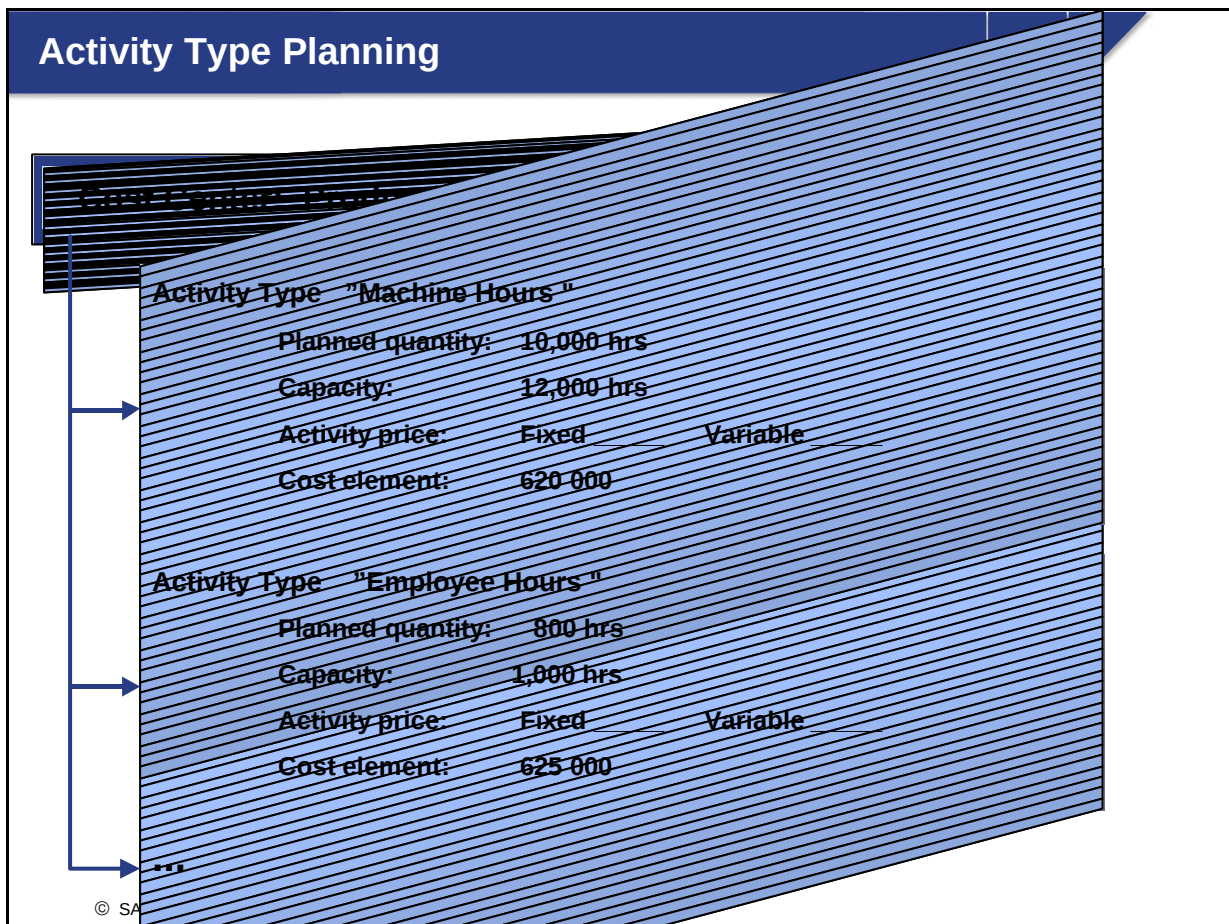


- You can plan statistical key figures in order to:
 - Calculate ratios in cost centers, such as cost per employee
 - Create receiver tracing factors (allocation factors) for periodic allocations (e.g. assessment, distribution)
- There are two different types of statistical key figures:
 - Fixed value
 - Totals value
- If you plan a fixed value statistical key figure, such as Employees, you enter the quantity of employees assigned to a cost center. The system displays the average value for all planned periods in the overview screen. In the periodic screen you see the planned quantity for each period.
- If you plan a totals value statistical key figure, such as the number of long-distance calls, the entered quantity is distributed to the periods according to the assigned distribution key.
- Statistical key figures can be planned directly on a cost center, or dependent on activity types. SAP provides Standard-Layout 1-301 for activity-independent and Standard-Layout 1-302 for activity-dependent statistical key figure planning. You can access both with the Standard-Profile SAPALL.
- You can also transfer statistical key figures from the Logistics Information System (LIS). (See the slide “Transferring plan values to Cost Centers” in the Integrated Planning Cycle topic).

Cost Center: Production

Primary cost element	Fixed costs
420000 Direct Labor Costs	300,000.00
421000 Indirect Labor Costs	100,000.00
430000 Salaries-Base Wages	130,000.00
452000 Machinery & Equipment	400,000.00
471000 Machinery Rental	50,000.00
481000 Estimated Depreciation	100,000.00
490000 ...	...

- Activity-independent primary costs, classified by cost elements, are planned on cost centers by plan version.
- If you plan activity-independent primary costs, you can only plan fixed costs. For cost centers using activity types, these planned fixed costs are assigned to the activity types of the cost center based on the equivalence numbers in the plan, or based on the plan splitting structure. In activity price calculation these fixed costs are taken into account to calculate the fixed portion of the activity price.
- You can use the Standard-Layout 1-101 included in the Profile SAPALL to plan activity-independent primary costs.



- Activity types serve as a measurement of cost center performance. They describe the quantity output of a cost center and can be used to determine an operating rate and target costs.
- Activity types are allocated under a secondary cost element, which is stored as a default value in the activity type master record.
- The activity price is determined per cost center/activity type either manually or in automatic activity price calculation:
 - You can set manual activity prices for your cost center/activity type combination if the activity price is fixed within your company and unaffected by any internal exchange of activities.
 - In automatic activity price calculation, all primary and secondary costs planned as activity-dependent or activity-independent for the appropriate cost centers are included in the activity price.
 - If several activity types are planned on a cost center, the activity-independent plan costs are broken down (split) onto these activity types for activity price calculation. You can accomplish this by entering equivalence numbers along with each planned activity type, or with plan cost splitting.
 - The unit price for an activity type is calculated by dividing planned costs for an activity by the planned quantity of activity type units. Alternatively, the capacity of a cost center to produce a given activity type can be used in calculating the fixed portion of the activity price.
- For activity type planning, SAP provides the Standard-Layout 1-201, assigned to the standard planner profile SAPALL.

Cost Center: Production

Activity Type "Machine Hours" 1200 hrs

Primary cost elements	Fixed costs	Variable costs
420000 Direct Labor Costs	600,000.00	400,000.00
421000 Indirect Labor Costs	200,000.00	130,000.00
453000 Maintenance Costs	100,000.00	100,000.00
481000 Estim. Depreciation	300,000.00	270,000.00

Activity Type "Employee Hours" 800 hrs

420000 ...

© SAP AG 1999

- Activity-dependent primary cost planning enables you to plan primary costs on a cost center that are dependent on the work performed by the cost center, in terms of activity type quantities.
- After completing activity type planning, you can plan the costs dependent on these activities in fixed and variable portions. Variable costs are the costs incurred in proportion to the quantity of activity produced. If the cost center produces several activities, you may plan fixed costs on the basis of the individual activity types, along with the activity-independent costs already planned on the cost center itself. This means that the activity type price can include two fixed cost portions:
 - Activity-independent plan costs for the cost center
 - Activity-dependent fixed plan costs for the activity type
- SAP provides the Standard-Layout 1-101 included in the SAP-profile SAPALL to plan activity-dependent primary costs.

Activity-Independent Secondary Cost Planning

SAP

Receiver Cost Center: 4275 Production

Sender CCtr.	Sender activity type	Activity input	Plan costs
4100	Maintenance hours	100 hrs	8000.--

Sender Cost Center: 4100 Techn. Service - Maintenance

Activity type	Planned Activity	Fixed price	Variable price	Scheduled Activity
Maint.hours	1,000 hrs	30.--	50.--	100 hrs

$$80.-- \times 100 \text{ hrs} = 8000.--$$

© SAP AG 1999

- In addition to primary costs, **secondary costs** are often incurred by a cost center, because a cost center must use services (activity inputs) from other cost centers. You can plan the activity input as **activity-independent and activity-dependent**.
- You choose **activity-independent** if you need services, such as maintenance hours, which are not especially for one activity type. For example, you have to maintain a machine you use in the performance of two activity types.
- You must plan secondary costs for your cost centers in order to obtain meaningful periodic comparisons of plan and actual data. In actual postings, you use the internal cost allocation to obtain the utilization of services from other cost centers.
- Planning of secondary costs from activity allocations always requires a sender and a receiver cost center. For activity-independent secondary costs, you plan the quantity of the “sender” activity type to be provided by the sender cost center to the receiver cost center.
- To determine secondary costs, the fixed and variable price of the activity type supplied by the sender cost center is drawn together and multiplied by the activity quantity consumed by the receiving cost center. Activity-independent secondary costs planned for a receiver cost center are always fixed costs.
- The *Standard-Layout 1-102* assigned to the profile *SAPALL* can be used here.

Activity-Dependent Secondary Cost Planning

SAP

Receiver cost center: 4275 Production

Activity type: 1420 "Machine hours" 10,000 hours

Sender CCtr	Sender acty type	Fixed consumption	Variable consumption	Fixed debit	Variable debit
4100	Repair hrs	30 hrs	70 hrs	4,500	3,500

Sender cost center: 4100 Technical services - repairs

Activity type	Plan activity	Fixed price	Var. price	Scheduled acty
Repair hrs	1,000 hrs	30	50	100 hrs

Variable debit = 70 hrs x 50 = 3,500

Fixed debit = 100 hrs x 30 + 30 hrs x 50 = 4,500

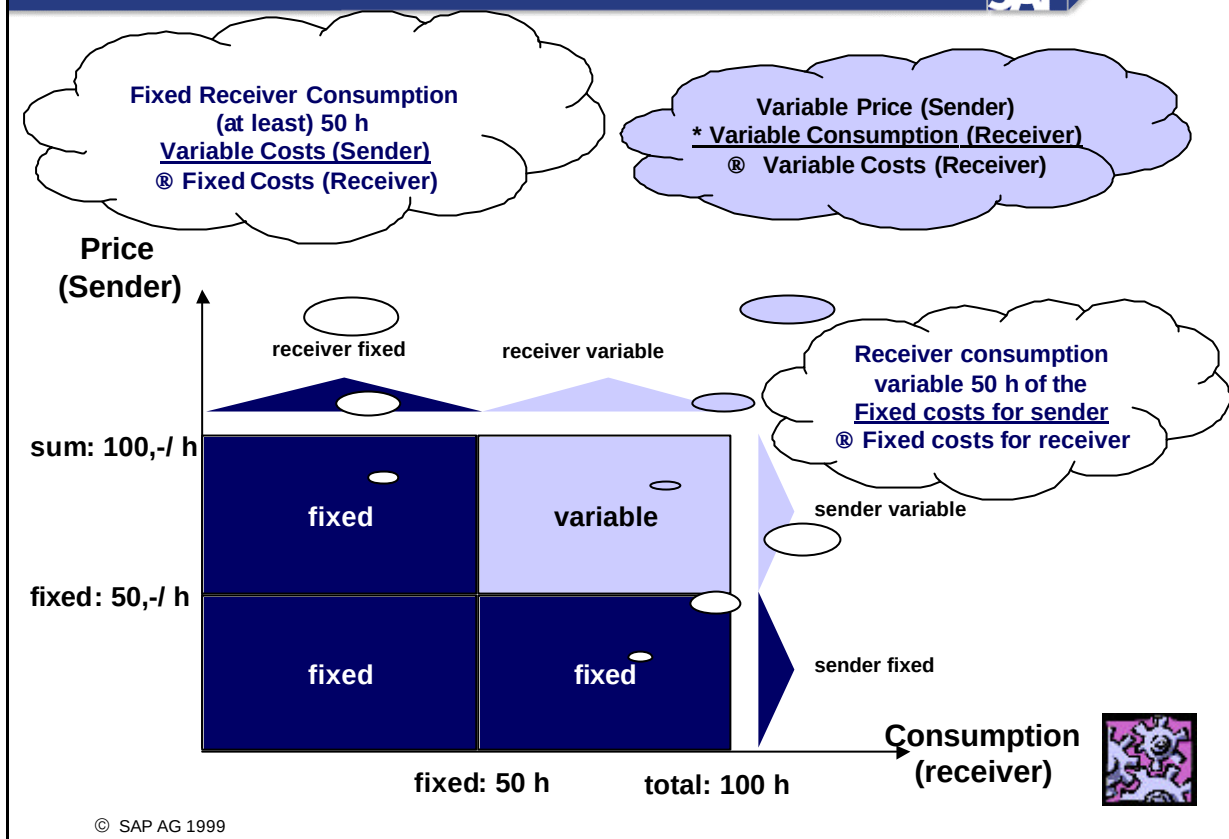
8,000

© SAP AG 1999

- You choose **activity-dependent secondary cost planning** if you require activities for a particular activity type. This may be the case if you have to plan repairs to a machine that you use for only one of your activity types.
- As for activity-independent secondary cost planning, you must plan the activity-dependent secondary costs, so that these can be compared to actual data. The actual posting that uses the internal activity allocation function records the activity input to the receiver cost center only, and not to the "cost center/activity type" combination. Dividing up the actual costs among the activity types is carried out using the cost center splitting function and according to the target costs.
- For activity-dependent secondary costs, you plan the quantity of activity input to a receiver cost center dependent on an activity type produced by the receiver center. When planning, you must therefore specify the sender cost center, the sender activity type, the receiver cost center, and the receiver activity type. To plan activity-dependent secondary costs, you must first plan the activity type produced by the receiver cost center.
- You enter a fixed activity quantity, if quantities arise irrespective of the level of activity produced by the receiver cost center. Calculating the fixed debit to the receiver cost center enables you to set variable portions of sender costs as "fixed" for the receiver. The fixed debit is the total of the following:
 - The total activity quantity multiplied by the fixed activity price
 - The fixed activity quantity unit multiplied by the variable activity price
- The quantity of the activity type that you enter as variable activity input will retain the variable fixed cost portions from the sender. The variable debit of the receiver cost center therefore corresponds to the variable activity input multiplied by the variable price.
- The SAP standard profile *SAPALL* containing the layout 1-102 can be used here.

Calculation of Variable Secondary Costs

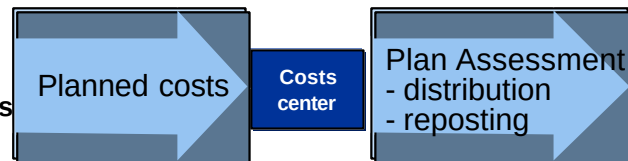
SAP



- With activity inputs from other cost centers, the fixed and variable secondary costs for the receiver are calculated as follows:
- You enter a fixed activity input quantity, if activity quantities occur independent of the activity levels of the receiver cost center. The calculation of the fixed debit to the receiver cost center makes it possible to set variable sender costs for the receiver to 'fixed'. The fixed debit **for the receiver** is the sum of the following elements:
 - The total activity quantity multiplied by the fixed price.
 - The fixed activity input quantity multiplied by the variable price.
- The quantity of the activity type entered as the variable activity input contains the variable and fixed costs of the senders.
 - For this reason, the **variable debit to the receiver cost center** equals the variable activity input multiplied by the variable price.

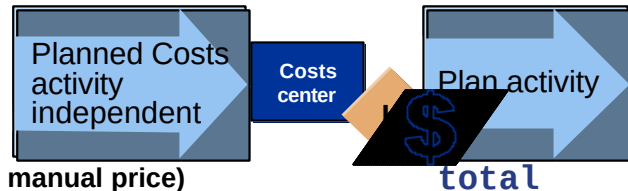
- **Cost planning**

- Value Planning
- Analyze: Plan / Actual Comparisons



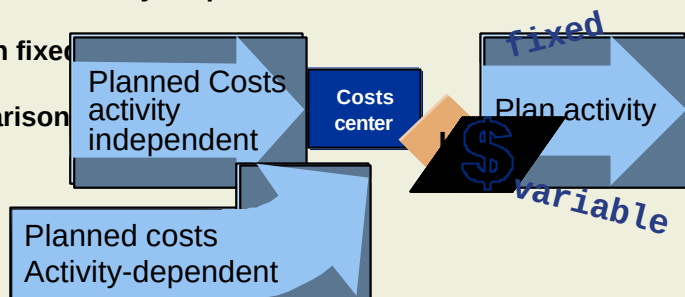
- **Activity Planning**

- Activity Planning: quantity output / cost center
- Cost planning (activity independent)
- Iterative Price Calculation (fixed or manual price)



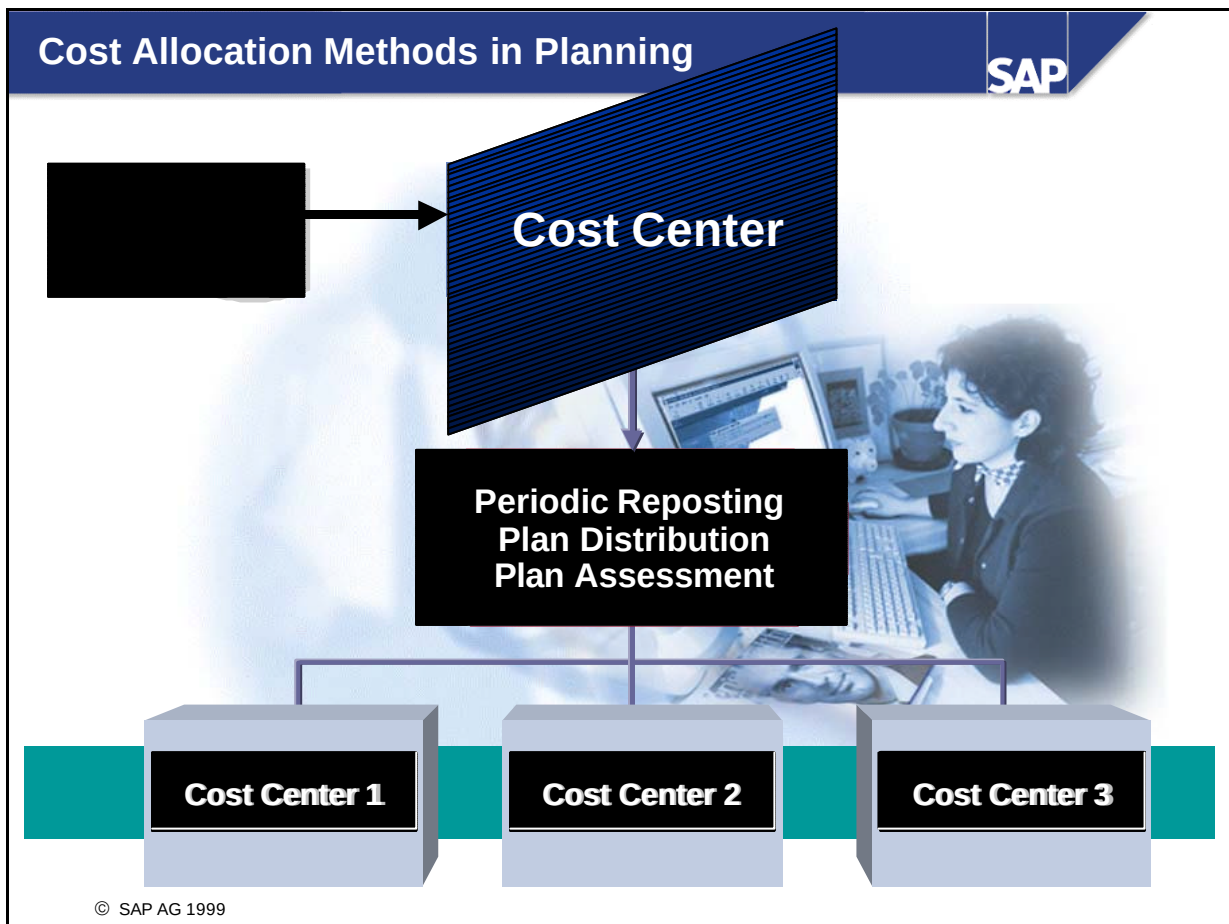
- **Fixed and Variable Cost Planning**

- Costs planned depending on own activity output (activity dependent costs)
- Iterative price calculation with fixed and variable portions
- Analyze: Target/actual comparison
- Flexible standard costing
- Optional marginal costing

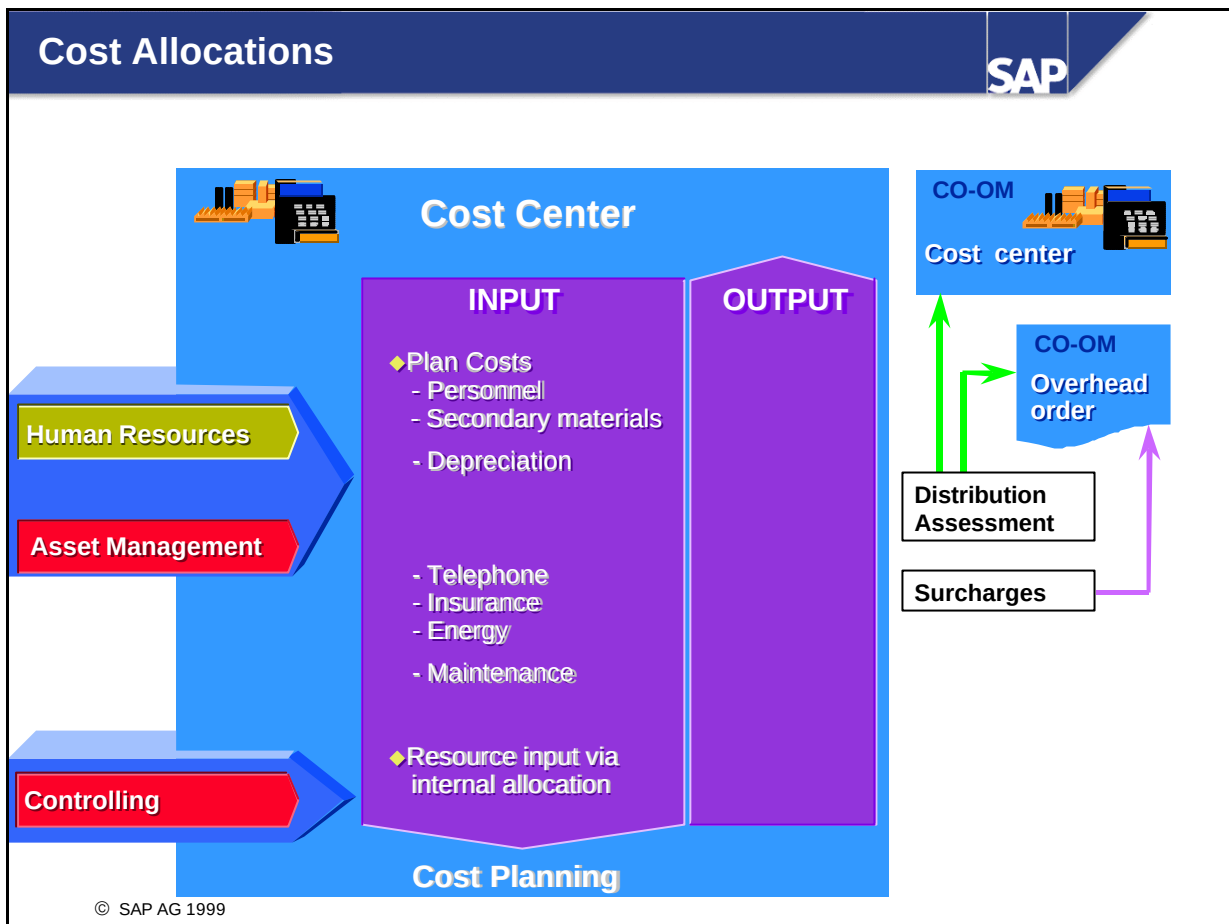


© SAP AG 1999

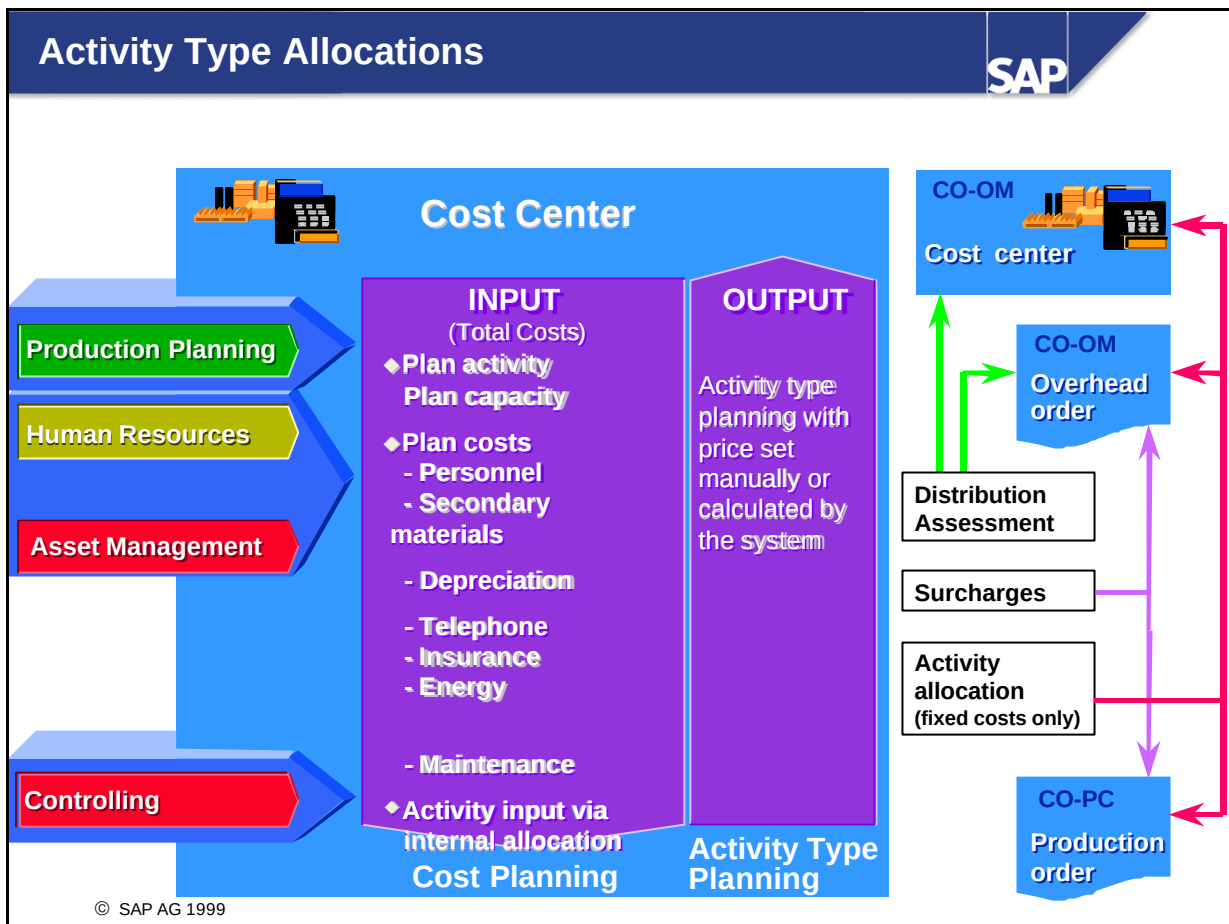
- Cost center planning forms part of the overall business planning process, and is a prerequisite for standard costing. The main characteristic of **standard costing** is that values and quantities are planned for specified timeframes, independently of the actual values from previous periods. In the planning you determine the control criteria for your later analysis.
- For the **cost planning**, you can compare the plan and actual costs per area of responsibility after the period-end closing.
- As soon as you are done with the **cost and activity planning**, you can value your activity flow in the actual. At period-end you can compare plan and actual prices. In contrast to cost planning, a price calculated from plan costs can be compared with external prices. You can also follow the price's development over various periods.
- If you include **fixed and variable plan costs** per activity type in your cost planning (=activity dependent planning), you can use the advanced analysis tools:
 - You can analyze your area of responsibilities based on target costs. This enables you to assess performance, not only based on plan data, but on target data as well (control of management effectiveness).
 - You can carry out simulations with various outputs, which automatically trigger cost calculations; here, only the variable costs rise (plan reconciliation).
 - You can also determine the cost of an additional activity unit (short term lower price limit, marginal costing).



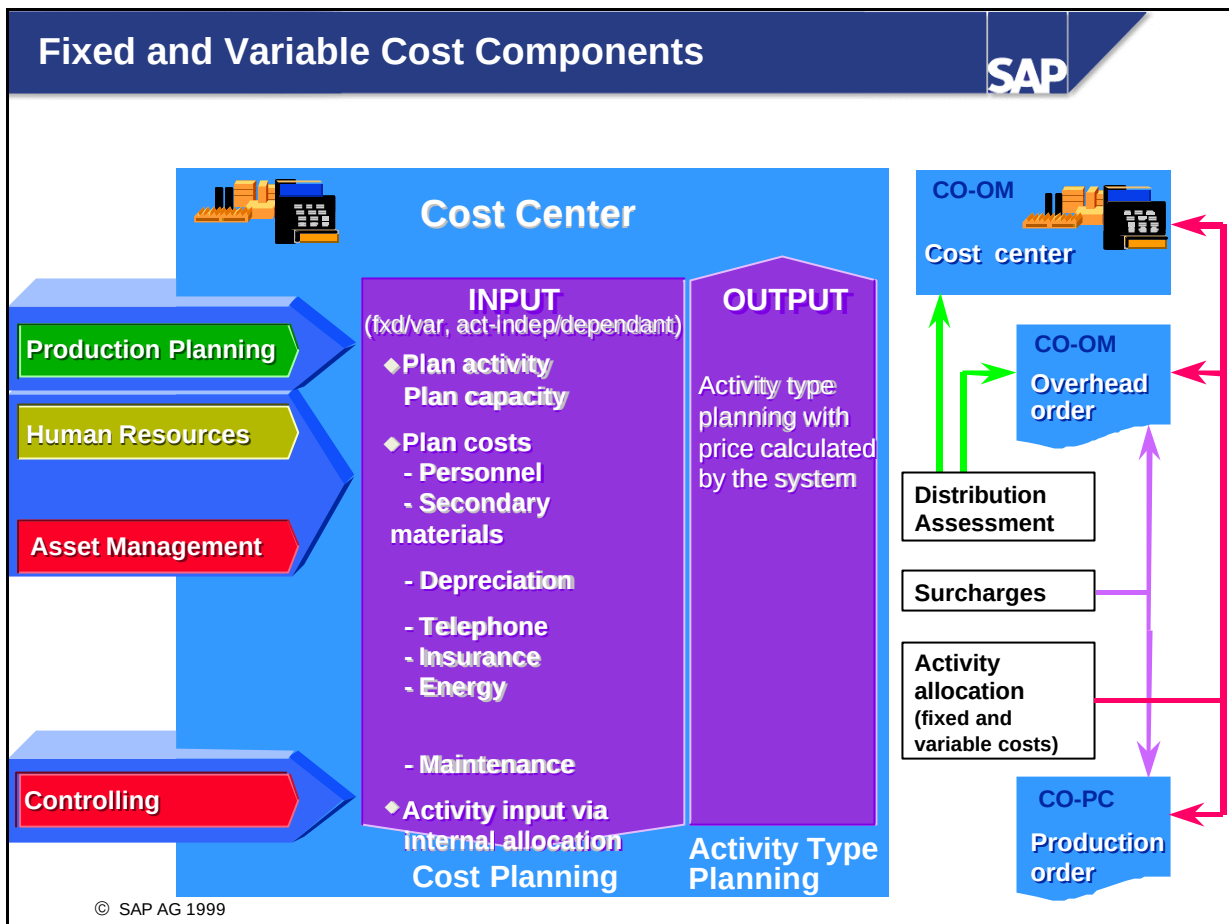
- Periodic repostings are used purely as a posting aid.
- Primary postings (such as telephone costs) are collected on an allocation controlling object to minimize the number of postings to FI. These costs are then allocated to the appropriate controlling objects at period-end closing according to a user-defined key (fixed amounts or tracing factors). The sender controlling object can be a cost center, internal order, or other object. You can specify the allowed sender and receiver objects for periodic reposting in customizing.
- Only primary costs can be reposted. The original cost elements are retained on the postings to the receivers.
- Distribution is intended for the transfer of primary costs from a sender cost center to receiver controlling objects. Only cost centers may serve as senders in a distribution.
- Primary postings (such as energy costs) are collected on a service cost center and allocated according to user-defined keys.
- Only primary costs can be distributed. The original cost elements are retained on the postings to the receivers.
- Assessment is designed for the allocation of primary and secondary costs from a sender cost center to receiver controlling objects. Only cost centers may serve as senders in an assessment.
- Primary and secondary postings are allocated according to user-defined keys.
- In the assessment framework, the original cost elements are grouped together into assessment cost elements (secondary cost element category = 42). The relationship between original and assessment cost elements is defined in an allocation structure.



- When using the Cost Allocations costing option, planning is not required. But if planning is done, only costs are planned. If costs are planned, then it will be possible to do analysis on actual costs compared with planned costs.
- Plan costs can be entered manually or transferred from feeder systems such as Human Resources (HR), Asset Management (AM), and the Logistics Information System (LIS).
- Several cost allocation tools can be utilized when planning costs. Distributions, assessments, and surcharges can be defined and calculated for plan costs. These essentially simulate the allocations of actual data that are anticipated for each period of the fiscal year being planned.



- When using the Activity Type Allocations costing option, planning is essential. Costs are planned, as before, but activity type quantities are also planned. This refers to the number of units of each activity type that is expected to be performed by a cost center.
- Since both costs and quantities of activity types are planned, it is possible to calculate a unit cost for each activity type. This is referred to as the activity price. The system can calculate these activity prices automatically once the planning has been completed. It is also possible to set activity prices manually.
- Activity type allocations can now be planned. This is called activity input planning. It involves planning a specific number of units of a given activity type produced by a given cost center that will be consumed by a receiver cost center (or internal order). Activity input planning results in quantities of activities “scheduled” to be consumed, which permits the manager of a cost center that produces activity units to see what quantity will be required. Activity quantities planned to be consumed by other cost centers, by planning integrated internal orders, and by production (via Sales and Operations Planning) are visible through reporting. This visibility facilitates plan reconciliation between activity quantities scheduled to be consumed and those planned to be produced by a cost center.



- When using the distinction between fixed and variable costs, cost planning includes classifying costs as activity-independent or activity-dependent. An activity-independent cost is expected to be incurred without regard to the output of a cost center; that is, whether or not an activity type is produced. It can be thought of as a fixed cost. By contrast, an activity-dependent cost is planned in conjunction with the production of a given number of units of an activity type. An activity-dependent cost is typically a variable cost, although it can incorporate a fixed cost portion.
- Example: An activity-dependent natural gas cost is planned in conjunction with an activity type for industrial blast furnace operating hours. Most of the planned gas fuel cost would be variable; that is, it would vary depending on the number of hours of furnace operation. But some of the cost could be fixed, in terms of the gas required for space heating, even if the furnace doesn't operate at all.
- With this costing option, when an activity price is automatically calculated by the system, it has both fixed and variable portions, based on the nature of the planned costs.
- By planning costs in this way, it becomes possible to calculate a target cost at the end of each actual operating period. The target cost is based on the operating rate of a given cost center/activity type combination (operating rate = actual number of activity type units produced / planned number).

$$\text{Target Costs} = [\text{Planned Fixed Costs} + (\text{Planned Variable Costs}) * (\text{Operating Rate})]$$
- The target cost is another baseline that can be used in evaluating cost center performance in terms of cost management.
- Additionally, activity allocations can be planned as either activity-independent or activity-dependent (through activity input planning). This can offer greater accuracy in reflecting the true cost origins.

Resources: Master data

Res. 1 SAP courses

Res. 2 Bus. Admin courses

Prices for course days

Res. 1 SAP courses Jan. 700 UNI

Res. 2 Bus. Ad. courses Jan. 900 UNI

Res. 2 Bus. Ad. courses Nov. 1000 UNI



Planning:
Training costs
Cost elem. 476400

Resource planning

476.400 Resource 1 80 days 01-12 56000 UNI

476.400 Resource 2 20 days 01-10 18000 UNI

476.400 Resource 2 10 days 10-12 10000 UNI

© SAP AG 1999

- Goods and services that are provided to the enterprise from an external source are called **resources** in the R/3 System.
- **Resource planning** assists manual planning of cost elements for **primary costs**, and revenues on cost centers, internal orders, and WBS elements. You plan **quantity-based resource usage** while the R/3 System values the planning. (Layout 1-1R1)
- By **assigning more than one resource to a cost element** you can reduce your chart of accounts, without losing any important details for the cost analysis.
- **Example:** Cost planning for external training jobs
Define the resource master data for SAP courses and business administration courses. Assign prices to the resources, taking into account that the prices of the business administration courses will be higher after the eleventh period. In resource planning, enter the number of course days that you want to reserve for your employees. The R/3 System then automatically calculates the training costs for the planning timeframe.
- You can either select planning that is dependent on activity, or that is independent.
- You can store different prices for each period in a separate price file, and if required with different dependencies. Resources that you create with a reference to a material are valued using the price stored in the material master.
- When you update resource prices, the R/3 System automatically updates your planning costs.
- You can also **copy** the **resource planning** to another version or period. In this case, the R/3 System only copies the usage quantities, at the same time executing a valuation. If this shows that a resource price is 2% higher in the target period than the price of the same resource in the source period, then the costs are also increased by 2%.

Dependency Planning

SAP

Value-based dependency planning

Cctr: FI/CO consulting

476000 (office supplies): 100.00 UNI per employee

10 employees

Planned costs = Dependency price x Dependency resource type (stat. key fig. or activity type) x Dependency resource type Qty

Quantity (resource) based dependency planning

Cctr: FI/CO consulting

SAP course days (CElem 476400): 2 per employee at 750.00 UNI each

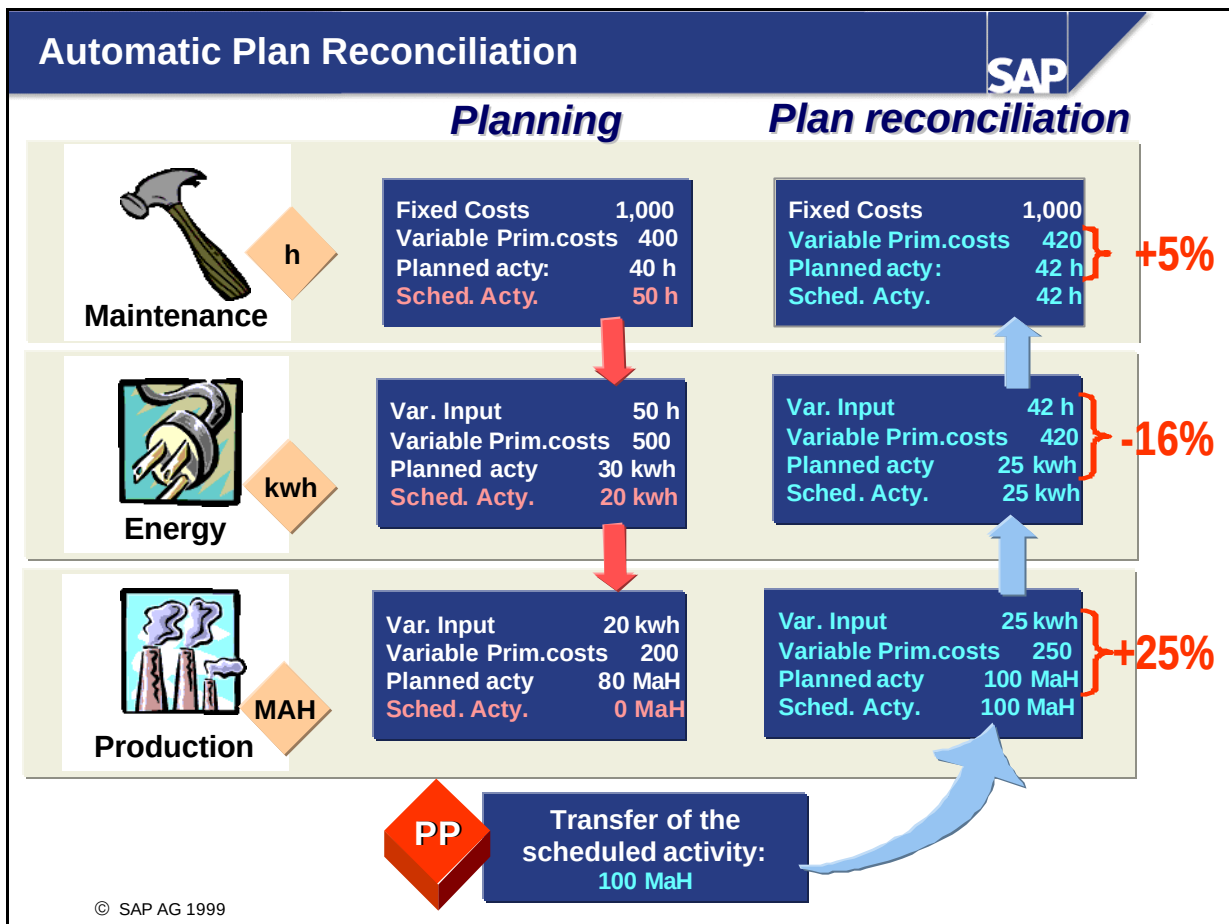
Bus. admin course days (CElem 476400): 1 per employee, 900 UNI each

10 employees

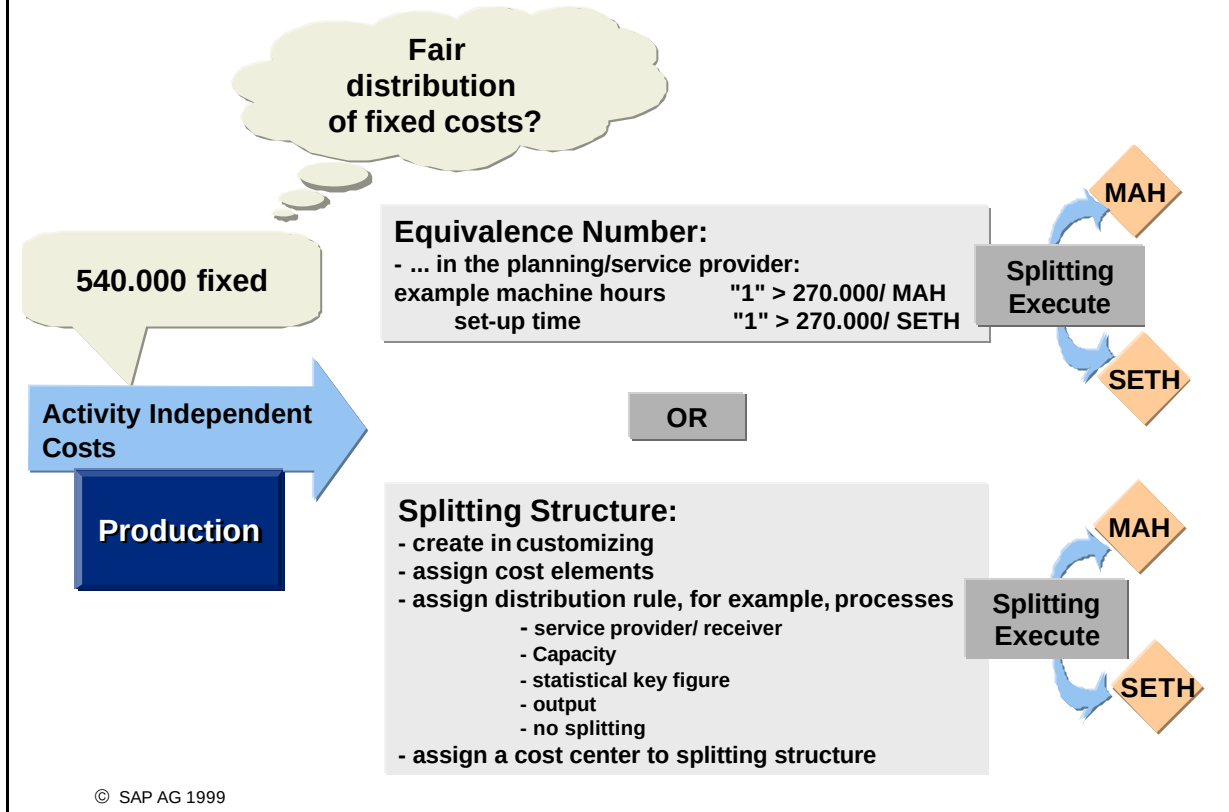
Resource costs = Dependency quantity x Dependency resource type x Resource price (stat. key fig. or activity type) x Dependency resource type Qty

© SAP AG 1999

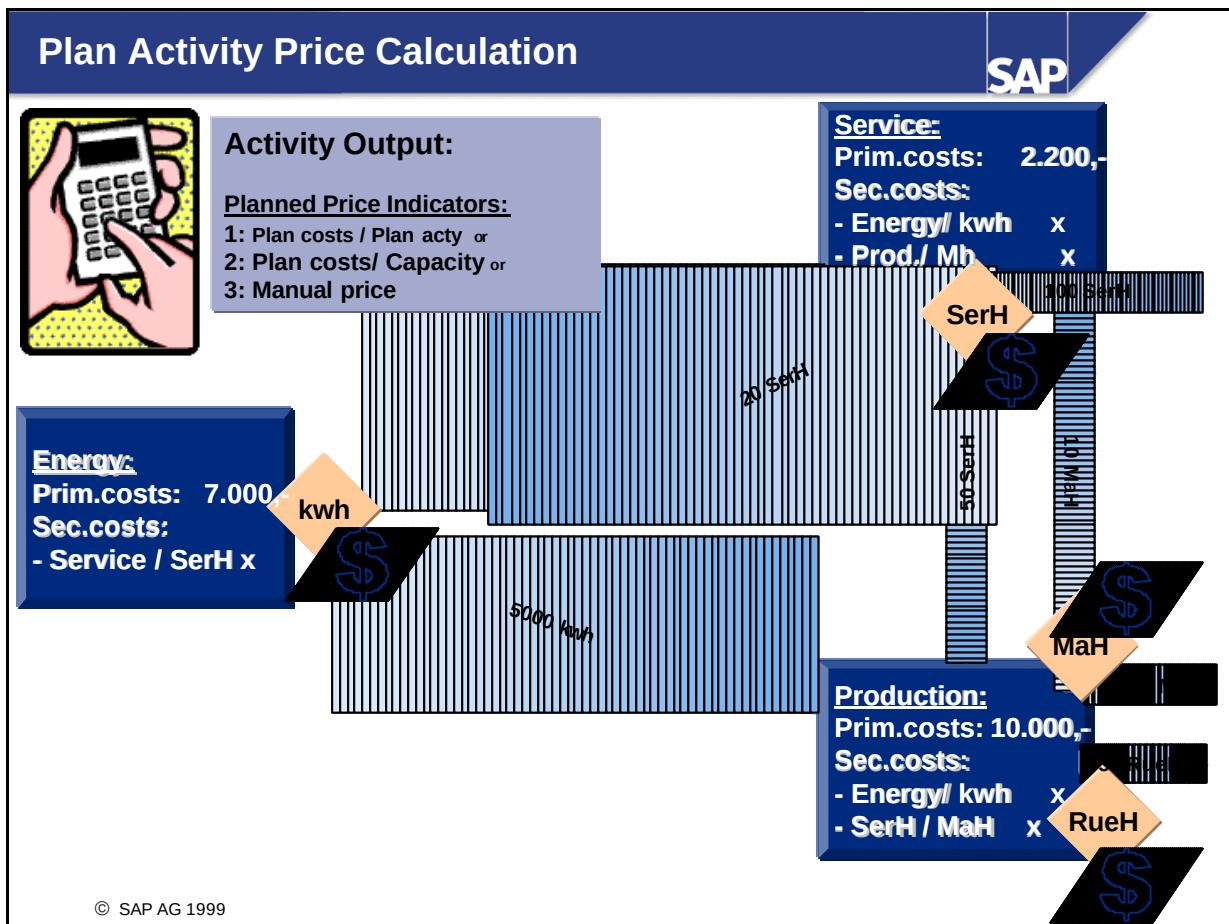
- You can use dependency planning for value-based and quantity-based planning of primary costs that are **activity-independent** and **activity-dependent**. The system uses a dependency to calculate the primary costs. This dependency can contain a statistical key figure, or activity types.
- For dependency planning that is value-based, you plan costs for each unit of a statistical key figure or activity type. For example, 100.00 UNI office supplies per employee, or 3,000.00 UNI training costs per employee. You plan a cost element. Dependency planning that is value-based is typically used in administration.
- For **dependency planning** that is **quantity-based**, you plan resource usage per unit of a statistical key figure or activity type. For example, the usage of course days per employee, or the usage of screws per car. The total planning costs are incurred by the usage per statistical key figure or activity unit, multiplied by the quantity of the object which created the cost, such as, the number of employees or cars, and the valuation with the resource price. Unlike dependency planning that is value-based, you plan the usage of more than one resource and thus detail your cost element planning. Dependency planning that is quantity-based is typically used in production.
- The SAP system calculates planned costs per period. If you defined different dependency prices, dependency quantities, or resource prices, the system determines a mean value in the overview screen for planning. The exact values are displayed in the period screen for planning.
- If you **change** the prices or quantities, the system revalues planning.
- Unlike resource planning, during dependency planning (quantity-based) for resource usage, not only is the resource consumption valued with the resource price, but the dependency quantity is also proportionalized with a statistical key figure or an activity type.
- SAP provides the standard **SAPR&R planning profile** with planning layouts for dependency planning (value-based: Layout 1-1R2, quantity-based: Layout 1-1R3).



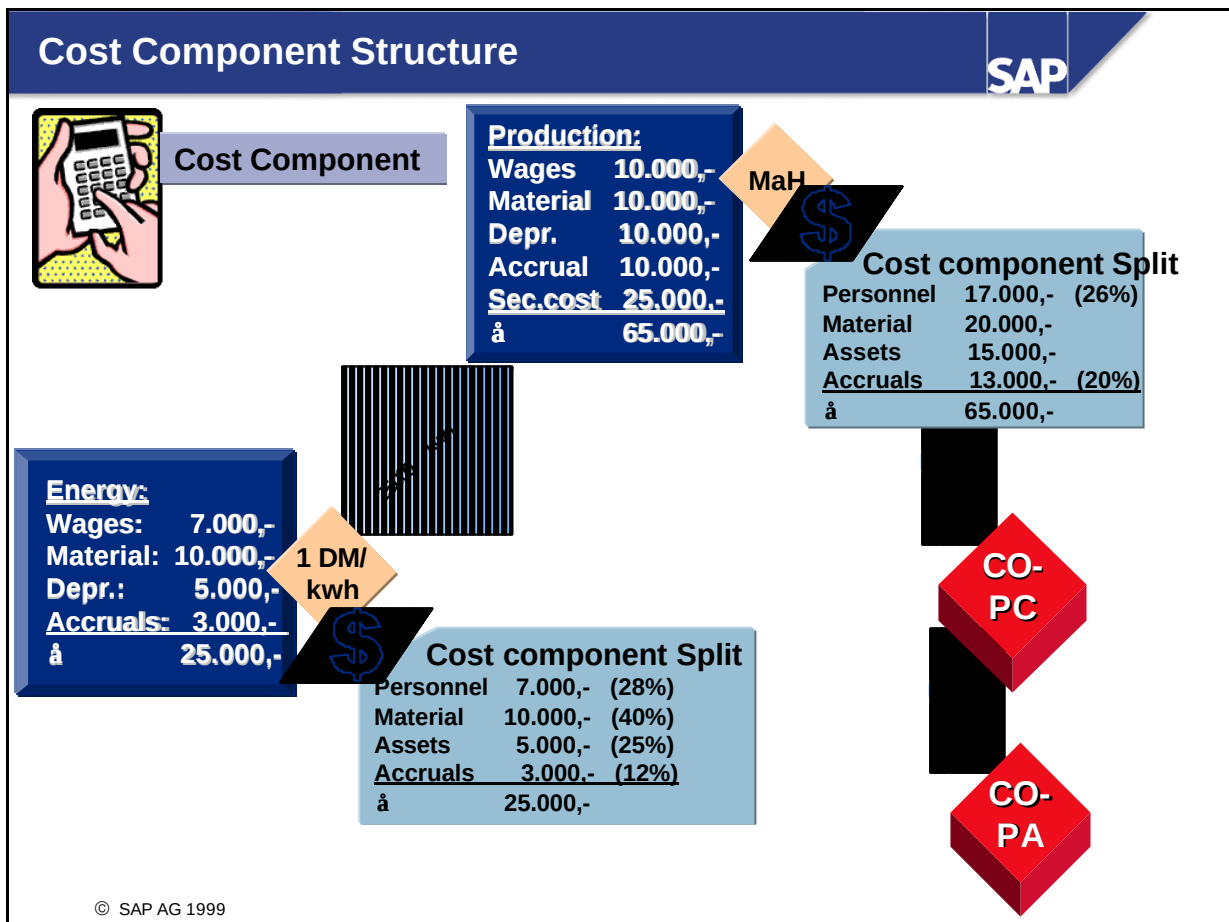
- The **automatic plan reconciliation** is used to check and reconcile the internal activity exchange. Also, if you have the production planning component active, you can transfer the scheduled activities for the production orders to the production cost centers. This approach can, and normally will, result in differences between the activity quantity performed by the sender cost center and the activities scheduled by the receiver cost centers or production orders.
- With the plan reconciliation, you can **adjust the entire plan activity quantities automatically on the basis of scheduled activity on the cost centers**. In the next step, the plan reconciliation adjusts the variable portion of activity-dependent primary costs and variable portion of activity-dependent activity inputs according to the new plan activity. The plan reconciliation does not change activity independent primary costs, activity independent activity outputs and the fixed portions of activity dependent activity outputs and primary costs.
- The plan reconciliation is carried out iteratively. This means that mutual activity relationships between cost centers are taken into account. Mutual activity relationships occur, for example, when a cost center plans to consume activity from a cost center, to which it also provides activity.
- The **posting of a plan reconciliation** leads to an automatic matching of your planned activities and variable planned costs in the firm. If the indicator for **plan quantity is set** in an **activity type**, the planned activity quantity will not be changed in the plan reconciliation, even when planning for the object is not intended to be reconciled.



- These activity-independent costs thereby become fixed portions in the activity prices. The simplest method for the plan cost splitting is to set up a **equivalence number** (default value = 1) in manual planning for each activity type. All planned activity-independent cost elements are split according the equivalence number.
- If you like to assign different cost elements groups to activities in different ways, or, for example, according to the plan quantity of the activity types, you can define a **splitting structure**. The latter along with splitting rules are used to determine the criteria applied to assign activity independent costs to activity types. A splitting structure contains one or more **assignments** in which you store **splitting rules** for the corresponding cost element(s) or cost element groups. You can restrict the selection of cost elements or cost element groups, as well the activity types on which the costs are split.
- Splitting methods are assigned to the splitting rules. These methods specify how the costs are split. This method, which is already set in the R/3 system, allows for the above described splitting of planned costs.
- You can also use weighting indicators to control whether tracing factors are to be weighted for the cost splitting. Set the indicator if the individual tracing factor values use different units of measure. If the *Conversion* indicator is active, the values are multiplied with the equivalence numbers of the activity types. This enables you to compare the different units of measure of the tracing factor values.



- **Planned prices** can be calculated for every cost center activity type. The R/3 system takes all plan activity flows between cost centers into account and calculates the activity price in an **iterative process** by **dividing the plan costs by the plan activity**.
- Alternatively, you can calculate the fixed price portion from the relationship between the plan costs and capacity. This is useful when the provision costs for the maximum activity quantity are not to affect costing of a product. For example, an energy-supplying cost center must always be capable of supplying the maximum level of activity, even if this activity quantity is not always used. In this case, the fixed provision costs should remain on the supplying cost center, since the full amount cannot be assigned directly to the product costs.
- In the plan version, you can set up the determination method for the plan activity price calculation. You can choose between **average activity price** and **periodic activity price**.
- If you have prices that are set both iteratively as well as **manually**, you can set the indicator "**purely iterative**" in the version. This ensures that the prices calculated from your planning (a mix of iterative and manual prices) are calculated using purely iterative methods. This means that an additional purely iterative price is calculated for all activity types on **all** cost centers, as if no prices have been set manually. You can thus see the effect of your manually planned prices on activity prices overall.



- Price calculation with **cost component breakdown** enhances the transparency of the prices calculated iteratively by the R/3 System. You can determine, for example, the proportions of material costs and wage costs in the price. The structure of price build-ups are retained for activity allocations in plan from the sender to the receiver.
- Before you are able to view the price cost components according to cost elements, you must first:
 - **Create cost component structures:** You save the cost component structure you wish to use for price calculation in the version. Cost component splitting is not carried out if a cost component structure does not exist in the version.
 - **Assign cost components to the cost component structure:** The cost component encompasses all costs of the assigned cost element range. You assign cost components to the cost component structure based on your organizational requirements.
- You can use the prices calculated in detail with the cost component in the **product cost planning (CO-PC)**. The assignment of cost elements in Cost Center Accounting to the cost elements in Product Cost Planning is done via a transfer scheme in Product Cost Planning. Cost components stemming from cost estimates that are forwarded from the product cost planning to the **profitability analysis** can also be analyzed in the **CO-PA**.



- ☐ statistical key figures
- ☐ activity output
- ☐ activity types (activity dependent / independent)
- ☐ activity input (activity dependent / independent)
- ☐ indirect activity allocation in plan
- ☐ template allocation in plan
- ☐ plan reconciliation
- ☐ (plan cost splitting)
- ☐ plan activity price calculation
- ☐ block planning, copying

- Cost center planning is used differently in almost every organization. The **type of industry, organization structures, and management areas** are all factors that affect planning. When defining the sequence of planning activities, SAP recommends bearing certain rules. A **sample scenario** might include the following points:
- You can use **statistical key figures** to calculate cost center characteristics, and to support cycle allocations and the splitting as tracing factors.
- As a rule, you begin with **activity planning** and tracing factor planning, because both plan activity quantities and plan capacity determine the final volume of costs.
- At the closing of the activity planning, you know the required volume of activity quantities and can therefore plan the **primary costs**, which can be either activity independent or dependent.
- The next step in the planning scenario is the **secondary cost planning**. You can plan secondary cost manually (activity inputs), or automatically (using the plan assessment or indirect activity allocation).
- At the end of the planning process, you can check and reconcile internal activity exchanges with the aid of **plan reconciliation**. Activity **price calculation** is the final stage of the planning activities.
- The planning process is not a one-time event, but an **iterative process** which usually goes through several cycles. Therefore you can store plan data in different versions.



Locking all of the planning:

Version 0 : Actual/Plan-version in 2000



Version locked

Locking planning transactions or plan periods:

Transactions	Periods											
	01	02	03	04	05	06	07	08	09	10	11	12
Periodic Reposting	x	x	x	x	x	x	x	x	x	x	x	x
Plan assessment	x	x	x	x	x	x	x	x	x	x	x	x
Planning primary costs	x	x	x	x	x	x	x	x	x	x	x	x

- Once the planning process is complete in Cost Center Accounting, you need to **lock** it to **prevent changes** being made.
- Use the locking indicator **in the version** to lock all of the planning for one planning year.
- Within the period lock, you can lock the planning for transactions that were not used (for example, revenue planning on cost centers). You can lock planning transactions for a combination of controlling area, fiscal year, and version.
- You can select the business transactions to be locked from a list.
- Likewise, you can lock individual business transactions for all **periods** in the fiscal year, or all business transactions for a certain period.

Copying Planning or Actual Data to Planning

SAP

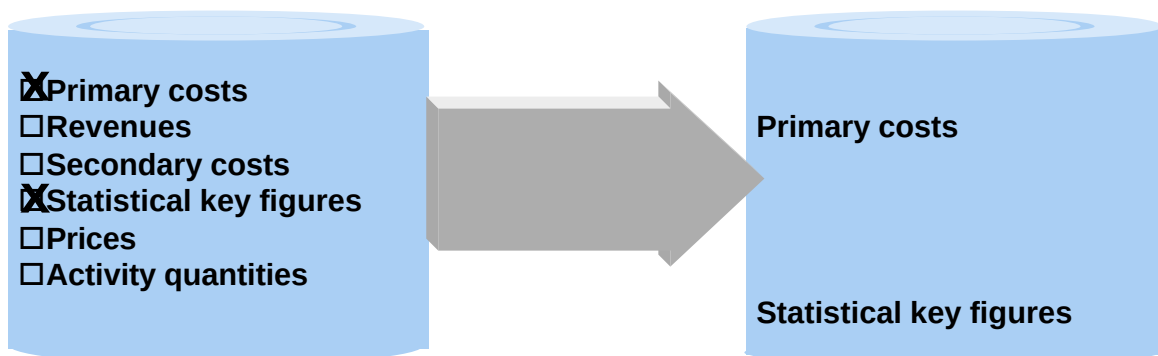
- ☐ Cost center
- ☐ Cost center group
- ☒ All cost centers
- ☐ Selection variant

Template

Period from to
 Fiscal year
☐ All data
☒ Select data

Target (plan)

Period from to
 Fiscal year
 Version 0



© SAP AG 1999

- To speed up planning data entry, you can obtain the plan values by copying plan or actual data.
- If you want to use **part of your manual planning** from the previous fiscal year for the current one, if you want to transfer your planning values into another period within a fiscal year, or if you want to create different versions, you can use the function for copying planning.
- By using the "Copy planning" function, you can select a reference version and a target version to copy values from one version to another.
- You can copy:
 - Within fiscal years, versions, and cost centers
 - Between different fiscal years, periods, and versions
- To assist your manual planning, you can select and **copy posted actual data** from cost centers. You can only use this function to copy transactions that you can plan manually.
- Selection criteria for actual data are cost centers (all cost centers, cost center groups, or individual cost centers) fiscal year, and from/to periods. You can also specify which actual data is to be copied.
- It is possible to select any value groups in the copy function. For example, you can restrict the selection to the data of a certain cost center, or use all of the data. You can also specify the business transactions that you want to copy.

Cost center: IT Service

Planned costs:	(copied)	(revaluated)
430000 (salaries)	500,000	510,000
476000 (office supplies)	10,000	9.900
476100 (IT supplies)	800,000	792,000
...	...	

Revaluation

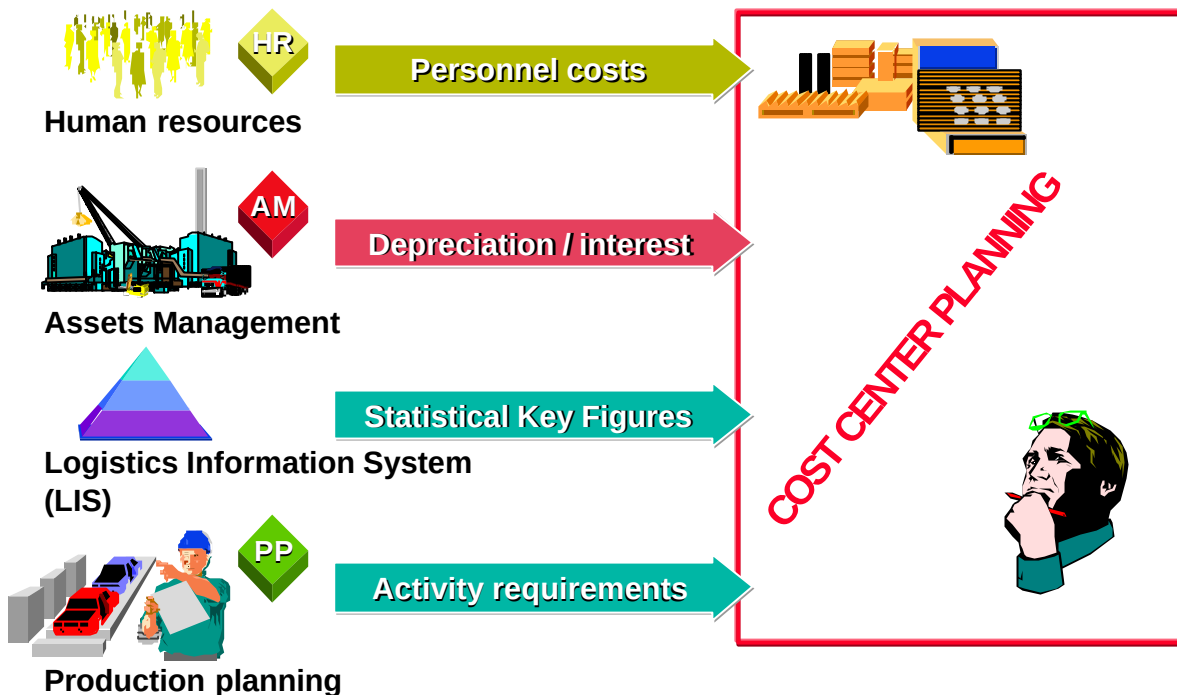
Cost element / CElem grp	% of cost element
476000 to 477000	- 1%
430000	+ 2%
Material	+ 1,5%

to CCtr only IT Service

to all cost centers

© SAP AG 1999

- You can use plan revaluation to **increase** or **reduce** planning data based on a percentage. For example, you can use this combine the "Copy planning" function with revaluation to create different plan versions. This can be useful if you copied the planning data from the previous fiscal year, or if you want to create scenarios for different situations in one fiscal year.
- You can revalue **costs** as well as the **consumption**. You can revalue all of the cost elements used in the planning for primary cost elements and revenues. Assessment cost elements, accrual cost elements, and cost elements that are used for indirect activity allocation cannot be revaluated.
- You can revalue cost centers or cost element plans as many times as required.
- During revaluation, **plan line items** are entered.
- Percentages used during a revaluation can be changed as many times as required. The old plan line items are deleted by repeated revaluations that have changed percentages. The revaluation always uses the original initial value.
- If the revaluation results are not to be reversed during a new run, then you need to define a new revaluation.

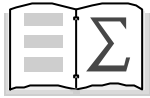


- **Integrated planning** enables you to transfer data from one of the pre-stored systems in Cost Center Accounting to cost center planning.
- If this **data was planned in the pre-stored systems**, and is transferred to cost center planning, then the corresponding data in Cost Center Accounting can be removed.
- To use integrated planning, certain requirements need to be fulfilled in Cost Center Accounting and in the pre-stored systems. Therefore, for example, to be able to transfer planned personnel costs from HR to primary cost planning in Cost Center Accounting, valid cost centers need to exist in Cost Center Accounting that are assigned to the corresponding master data for personnel.

Distribution key 1		
The total value is distributed evenly to the periods.		
P	24,000	Value
1		2,000
2		2,000
3		2,000
4		2,000
5		2,000
6		2,000
7		2,000
8		2,000
9		2,000
10		2,000
11		2,000
12		2,000

Distribution key 7		
The total value is distributed to the periods using the number of calendar days.		
P	24,000	Value
1		2,032.79
2		1,901.64
3		2,032.79
4		1,967.21
5		2,032.79
6		1,967.21
7		2,032.79
8		2,032.79
9		1,967.21
10		2,032.79
11		1,967.21
12		2,032.79

- The R/3 system interprets the values entered in the overview screen as the total value for the period of time entered in the initial screen for planning. It uses a distribution key for **period-based distribution** of the totals values.
- The standard R/3 system contains distribution keys that can be used to distribute values by different criteria. It is not possible to change the defaulted distribution keys.
- **Examples:** If you select standard distribution key 1, the corresponding value is distributed evenly to the periods. Distribution key 7 means that the entered value is distributed to the periods using the number of calendar days.
- In addition to the standard distribution keys, you can define as many **customer distribution keys** as required. For example, you can create a distribution key for seasonal fluctuations, or one for shift schedules.



You are now able to:

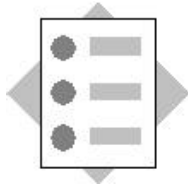
- **Describe the purpose of cost center planning and the function of versions**
- **Explain the use of planning layouts and planner profiles**
- **Execute a manual planning process**
- **List the options available under automatic planning**
- **Describe final planning activities**
- **Explain the planning aid provided by the SAP R/3 System**
- **Set up a planning layout and a planner profile as you require**

Optional Exercises



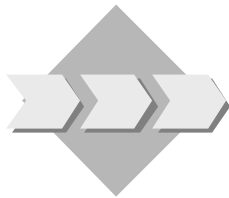
Unit: Planning

Topic: Planning Configuration



At the conclusion of these exercises, you will be able to:

- Create a planning layout



As a member of the project team, you have reviewed all the standard planning layouts supplied by SAP for the individual planning areas. Some of these layouts are too simple, others too extensive; you therefore decide to adapt an existing planning layout to your requirements.

- 1-1 The layouts in planner profile SAPEASY are designed for price planning and not for planning of activity output. Using the copy feature, use an existing, simple layout to create a new layout corresponding to the diagram below.

Version 0							
Period 1 through 12							
Fiscal year 1999							
Activity type J## Junior consultant							
Cost Center		Total price	Price unit	Plan activity	Version	Allocation cost element	L
301##	FI/CO Consulting	200	00001		1	6361##	☐
302##	LO consulting	200	00001		1	6361##	☐
							☐

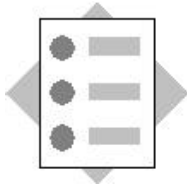
- 1-1-1 For the planning area activity type planning, create a planning layout **PL##** titled **Prices & Activities**. Use layout **1-262** (central price planning, simple layout) as a template.
 - 1-1-2 Place your cursor **in** the "L" column (long text). Enter the column (element) with the *key figure* **plan activity**. Confirm the element definition.
 - 1-1-3 Place your cursor in the "L" column (long text). Enter the column (element) with the *key figure* **distribution key**. This column determines the distribution of the planned annual activity to the periods and is therefore the attribute for the "Plan activity" column. Confirm your entry.
 - 1-1-4 Place your cursor in the "L" column (long text). Enter the column (element) with the *attribute* **allocation cost element**. Switch from the element definition screen to text maintenance and enter **AllocCElem** as the short text. Copy the short text and confirm your entries.
Save your layout.
- 1-2 Assign your planning layout to planner profile Z-##.

Exercises



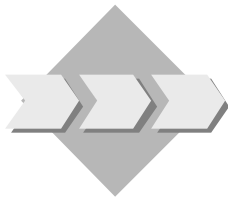
Unit: Planning

Topic: Planning Process



At the conclusion of these exercises, you will be able to:

- Plan statistical key figures
- Plan activity types
- Plan primary costs using cost element planning
- Create master data for resources
- Plan primary costs using resource planning
- Plan primary costs using dependency planning
- Run periodic reposting in the plan, and run plan assessment.
- Compare plan/actual data



The executive board has decided to use the planning functions provided by the R/3 System. Since you previously used an external system for your planning, you have to transfer the planning data for the current fiscal year to the R/3 System. To enable you to create actual/plan comparison reports for the whole year, you enter the annual planning values.

- 2-1 To avoid errors and to simplify data entry, define the basic data for planning in the user settings. You create the plan values for the **whole of the current fiscal year** in version **0**.



You enter all plan data in this unit for the **periods 1 to 12** of the **current fiscal year**. This then provides you with comparison values for the actual data already posted.

2-2 You plan the statistical key figures first. These figures serve as a reference for cost element planning (for example do IT costs vary with the number of PCs required) and are the basis for plan allocations.

2-2-1 Use the **SAPEASY** planner profile for planning the statistical key figures, or if you did the exercise that created a planning layout, use planner profile **Z-##**.

2-2-2 Use planning layout **1-362** for central planning. In this layout, you plan one statistical key figure to several cost centers. Plan the statistical key figure **TELE##** to the cost centers belonging to cost center group **B##**. Choose form-based entry.

Enter the following plan values.

Cost center	201##	202##	203##	301##	302##
TELE##	120,000	120,000	---	420,000	180,000

Save your entry, but do not exit the layout.

2-2-3 Plan the statistical key figure **PC##** to the cost centers belonging to cost center group **B##**. Choose form-based entry.

Enter the following plan values.

Cost center	201##	202##	203##	301##	302##
PC##	2	5	---	18	12

Save your entry, but do not exit the layout.

2-2-4 Plan the statistical key figure **KM##** to the cost centers belonging to cost center group **B30##**. Choose form-based entry.

Enter **580,000** kilometers for cost center **301##** (FI/CO consulting) and **250,000** kilometers for cost center **302##** (LO consulting). Save your entry.

2-3 Plan the activity types for cost center **301##** (FI/CO consulting) and **302##** (LO consulting). Since you already entered the prices when maintaining the master data, you need plan the activity quantities only.



If you did not work through the exercise on planning layouts, or for any reason you cannot access your own planning layout for activity type planning, use planner profile **SAPALL** for this exercise.

- 2-3-1 Plan the activity quantities of activity type **J##** in your planning layout **PL##** in planner profile **Z-##** (or **1-201** in planner profile **SAPALL**) for the consulting cost centers (cost center group **B30##**). Choose free entry.
- 2-3-2 Plan **12,000** junior consulting hours to cost center **301##** (FI/CO consulting) and **9,600** hours to cost center **302##** (LO consulting). The plan activity is to be distributed evenly across all the posting periods. Check the setting on the period screen. Save your plan data.
- 2-3-3 Plan activity type **S##** for the consulting cost centers (cost center group **B30##**). Choose free entry.
- 2-3-4 Plan **12,000** senior consulting hours for cost center **301##** (FI/CO consulting) and **9,600** hours for cost center **302##** (LO consulting). The plan activity is to be distributed evenly across all the posting periods. Save your plan data.
- 2-3-5 Access the report *Cost Centers: Planning Overview* for periods **1 to 12** of the **current fiscal year** and cost center **301##** (FI/CO consulting). Check your entries.
- 2-4 Plan the costs on the cost centers.



If you did not work through the exercise on planning layouts, or for any reason you cannot access your own planning layout for activity type planning, use planner profile **SAPALL** for this exercise.

- 2-4-1 The salary costs (**cost element 430000**) are planned centrally for all cost centers (**B##**) by the head of the consulting department. The manager shows you a list of the corresponding plan data and asks you to enter it in the system. Choose planning layout **1-162** for this (Cost element planning: central, simple). The values to be entered are annual values that are to be evenly distributed across the posting periods.

Cost center	Planned costs
201##	60,000
202##	252,000
203##	192,000
301##	2,532,000
302##	1,560,000

- 2-4-2 The other costs (cost elements **473120 through 477000**) incurred by the cost centers (cost center group **B##**) are planned by the cost center managers, each manager being individually responsible for these figures. The following graphic lists the plan data of the individual cost centers. Choose planning layout **1-161** (cost element planning: simple layout) in planner profile **SAPEASY**. The values to be entered are annual values that are to be evenly distributed across the posting periods. Choose form-based entry.

Cost center	Cost element	Planned costs
101##	473120 - Telephone usage costs	84,000
201##	476000 - Office supplies	24,000
202##	476100 - IT supplies	98,400
203##	475000 (Vehicle costs)	1,320,000

- 2-4-3 Use report *Cost Centers: Actual/Plan/Variance* to check the results of manual planning for the consulting cost centers. Access the report for the cost center group **B##** and for the **current period only**, so that you can compare planning data and actual data. Use the variation function to check your cost center planning.

- 2-5 Plan the costs on the consulting cost centers using **resource planning**.

Plan the training costs to the cost centers **301##** (FI/CO consulting) and **302##** (LO consulting). The additional training that you are interested in includes SAP training courses or other business administration training. The costs are calculated by multiplying the number of course days by the price of the course per day.

- 2-5-1 Display the master data for the **SAP-TRAIN** and **BA-TRAIN** resources.

Is the master data for the resources still valid?

- 2-5-2 In Customizing in condition type **TRAIN (Training prices)** display the prices for SAP and BA courses for the **current fiscal year** in version **0** and controlling area **1000**.

Which prices are stored for the courses?

- 2-5-3 For resource planning, use the planner profile **SAPR&R**.

- 2-5-4 Now plan the number of SAP training days. Execute planning in planning layout **1-1R1 "Resource planning"** for the **current fiscal year**. For cost center **301##** (FI/CO consulting) you plan the training costs (cost element **476400**) incurred by attendance at SAP training courses. Choose free entry. What data already exists in the table and where does it originate?
-

- 2-5-5 Plan an input of **180** course days and confirm with ENTER.
What information is displayed after you press ENTER?

Save your entry, but remain in the layout, so that you can plan the BA (business administration) days.

- 2-5-6 For cost center **301##** (FI/CO consulting) you plan the training costs (cost element **476400**) incurred when the consultants attend business administration courses. Choose free entry.

- 2-5-7 Explain the resource price displayed.

Display the period values.

- 2-5-8 Plan an input of **60** course days and confirm your entry with ENTER. Save your entry.

- 2-5-9 Check the planned costs for training in the *Cost Centers: Planning Overview* report for **all periods** of the **current fiscal year** and version **0**.
What is the source of the planning amount for cost element 476400 (training costs)?

-
- 2-6 Plan the costs on the cost centers using **dependency planning**.

When planning training costs, the manager of cost center 302## (LO consulting) uses a different planning strategy than the manager of cost center 301## (FI/CO consulting). The manager of cost center 302## wants each employee in their cost center to attend a certain number of course days per year. For this reason, they do not plan the number of course days for the cost center as a whole, but instead the number of course days per employee.

- 2-6-1 Use the **SAPEASY** planner profile for planning the *Employees* statistical key figure, or if you did the exercise for creating a planning layout, use planner profile **Z-##**.
- 2-6-2 Carry out planning using planning layout **1-361**. Plan the existing statistical key figure **9100** (employees) on cost center **302##** (LO consulting). Choose form-based entry.
Plan **15** employees on the cost center.
- 2-6-3 For quantity-based dependency planning, use the planner profile **SAPR&R**.

2-6-4 Execute cost element planning in planning layout **1-1R3** "Quantity-based dependency planning" for the **whole of the current fiscal year**. You plan the training costs (cost element **476400**) for cost center **302##** (LO consulting). You only plan SAP training days (**SAP-TRAIN**). Choose free entry.

2-6-5 What data does the table already contain?

2-6-6 Enter dependency type **2**, since when planning you access statistical key figures that you entered without reference to a particular activity type. Choose ENTER. The dependency source type is the number of employees (**9100**). Confirm with ENTER.

How do you explain the dependency source quantity of 180 pieces?

Each employee is to attend an average of **1** day of SAP training per period (= **dependency quantity**). Confirm your entry with ENTER.

How high are the total costs you planned for days spent attending SAP courses?

Save your planning data.



The **dependency type** controls whether the dependency quantity or the dependency price refers to an activity-dependent or activity-independent statistical key figure, or to an activity type.

Optional Exercise: 2-7 through 2-12

- 2-7 In the plan, create a cycle and a segment to allocate the planned costs from the "Telephone" cost center to other cost centers.
 - 2-7-1 Create a plan cycle **PU##** for periodic repostings on the telephone cost center. Use the actual cycle **PU##** as the source to copy from. Use the **first day of the current fiscal year** as the starting date.
 - 2-7-2 Change the *Variable portions type* field to **plan statistical key figures**. Run a formal check on the cycle and the segment. Save your entries.



Note that the sender values are automatically set to the plan values.

- 2-8 Execute the periodic reposting in the plan for the "Telephone" cost center.
 - 2-8-1 In the plan, run the periodic reposting for your **PPU##** cycle for **periods 1 to 12** of the **current fiscal year**. Choose *Test run* and *Detailed lists*.
 - 2-8-2 Execute the periodic reposting in the plan as an *update run*, so that the results are actually posted to the database.
- 2-9 Check the results of automatic planning.
 - 2-9-1 Call up the *Cost Centers: Actual/Plan/Variance* report for the **current period**, plan version **0**, and the cost center group for the consulting department **B##**.
 - 2-9-2 Use the variation function to check cost center planning for cost center **101##** (telephone) and on a receiver cost center for the periodic reposting.
- 2-10 Create an assessment cycle with which to allocate the costs of the "Organization", "IT Services" and "Vehicles" cost centers.
 - 2-10-1 Create a plan cycle **PASSE##** for the plan assessment of the above mentioned cost centers. Use the actual assessment cycle **ASSE##** as a source to copy from. Use the **first day of the current fiscal year** as the starting date.
 - 2-10-2 In the segment overview, display the segments.
 - 2-10-3 Because the cost centers "IT Service" and "Vehicles" use the variable portions of the actual statistical key figures as the tracing factors for their allocation in the **ASSE##** cycle, you need to change these values in the plan assessment

cycle. In the **IT SERV##** segment, change the *Variable portions type* field to **Plan statistical key figures**.

2-10-4 In the **VEHIC##** segment (or in the **New vehicles##** segment if you have done the optional exercise on creating an allocation schema) change the *Variable portions type* field to **Plan statistical key figures**. Save your data.

2-11 Run the plan assessment.

2-11-1 Run the plan assessment as a *test run* for your cycle (**PASSE##**) for **periods 1 to 12** of the **current fiscal year**. Choose *Detailed lists*.

2-11-2 To post the allocations, run the assessment as an *Update run*.

2-12 Check the results of automatic planning.

2-12-1 Access the *Cost Centers: Actual/Plan/Variance* report for the **current period**, plan version **0**, and the cost center group for the consulting department **B##**.

2-12-2 Check whether the cost centers **201## (Organization)**, **202## (IT Service)**, and **203## (Vehicles)** were fully credited.

2-12-3 Which actual cost balances (overabsorption/underabsorption) exist on the consulting cost centers?

301## (FI/CO consulting)

302## (LO consulting)

What conclusions can be drawn from these figures with regard to the choice of activity type price?

2-12-4 Both consulting cost centers have been credited less in actual than in plan. Why could this be?

2-12-5 Cost center **301## (FI/CO consulting)** shows less actual costs than were planned, for cost center **302## (LO consulting)** the reverse is the case. Analyze the reasons in each case.

301## (FI/CO consulting)

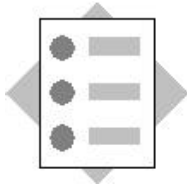
302## (LO consulting)

Exercises



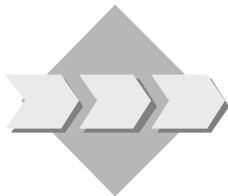
Unit: Planning

Topic: Planning Aids



At the conclusion of these exercises, you will be able to:

- Enter planning data for the coming fiscal year using the copying function.
- Revalue the copied planning data in line with projected costs.



You want to enter planning data for the coming fiscal year more easily and quickly. You decide to copy your previous planning data because it is so reliable.

The new salary scale takes effect from January of the new year, entailing an increase of 2% in personnel costs. You therefore need to adjust your planned salary costs for the new year.

3-1 Copy the planning data for all consulting cost centers to the next fiscal year.

3-1-1 All planning data for cost center group **B##** for periods **1 to 12** of the **current fiscal year** is copied to the corresponding periods of the **following fiscal year** to version **0**. If planning data already exists for these periods, this data must not be overwritten. Execute the copying function in *test mode* first, selecting *Detail lists*.

3-1-2 What type of planning data was copied?

3-1-3 Exit the list and display the *Notes* (under *Extras*) on the copy function. Can you also copy planning data from periodic reposting or assessment?

3-1-4 Execute the *Update run*.

3-2 Check whether the values were posted to the cost centers. Access the *Cost Centers: Planning Overview* report for the "FI/CO consulting" cost center (**301##**) for the **coming fiscal year** and the periods **1 to 12** in version **0**.

- 3-3 To modify the copied planning data to take expected changes into account, use the revaluation function.
- 3-3-1 Create a revaluation called **Salary##**. This is valid for the **following fiscal year** and version **0**.
 - 3-3-2 Enter **2% salary increase** as the text. This raise affects cost element **430000** and applies to all consulting department cost centers (**B##**).
 - 3-3-3 Define a cost increase of **2%**. Save the revaluation.
 - 3-3-4 Carry out the **Salary##** revaluation for **every period** of the **following fiscal year** in version **0**. Select *Test run* and *Detailed lists*.
 - 3-3-5 Now run the revaluation cycle in an *Update run* to post the revaluated planning data.
- 3-4 Check the results of the revaluation.
- 3-4-1 Access the *Cost Centers: Planning Overview* report for a cost center of your choice for the **coming fiscal year**, version **0**. (Do not choose the "Telephone" cost center as salary costs do not apply.)
 - 3-4-2 Display the line items for the salary costs (cost element **430000**). Double-click on the line item to access the detail display. This shows you which business transaction caused the line item.



Unit: Planning

Topic: Planning Configuration

1-1

- 1-1-1 **IMG ® Controlling ® Cost Center Accounting ® Planning ® Manual Planning ® User-Defined Planning Layouts ® Create Planning Layouts for Activity Type Planning ® Create Activity Type Planning Layout**

Field name or data class	Values
<i>Planning layout field 1</i>	<i>PL##</i>
<i>Planning layout field 2</i>	<i>Prices & activities</i>
Copy from	
<i>Planning layout</i>	<i>1-262</i>

Create button

- 1-1-2 Place your cursor on the "L" column (long text).

Edit ® Element ® Insert element

Select *Key figure with characteristics*.

Enter

Enter the *Plan activity* key figure.

Confirm the element definition.

- 1-1-3 Place the cursor on the "L" column.

Edit ® Element ® Insert element

Select *Attribute*.

Enter

Select *Distribution key*.

Enter

Confirm the element definition.

1-1-4 Place your cursor on the "L" column.

Edit ® Element ® Insert element

Select *Attribute*.

Enter

Select the *AllocCElem* attribute.

Enter

Icon ***Change short, medium, and long texts***

Change the short text to AllocCElem.

Icon ***Copy short text***

Confirm the element definition.

Save your data.



Unit: Planning

Topic: Planning Process

2-1 *Cost Center Accounting* ® *Information system* ® *User settings.*

Choose the *Planning period* on the tab page.

Field name or data class	Values
<i>Fiscal year</i>	<i>The current year</i>
<i>Period</i>	<i>From 1 to 12</i>

Save your data.

2-2

2-2-1 *Cost Center Accounting* ® *Planning* ® *Set planner profile.*

<i>Planner profile</i>	SAPEASY
------------------------	---------

Enter.

2-2-2 *Cost Center Accounting* ® *Planning* ® *Statistical key figures* ® *Change* ® *Goto* ® *Next layout (1-362).*

Field name or data class	Values
<i>Version</i>	0
<i>From period</i>	1
<i>To period</i>	12
<i>Fiscal year</i>	<i>The current year</i>
<i>Cost center group</i>	B##
<i>Statistical key figure</i>	TELE##
Entry	
<i>Form-based</i>	Select

Goto ® **Overview screen.**

Cost center	201##	202##	203##	301##	302##
Current plan value	120,000	120,000	--	420,000	180,000
Version	1	1	1	1	1

Save your data.

- 2-2-3 Change the value in the *Statistical key figure* field on the initial screen for planning.

<i>Statistical key figure</i>	<i>PC##</i>
-------------------------------	-------------

Goto ® Overview screen.

Cost center	201##	202##	203##	301##	302##
Current plan value	2	5	--	18	12
Version	1	1	1	1	1

Save your data.

- 2-2-4 Change the values for the *Cost center group* and *Statistical key figure* fields on the initial screen for planning.

<i>Cost center group</i>	<i>B30##</i>
<i>Statistical key figure</i>	<i>KM##</i>

Goto ® Overview screen.

Cost center	301##	302##
Current plan value	720,000	360,000
Version	1	1

Save your data.

2-3

2-3-1 **Cost Center Accounting ® Planning ® Activity input / Prices ® Change
® Goto ® Next layout (PL##).**

or

**Cost Center Accounting ® Planning ® Set planner profile® SAPALL ®
Activity output/prices ® Change (Layout 1-201).**

Field name or data class	Values
<i>Version</i>	<i>0</i>
<i>From period</i>	<i>1</i>
<i>To period</i>	<i>12</i>
<i>Fiscal year</i>	<i>The current year</i>
<i>Cost center group</i>	<i>B30##</i>
<i>Activity type</i>	<i>J##</i>
Entry	
<i>Free</i>	<i>Select</i>

Goto ® Overview screen.

2-3-2 In layout 1-201 you go to the next cost center.

Goto ® Next combination.

Cost center	301##	302##
Plan activity	12,000	9,600
Version	1	1

Save your data.

2-3-3 In the initial screen for planning, change the value in the *Activity type* field.

<i>Activity type</i>	<i>S##</i>
----------------------	------------

Goto ® Overview screen.

2-3-4

Cost center	301##	302##
Plan activity	12,000	9,600
Version	1	1

Save your data.

2-3-5 **Cost Center Accounting ® Information System ® Reports for Cost Center Accounting ® Planning Reports ® Cost Centers: Planning Overview.**

Field name or data class	Values
Cost center	301##
Fiscal year	The current year
Period	1 to 12
Version	0

Planning overview ® Execute.

2-4

2-4-1 **Cost Center Accounting ® Planning ® Set planner profile.**

Planner profile	SAPEASY
-----------------	---------

Cost Center Accounting ® Planning ® Costs and activity input ® Change ® Goto ® Next layout (1-162).

Field name or data class	Values
Version	0
From period	1
To period	12
Fiscal year	The current year
Cost center group	B##
Cost element	430000
Entry	
Form-based	Select

Goto ® Overview screen.

Cost center	201##	202##	203##	301##	302##
Total plan costs	60,000	252,000	192,000	2,532,000	1,560,000
Version	1	1	1	1	1

Save your data.

2-4-2 **Goto ® Previous layout (1-161).**

Field name or data class	Values
Version	0
From period	1
To period	12
Fiscal year	The current year
Cost center group	B##
Cost element	473120
to	477000
Entry	
Form-based	Select

Goto ® Overview screen.

To go to the next cost center, choose

Goto ® Next combination.

Cost center	Cost element	Total plan costs	Version
10100	473120 - Telephone usage	84,000	1
20100	476000 - Office supplies	24,000	1
20200	476100 - IT supplies	98,400	1
20300	475000 - Vehicle costs	1,320,000	1

Save your data.

2-4-3 **Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Plan/Actual Comparisons ® Cost Centers: Actual/Plan/Variance.**

Field name or data class	Values
Controlling area	1000
Fiscal year	The current year
From period	1
To period	12
Plan version	0
Cost center group	B##

Program ® Execute.

2-5-1 **Cost Center Accounting ® Master data ® Resources ® Create/Change.**

Field name or data class	Values
<i>Resources</i>	<i>SAP-TRAIN##</i>
<i>Valid from</i>	<i>01/01/current fiscal year</i>
<i>Valid until</i>	<i>12/31/9999</i>
<i>RE</i>	<i>T</i>
<i>Name</i>	<i>SAP course days</i>
<i>Cost element</i>	<i>476400</i>

Go to the next entry row.

<i>Resources</i>	<i>Bus. admin. course##</i>
<i>Valid from</i>	<i>01/01/current fiscal year</i>
<i>Valid until</i>	<i>12/31/9999</i>
<i>RE</i>	<i>T</i>
<i>Name</i>	<i>Bus. admin. course days</i>
<i>Cost element</i>	<i>476400</i>

Save your data.

2-5-2 **IMG ® Controlling ® Cost Center Accounting ® Planning ® Resource Planning ® Define Condition Types.**

Select the *Training Prices* row.

Go to the *Dialog Structure*.

Double-click on *Condition records*.

Choose *Price per Controlling Area* as the access sequence.

Enter.

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Version</i>	<i>000</i>
<i>Fiscal year</i>	<i>Current</i>

Enter.

Price per SAP course day in the year 2000 700.- in the year 2001,
800

Price per bus.admin.course in the year 2000 until October: 900, as of
November: 1,000

Price per bus.admin.course in the year 2001 until October: 1,000, as of
November: 1,100.

2-5-3 **Cost Center Accounting ® Planning ® Set planner profile.**

<i>Planner profile</i>	<i>SAPR&R</i>
------------------------	-------------------

Enter.

2-5-4 **Cost Center Accounting ® Planning ® Cost and activity inputs ® Change (Layout 1-1R1).**

Field name or data class	Values
<i>Version</i>	<i>0</i>
<i>From period</i>	<i>1</i>
<i>To period</i>	<i>12</i>
<i>Fiscal year</i>	<i>1999</i>
<i>Cost center</i>	<i>301##</i>
<i>Cost element</i>	<i>476400</i>
<i>Resources</i>	<i>SAP-TRAIN##</i>
Entry	
<i>Free</i>	<i>Select</i>

Goto ® Overview screen.

The resource price is taken from the condition type.

2-5-5 Enter the planned resource consumption.

<i>Plan fixed consumption</i>	<i>180</i>
-------------------------------	------------

Enter.

The total costs incurred by course day input are displayed in the plan fixed costs column.

Save your data.

2-5-6 On the initial screen for resource planning, change the value in the *Resources* field to *BA-TRAIN##*.

<i>Resources</i>	<i>BA-TRAIN##</i>
------------------	-------------------

Goto ® Overview screen.

2-5-7 The resource price comes from the condition type.

The resource price displayed is the average of the periodically maintained prices over the 12 periods.

Goto ® Period screen.

2-5-8 ***Goto ® Overview screen.***

Enter the planned resource consumption.

<i>Plan fixed consumption</i>	<i>60</i>
-------------------------------	-----------

Save your data.

2-5-9 ***Cost Center Accounting ® Information System ® Reports for Cost Center Accounting ® Planning Reports ® Cost Centers: Planning Overview.***

Field name or data class	Values
<i>Cost center</i>	<i>301##</i>
<i>Fiscal year</i>	<i>The current year</i>
<i>Period</i>	<i>1 to 12</i>
<i>Version</i>	<i>0</i>

Planning overview ® Execute.

The planning amount for cost element 476400 is the resource input for the SAP courses and business administration courses.

2-6

2-6-1 ***Cost Center Accounting ® Planning ® Set planner profile.***

<i>Planner profile</i>	<i>SAPEASY</i>
------------------------	----------------

Enter.

2-6-2 **Cost Center Accounting ® Planning ® Statistical key figures ® Change**

Field name or data class	Values
<i>Version</i>	<i>0</i>
<i>From period</i>	<i>1</i>
<i>To period</i>	<i>12</i>
<i>Fiscal year</i>	<i>The current year</i>
<i>Cost center group</i>	<i>302##</i>
<i>Statistical key figure</i>	<i>9100</i>
Entry	
<i>Form-based</i>	<i>Select</i>

Goto ® Overview screen.

Cost center	302##
Current plan value	15
Version	1

Save your data.

2-6-3 **Cost Center Accounting ® Planning ® Set planner profile.**

<i>Planner profile</i>	<i>SAPR&R</i>
------------------------	-------------------

Enter.

2-6-4 **Cost Center Accounting ® Planning ® Cost and activity inputs**

Field name or data class	Values
<i>Version</i>	<i>0</i>
<i>From period</i>	<i>1</i>
<i>To period</i>	<i>12</i>
<i>Fiscal year</i>	<i>1999</i>
<i>Cost center</i>	<i>302##</i>
<i>Cost element</i>	<i>476400</i>
<i>Resources</i>	<i>SAP-TRAIN##</i>
Entry	
<i>Free</i>	<i>Select</i>

Goto ® Overview screen.

2-6-5 The resource price for the SAP course days.

2-6-6 Enter **2** in the **Dependency type (R)** column.

Enter.

Enter **9100** in the **Dependency source type** column.

Enter.

The dependency source quantity of 180 pieces results from the employee-related planning for course attendance.

15 employees per period (12)

Enter a **1** in the fixed dependency quantity column.

Enter.

The total costs planned for the SAP course days are 126,000 (year 2000), and 144,000 (year 2001).

Save your data.

2-7

2-7-1 **Cost Center Accounting ® Planning ® Planning aids ® Periodic reposting ® Extras ® Cycle ® Create.**

Field name or data class	Values
<i>Cycle</i>	<i>PPU##</i>
<i>Start date</i>	<i>01/01// current fiscal year</i>
Copy from	
<i>Cycle</i>	<i>PU##</i>

Enter.

2-7-2 **Goto ® Overview segments**

Select the first segment.

Click on the **Choose** icon.

Change the *Variable portions type* field to *Plan statist. key figure*.

<i>Variable portions</i>	<i>Statistical key figure plan.</i>
--------------------------	-------------------------------------

Cycle ® Formal check

Save your data.

Confirm the *Customizing order* dialog box.

2-8

2-8-1 **Goto ® Back (twice).**

Field name or data class	Values
<i>Period</i>	<i>1 to 12</i>
<i>Fiscal year</i>	<i>The current year</i>

Select *Test run* and *Detailed lists*.

<i>Cycle</i>	<i>PPU##</i>
--------------	--------------

Periodic Reposting ® Execute.

2-8-2 Return to the initial screen for plan period repostings.

Deselect *Test run*.

Periodic repostings ® Execute.

2-9

2-9-1 **Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Plan/Actual comparisons ® Cost centers: Actual/Plan/Variance.**

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>The current year</i>
<i>From period</i>	<i>1</i>
<i>To period</i>	<i>12</i>
<i>Version</i>	<i>0</i>
<i>Cost center group</i>	<i>B##</i>

Program ® Execute.

2-9-2 Click the **Navigation on/off** icon

Go to the **Variation: Cost center** window.

Click on a cost center to call up the corresponding report and check the results of the automatic planning.

2-10-1 **Cost Center Accounting ® Planning ® Allocations ® Assessment ® Extras ® Cycle ® Create.**

Field name or data class	Values
<i>Cycle</i>	<i>PASSE##</i>
<i>Start date</i>	<i>01/01/current fiscal year</i>
Template	
<i>Cycle</i>	<i>ASSE##</i>

Enter.

2-10-2 **Goto ® Overview segments.**

2-10-3 Select the **IT-SERV##** segment.

Click on the **Choose** icon.

Change the entry in the *Variable portions type* field to *Plan statist. key figure*.

<i>Variable portions</i>	<i>Statistical key figures plan.</i>
--------------------------	--------------------------------------

Save your data.

Confirm the *Customizing order* dialog box.

2-10-4 Select the **VEHIC## or VEHIC##NEW** segment.

Click on the **Choose** icon.

Change the entry in the *Variable portions type* field to *Plan statistical key figures*.

<i>Variable portion type</i>	<i>Plan statistical key figures</i>
------------------------------	-------------------------------------

Save your data.

Confirm the *Customizing order* dialog box.

2-11

2-11-1 **Goto** ® **Back**.

Field name or data class	Values
<i>Period</i>	<i>1 to 12</i>
<i>Fiscal year</i>	<i>The current year</i>

Select *Test run* and *Detailed lists*.

<i>Cycle</i>	<i>PASSE##</i>
--------------	----------------

Assessment ® **Execute**.

2-11-2 Return to the initial screen for plan periodic repostings.

Deselect *Test run*.

Assessment ® **Execute**.

2-12

2-12-1 **Cost Center Accounting** ® **Information system** ® **Reports for Cost Center Accounting** ® **Plan/Actual Comparisons** ® **Cost Centers: Actual/Plan/Variance**.

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>The current year</i>
<i>From period</i>	<i>The current year</i>
<i>To period</i>	<i>The current year</i>
<i>Version</i>	<i>0</i>
<i>Cost center group</i>	<i>B##</i>

Program ® **Execute**.

2-12-2 Click the **Navigation on/off** icon

Go to the **Variation: Cost center** window.

Double-click on each cost center in the consulting cost center group to call up the corresponding report, and check the credit.

All cost centers are completely credited by the plan assessment.

2-12-3 The following actual cost balances exist on the consulting cost centers:

301## (FI/CO consulting) - 138,084.75

302## (LO consulting) - 117,915.25

2-12-4 The actual activity of the junior consultant is 200 hours less than planned.

2-12-5 Normally, the cause of an actual/plan variance is a lower or higher debit of actual costs than originally planned.

Cost center 301## actual costs (debits) were lower than planned due mainly to salary, training, and vehicles costs.

Cost center 302## was also due mainly to salary, training, and vehicles costs, as well as use of IT services.

Solutions



Unit: Planning

Topic: Planning Aids

3-1

3-1-1 *Cost Center Accounting* ® *Planning* ® *Planning aids* ® *Copy* ® *Copy plan to plan.*

Field name or data class	Values
<i>Cost center group</i>	<i>B##</i>
Template	
<i>Version</i>	<i>0</i>
<i>Period</i>	<i>1 to 12</i>
<i>Fiscal year</i>	<i>Current</i>
Targets	
<i>Version</i>	<i>0</i>
<i>Period</i>	<i>1 to 12</i>
<i>Fiscal year</i>	<i>Next year</i>
<i>Existing planning data</i>	<i>Do not change</i>

Select *Test run* and *Detail lists*.

***Copy* ® *Execute*.**

3-1-2 Primary costs, activities, statistical key figures

3-1-3 On the *Copy Planning: Initial Screen*

***Extras* ® *Notes*.**

You can copy only those business transactions that can be planned manually.

3-1-4 Deselect *Test run*.

***Copy* ® *Execute*.**

3-2

3-2-1 Cost Center Accounting ® Information System ® Reports for Cost Center Accounting ® Planning Reports ® Cost Centers: Planning Overview.

Field name or data class	Values
<i>Cost center</i>	<i>301##</i>
<i>Fiscal year</i>	<i>Next year</i>
<i>Period</i>	<i>1 to 12</i>
<i>Version</i>	<i>0</i>

Planning overview ® Execute.

3-3

3-3-1 Cost Center Accounting ® Planning ® Planning Aids ® Revaluate ® Costs ® Extras ® Revaluation ® Create.

Field name or data class	Values
<i>Revaluation</i>	<i>Salary##</i>
<i>Fiscal year</i>	<i>Next year</i>
<i>Version</i>	<i>0</i>

Enter.

3-3-2

<i>Text</i>	<i>2% salary increase</i>
<i>Cost center group</i>	<i>B##</i>
<i>Cost element</i>	<i>430000</i>

3-3-3 Goto ® Definition.

Field name or data class	Values
<i>From</i>	<i>1</i>
<i>To</i>	<i>12</i>
<i>Costs</i>	<i>2</i>

Save your data.

3-3-4 On the *Plan Revaluation: Initial Screen*.

Field name or data class	Values
<i>Version</i>	<i>0</i>
<i>Period</i>	<i>1 to 12</i>
<i>Fiscal year</i>	<i>Next year</i>

Select *Test run* and *Detailed lists*.

<i>Revaluation</i>	<i>Salary##</i>
--------------------	-----------------

Revaluation ® Execute.

3-3-5 Deselect *Test run*.

Revaluation ® Execute.

3-4

3-4-1 ***Cost Center Accounting ® Information system ® Reports for Cost Center Accounting ® Planning Reports ® Cost Centers: Planning Overview.***

Field name or data class	Values
<i>Cost center</i>	<i>301##</i>
<i>Fiscal year</i>	<i>Next year</i>
<i>Period</i>	<i>1 to 12</i>
<i>Version</i>	<i>0</i>

Planning overview ® Execute.

3-4-2 Position your cursor on the report row **cost element 430000**.

View ® Row ® Line items on/off.

Double-click on the line item of the revaluation.

Transaction

RKP1: Primary Costs Planning

Original transaction

KPUW: Plan revaluation

Content:

- **Variance Analysis**
- **Reconciliation ledger**
- **Period locks**



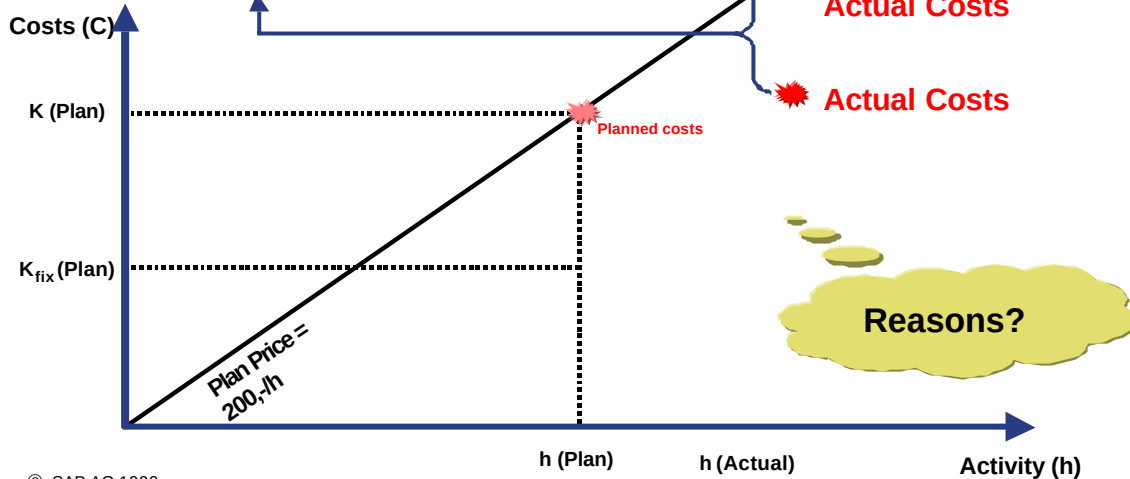
At the conclusion of this unit, you will be able to:

- **Explain Variance Analysis**
- **Make reconciliation postings in Financial Accounting, using the reconciliation ledger**
- **Open and close whole periods, or selected business transactions in periods**

Cost Center Balance

SAP

Cost elements	Act. costs	Planned costs	Var. (abs)
415100 external acty.	121.100,-	100.000,-	21.000,-
404000 replacement	9.000,-		9.000,-
430000 Salaries	100.000,-	100.000,-	
Debit	230.000,-	200.000,-	30.000,-
619000 DIAA Repair	-280.000,-	-200.000,-	-80.000,-
Credit	-280.000,-	-200.000,-	80.000,-
Under/Over Absorption	-50.000,-	0,-	-50.000,-



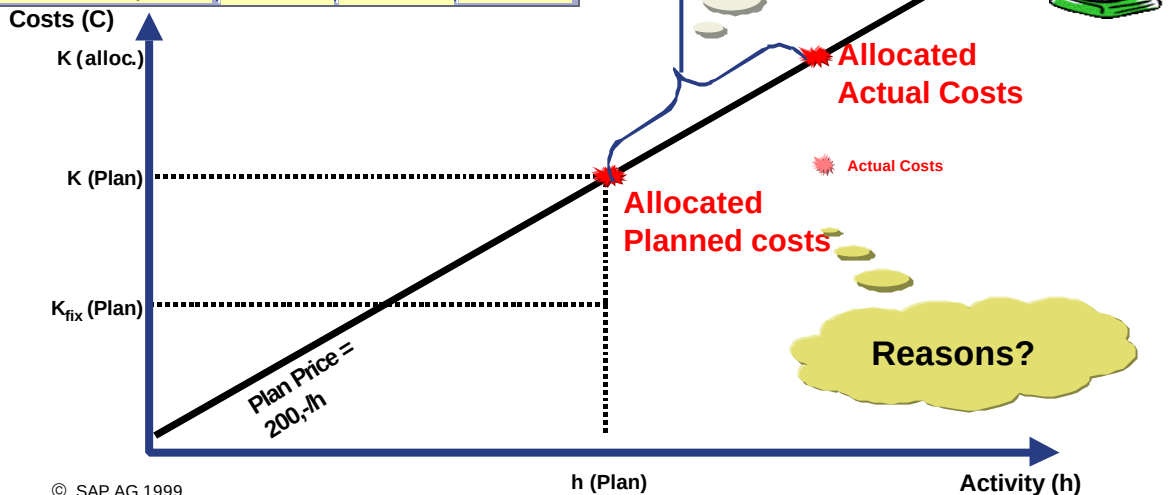
© SAP AG 1999

- As soon as all periodic allocations are executed (accrual allocations, periodic repostings, distributions, assessments, indirect activity allocations, target=actual activity allocations) you can carry out the **closing analyses for your areas of responsibility**. The functionality you have in the R/3 Controlling depends on the functions you have used during the period and which **cost accounting system** you implement.
- The **information system** plays a crucial role here. Therefore, a review of the simple analytical functionalities is well advised at this point in order to grasp the more advanced ones covered later in this chapter. You can analyze the balance of the cost center in its plan/actual comparison (in column **Under/Over Absorption Actual Costs**):
 - This provides the cost center relevant **debits** and **credits**, whose sum should result in zero if the cost center has assessed all its costs.
 - For cost centers that execute activity related allocations using plan prices, the **balance** is usually transferred **into the results per assessment**. For activity types/cost centers and constant period prices (here 200 UNI/quantity unit), the allocated costs are in line with the target credits as opposed to the actual activity (see above illustration).
 - A negative balance (as shown above) shows that less actual costs were incurred than activity costs were imposed on the receiver (-50.000 UNI).

Plan/Actual Comparison: Credit Side

SAP

Cost elements	Actual Costs	Planned costs	Var. (abs)
415100 external acty.	121.100,-	100.000,-	21.000,-
404000 replacement	9.000,-		9.000,-
430000 Salaries	100.000,-	100.000,-	
Debit	230.000,-	200.000,-	30.000,-
619000 DIAA Repair	-280.000,-	-200.000,-	-80.000,-
Credit	-280.000,-	-200.000,-	80.000,-
Under/Over Absorption	-50.000,-	0,-	-50.000,-



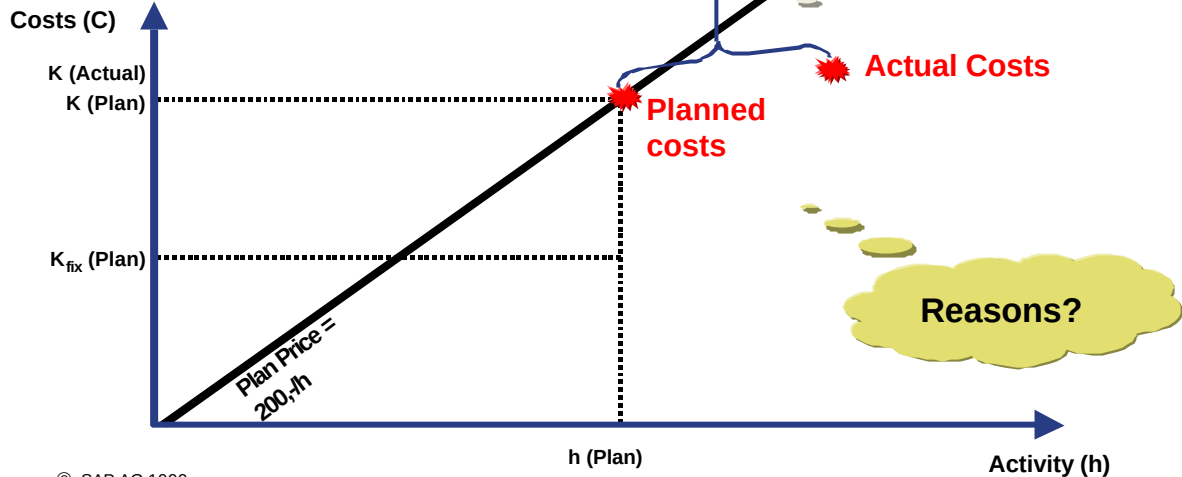
© SAP AG 1999

- The **plan/actual variance of the credit side** provides information on how much costs were allocated compared to the planned allocation for the cost center.
- In the example provided, the variances from the credit side are negative; that is, the **receivers of activities** (or costs) **for the cost center** are burdened with more debits than planned.
- The illustration refers to a simple case with only one activity type that is allocated with an iterative plan price of 200 UNI.

Plan/Actual Comparison: Debit Side

SAP

Cost elements	Actual Costs	Planned costs	Var. (abs)
415100 external acty.	121.100,-	100.000,-	21.000,-
404000 replacement	9.000,-		9.000,-
430000 Salaries	100.000,-	100.000,-	
Debit	230.000,-	200.000,-	30.000,-
619000 DIAA Repair	-280.000,-	-200.000,-	-80.000,-
Credit	-280.000,-	-200.000,-	80.000,-
Under/Over Absorption	-50.000,-	0,-	-50.000,-



© SAP AG 1999

- To judge the **cost effectiveness** of a cost center, you can use the standard costing of the **plan/actual comparison from the debit side**. Actual cost values are compared with planned costs here.
- The report referenced shows actual costs that are larger than planned costs (+30.000 UNI). That is, more costs were actually incurred than planned.
- The report does not consider cost center performance, making satisfactory judgements in this area impossible.

Target Costs: Concepts and Calculations

SAP

Cost elements	Actual Costs	Target costs	Planned costs	T/A-Var.(abs)
415100 external acty.	121.000,-	140.000,-	100.000,-	-19.000,-
404000 replacement	9.000,-			9.000,-
430000 Salaries	100.000,-	100.000,-	100.000,-	
Debit	230.000,-	240.000,-	200.000,-	-10.000,-
619000 DILV Production	-280.000,-	-280.000,-	-200.000,-	
Credit	-280.000,-	-280.000,-	-200.000,-	
Under/Over Absorption	-50.000,-	-40.000,-	0,-	-10.000,-

Planned costs::
remain constant

Actual Costs: increase with
Resource Consumption

Target Costs (variable):
increase with
own activity

Activity-Related Calculations for Target Costs/Cost Centers

Debit Side:

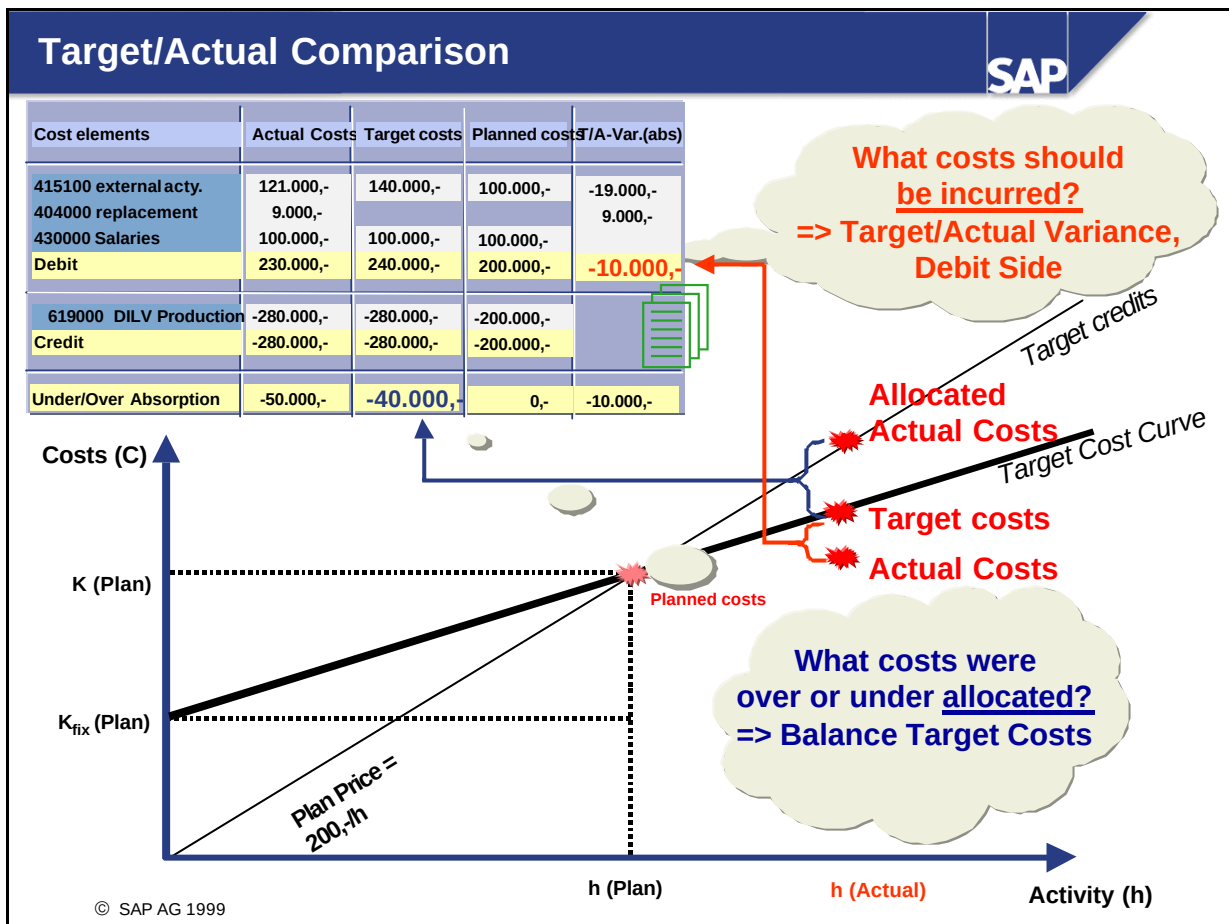
fixed plan costs
+ variable plan costs (or qty.) * operating rate
= target costs

Credit Side:

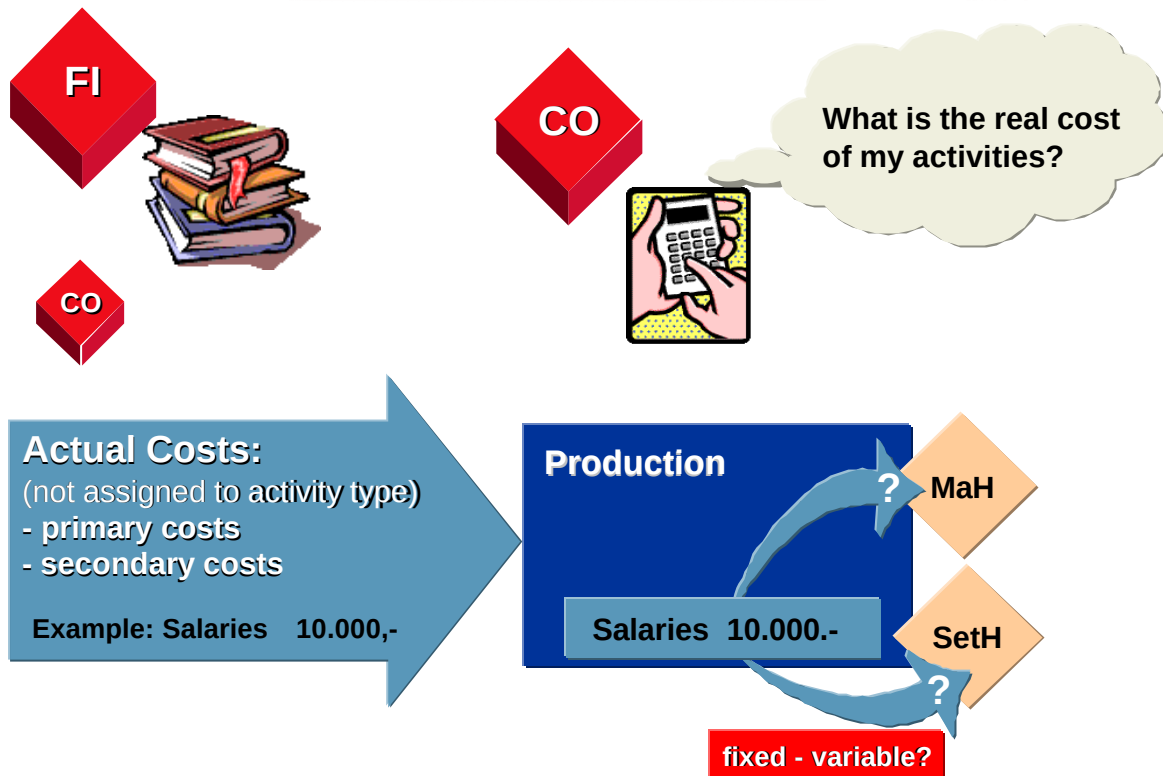
= target credit (actual qty. full cost price)

© SAP AG 1999

- The system calculates the target costs directly, making it possible to obtain an actual/target comparison before period-end. Target and plan costs differentiate themselves only when an **activity dependent plan** has taken place. Increases in target costs and actual activities of an activity type are correlated for the cost center.
- Target costs that appear in the **standard report "target/actual comparison"** are calculated as follows:
- Debit Side:
 - activity-independent planned costs
 - plan costs = (fixed) target costs
 - activity-dependent planned costs
 - fixed planned costs = fixed target costs
 - variable planned costs * operating rate = variable target costs
 - (secondary costs are calculated using fixed or variable quantities)
- Credit Side:
 - target credit = allocated quantity * iterative plan price (full costs basis)



- The target/actual variances from the target cost analysis are used to check the economic **variances of the debit side**. Here, the incurred cost center costs are compared with those that should have been incurred.
 - The above report shows that the cost center incurred less costs than it should have at the same level of operation, even though more actual costs are shown than plan costs. The cost center had a favorable (negative) target/actual variance for the debit side (-10.000 UNI). This stems from a higher level of activities than planned. The target/actual comparison report shows the operating level for each activity type of the cost center individually.
- Furthermore, the values over/under absorption detail what costs were allocated too high, or too low (compared to the target costs). These are variances of the estimated costs (target costs) that are debited too high or too low to the receiver. In the above example, the receiver is allocated with activity costs that are too high, 40.000 UNI, which works out favorably for the sender cost center (negative variance - 40.000 UNI).
- The illustration shows that the balance (under/over absorption actual costs) is the sum of the target/actual variances for the debit side plus the under/over absorption of the target costs.



- **Actual costs** in cost center accounting are normally booked to the **cost center**, and not to the combination 'cost center/activity type' (see chapter on actual allocations). In order to carry out the variance calculation or the actual activity price calculation, therefore, the actual costs must be apportioned to the activity types performed by the cost center. In the actual, these activity independent costs must be apportioned to the activity types before the variance analysis.
- The goal of the actual cost splitting is to calculate the **total cost for the activity types**. This is required for the variance calculation, which can be executed per cost center and activity/cost center.
- Furthermore, the actual cost splitting is executed to facilitate the comparison of target/actual using the **separated fixed and variable costs**.
- **Actual costs are automatically split into two steps**. The system's internal process is described in the next slides.

Actual Cost Splitting per Cost Element

Cost Elements	CCtr.Acty.	Plan Costs	Target Costs	Actual Costs
430.000	Costs center -	100.000,-	100.000	100.000
	Costs center h	?	?	?
404.000	Costs center -	-	-	9.000,-
	Costs center h	-	-	?
415.100	Costs center -	100.000,-	140.000,-	121.000,-
	Costs center h			121.000,-

First Step:

Splitting based on target costs
(per cost element
or cost element group)

Prerequisite:
activity-dependent
planning of the
cost element

Consequences:

Actual costs are distributed
to the activity types based on the target
costs (fixed/variable: ratio
based on the plan)

© SAP AG 1999

■ First splitting step:

- In the first step, the actual cost center costs are apportioned to the respective **activity types** according to the **target costs**. This step occurs for each cost element. Thus:
 - primary costs are apportioned according to target costs.
 - secondary costs are apportioned according to target quantities, if these already exist. If not, they are apportioned according to the target costs.
- If target costs do not exist for a cost element, splitting takes place according to the target costs of the assigned cost element group (in the customizing of the target version). All target costs of cost elements in this group are drawn upon as a basis for splitting. If no target costs exist in the entire group, the costs are split in the second step.
- If dependent and independent planned costs for a cost element already exist, then these are split among the activity type/cost center and cost center according to the way they were planned. The actual costs split to the cost center remain there for the second step.
- The distribution of the actual costs (planned as activity dependent) into **fixed and variable portions** occurs based on the planning.

Actual Cost Splitting: Second Step

SAP

Actual Cost Splitting / Cost Element

Cost Elements	CCtr.Acty.	Plan Costs	Target Costs	Actual Costs
400.000	Costs center Costs center	100.000,- 100.000,-	100.000,- 100.000,-	100.000,- 100.000,-
404.000	Costs center Costs center	- -	- -	9.000,- 9.000,-
615.000	Costs center Costs center	100.000,- -	140.000,- -	121.000,- -

Second Step:

Splitting based on Splitting rule:

- activity quantity
- statistical key figure
- capacity
- output...

or equivalence numbers

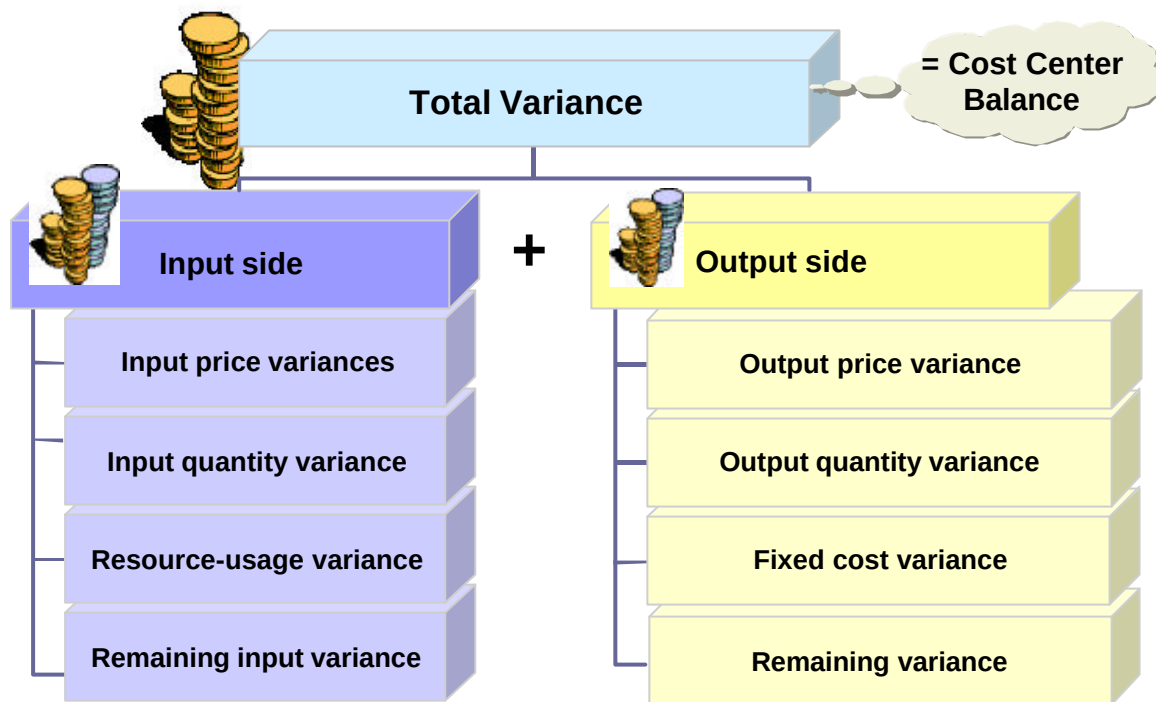
Prerequisite:
existing
activity
dependent planning
of cost element

or:
no existing
planning for the
cost element

Consequences:
splitting the actual costs
over the activity type
based on a splitting rule
(fixed costs actual)

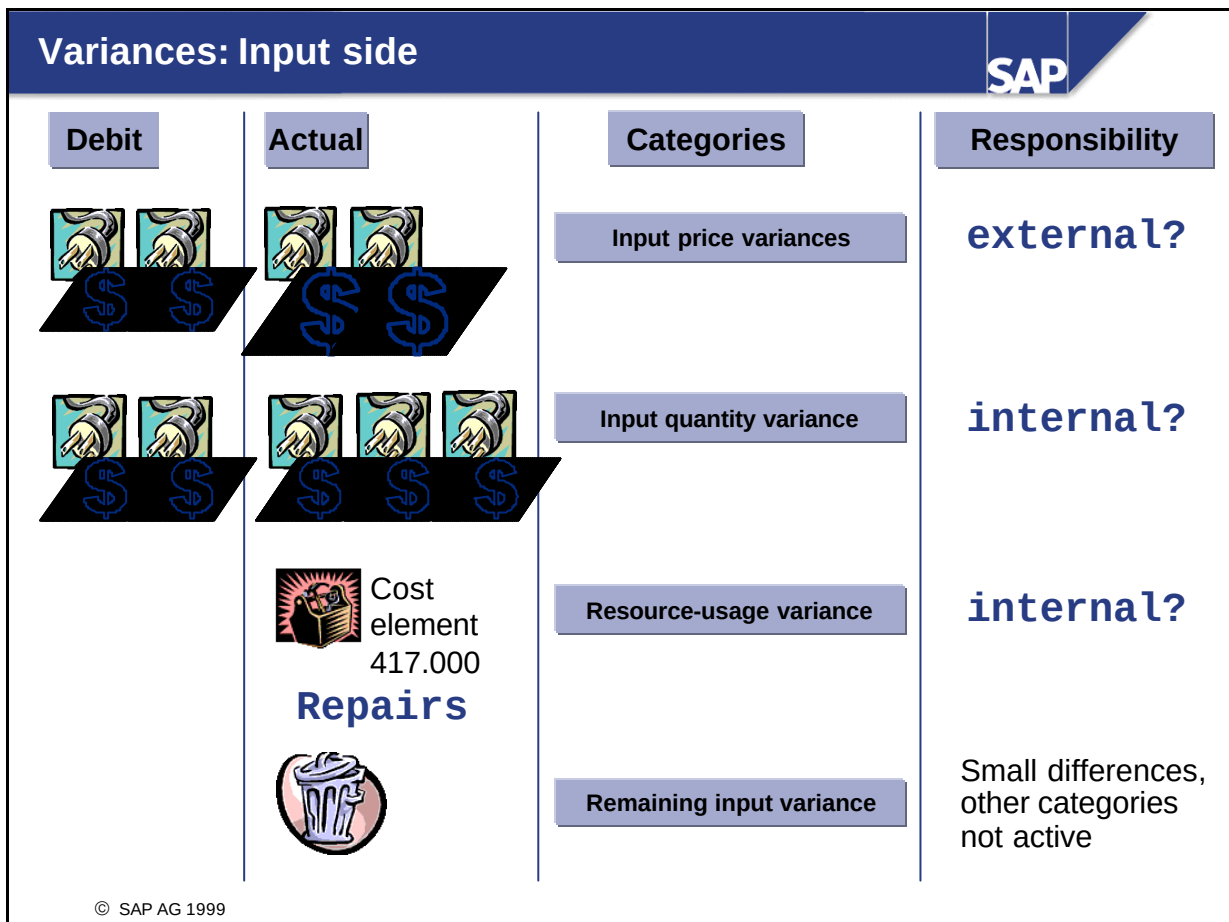
© SAP AG 1999

- A **second splitting step** is necessary if:
- **No target costs** or quantities exist for the cost element or cost element group. In this case, the reference used for the splitting is missing (for example, no planning for the cost element exists).
- **Activity-independent target costs** or quantities exist. In this case, the portion of actual costs remains on the cost center; this part corresponds to the portion of activity independent target costs (target quantities) of the entire target costs (target quantities).
- In the second step, the actual costs that remain in the cost centers are apportioned according to **splitting rules**, that can be set, to the activity types. If no rules are defined, the cost center costs are divided according to **equivalence numbers** (similar process as with the plan cost splitting).

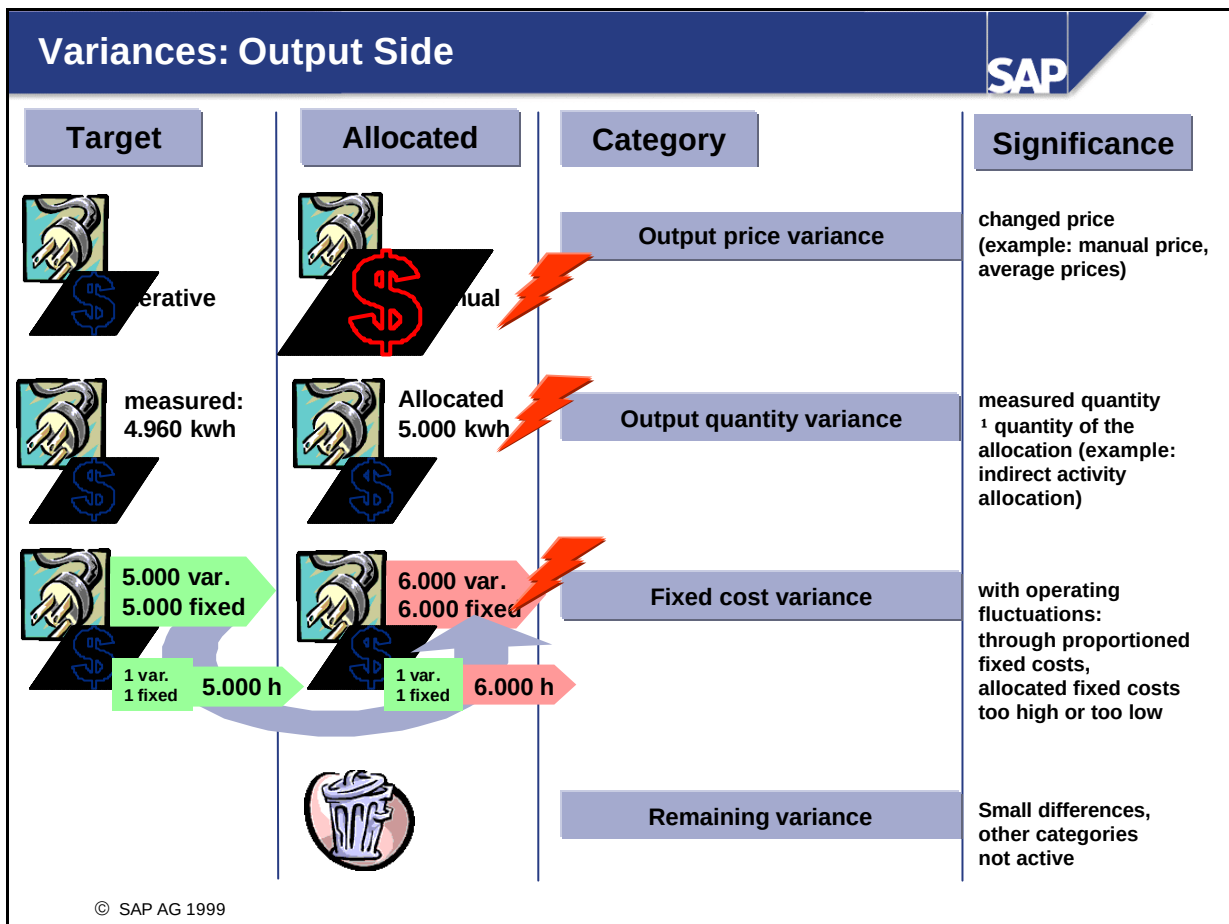


© SAP AG 1999

- **Variance calculation** is a tool that helps you **analyze problematic variances**. It enables you to compare actual costs and allocated actual costs with the target costs. Shown are:
 - **Variances of the input side** (actual costs - target costs)
 - **Variances of the output side** (target costs - allocated actual costs)
- The sum of these variances corresponds to the **total variance** and therefore the **balance of the cost center**. This total arises when the debits to the cost center and the credits from the activity allocation are not the same amount (actual cost - allocated actual costs).
- **System requirements for the variance calculation**
 - **Creating Target Versions**
 - Determine the **version** from which the plan and actual data is read or in which the split actual costs and the variances are booked (in CO-OM only with version 0!).
 - As an option, determine the **cost element group**, after the actual cost splitting is made in the first step, as well as the variance variant after the variances are calculated.
- **Create variance variant and assign to the target version**
 - in the variance variant, determine which **variance categories** are to be calculated. Variances belonging on the variance categories that are not activated flow into the remaining variance.



- **Input price variance** indicates changes in costs due to price fluctuations. The input price variance is the discrepancy between target and actual costs due to differences in the plan and actual prices of materials or services.
- **Input quantity variance** indicates under- and over-consumption for cost elements. It is the difference between target and actual costs; that is, it stems from the difference between the planned and the defacto quantity consumed.
Variances caused by price and quantity differences are also assigned to input price variances.
- **Resource-usage variance** indicates changes in the plan consumption of cost elements. It occurs if you post an unplanned cost element in actual, or if no actual data exists for a plan cost element.
- The **input variance** is the discrepancies between target and actual costs which cannot be assigned to any of the above categories. You get input side variances if you deactivate one of the above variance categories in the variance variant.
For many organizations, remaining input variance is often the classic consumption variance (input quantity variance). Cost elements that react quickly to price changes are recorded by quantity, which ensures an exact calculation of input price and input quantity variances for these cost elements. For cost elements underlying minimal price flows, the difference between actual and target can be traced to increased consumption. This procedure reduces the requirements for entering plan and actual data, but lets you display results for individual cost elements.



- An **output price variance** occurs if you use a price that differs from the plan price, which is calculated iteratively each month, based on plan activity. The target credit (= plan activity price X actual activity) varies from the actual credit (= allocated price X actual activity) of the affected cost center. Output price variance can be due to several causes:
 - if average prices are used instead of period-based prices
 - if the capacity of the activity type underlies the price calculation
 - if a manual price is used
- The **output quantity variance** is the discrepancy between target costs and allocated actual costs due to the use of allocated activity quantities which are not measured on the sender cost center. The measured quantity can be entered on the sender cost center and then be compared with the allocated quantity. A difference results in a output quantity variance.
- **Fixed cost variances** occur when the actual operating rate varies from the plan operating rate and some of the planned fixed costs are either underabsorbed or overabsorbed due to the credit postings. The system only determines the fixed cost variance if the operating rate varies from 100%.
- The **remaining variance** includes discrepancies between target and actual costs which cannot be assigned to any of the above categories. You get remaining variances if you deactivate one of the output side variances or the input variance in the variance variant.



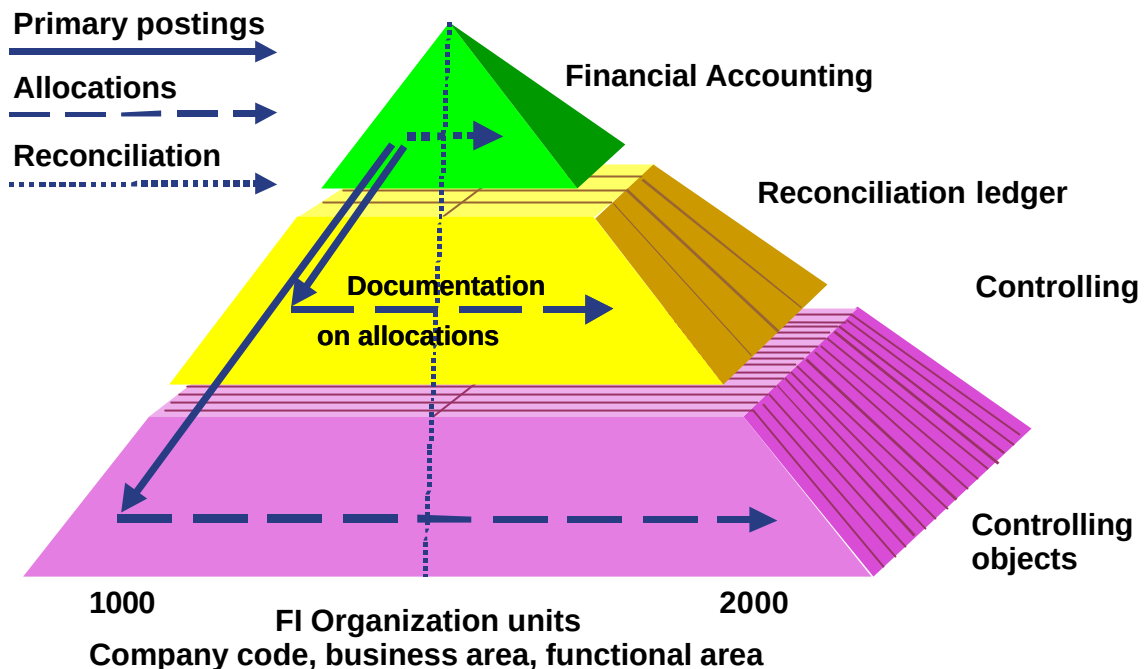
Variance Analysis

- ☐ target version and variance categories
- ☐ indicator: store quantity
- ☐ create activity types
- ☐ activity plan and price calculation
- ☐ cost and activity allocation
- ☐ actual cost splitting
- ☐ variance analysis: categories
- ☐ variance reports
- ☐ over/under absorption ® CO-PA

© SAP AG 1999

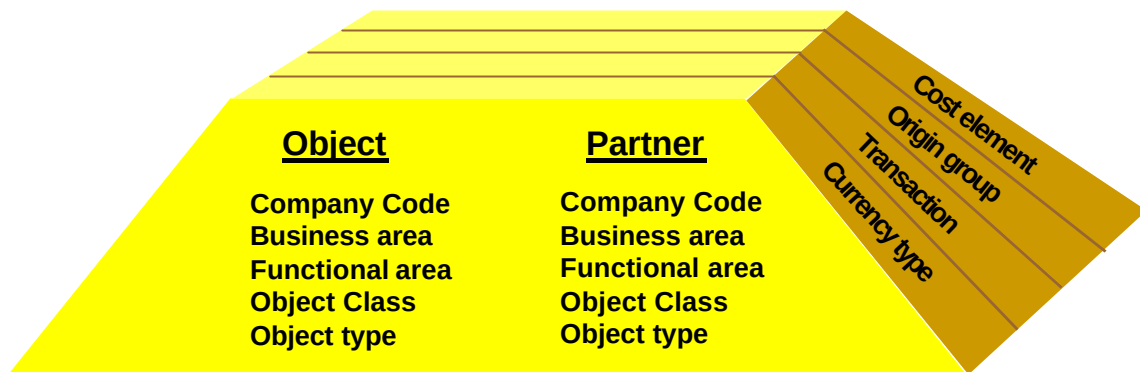
■ Typical procedure for variance analysis:

- To do variance analysis, you must first create a **target version** in customizing that refers to a **variance variant** (determination and implementation of variance categories). Furthermore, the target version must be entered in the plan version 0, where variances are booked for the overhead cost controlling.
- To determine quantity and price variances precisely, you should activate the indicator **Record quantity** for the corresponding cost elements and cost centers (or in the scope of the planning).
- After executing the planning, bookings and activity variances in the actual, you can carry out the **variance calculation**. This **automatically** performs an **actual cost split** in order to bring all costs to the activity types.
- You can execute the variance analysis in the application, or after bookings are made in the **information system** for individual and also cumulated cost centers (for cost center groups).
- The variances are not allocated further, but rather booked to the **profitability analysis per assessment**. If you want to perform subsequent adjustments of your variances to the receiver, then you must consider the actual price calculation.

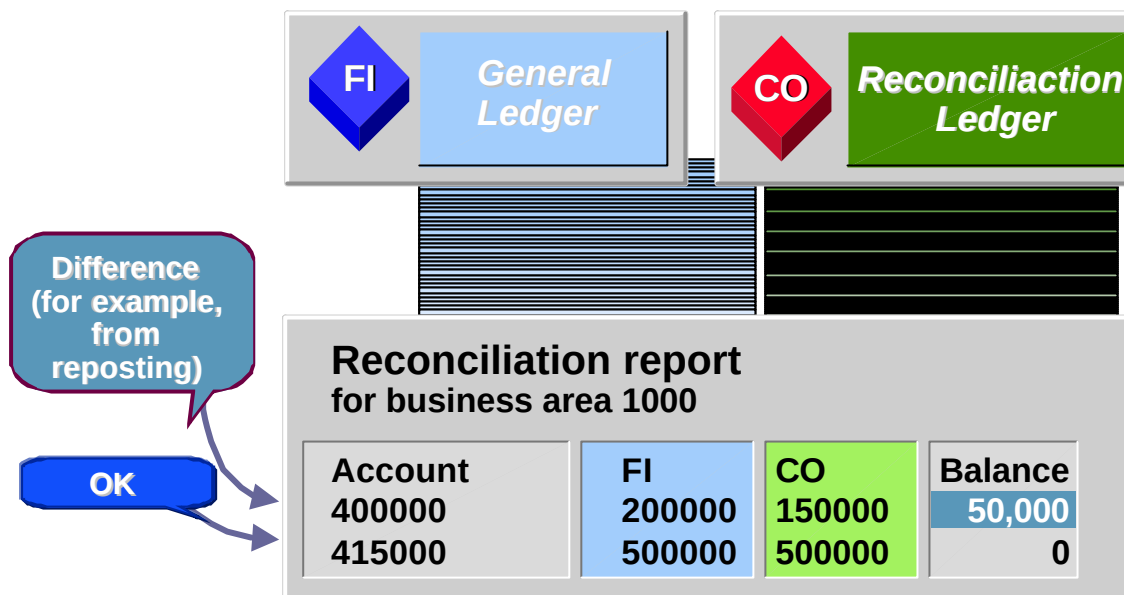


© SAP AG 1999

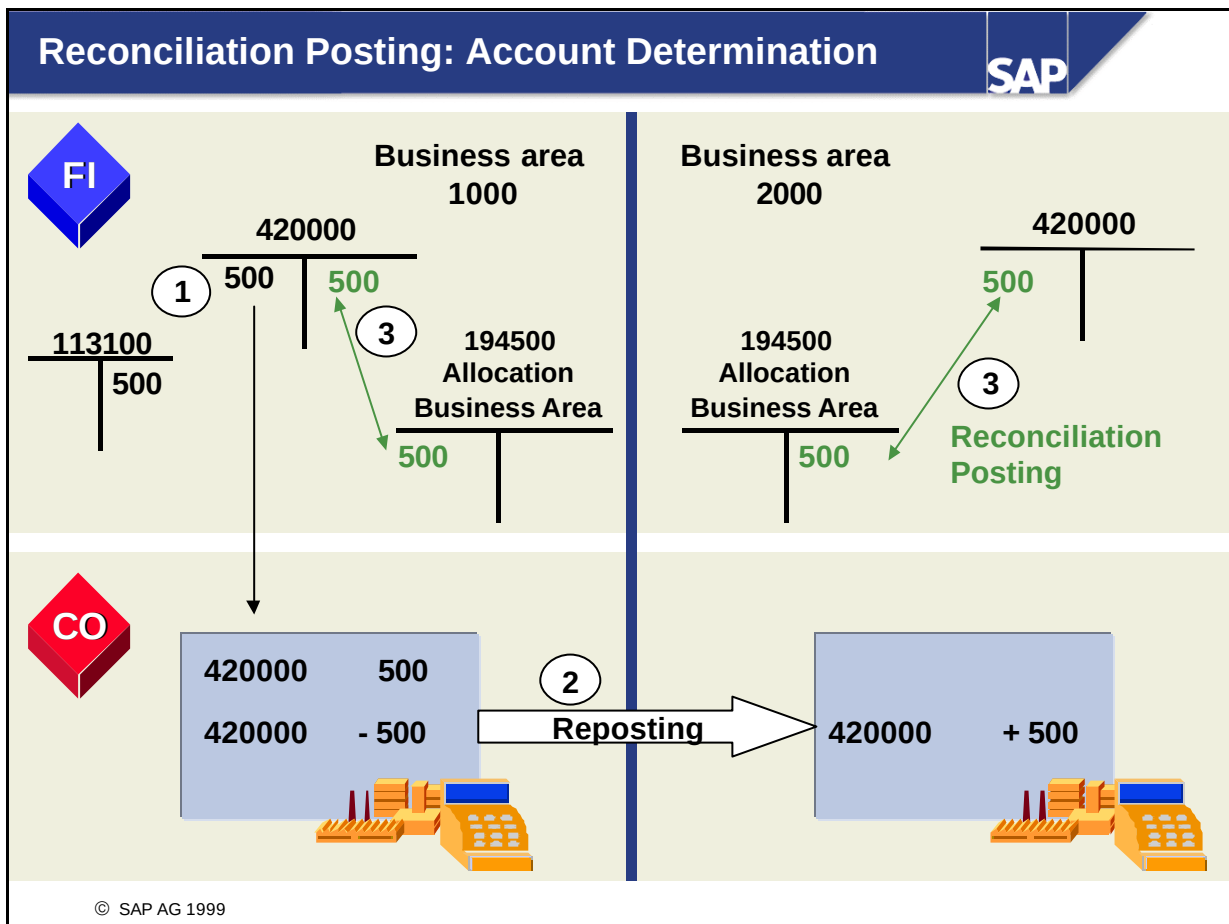
- In the reconciliation ledger, **CO data is totaled and valued**. The reconciliation ledger shows you the data in all CO applications for a cost element, as well as totals for company codes, business areas, object types, and object classes and so on.
- Although it is not a statutory requirement, it ought to be possible to reconcile data from Controlling and Financial Accounting. One **purpose** of the reconciliation ledger is to create reconciliation postings.
 - External postings to FI that are relevant to cost are automatically transferred to the corresponding CO application component (this is done directly, in realtime). The CO totals are updated for the reconciliation ledger for these postings.
 - If amounts in CO are posted across company code, functional area, or business area, then this information needs to be transferred back to FI. This information is not automatically transferred to Financial Accounting. The CO totals in the reconciliation ledger are updated however.
 - You can use the reconciliation ledger to create a posting for reconciling FI and CO postings.
- In addition to CO/FI reconciliation, the reconciliation ledger also has the following **informative functions**:
 - Cross-CO cost analyses
 - Navigation help and access to Controlling for the profit and loss statement.



- The reconciliation ledger uses the **criteria** below when deciding on the posting, and **creating a total**:
 - Account (cost element)
 - Company code
 - Business area
 - Origin group (subdivision of material types)
 - Object type (cost center, order, project, business process, and so on)
 - Object class
 - Functional area
- The **object class** puts the controlling objects into business categories. The four object classes for Controlling are: Overhead costs (OCOST), investments (INVST), production (PRODT), and profit and loss, and sales and distribution (PROFT).
- The R/3 system also makes a differentiated update of data records, although concentrating on the corresponding business transaction and the Credit/Debit indicator. During each update, three currency amounts (currency for controlling area, company code, and group) are updated, as well as the quantity field.
- During allocations, partner record fields (senders or receivers) are also updated. Using this data, you can value the value flow across company codes, business areas, and functional areas.



- The R/3 system contains special **cost element reports** for evaluating the reconciliation ledger. You can use these reports for the following:
 - Comparing Controlling and General Ledger results.
 - Displaying costs for each **object class**
 - Displaying the **flow of costs** between company codes, business areas, and functional areas
 - Drilling down to line item level**
- Value the reconciliation ledger on a cross-application basis (for the whole of CO), and create an overview of costs incurred This enables you to make complex cost analyses using object types, functional areas, object classes, company codes, or business areas.



- The account determination helps you decide which reconciliation accounts in R/3 postings are to be made to. You need to create adjustment and clearing accounts in FI.
- For **standard account determination**, reconciliation accounts are only defined by business transaction and object class.
- If you required more than one adjustment account for your reconciliation postings, then you can use **extended account determination**. This enables you to make more detailed assignments to reconciliation accounts. In substitution rules, you can use any field in the reconciliation ledger (functional area, company code, cost element, and so on) as a substitution condition.
- If, for example, the standard account determination is based on the chart of accounts, then companies working with the same chart of accounts also use the same adjustment account. You can use the account determination to assign the adjustment account independently of the company code.
- You need to maintain **posting keys** for each chart of accounts, but it does not matter whether you use standard or extended account determination. If a reconciliation account was determined using an earlier version of the standard account determination, you can replace this account with a new one using substitution.
- The R/3 system needs the **adjustment account** for **secondary cost elements** as there is no corresponding G/L account. The system usually creates the reconciliation posting on the corresponding FI account for primary costs. However, you can also define an extended account assignment for primary cost elements if the reconciliation posting is not to be made to the FI G/L account.

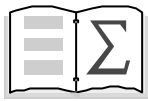
Locking transactions or periods



Transactions	Periods													
	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CO through-posting from FI	x	x	x	x	x	x	x	x	x	x				
Periodic Reposting	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Assessment	x	x	x	x	x	x	x	x	x					
...														

- Use the period lock to lock plan and actual business transactions for a combination of controlling area, fiscal year, and version.
- You can **select** individual **business transactions** for locking from a list of all the actual and plan business transactions.
- It is also possible to **lock** individual business transactions for all the **periods** of the fiscal year, or all business transactions for individual periods.

You are now able to:



- **Explain Variance Analysis**
- **Make reconciliation postings in Financial Accounting, using the reconciliation ledger**
- **Open and close whole periods, or selected business transactions in periods**

Exercises



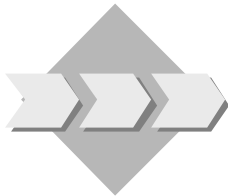
Unit: Variance: Allocation and Analysis

Topic: Variance Analysis



At the conclusion of these exercises, you will be able to:

- analyze standard reports such as Plan/Actual Comparisons
- configure and use the variance analysis
- analyze the variance categories



You will use the repair cost center “REP##” to examine and decide which analysis tools will provide you with the information you need for cost center analysis in overhead cost controlling. You will run various scenarios that will provide you with different information and results.

- 1 Now create an activity type for your firm which you will use to measure the effectiveness of your cost centers. The resulting costs for each cost center should reflect the activity output at period-end. All master data between dates 1.1 and 12.31 of the current fiscal year should be valid.



Carry out the creation of activity types in the following exercises exactly as instructed. Use the solutions to check whether you have entered all the correct activity type categories and price indicators for the activity types.

Leave the unnamed indicators free (for example, predistribution of fixed costs, actual quantity set, plan quantity set, and others)

- 1-1 Create activity type REPH## (repair hours ##) in units of h which will be used to measure the activity. It may be used by all cost centers (category *). The activity should be allocated manually in the plan and actual (Type1). Choose an appropriate secondary cost element (such as 615000) in order to carry forward the origin of the allocation operation to the receiver. Plan prices are set manually (PI-3, PI=Price Indicator).
- 2 Preparation of the planning

Your repair cost center (REP##) plans 1,200 repair hours. The price should be set manually (PI 3). Set fixed and variable activity price both equal 100,- UNI. The output should be evenly spread out over the periods (DK 1).

Leave the other rows empty and remain in the planning screen.

3 Cost Element Planning

- 3-1 Plan the salary costs and the room rental for your cost center (REP##) as fixed costs (that is, activity independent). Page to layout 1-101 for this.

Choose the current period and current fiscal year (form-based entry) as well as cost center REP## and the cost element group FIX412. Leave field activity types/groups empty.

<i>Cost Center</i>	<i>Cost Element</i>	<i>Fixed planned costs</i>	<i>DK</i>
REP##	430000 (salaries)	900,-	
	470000 room costs	1.000,-	

All fixed planned costs should be distributed over the periods evenly (distribution key 1). Check the data again and save your entries.

- 3-2 Plan the activity dependent costs for your repair cost center as follows. In the initial screen, choose (form-based) cost center REP##, activity type REPH##, and the cost element 415100. The distribution key is 1.

For the additional purchases of external activities (415100), which you plan for 1,200 h for 100,- UNI per hour, enter for the variable cost of 120,000 the corresponding variable consumption of 1,200 h. Do not forget the unit h, and the quantity indicators.

<i>Cost Center</i>	<i>Acty</i>	<i>Cost Element</i>	<i>Fixed planned costs</i>	<i>Variable planned costs</i>	<i>fix. consumption</i>	<i>var. consumption</i>	<i>Unit</i>	<i>M</i>
REP##	REPH##	415100 external acty.	-	120.000,-	-	1.200	h	X

Save your entries.

4 Target costs analysis

- 4-1 Preparation: Delete your user settings in group H_TECH## from the cost center group for the planning and reporting periods, and enter the cost center REP## for each.

- 4-2 Controlling the planned costs

No actual costs were posted to your cost center REP## for the current period. View the planned values by going to the cost element planning (version 0, actual period, cost center REP##, activity type * [=all], cost elements 400000 – 699999, enter).

What three cost elements have been planned up to now and for what amount?

In which cost element did you set the indicator “Record quantity”?

Cost center: REP## for the current period.							
Activity type	Cost Element	Fixed planned costs	variable	Fixed quantity	variable	Units	M

(If the field for activity type is empty (or #), then activity independent/fixed is planned.)

Compare your plan with the solution, and change the values if needed.

4-2-2 Analyze the planned output of your cost center REP## in the planning of the activity output.

What activity quantity (activity type *) was planned in the current period?

What price did you calculate earlier for this quantity (the price is automatically transferred to the planning during the price calculation)?

What activity quantity was scheduled?

Compare this with the value in the solutions and make changes if necessary.

Cost center REP## in the current period:				
Activity type	Plan activity	Fixed price	Variable price	Scheduled activity
REPH##				

4-2-3 Analyze the cost center REP## in the Target/Actual Comparison of the information system.

Were actual costs already posted?

Were activities already completed during the period?

Interpret the target costs using the known values.

Interpret the plan costs using the known numbers (turn to the next page in the report).

Cost center: REP##		Interpretation:
Actual costs:		
Actual activity:		
Target costs: _____		
Planned costs: _____		

4-3-1 From sender cost center REP##, allocate 140 h of activity type REPH## to cost center PC## using the direct activity allocation (since the activity type has activity type category 1). Perform the allocation in the entry variant “cost center” within the list entry.

4-3-2 Analyze the target costs for cost center REP##.

How high are the target costs of the debit side (previously 10,000), since the operating rate comes to 140%?

How has the system calculated these?

Cost center REP##, current period	
Target costs:	
Calculation:	

4-3-3 Post the actual costs of cost center REP## in module FI. Make the posting using the current date and choose the entry variant with cost center and quantity. Choose the V0 (no control) control indicator and enter the following items.

Do not forget to enter the quantity 110 h in the detail screen of cost center 415100.

G/L account	Target/Credit indicators	Amount	Control	Cost Center	Quantity	Units
404000	S	900	V0	REP##		
415100	S	12.100	V0	REP##	110	H
430000	S	9.000		REP##		
470000	S	1.000	V0	REP##		
113100	H	23.000				

Compare all your numbers and then make the posting.

- 4-3-4 You have now determined your costs for the entire period, and you want to analyze the cost effectiveness of the cost center in the Target/Actual Comparison report. Analyze the balance of cost center REP##, and the Plan/Actual as well as Actual/Target Variances for the input side; then answer the following questions:

Cost center REP##, current period

Plan/Actual Variance: _____% Assessment: favorable / unfavorable
(2nd page in report)

Actual/Target Variance: _____% Assessment: favorable / unfavorable

Under / Over Absorption: _____

(How much more/less was allocated than the cost center was debited for in the actual?)

5 Variance analysis

- 5-1 Execute the variance analysis for the current period and your cost center REP## in PRODUCTION RUN.

How meaningful is the total variance for your cost center/activity types?

Which variance side provides the best information to assess the cost effectiveness of a cost center?

Save your variances, as long as they are not automatically saved in the PRODUCTION RUN. The variances are now analyzed in the information system.

- 5-2 Analyze the variances of your cost center REP## for the current period in the *Cost Centers: Variances* report.

Note the corresponding numbers in the following table. Assess the variances using favorable or unfavorable (select).

Optional: Consider the causes (explanations are given in the solution).

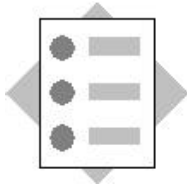
Target/Actual Variance: (Input SideVariance)		favorable / unfavorable
Categories	<i>(go to page three of th ereport)</i>	
Input side	Amount: (Cost Element)	
Resource-usage variance:		favorable / unfavorable
Price Variance:		favorable / unfavorable
Quantity variances:		favorable / unfavorable
Output side	Amount:	Reason:
Fixed cost variance:		

Optional Exercises



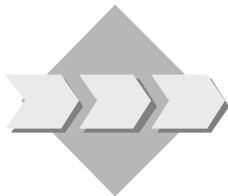
Unit: Variance: Allocation and Analysis

Topic: Reconciliation Ledger



At the conclusion of these exercises, you will be able to:

- Make a reconciliation posting



In the project team, you decided that Controlling is to always be reconciled with Financial Accounting with regard to business areas. This means that in FI, you want to follow up cross-business area postings that you made in Controlling during allocations.

- 1-1 Before reconciliation, examine the cost flows that apply to all of the business areas and require reconciliation.
 - 1-1-1 In Cost Element Accounting under the cost flow node, call up the *Cost elements: Allocation between business areas* report, for the **current period** in controlling area **1000**. Run the report for the business areas that are in the **8000** to **IS##** interval.
 - 1-1-2 If you receive a warning message about a threshold value, deactivate the threshold setting. If no message is displayed, continue with the next step.
 - 1-1-3 Choose Variation. Set the business area to **IS## Internal Services group ##**, and the partner business area to **8000 External Services** to display the cost flows between these two business areas. When you exit the report, save the layout settings if you changed the threshold value.

- 1-2 Execute the reconciliation postings to FI for your business area **only**.
- 1-2-1 Execute the reconciliation postings in company code **1000**, and for the **current period**. You want to *select reconciliation postings interactively*. Run the program in an *update run*, and choose *Detail lists*.
- 1-2-2 Select all rows that contain business area (BusA) **8000**, and partner business area (PaBA) **IS##** or vice versa in their columns. Execute the reconciliation posting. Avoid selecting the postings of another group at all costs.
- 1-3 Check the costs that were reconciled.
- 1-3-1 Under the cost flow node, call up the *Cost elements: Allocation between business areas* report, for the **current period** in controlling area **1000**. Run the report for the business areas that are in the **8000** to **IS##** interval.
- 1-3-2 Choose Variation. Set the business area to **IS## Internal services group ##**, and the partner business area to **8000 External services** to display the cost flows between these two business areas.
In what way does the displayed report differ from that in activity 6-1?
-
-
-
- 1-3-3 To check whether any reconciliation postings are still open, call up the *Overview: Cost flows* report for company code **1000**, in the **current period**. Deactivate the *Line item statements* and *Reconciliation posting*. Only call up the *postings that were not reconciled*.

Solutions



Unit: Variance: Allocation and Analysis

Topic: Variance Analysis

1 Create activity types



Carry out the creation of activity types in the following exercises exactly as instructed. Use the solutions to check whether you have entered all the correct activity type categories and price indicators for the activity types.

Leave the unnamed indicators free (for example, predistribution of fixed costs, actual quantity set, plan quantity set, and others)

1-1 Activity type REPH## (repair hours ##)

CCtr: Master Data > Activity Type > Individual Processing > create >

Activity Type: REPH##
Valid: 1.1.current year to 12.31.9999
enter
Activity unit: h
Cost center categories: *
Activity type category: 1
Allocation cost element: 615000
Price indicator: 3
Save

2 Preparation of planning

CCtr: Planning > Activity output / prices

Plan version: 0
Time period: 12-1 current year
Cost center: REP##
Activity type : REPH##
Entry: Form-based

Overview

Planned activity: 1.200 h
DK: 1
fixed act. price: 100
var. act. price: 100
DK: 1
PI: 1

save

3 Cost Element Planning

3-1 Cost Center (REP##)

CCtr: Planning > Cost elements/activity inputs

Version 0

Time period: current period current year

Cost center: REP##

Activity Types/Groups -

Cost Element Group: FIX412

Entry: Form-based

Page to the corresponding cost centers and make the following entries:

Cost Center	Cost Element	Fixed planned costs	DK
REP##	430000 (salaries)	900,-	1
	470000 room costs	1.000,-	1

Check the data again and save your entries.

3-2 Activity dependent costs of the repair cost center REP##

CCtr: Planning > Cost elements/activity inputs

Layout: 1-101

Version: 0

Time period: 12-1 current year

Cost center: REP##

Activity Type: REPH##

Cost element 415100

Entry: Form-based

Overview

Cost Center	Acty	Cost Element	Fixed planned costs	Variable planned costs	fix. consumption	var. consumption	Unit	M
REP##	REPH##	415100 external acty.	-	120.000,-	-	1.200	h	X

Do not forget the unit h and the quantity indicator that calls up an error message during FI postings for account assignments of quantities.

Save your entries.

4 Target costs analysis

4-1 Preparation: User Settings

CCtr: Infosystem > User Settings

Basic Data .

Remove cost center group H_TECH##

Enter cost center REP##

4-2 Controlling the planned costs

CCtr: Planning > Cost elements/activity inputs > Change

Layout: 1-101

Version 0

Time period: Current period in current fiscal year

Cost center: REP##

Activity Type: *

Cost element From 400000

To 699999

Free entry

Overview

Cost center: REP## for the current period.							
Activity type	Cost Element	Fixed planned costs	variable	Fixed quantity	variable	Units	M
	430000	9.000,-					
	470000	1.000,-					
REPH##	415100	-	10.000,-	-	100	h	X

If the field for activity type is empty, then activity independent (only fixed) is planned.

Check your plan with the solution and make any changes if necessary.

20,000 UNI is the total planned costs; the salaries (430000) and the room costs (470000) are fixed, and the external activities (415100) are variable. External activities are given a variable quantity whose indicator M together with units h make the system return a warning message regarding account assignment of quantities during the actual postings. In total, there are 10,000 fixed and 10,000 variable costs planned.

4-2-2 Controlling the activity output

CCtr: Planning > Activity output / prices > Change

Version: 0

Time period: Current period in current fiscal year

Cost center: REP##

Activity Type: *

Overview

Cost center REP## in the current period:				
Activity type	Plan activity	Fixed price	Variable price	Scheduled activity
REPH##	100 h	100,-	100,-	100 h

You should have automatically calculated the price in the chapter on planning (PI=Price Indicator 1):

fixed costs / planned costs = fixed price: $100,000 / 100 \text{ h} = 100 / \text{h}$
fixed

Variable costs / Planned activity = Variable price: $100,000 / 100 \text{ h} = 100 / \text{h}$
variable

Compare this with the value in the solutions and make changes if necessary.

4-2-3 Target/Actual-Comparison Cost Center REP##

CCtr: Information System > Reports for cost center accounting > Target/Actual Comparison > Cost Center: Actual/Target Variance

Version: 0

Time period: Current period in current fiscal year

Cost center: REP##

Execute

Cost center: REP##		Interpretation
Actual costs:	0,-	
Actual activity:	0 h	
Target costs: _____	10.000,-	Since operating rate = 0. All fixed planned costs. (Comparison costs, with no activities)
Planned costs:: _____ _____	20.000,-	All fixed and variable plan costs. (see next page, right side, in report)

4-3-1 activity allocation

CCtr: Actual posting > Enter activity allocation

Choose the screen variant Cost Center

Choose the list variant.

Sender: REP##

Sender Activity Type: REPH##

Quantity: 140 h

Receiver – Cost Center: PC##

Save

4-3-2 Target costs of cost center REP##

CCtr: Information System > Reports for cost center accounting > Target/Actual Comparison > Actual/Target - Variance:

Version:0

Time period: Current period in current fiscal year

Cost center: REP##

Execute

Cost center REP##, current period	
Target costs:	24.000,-
Calculation	10,000 fix. PlnCsts + 10,000 var. PlnCsts * Oper. Rate 140%

You changed the target costs only for cost element 415.100 since this item was planeed as variable or activity dependent.x

4-3-3 Actual costs of cost center REP##

Accounting > Finance > General Ledger > Posting > Post G/L Account

Enter

Document Date: today's date

Choose: Screen variant: "With cost center and quantity"

Enter the values provided into the posting screen.

G/L account	Target/Credit indicators	Amount	Control	Cost Center	Quantity	Units
404000	S	900	V0	REP##		
415100	S	12.100	V0	REP##	110	H
430000	S	9.000		REP##		
470000	S	1.000	V0	REP##		
113100	H	23.000				

Before saving, ensure that all values are correct and then choose: Post

4-3-4 Target/Actual-Comparison of Cost Center REP##

CCtr: Information System > Reports for cost center accounting > Target/Actual Comparison > Target/Actual - Variance:

Version: 0

Time period: Current period in current fiscal year

Cost center: REP##

Execute

Cost center REP##, current period

Plan/Actual Variance: +15% **Assessment: favorable / unfavorable**
(2nd page in report) 15% hier Actual as Plan costs

Actual/Target Variance: -4,17 % **Assessment: favorable / unfavorable**

4.17% less Actual as Target costs

Under / Over Absorption: -5000,-
(5,000 more allocated as debited with actual costs)

5 Variance analysis

5-1 Variance analysis for cost center REP##

CCtr: Period-End Closing > Single Functions > Allocations > Variances

Version: 0

Time period: current period and fiscal year

Cost center: REP##

PRODUCTION RUN

Execute

The variances are automatically saved through status Production Run.

The total variance reveals little regarding cost effectiveness since it only compares the actual costs with the allocated actual costs (=under / over absorption of the cost center).

The variances of the input side provide the most precise information.

(These are now analyzed in the information system.)

5-2 Report “Cost Center: Variances” for cost center REP##

CCtr: Information System > Reports for cost center accounting > Target/Actual Comparison > Variance Analysis > Cost Center: Variances

Version: 0

Time period: Current period in current fiscal year

Cost center: REP##

Execute

Target/Actual Variance: (Input SideVariance)	- 1.000,- - 4,17%	favorable / unfavorable <i>alltogether less actual costs than target costs</i>
Categories	<i>(go to page three of th ereport)</i>	
Input side	amount (cost element)	
Resource-usage variance:	+ 900,- (404000 replacement)	favorable / unfavorable <i>unplanned consumption of replacements</i>
Price Variance:	+ 1.100,- 415100 external activities	favorable / unfavorable <i>Price increase for additional purchase of external activities Plan: 100 h for each 100.- Actual: 110 h for each 110.- (postng 12,100.-) 10.- price variance * 110.- h = price variance of 1,100.-</i>
Quantity variances:	- 3.000,- 415100 external activities	favorable / unfavorable <i>100 h were planned as variable external for planned activity of 100 repair hours. 140 h were performed in actual. This makes the external target quantity 140 h. However, only 110 h were consumed (each at 100.- planned price). -30 h * 100.- = - 3,000.- quantity variance</i>
Output side	Amount	Reason:
Fxed costvariance:	- 4.000,-	<i>(theoretically) too many allocated costs because of transaction-based allocation with proportionalized prices</i> Output 140 h * 100.- fixed + 140 h * 100.- <u>fixed</u> = 28,000.- allocated actual costs - 24.000.- target costs <i>The fixed costs should not have been multiplied with the quantity (recommended with predistribution of fixed costs).</i>



Unit: Variance: Allocation and Analysis

Topic: Reconciliation Ledger

1-1

- 1-1-1 **Controlling** ® **Cost Element Accounting** ® **Information system** ®
Reports for cost and revenue element accounting ® **Cost Flow** ® **Cost Elements: Allocations Between Business Areas.**

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Period</i>	<i>Current</i>
Group selection	
<i>Values</i>	<i>8000 to IS##</i>

Program ® **Execute**

- 1-1-2 **Edit** ® **Threshold value**

Deselect **Active**.

- 1-1-3 If the variation menu is not shown, activate it using:

Navigation on/off icon

Click on the *Variation: Characteristics* field, on **Trdg part.BA**.

Click on the *Variation: Bus. Area* field, on **IS##**.

The report now displays the cost flows between business area 8000, and partner business area IS##.

1-2

1-2-1 **Controlling ® Cost Element Accounting ® Actual postings ® Reconciliation with Financial Accounting.**

Field name or data class	Values
<i>Company code</i>	<i>1000</i>
<i>Period</i>	<i>Current</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Processing</i>	<i>Select reconciliation postings interactively</i>
<i>Test run</i>	<i>Deselect</i>
<i>Detail lists</i>	<i>Select</i>

Reconciliation postings ® Execute

1-2-2 Select the document rows.

Reconcile selected documents with Financial Accounting icon.

1-3

1-3-1 **Controlling ® Cost Element Accounting ® Information system ® Reports for cost and revenue element accounting ® Cost flow ® Cost elements: Allocations between business areas.**

Field name or data class	Values
<i>Controlling area</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Period</i>	<i>Current</i>
Group selection	
<i>Values</i>	<i>8000 to IS##</i>

Program ® Execute

1-3-2 If the variation menu is not shown, activate it using:

Navigation on/off icon

Click on the *Variation: Characteristics* field, on **PaBA**.

Click on the *Variation: Bus. Area* field, on **IS##**.

The values from the *Reconcil.* column, are now under *Rec. post.* This means that the reconciliation posting was made in FI.

1-3-3 **Controlling ® Cost Element Accounting ® Information system ® Reports for cost and revenue element accounting ® Cost flow ® Cost flow overview.**

Field name or data class	Values
<i>Company code</i>	<i>1000</i>
<i>Fiscal year</i>	<i>Current</i>
<i>Period</i>	<i>Current</i>
Settings	
<i>Line item statement</i>	<i>Deselect</i>
<i>Reconciliation document</i>	<i>Deselect</i>
<i>Non-reconciled only</i>	<i>Select</i>

Program ® Execute