SAP HCM

Capgemini

Lesson 03: Human Capital Management (HCM) Reporting

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Course Overview

Unit 1:**Human Capital Management (HCM) Reporting**

  1.1 Identifying the HCM Reporting Requirements and Toolsets
    1.1.1. Roles for HCM Reporting
    1.1.2. HCM Reporting Levels
    1.1.3. Tools for Reporting
    1.1.4. Manager Self Services (MSS)
    1.1.5. Ad Hoc Query

Unit 2 : Standard SAP Reports

  2.1. Executing Standard Reports
    2.1.1. ABAP workbench Reports
    2.1.2. Information System Reports
  2.2. Defining a user Menu
    2.2.1. User Menus

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Unit 3: Ad Hoc Query

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Purpose

Efficient Human Resources Management constantly requires complete, up-to-the-minute information on employees at the enterprise. The R/3 System's *Human Resources* (HR) component contains all relevant employee data. With its multitude of reporting and analysis options, HR helps you process data quickly. This provides you with the information you require, and supports your decision-making processes.

As well as more than 200 standard reports, SAP HR provides you with a reporting tool (HIS) that enables you to report on data along hierarchical structures, and access standard reports easily. Cross-application SAP reporting tools enable you to create your own reports (InfoSet Query and SAP Query), and format and analyze HR data from SAP and non-SAP systems (Business Information Warehouse), **without having to spend time on programming**

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Human Capital Management (HCM)Reporting

Identifying the HCM Reporting Requirements and Toolsets

LESSON OVERVIEW

This lesson explains the essentials of reporting and provides an overview of the reporting tools.

Business Example

As the HR Analyst, you regularly require reports for senior management. A number of reporting tools are available to create the reports. You need to select and use the appropriate reporting tool based on the requirements.

For this reason, you require the following knowledge:

➢ An understanding of the reporting tools, Ad Hoc Query, and information systems

➢ An understanding of SAP NetWeaver Business Warehouse (SAP NetWeaver BW)

LESSON OBJECTIVES

After completing this lesson, you will be able to:

➢ Outline HR reporting roles

➢ List the differences between flat and analytical reporting levels

➢ Summarize the available reporting tools

Roles for HCM Reporting

SAP ERP HCM

Business Goals

Workforce Planning

Talent Management | End-User Service Delivery | Workforce Process Management

Workforce Analytics

Business Results

SAP ERP HCM integrates these three core areas using Workforce Analytics

Human Resources Analysts perform the following tasks:
➢ Create, execute, and format numerous reports.
➢ Format and retrieve, in a timely manner, the relevant HR data to help HR managers and the managing directors of the enterprise to devise plans and make decisions.
➢ Process and retrieve in a timely manner the HR statistics required by law.

The following international single roles provide the authorizations required by Human Resources Analysts:
➢ Human Resources Analyst (SAP_HR_REPORTING)
➢ Time and Labor Analyst (SAP_HR_PT_TIME-LABOR-ANALYST)

To depict country-specific activities of the Human Resources Analyst composite role, single roles are provided for Canada (SAP_HR_PA_CA_HR-ADMINISTRATOR) and USA(SAP_HR_PA_US_HR-ADMINISTRATOR).

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HCM Reporting Levels

'Flat' reporting:

→ **Particularly suited to master data and line item reporting**
- Ad Hoc Query in HR (InfoSet Query)
- SAP Query

Analytical reporting:

→ **Particularly suited to key figure reporting and multidimensional views**
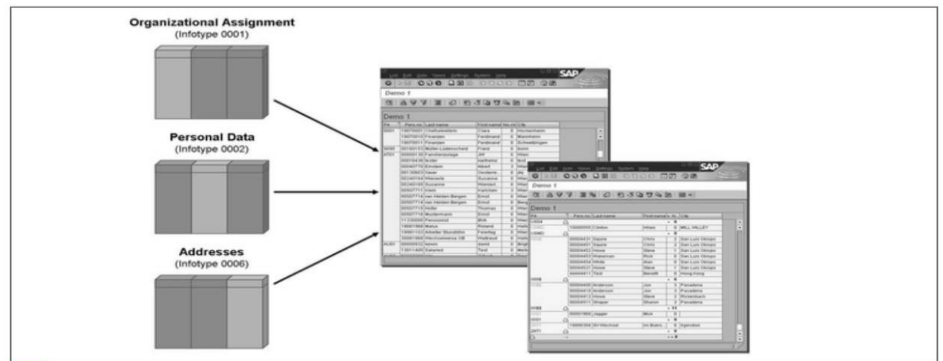- Business Warehouse (BW)

The levels of reporting are as follows:
- Flat reporting Flat reporting means reporting on uncompressed raw data from tables.
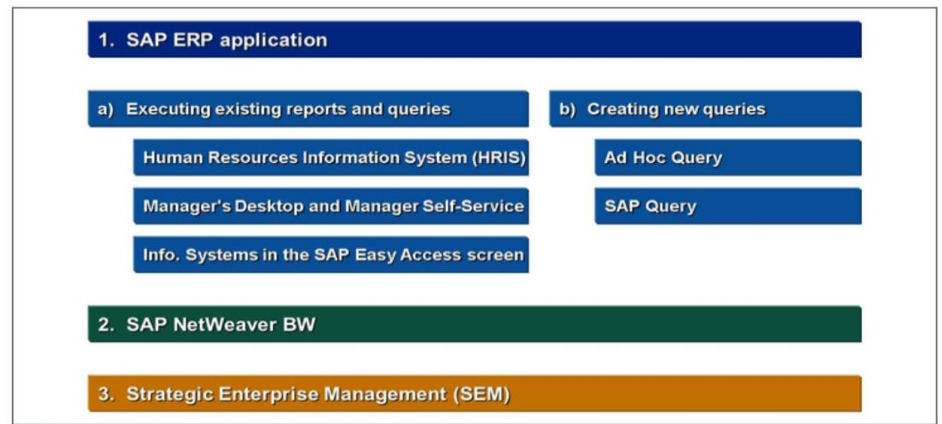- Analytical reporting

Analytical reporting means using compressed data (key figures) as the basis for reporting.

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Flat Reporting

When flat reporting is performed, data is retrieved from various infotypes. The results are displayed in a flat list, which means that each line of output corresponds to one data base entry. There are no views of different levels or segments of an Info Cube (IC) and its key figures and characteristics.

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Tools for Reporting

1. SAP ERP application

a) Executing existing reports and queries

- Human Resources Information System (HRIS)
- Manager's Desktop and Manager Self-Service
- Info. Systems in the SAP Easy Access screen

b) Creating new queries

- Ad Hoc Query
- SAP Query

2. SAP NetWeaver BW

3. Strategic Enterprise Management (SEM)

Depending on the system environment in which they are used, reporting tools are divided into the following categories:

➢ Reporting tools in the SAP ERP application (flat reporting)
➢ Reporting tools in SAP Business Warehouse (analytical reporting)

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The tools included in SAP ERP for flat reporting enable you to perform the following tasks:

●Execute existing reports and queries.

●Create new queries and change existing queries.

The following tools are used to execute existing reports and queries:

●Manager's Desktop (MDT) and Manager Self-Service (MSS) through the SAP portal

●Information Systems in the SAP Easy Access screen

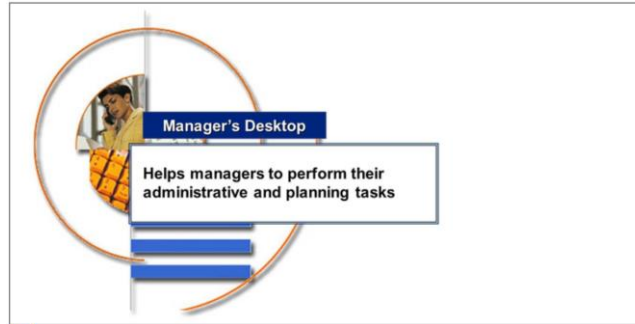**You can create queries and change existing queries using the following reporting tools:**

●Ad Hoc Query in HR (InfoSet Query)

●SAP Query

SAP Business Explorer (SAP BEx) tools are available in the front end in SAP BW.

Manager Self-Service (MSS)

Manager's Desktop (MDT)

MDT is tailored to the daily needs of managers such as line managers. It helps them to perform their administrative, organizational, and strategic tasks.

MDT offers decision support to managers to help them make HR decisions and perform strategic planning activities. It does this by providing them with swift access to the required HR data of directly and indirectly subordinate employees. It then enables them to report on this data.

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Manager Self-Service (MSS)

- ● **Target Group**
  - ■ Managers with line and personnel responsibility
  - ■ Suitable for any industry
- ● **Roles**
  - ■ Team leaders
  - ■ Project managers
  - ■ Heads of department
  - ■ ...
- ● **Content**
  - ■ Personnel Management
  - ■ Budget Management
  - ■ Project Management

MSS helps managers perform their managerial tasks. The functions are delivered in business packages, and are intuitive and easy to use. Extensive Customizing options enable you to make changes without the assistance of a developer.
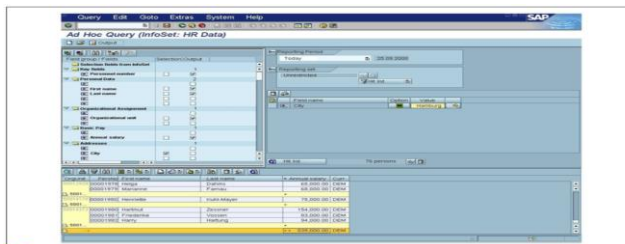
The prerequisites for implementing MSS are as follows:

●Organizational Management needs to be active and the manager must hold the chief position. An organizational structure consisting of organizational units, positions, and person assignments must exist in the system.

●A checklist of prerequisites is available athttps://www.service.sap.com/MSS.

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Ad Hoc Query

Ad Hoc Query is a simple and efficient tool for selecting and processing HR data. It is best suited to line item (flat) reporting.

Ad Hoc Query has the following advantages:
- ✓ Makes the report definition simple using drag and drop
- ✓ Enables you to report on data from Personnel Administration, Organizational Management, Training and Event Management, Recruitment, and Personnel Development
- ✓ Enables you to select output and selection fields as required
- ✓ Provides numerous report design options
- ✓ Displays the resulting set before output
- ✓ Selects and outputs the real data on one screen
- ✓ Enables you to determine results quickly because the database is accessed directly
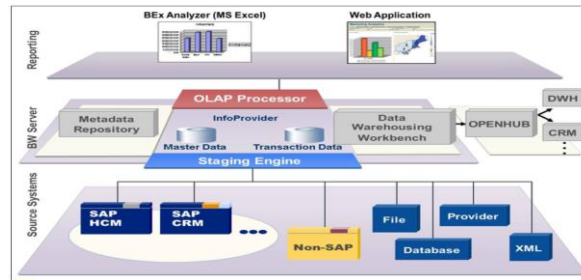- ✓ Creates logs

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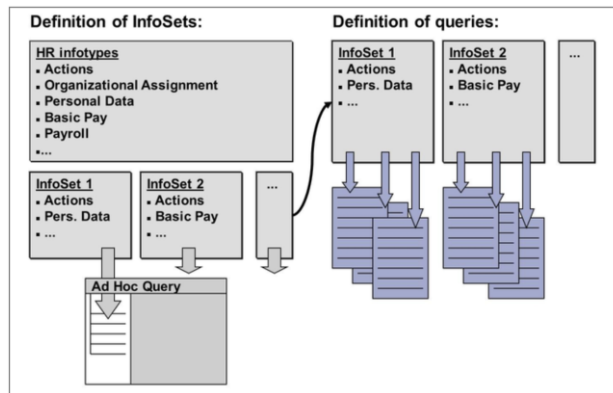
SAP Query

SAP Query performs the following functions for reporting in HR:

➢ Creates InfoSets which are the basis for defining reports using Ad Hoc Query and SAP Query
➢ Defines reports if they cannot be created using Ad Hoc Query (for example, if local fields are required).
➢ Uses Infosets and User groups.

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SAP Business Warehouse

SAP BW is used to meet analytical reporting requirements such as key figures and benchmarking.

The main components of SAP BW are as follows:
➢ SAP BW Server
➢ Data Warehousing Workbench
➢ SAP Bex

Reporting can be done using data extracted from SAP systems, non-SAP systems, or from external sources such as databases, online services, and the Internet. This data is managed on the SAP BW Server.

The Data Warehousing Workbench manages the various source systems. SAP BEx is used to display, analyze, and process the reports.

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Standard SAP Reports

Executing Standard Reports

LESSON OVERVIEW

This lesson introduces standard reports and the method to execute them in the SAP system.

Business Example

You work in the Human Resources (HR) department of your company and you need reports about employees based on various criteria. For this reason you require the following knowledge:

➢ An understanding of ABAP Workbench reports

➢ An understanding of information system reports

➢ An understanding of how to execute a report from an information system

LESSON OBJECTIVES

After completing this lesson, you will be able to:

➢ Locate standard reports using the ABAP Workbench

➢ Execute a standard delivered report

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ABAP Workbench Reports

You can execute SAP standard reports directly from the ABAP Editor. To execute SAP standard reports, you must have the appropriate authorization and you must know the technical name of the report.

To start the ABAP Editor, choose SAP Menu→ Tools→ ABAP Workbench →Development →ABAP Editor.

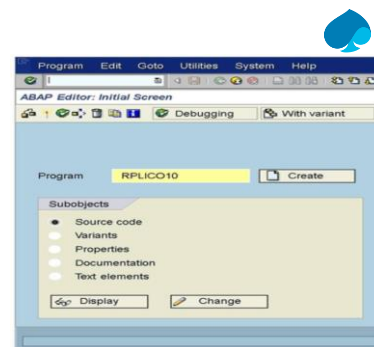Alternatively, you can start a report by choosing System→Services→Reporting.

Naming Conventions Used for Grouping HR-Specific Reports

Examples of naming conventions used to group HR-specific reports together are listed in the following table:

Table 1: Programs

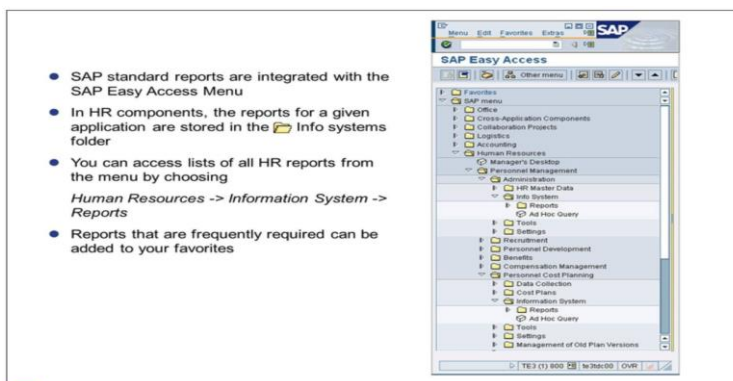| Program Abbreviation	Reports for
RP...	Personnel Administration (PA)
RH...	Organizational Management and Personnel Development (PD)
RPT...	Time Management
RPC...	Payroll
RPL...	List Reports in PA
RPB...	Statements
RPR...	Travel Expenses
RPAQ...	ABAP Query
RPAPL...	Recruitment

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Examples of naming conventions used to group HR-specific reports together are listed in the following table:

Table 1: Programs

Program Abbreviation	Reports for
RP...	Personnel Administration (PA)
RH...	Organizational Management and Personnel Development (PD)
RPT...	Time Management
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RPL...	List Reports in PA
RPB...	Statements
RPR...	Travel Expenses
RPAQ...	ABAP Query
RPAPL...	Recruitment

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Information System Reports

- SAP standard reports are integrated with the SAP Easy Access Menu
- In HR components, the reports for a given application are stored in the 🗁 Info systems folder
- You can access lists of all HR reports from the menu by choosing

  Human Resources -> Information System -> Reports

- Reports that are frequently required can be added to your favorites

SAP standard reports are integrated with the SAP Easy Access screen. These reports are called information system reports.

You can search for standard reports in individual applications or across applications. Application specific standard reports are available in the info systems of individual HR components. In HR components, the reports for a given application are stored in the infosystems folder.

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You can add reports that are frequently required to your favorites.

To access different information systems of individual HR components, choose the following paths:

➢ Human Resources→<component>→<info system>→Reports
➢ Human Resources→Payroll→<continent>→<country>→Info System
➢ Human Resources→Time management→<component>→Info System

The Human Resources Information System (HRIS) contains all HR-specific reports. Its structure corresponds to the HR components. Within the components, reports are grouped together by subject matter. To access the HRIS, choose the following path:

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Reports on the SAP Easy Access Screen

Human Resources→Information System→Reports
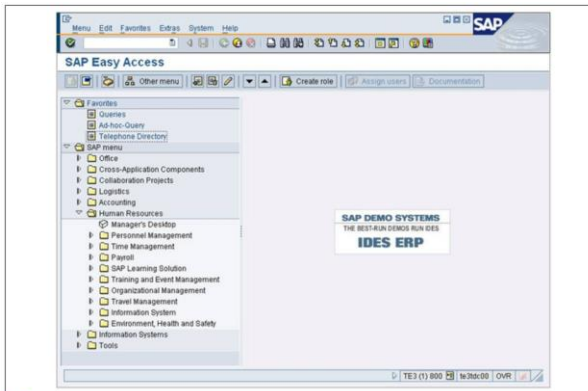
You can insert reports directly into area menus. Each report without a transaction code is automatically assigned a new transaction code, which is then inserted into the menu.

To access area menus, on the SAP Easy Access screen, choose
Tools→ABAPWorkbench→Development→Other Tools→Area Menus.

If you do not want the system to generate a transaction code automatically, you must create it beforehand.

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Defining a User Menu

LESSON OVERVIEW

This lesson explains how to define a user menu in the SAP system.

Business Example

As the line manager of a department, you are responsible for reporting. To ensure employees are able to generate the required reports efficiently, you need to adjust user menus to include the reports. For this reason, you require the following knowledge:
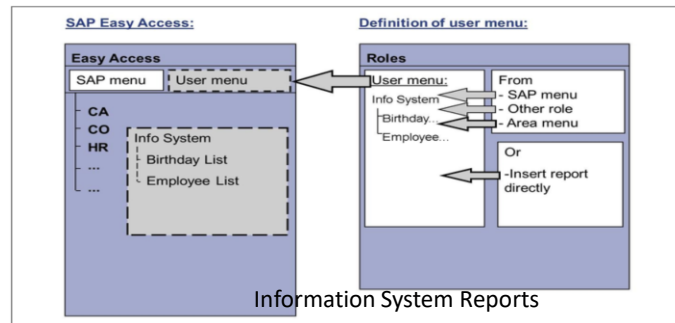
➢ An understanding of user menus

➢ An understanding of how to modify a user menu

LESSON OBJECTIVES

After completing this lesson, you will be able to:

➢ Modify an existing user menu to include additional reports

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User Menus

Information System Reports

To integrate your own reports in a role, perform the following general role maintenance steps:

1.Integrate the reports directly in the role or by adjusting an area menu.
2.Generate profiles.
3.Assign users.

To access role maintenance on the SAP Easy Access screen, choose Tools→ Administration → User Maintenance→ Role Administration .→Roles.

Ad Hoc Query

Identifying the Components of Ad Hoc Query

LESSON OVERVIEW

This lesson explains how to define simple queries using Ad Hoc Query.

Business Example

You need to define reports that are not available as standard reports in the SAP system. For this reason, you require the following knowledge:

➢ An understanding of Ad Hoc Query

➢ An understanding of the integration of Ad Hoc Query

➢ An understanding of user groups

LESSON OBJECTIVES

After completing this lesson, you will be able to:

➢ Describe the basic concepts of Ad Hoc Query

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Ad Hoc Query Basics

Ad Hoc Query is a tool that enables you to access and report data from Human Resources. It involves choosing the selection and output fields.

You can use Ad Hoc Query to report on the following data:

➢ HR master data, data from Time Management, and payroll results (logical database PNPCE)

➢ Applicant master data (logical database PAP)

➢ Data from Personnel Planning (logical database PCH)

Unlike standard reports that use logical databases to retrieve data, Ad Hoc Query selects there quested data directly from the database. As a result, the performance of Ad Hoc Query is better than that of standard reports. The standard authorization check is performed when data is selected and output.

You do not need programming skills to use Ad Hoc Query. Instead, you can choose selection and output fields simply by clicking on them or by using drag and drop.

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Overview of Ad Hoc Query
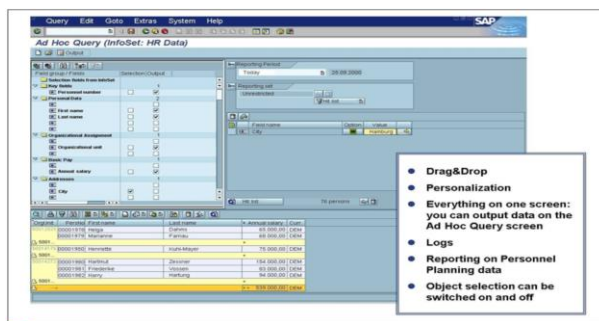
Ad Hoc Query offers the following features:

Drag and drop:
You can choose selection and output fields easily by using the drag and drop function. Select the fields you need and drag them to the Selection or Output area. If the fieldnames of a field group have values and text, you can either use the text, the value, or both.

Personalization:
When you exit Ad Hoc Query or logoff from the system, the system saves your user settings (for example, for the last queries you accessed) and reloads them the next time you start the query.

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Continue…

Object selection:

You can switch off object selection and work in basic mode by choosing Extras→ Switch Off Object Selection. This enables you to use all basic modes, such as selections using texts.

Output preview:

You can output real data on the Ad Hoc Query screen.

Integration of Ad Hoc Query

You can access Ad Hoc Query from the following systems and HR tools:

➢ **Information system:**

You can access Ad Hoc Query in HR as a standalone tool from the various info systems in the SAP Easy Access menu.

➢ **HIS:**

A set of selected persons is available in HIS as a reporting set in Ad Hoc Query. You can make further selections from this set or use it as a hit list and output data on the persons. You can even use saved queries for the selected set of persons.

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> **Manager's Desktop:**

You can use Ad Hoc Query to process sets of persons determined in Manager's Desktop. To do this, select a suitable object from the Employee theme category in Manager's Desktop and call Ad Hoc Query.
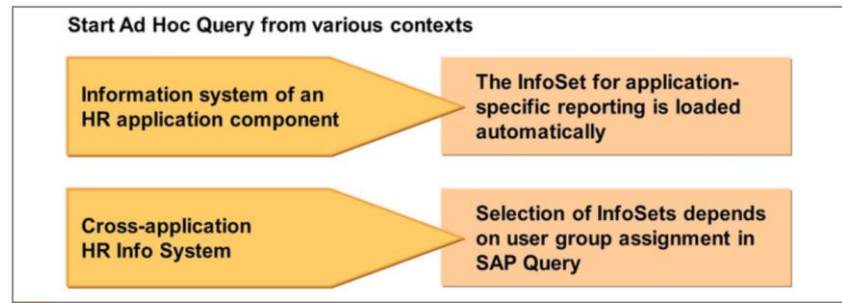
> **HR input helps:**

Ad Hoc Query is also available in many HR input helps to select objects in the system for fast data entry in Personnel Administration.

> **Processing of selected object set in general reporting:**

You can use standard reports to continue processing sets of objects selected by Ad Hoc Query

User Groups

Start Ad Hoc Query from various contexts

Information system of an HR application component	The InfoSet for application-specific reporting is loaded automatically
Cross-application HR Info System	Selection of InfoSets depends on user group assignment in SAP Query

Before users can start the InfoSet query using the delivered InfoSets, they must be assigned to the relevant user group in SAP Query.

The following SAP Query user groups are used for individual application components:

- /SAPQUERY/H0 for Compensation Management
- /SAPQUERY/H1 for Benefits
- /SAPQUERY/H2 for Personnel Administration
- /SAPQUERY/H3 for Personnel Development"
- /SAPQUERY/H4 for Recruitment
- /SAPQUERY/H5 for Training and Event Management

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Creating Reports Using Ad Hoc Query

LESSON OVERVIEW

This lesson explains how Ad Hoc Query is used for HR reporting.

Business Example

You need to define your own reports when such reports are not available as standard reports in the SAP system. For this reason, you require the following knowledge:
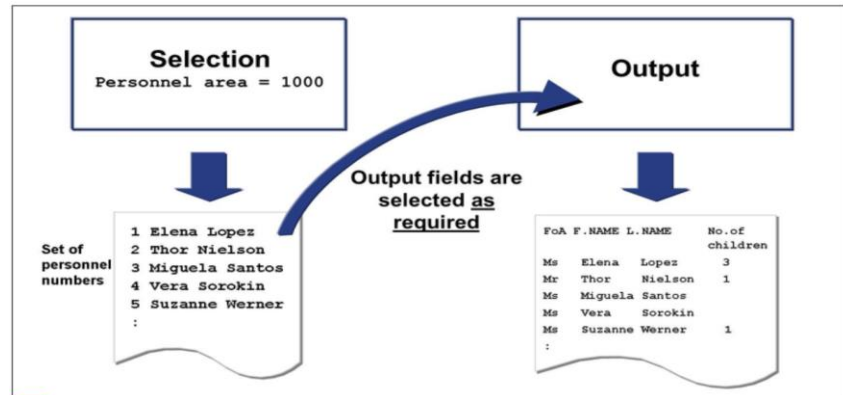
➢ An understanding of the principles of Ad Hoc Query

➢ An understanding of the selection options in Ad Hoc Query

LESSON OBJECTIVES

After completing this lesson, you will be able to:

➢ Create queries by using Ad Hoc Query
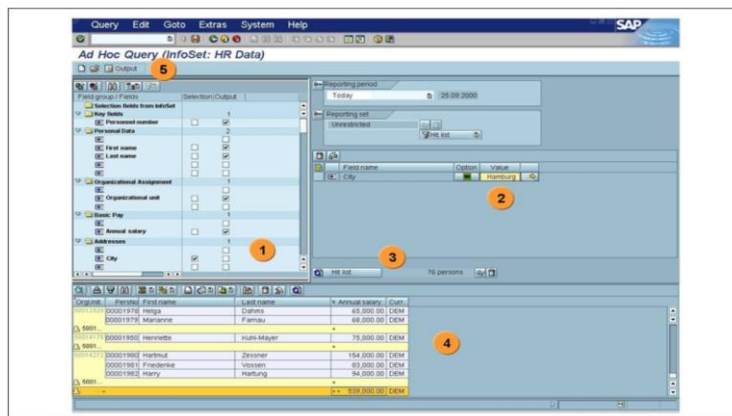
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Ad Hoc Query Principles

The basic mode of operation of Ad Hoc Query consists of the following steps:

1.Define one or more selection criteria and then start the selection. The result of this selection is a set of objects, such as persons, applicants, business events, or positions.

2.Output the data as required for the selected objects.

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Ad Hoc Query Screen

The Ad Hoc Query screen is divided into the following main areas:

➢ The field groups and fields of the current InfoSet are displayed on the left of the screen. This part of the screen is used to select the selection and output fields.
➢ The right side of the screen enables you to determine selection values and execute your selection.
➢ The lower part of the screen contains an output preview.

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When working with Ad Hoc Query, proceed as follows:

1. Select the selection and output fields in the overview tree.

2. Enter a value and choose a selection option, if necessary.

3. Execute the selection (the hit list is determined by selecting objects that match the selection criteria).

4. Format the output in theOutputpreview.

5. Access the output.

InfoSets for Ad Hoc Query

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The InfoSets required for Ad Hoc Query are created and managed in SAP Query. When you create an InfoSet, you select the logical database on which it is based, and determine the infotypes that it includes. The infotypes are subsequently displayed in the InfoSet as field groups. Once you have selected your infotypes, you determine the fields of each infotype to be included in the field group.

The following scenarios illustrate how the InfoSet determines the objects that you can select with Ad Hoc Query:

➢ **InfoSet based on PNP or PNPCE**

The InfoSet based on the logical databases PNP or PNPCE enables you to use Ad Hoc Query to select employees and then output data on them.-You can include Personnel Planning infotypes in these InfoSets. Consequently, you can use them to output person-related personnel planning data on the persons selected.-You can also use these InfoSets to report on payroll results.

➢ **InfoSet based on PAP**

The InfoSet based on the logical database PAP enables you to use Ad Hoc Query to select applicants.

➢ **InfoSet based on PCH**

The InfoSet based on the logical database PCH enables you to use Ad Hoc Query to select objects of one object type, such as business events, qualifications, or positions. When you create the InfoSet, you determine the object type.

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Choose Selection and Output Fields
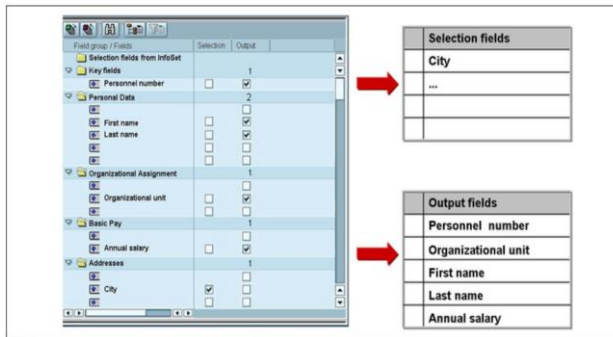
To access data in the system, Ad Hoc Query uses an InfoSet that provides a view of data in specific areas of HR. The view is structured by infotype. The InfoSet is displayed as an overview tree on the initial Ad Hoc Query screen.

You can select the selection and output fields by using drag and drop. To do so, select one or more fields and then drag them to the Selection or Output area.

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If object selection has been switched off and values and texts exist for a field, you can select objects using values or texts. For example, you can select personnel area Frankfurt instead of personnel area 1000.

You can treat the text fields in the following ways:
➢ Include user-specific settings for using text fields
➢ Override settings for field selection For the output, you can always use the value and the text, when available.

You can choose a selection or output field by using the following methods:
➢ Select using Drag and Drop→ User setting
➢ Select using Checkboxes→ User setting
➢ Select using the context menu and choose between Value, Text or Value, and Text

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Ad Hoc Query Selection Options

- **You can enter field values directly using the keyboard**
  - **Single values**
  - **Patterns (with text field)**

	Field name	Option	Value	
	City	=	Hamburg	⇨

- **Input help**
  - **Fixed values from input help**
  - **Multiple selection of single values and/or ranges**

Field name	Option	Value	
Last name	[*]	S*	⇨
Employment status	=		

Status	Name
3	Active
2	Retired
1	Inactive

To restrict selection, you enter values and, if necessary, select options for the selection criteria. You select the required selection option from input help. You can enter values directly or determine them using standard input help. Input help enables you to select an input value or use multiple selections to enter any required number of single values or intervals.

The values that you can enter depend on the type of selection field, such as numeric, alphanumeric, and date. You can also use patterns as values. For example, if you want to find all of the employees whose names begin with S, enter S* as your value

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Editing of Selected Set of Objects

- **Display and sort list of personnel numbers**
- **Delete entries**
- **Branch to HR master data**

The result of each selection is a set of objects, such as persons or business events, for which you can output data.

**You can also use the following editing options for each object set:**
➢ Output the selected objects in a list.
➢ Sort the list.
➢ Remove specific objects from the list, if you do not want to output data for those objects.

Use pushbuttons to branch directly to the following data:
➢ HR master data for a set of persons.
➢ Applicant master data for a set of applicants.
➢ Detail maintenance for other sets of objects.

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Selection Using Organizational Structure
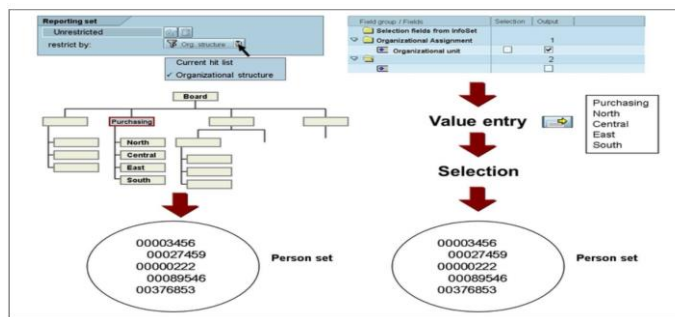
Ad Hoc Queries are often required to report on employee data from one or more organizational units. To do this, you can select persons using the organizational structure if the InfoSets are based on the logical database PNPCE.

To display the organizational structure, use the Reporting Set push button. Choose Persons along organizational structure, then choose the filter icon. You can select the organizational units you require from the overview tree that appears.

When you confirm your selection, the persons who belong to the organizational units are selected immediately. These persons are written to Ad Hoc Query as a reporting set

If you make your selection using the organizational structure, the system takes the specified reporting period into account and uses the current plan version.

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Note:

If you use the organizational structure to select a higher-level organizational unit, the selection includes all of the persons who belong to the selected organizational unit or one of the lower-level organizational units. To achieve the same result, you must use the Organizational Unit Selection field and specify all the organizational units explicitly using multiple selections.

You can switch off object selection and work in Basic Mode by choosing Extras→ Switch Off Object Selection. This gives you the advantage of being able to use all basic mode functions, such as selections using texts.

The absence of the Hit List function and its output field indicates that object selection is switched off.

Note:

The disadvantage of switching off object selection is that you no longer benefit from improved performance (fast selection routine for persons and personnel planning objects). Further more, you cannot restrict the reporting set when object selection is switched off.

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Formatting Report Output

LESSON OVERVIEW

This lesson explains how to define simple queries using Ad Hoc Query.

Business Example

You often need to define your own reports with enhanced reporting output results. For this reason, you require the following knowledge:

➢ An understanding of set operations

➢ An understanding of the various Ad Hoc Query options available to create reports

➢ An understanding of the InfoSets required to work with Ad Hoc Query

LESSON OBJECTIVES

After completing this lesson, you will be able to:

➢ Create reports with enhanced reporting output results

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Data Output

SAP includes an Ad Hoc Query screen that allows you to define and output data as per your requirements.

The Ad Hoc Query screen provides the SAP List Viewer that helps you to create the required reports. The lower part of the Ad Hoc Query screen contains a preview of output in the SAP List Viewer. It enables you to use sample data to gain an impression of the appearance of the output list.

The Refresh function enables you to replace the sample data with the real data. The data is output to the SAP List Viewer on the Ad Hoc Query screen. This means that the definition and result of a query are both included in a single screen.

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After you have output the real data, you can use the following SAP List Viewer functions on the Ad Hoc Query screen:

- Search for entries

- Calculate totals and subtotals

- Display the output list in Excel and then use all Excel functions

- Use the SAP List Viewer export and display options

Note:

For more information about the functions of the SAP List Viewer, refer to the SAP Library. To access the SAP Library, go to Getting Started→ Working with Tools and Functions →Working with Lists →Sap List Viewer for Sap GUI.
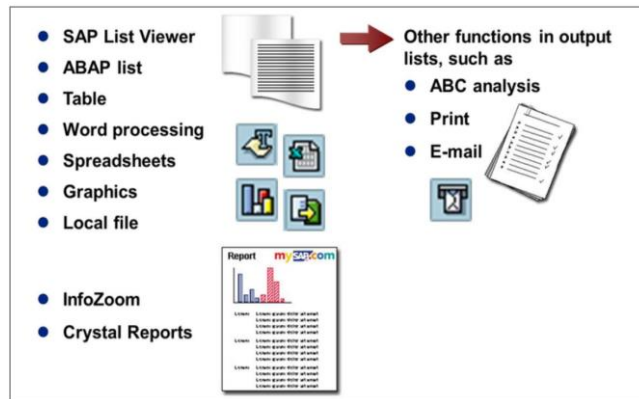
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Definition and Formatting of Output
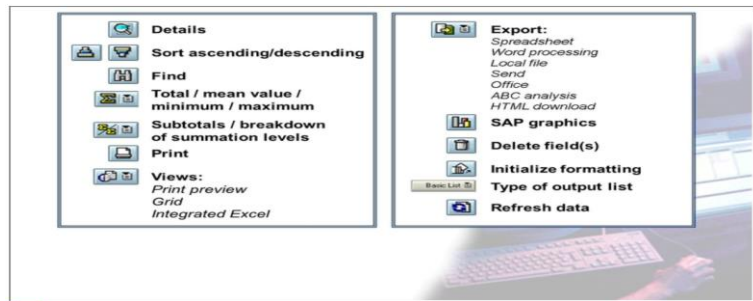
The output preview displays the layout of the output list before data is finally output. It also enables you to format the output list.

You can perform the following tasks once the output list is formatted:

➢ Sort the list by one or more columns.
➢ Calculate totals for numeric columns in basic lists and calculate subtotals by using specific criteria (non-numeric columns).
➢ Delete all output fields at once.
➢ Initialize formatting.
➢ Determine the position of the currency column in basic lists or hide it completely.

The context menu for ranked lists and statistics enables you to determine whether additional columns, such as mean value, share in %, and total number, are output.

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Types of Output

- SAP List Viewer
- ABAP list
- Table
- Word processing
- Spreadsheets
- Graphics
- Local file

- InfoZoom
- Crystal Reports

Other functions in output lists, such as
- ABC analysis
- Print
- E-mail

You can select the type of output, which determines how data is displayed when output. You can choose from various types of list output and export functions. For example, you can out put data for spreadsheets. In this case, a list is not output to the screen. Instead, the report is copied to a file that you can then edit by using a spreadsheet program.

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Output and Export Settings
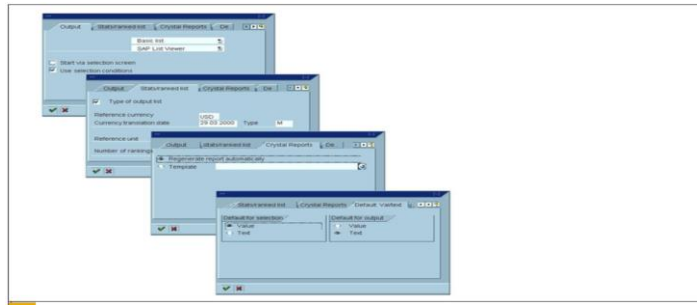
To specify various output and export settings in a single dialog box, choose Edit→ Settings.

You can specify the following settings:
- ➢ Select the type of output list, such as basic list, ranked list, or statistics.
- ➢ Start a query through the standard selection screen of the logical database.
- ➢ Use selection conditions for output.
- ➢ Reference the currency and counter.
- ➢ Export to Crystal Reports.
- ➢ Specify field selection as a value or a text.

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ABAP

Continue..

You can use the following tab pages to specify various output and export settings:

Output tab page:

On the Output tab page, you can select the type of output list (such as basic list, statistics, and ranked list) and the type of output (such as standard list, word processing, and spreadsheet). You can also determine whether the query is started through a selection screen. Ad Hoc Query uses the SAP List Viewer as the standard type of output.

Stats/Ranked List tab page:

On the Stats/ranked list tab page, you can determine the reference currency that is used to translate currency fields and the reference unit that is used to translate units of measurement. You can also specify the number of lines included in a ranked list.

Crystal Reports tab page:

On the Crystal Reports tab page, you can determine how data is exported to Crystal Reports if Crystal Reports is started directly from InfoSet Query. You can also create a Crystal Report each time data is exported. Alternatively, you can export data to an existing Crystal Report on your local PC.

Default: Val/Text tab page: On the Default: Val/Text tab page, you can determine whether the value or text is used when a field is selected by drag and drop or by checkbox. You can override these defaults by using the context menu to select a field.

ABAP

Continue..

Output List

Basic list: monthly salaries in organizational unit 00001000

Last name	First name	Monthly sal.	Curr.
Smith	Denise	6500.00	UNI
Vega	Jose	2575.00	UNI
Mikovics	Vaclev	4500.00	UNI
Washington	Rodney	9600.00	UNI
Werner	Suzanne	10200.00	UNI
Haddem	Mohammed	3280.00	UNI
Kopp	Oleg	5400.00	UNI
Cabrera	Helen	4800.00	UNI

Statistics: monthly salaries per org. unit

Org.unit	Monthly salary in UNI	No.
00001000	46,855.00	
00502020	75,954.00	
50067231	156,589.00	20
Total	279,398.00	40

Ranked list: investment types for savings plans

| Rank	Investment type	No.
1.	Building/loan association	171
	interest-earning securities	56
	Capital savings	12
4.	Life insurance	5

Information System Reports

Output lists are of the following types:

●Basic list
●Statistics
●Ranked list

While basic lists enable you to output detailed overviews, statistics and ranked lists enable you to output aggregated data.

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ABAP

Restriction of the Reporting Set
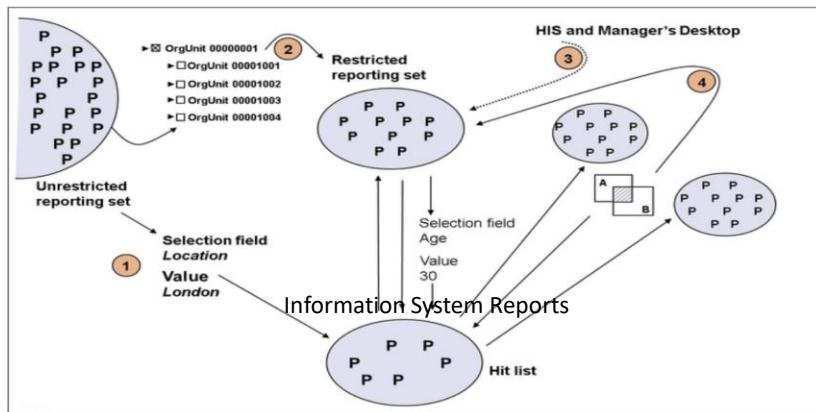
You often require reports for a specific set of objects, such as the employees assigned to an organizational unit or a group of persons who meet certain conditions. If you do not restrict the reporting set, selections are performed for all of the objects of an object type that are stored in the system. You can include only the required set of objects in your reports by restricting the reporting set as appropriate.

Continue..

You can use one of the following restrictions for sets of persons:

●The current hit list that you obtained by making a specific selection

●A set of persons that you selected by using the organizational structure

●A set of persons that you selected in HIS or Manager's Desktop

●A set of persons that you determined by using set operations

You can define further restrictions for the reporting set of persons. For more information, access Customizing for the Human Resources Information System and read the section on Selection IDs.
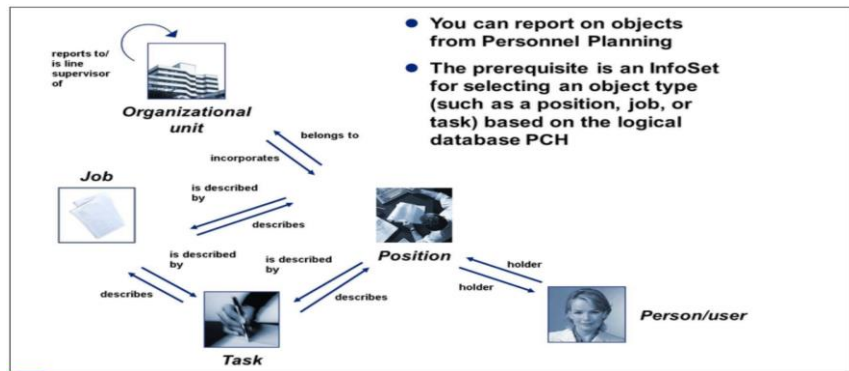
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ABAP

Personnel Planning
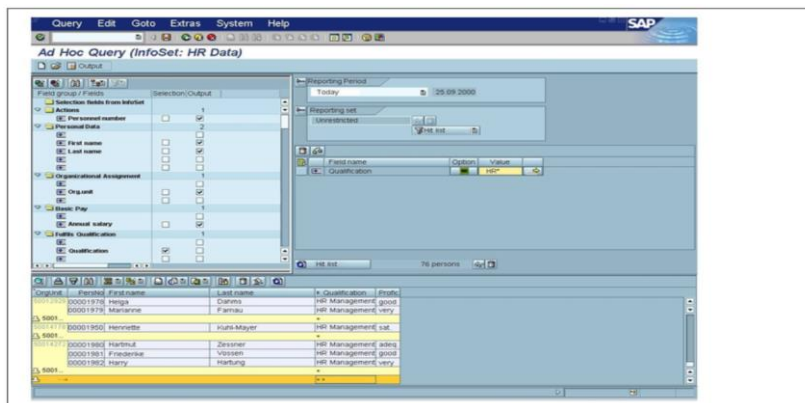
You can use data from personnel planning as selection fields to define various reports.

You can now use the infotypes of related objects as selection and output fields for persons and personnel planning objects, for example, to find persons with specific qualifications. The prerequisite for this is an existing InfoSet based on logical database PNP or PNPCE (HR master data). In this example, it would also need the added Object Type Qualification Fulfils to give you the requisite data.

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ABAP

Reporting on Data from Personnel Planning

- You can report on objects from Personnel Planning
- The prerequisite is an InfoSet for selecting an object type (such as a position, job, or task) based on the logical database PCH

In earlier releases, you could only use Ad Hoc Query to select sets of persons. You could output any data from Personnel Administration for the selected persons, as well as data from infotypes of related personnel planning objects. You could not use personnel planning data to make selections. With the use of an InfoSet specially created for selecting a specific object type, such as courses (based on PCH), you can now select personnel planning objects and report on related objects.

ABAP

Creating Dashboards

LESSON OVERVIEW

This lesson provides an introduction to HCM dashboards.

Business Example

As the HR Analyst, you are responsible for the setup and generation of various reports. You have received a request for an HCM Dashboard report and must familiarize yourself with dashboards. For this reason, you require the following knowledge:

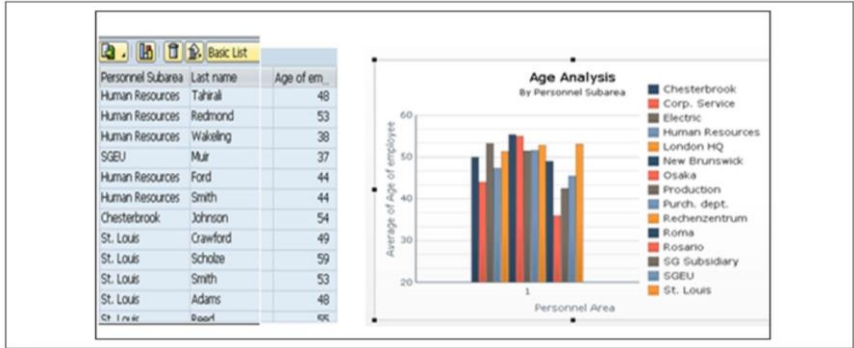●An understanding of HCM Dashboards

LESSON OBJECTIVES

After completing this lesson, you will be able to:

●Create a dashboard based on an Ad Hoc query

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ABAP

BI Dashboards

Translating HCM Data into Business Information

Introduction to Dashboards

Dashboards are used to present data in charts, graphs and other visual devices such as maps. This is known as visualization. The SAP BI dashboard application is called SAP Business Objects Dashboard Designer, previously known as Xcelsius. Dashboards are designed to be interactive, allowing the user to change the emphasis of the display. For instance a drop-down list could be included next to a chart of average age by personnel subarea, to allow the selection of a different personnel area.

Dashboards are part of the roadmap for HCM reporting and can be seen as content in Manager Self Service. These dashboards do not support 'what if' scenarios.

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ABAP

Dashboards for HCM
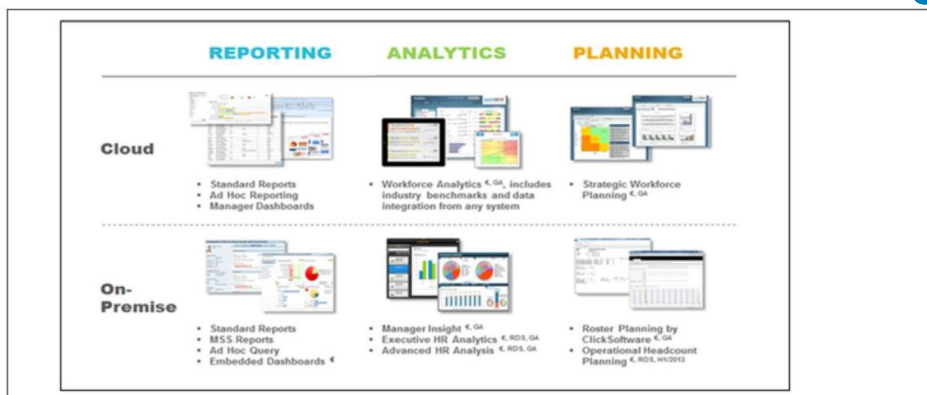
Reporting

Standard and ad hoc reports represent transactional level data, and display data in rows in a table which can be sorted, filtered, counted and summed. Standard reports are developed either using ABAP or were built using Ad hoc Queries. Users can create their own reports by using the ad hoc query tool to retrieve HCM data

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Continue…

Analytics

Workforce Analytics is the Cloud Analytics solution. Manager Insight, Executive Analytics, and Advanced Analytics are the on-premise offerings. Analytics is optional and attracts a fee. Analytics offers a library of delivered metrics, industry benchmarks, and HR strategies.

Analytics will focus on different levels of data depending on who is using it. Executive analytics focuses on higher level KPIs and HCM scenarios. Theon-premise solutions include specific metrics for Managers.

These tools are optional and help to answer questions such as:

● Are we building talent according to our strategy?

● Will we have the right resources to enter new markets or launch new products?

● Are we building skills to support our strategy?

● Do we have career paths that are strategic and make sense?

● Will we have resources available when we need them?

● Are we able to pay a competitive salary?

● Is our workforce located where our customers and business requirements are?

● Can we outsource certain functions?

Planning tools include the following types:

● Short-term planning: shift, roster, resources

● Mid-term planning: headcount, budgets

● Long-term planning: strategic workforce planning

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SAP Query
Creating Queries with SAP Query

LESSON OVERVIEW

This lesson introduces SAP Query and outlines how to create queries using this tool.

Business Example

As the HR Analyst, you need to generate reports using SAP Query. For this reason you require the following knowledge:

- An understanding of SAP Query
- An understanding of how to create queries by using SAP Query

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Generate a report by using SAP Query

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ABAP

SAP Query Basics

If you use SAP Query to create queries, you can create one basic list and up to nine statistics or ranked lists for one query, which can be defined using selection and output fields.

When creating queries using HR logical databases, you can use the Line Groups function. This function enables you to group specific lines within multiline basic lists to form line groups.

If infotypes have more than one record, this function ensures that infotype fields that logically belong together are grouped in a logical manner, instead of being output one after the other

The following table shows an example of different placement of fields from the infotypes with and without Line Groups:

Basic List with Line Groups	Basic List Without Line Groups
Martin Smith	Martin Smith
54333 Musterstadt	54333 Musterstadt
Any Street 4	12456 Anyplace
12456 Anyplace	Any Street 4
Example St. 4	Example Street 4

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ABAP
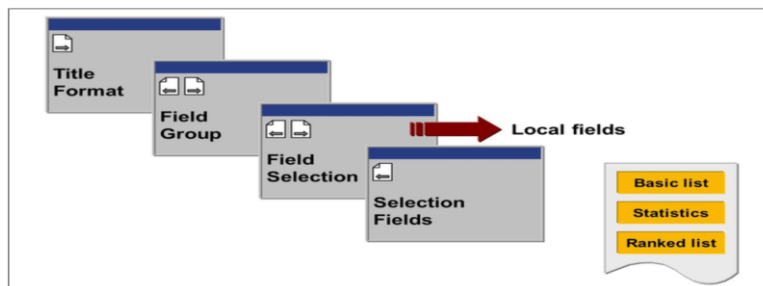
Field Selection

The system guides you through the following sequence of screens for field selection:

1.**Title, Format:**
This screen enables you to assign the title of the query. By entering format data, you can determine the page layout. By entering special attributes, you can determine further characteristics for the query such as change lock and output types).

2.**Field Group Selection:**
This screen enables you to select the required field groups. Info Sets are divided into field groups, which correspond to infotypes in HR.

3.**Field Selection (Output Fields):**
This screen enables you to select the data fields required for the field groups selected earlier. If you require local fields, you can define them on this screen

Continue..

4.Selection Fields:

This screen enables you to define selection fields with which you can enter further restrictions on the selection screen.

To Create SAP Queries -Steps

1.Define the name of the query.

2.Select an InfoSet.

3.Specify the query title, list format, and design the list.

4.Select the field groups and their fields.

5.Define the layout of the list.

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ABAP

Modifying SAP Query Reports

LESSON OVERVIEW

This lesson explains how to generate SAP Queries which include control levels, statistics, local fields, and multi-lines.

Business Example

As the HR Analyst, you are responsible for the generation of SAP Queries including control levels, statistics, user defined fields and formats. For this reason, you require the following knowledge:
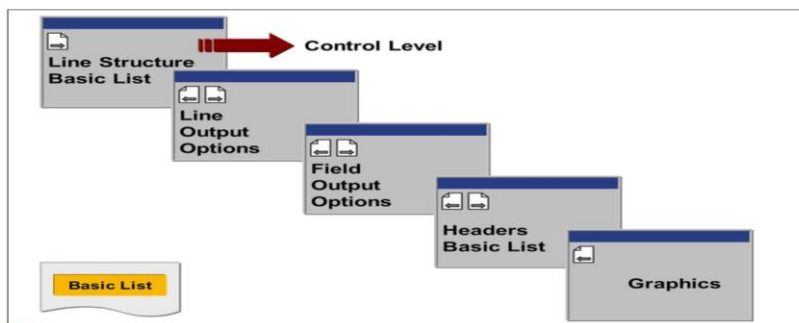
- An understanding of SAP Query output
- How to set up control levels
- How to include statistics in a report

LESSON OBJECTIVES

After completing this lesson, you will be able to:
- Execute reports that include specific and local fields using SAP Query

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ABAP

SAP Query Output

The system guides you through the following screens for creating a basic list:

1.Basic List Line Structure:
This screen enables you to arrange fields in single or multiple lines, and determine the field sequence. It also enables you to determine the sort sequence and other global field characteristics. Control level processing can be defined for sorted fields. Summation and field counting are possible for each control level.

2.List Line Output Options:
This screen enables you to determine output options for each line. The appearance of the Output depends on whether another line exists, output for blank lines (before and after a line), page breaks, and output in the page header.

ABAP

Continue..

3. Field Output Options:

This screen enables you to determine output options for each field, such as output length, output position, and output with template (in this case, using an additional Field Templates screen).

4.Basic List Header:

This screen enables you to enter text for the footer and header, and to change the text for column headers.

5.Graphics:

This screen enables you to determine the graphic type that is used if the list is output as a graphic

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ABAP

Additional Fields

The term additional fields covers all the fields that do not exist in the database table of the corresponding infotype, but that are available for reporting purposes.

Additional fields are classified as follows:

Standard additional fields:

Standard additional fields are additional fields that are required by the majority of customers. For this reason, they are available in the standard system when InfoSets are created.

ABAP

Continue..

Additional fields from Customizing or InfoSet:

Additional fields can also be defined by customers to meet special, company-specific requirements. They can be created in HR Customizing or when an InfoSet is created.

Local fields: Local fields are similar to additional fields and are used to meet specific requirements. They are defined within a query and are available only for that query (for instance in SAP Query).When these additional fields are created in Customizing, they are always available when InfoSets are created. If they are created in an InfoSet, they are only available in that particular InfoSet. To create additional fields from Customizing or an InfoSet, choose HR Settings for SAP Query→ Additional Information for Maintaining Info Sets (Functional Areas)→Define Additional Fields.

Date Selection

Many times, the reporting period as of a single (key) date or multiple (From and To) date is sufficient to return the data you have requested. The reporting period enables you to determine the period from which objects are retrieved. The system searches for objects with valid infotype records that meet the selection criterion in the period you specify.

However, because the reporting period also affects data output, there may be cases in which you need to separate the Person Selection Period and Data Selection Period on the report selection screen.

ABAP

Payroll and Time management Infotypes

Setting Up Payroll Infotypes

LESSON OVERVIEW

This lesson explains the concepts of payroll and shows how to set up payroll infotypes (PITs).

Business Example

As a member of the HR team, you require reports on payroll results, such as a list of all employees with an annual gross income exceeding 100,000, and results of specific wage types per employee, per personnel area, and per organizational unit. For this reason, you require the following knowledge:
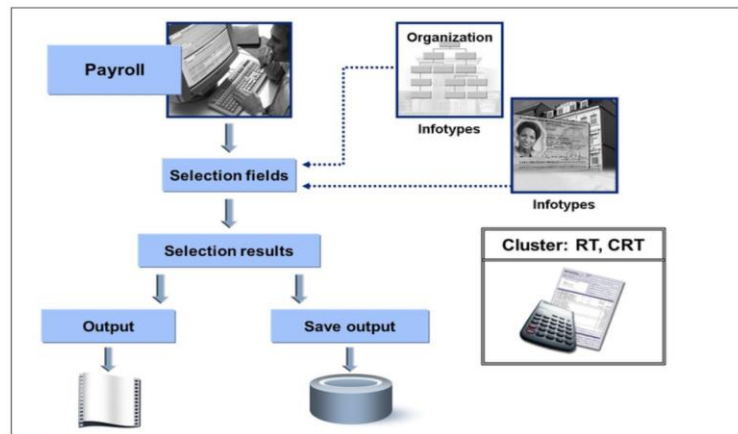
●An understanding of payroll infotypes and their structures

●An understanding of how to set up payroll infotypes

LESSON OBJECTIVES

After completing this lesson, you will be able to:

●Set up a payroll infotype (PIT) to report on payroll cluster information

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Payroll Infotypes

Most Human Resources data is stored in infotypes. You can report on this data by using standard reporting procedures such as Ad Hoc Query or SAP Query. Payroll results are stored in cluster tables. You can only report on payroll results by using either specific standard reports or reports that you have programmed using the ABAP Editor or transaction codeSE38.
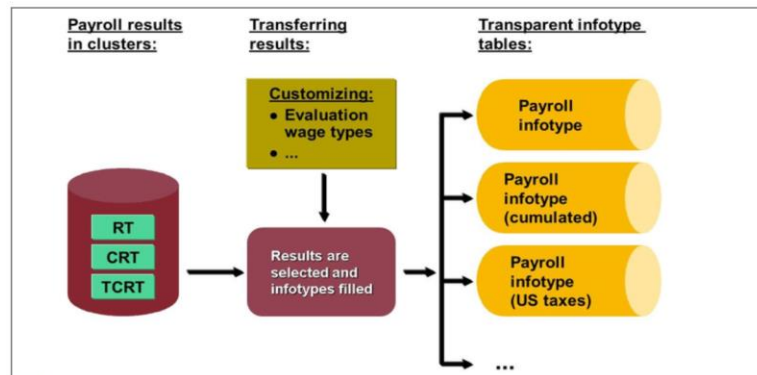
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ABAP

Payroll Results – Reporting
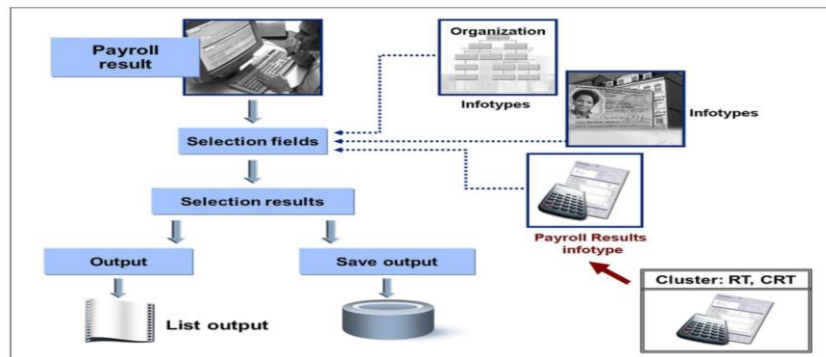
To evaluate payroll results in the same way as other HR data, you can set up payroll linfotypes in the following ways:

●Use preconfigured payroll infotypes

●Define your own payroll infotypes

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Structure of Payroll Infotypes

The basic principle of PIT involves defining an infotype whose specific fields correspond to the results of one or more wage types in the payroll.

To enable the results of (technical) wage types to be aggregated, evaluation wage types(EWTs) are defined in an intermediate step. EWTs are used to define the payroll infotypes.

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ABAP

Continue..

For example, you can use EWTs to define PITs as shown in the following table:

Wage Type	EWT	PIT
/101 (Gross/Employee)	Gross/ER-EWT	Gross/ER-PIT
/262 (Gross/Social Contri-bution/ER)	Gross/ER-EWT	-

Technical wage types/101and/262are both written to EWT Gross/ER-EWT. In this case, the payroll infotype Gross/ER-PIT only contains this evaluation wage type.

Like all other infotypes in Personnel Administration, PITs have three substructures (key fields/PAKEY, administrative fields/PSHD1, and infotype-specific fields/PSnnnn). The infotype-specific fields are contained in substructure PSnnnn.

In the case of payroll infotypes, PSnnnn contains additional, payroll-specific fields (such as sequence number and MOLGA) that are created automatically when a PIT is created.

The infotype-specific fields of a PIT are contained in include CI Pnnnn. These fields correspond to the EWTs defined in Customizing.
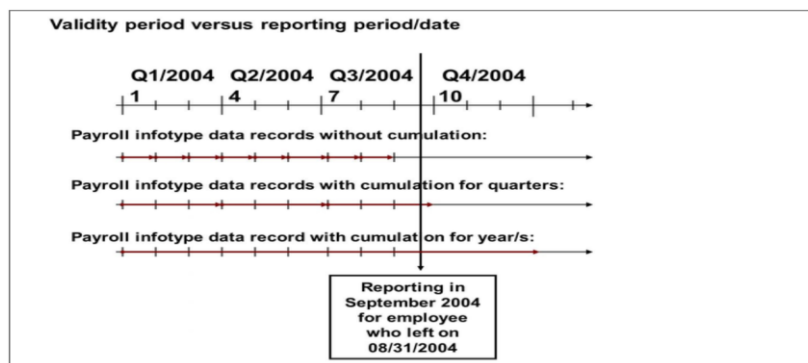
The structure of infotypes that are preconfigured for the USA (such as 0446) also contains the following key fields:

●TXCMP (tax interface)

●TAXAU (tax authorities)

Cumulated Payroll Infotypes

Validity period versus reporting period/date

Q1/2004 Q2/2004 Q3/2004 Q4/2004

1   4   7   10

Payroll infotype data records without cumulation:

Payroll infotype data records with cumulation for quarters:

Payroll infotype data record with cumulation for year/s:

Reporting in
September 2004
for employee
who left on
08/31/2004

Depending on the reports that you require, you can cumulate payroll results and then import them into payroll infotypes. In this case, you must define cumulated payroll infotypes.

When defining cumulated payroll infotypes, you can determine which amounts are included in the PIT and the number of infotype records that are created (in relation to the payroll period).

You can create PIT data records without cumulation. In this example, each record contains the total paid for the corresponding payroll period.

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ABAP

Continue..

An example of PIT data records without cumulation is as follows:

Record 1 for period 012004: 3000 EUR'

Record 2 for period 022004: 3200 EUR

An example of cumulated PIT data records is as follows:

Record 1 for quarter 012004: 3000 Euro (on 01/31/04)

Record 1 for quarter 012004: 6200 Euro (on 02/28/04)

Record 1 for quarter 012004: 9200 Euro (as of 03/31/04)

Record 2 for quarter 012004: 12200 Euro (on 01/31/04)

Record 2 for quarter 012004: 15200 Euro (as of 02/28/04)

In cumulated PIT data records, each record always contains the cumulated payroll values.

When cumulated PITs are set up, you no longer need to define the assignment to EWTs. This assignment is taken from PITs that are not cumulated.

PIT Creation
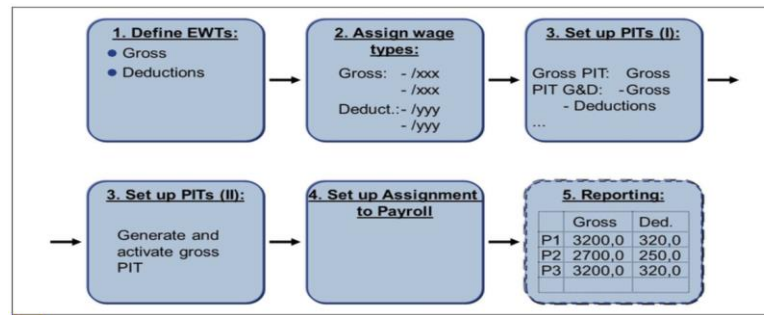
PITs are created in Customizing for HR Information Systems.

To create a PIT, in Customizing, choose Personnel Management →Human Resources Information System→ Payroll Results.

To work with preconfigured payroll infotypes, you need to perform some of the following Customizing activities:

- Define EWTs
- Assign wage types
- Set up payroll infotypes
- Set up assignment to payroll

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ABAP

Definition – EWTs

Eval. WT	Cum	Amount	No.	EWT text
Z101		•	○	Gross
Z101	M	•	○	Gross/M
Z101	Q	•	○	Gross/Q
Z101	Y	•	○	Gross/Y
Z262		•	○	Deductions
Z262	M	•	○	Ded./M
Z262	Q	•	○	Ded./Q
Z262	Y	•	○	Ded./Y
Z560		•	○	Payment
Z560	M	•	○	Payment/M
Z560	Q	•	○	Payment/Q
Z560	Y	•	○	Payment/Y
ZContrib1		•	○	Contrib.
		•	○	
		•	○	
		•	○	
		•	○	

1. **Define Evaluation Wage Types**
2. Assign Wage Types
3. Set up Payroll Infotypes
4. Set up Assignment to Payroll

- ID of evaluation wage type
- Cumulation type (year, ...)
- Text of evaluation wage type (→ field in SAP Query/Ad Hoc Query)
- Number/amount

An EWT consists of one or more wage types and is used to define PITs. An EWT can include amounts or numbers and is created based on a wage type used in payroll processing.

This step enables you to define EWTs. The definition of EWTs is country-specific; it is defined by the MOLGA.

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ABAP

Wage Types – Assignment

Eval. WT	K	EWT Text	W.Type	Negative
Z101		Gross	/101	☐
Z101	M	Gross/M	/101	☐
Z101	Q	Gross/Q	/101	☐
Z101	Y	Gross/Y	/101	☐
Z262		Deductions	/262	☐
Z262	M	Ded./M	/262	☐
Z262	Q	Ded./Q	/262	☐
Z262	Y	Ded./Y	/262	☐
ZContrib		Contrib.	1000	☐
ZContrib	M	Contrib.	1100	☐
ZContrib	Q	Contrib.	1200	x
ZContrib	Y	Contrib.	1200	☐
				☐
				☐
				☐
				☐
				☐

1. Define Evaluation Wage Types
2. **Assign Wage Types**
3. Set up Payroll Infotypes
4. Set up Assignment to Payroll

EWT: wage type
1: n

This step enables you to determine the (technical) wage types entered in an EWT. The technical wage types are obtained from the payroll results.

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ABAP

Payroll Infotypes – Set Up

IType	Eval. WT	K	EWT Text
	Generate Payroll Infotype		
9580	Z101		Gross
9580	Z101	M	Gross/M
9580	Z101	Q	Gross/Q
9580	Z101	Y	Gross/Y
9584	Z262		Deductions
9584	Z262	M	Ded./M
9584	Z262	Q	Ded./Q
9584	Z262	Y	Ded./Y

1. Define Evaluation Wage Types
2. Assign Wage Types
3.a **Set up Payroll Infotypes: assign and generate evaluation wage types**
4. Set up Assignment to Payroll

- Enter infotype from customer namespace **9nnn** or use preconfigured PIT
- Assign evaluation wage types
- Generate

This step enables you to define the PIT by assigning EWTs to it. You then generate the PIT and the appropriate screens and tables are generated.

Hint:
You can only use entries from the customer namespace (9nnn) as infotype numbers.

ABAP

Set Up Payroll Assignment

IType	I	K	IT Text	Gen.	Act.	IType
9580			Gross	x		
9581		M	Gross/M			9580
9582		Q	Gross/Q			9580
9583		Y	Gross/Y			9580
9584			Deductions			
9585		M	Ded./M			9584
9586		Q	Ded./Q			9584
9587		Y	Ded./Y			9584
			Contrib.			
			Contrib.			
			Contrib.			
			Contrib.			

1. Define Evaluation Wage Types
2. Define Wage Types
3.b Set up Payroll Infotypes: set PIT to active
4. Set up Assignment to Payroll

- Set infotype to **active**
- Enter infotype for automatic data retrieval OR use report RPABRI00 to fill with data manually

This step enables you to set the generated PIT to active by selecting the Generate field on the Change View Payroll Infotypes: Overview table. Once the PIT has been set to active, you can test it to ensure that it functions correctly.

Perform the following steps to test the PIT:

1.Transfer payroll results manually from payroll cluster tables to the PIT (RPABRI00).
2.Display the contents of the corresponding database tables (PA9*) by using SE16 and compare the content with the values in the relevant payroll clusters (for example, with RPCLSTRD for Germany).
3.Display the values in the PIT fields using the HR master data of the corresponding persons.

To ensure that the PIT is filled with data automatically, enter the PIT in the Set up Assignment to Payroll Customizing activity.

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ABAP

Simulating Time Infotypes

LESSON OVERVIEW

This lesson explains the concept of simulated infotypes in Time Management.

Business Example

For reporting purposes, you require time evaluation results together with information from Time Management infotypes. For this reason, you require the following knowledge:
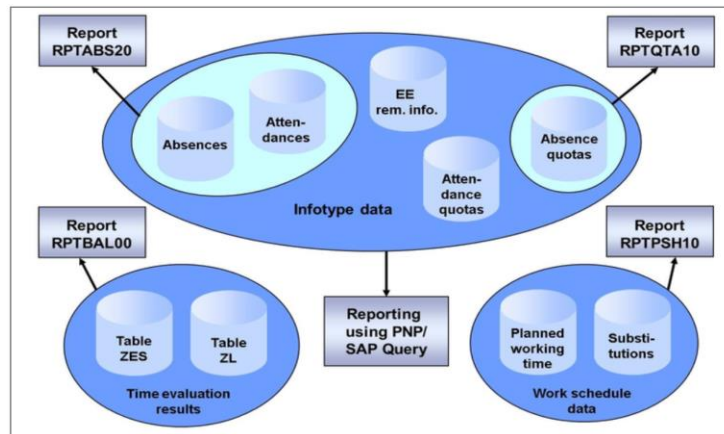
●An understanding of simulated time infotypes

●An understanding of simulated infotypes for personal work schedules, employee times, and quota statuses

LESSON OBJECTIVES

After completing this lesson, you will be able to:

●Review the setup and assignment of simulated time infotypes for enhanced time reporting

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Simulated Time Infotypes

Time management data is stored in various infotypes and in cluster B2 (time evaluation results). The standard reports enable you to run evaluations for individual data sources, such as infotype data (for example, the report RPTABS20) or cluster data (for example, the reportRPTBAL00), but not for both infotype data and cluster data at the same time. Therefore, standard reports may often provide only a section of the relevant data.
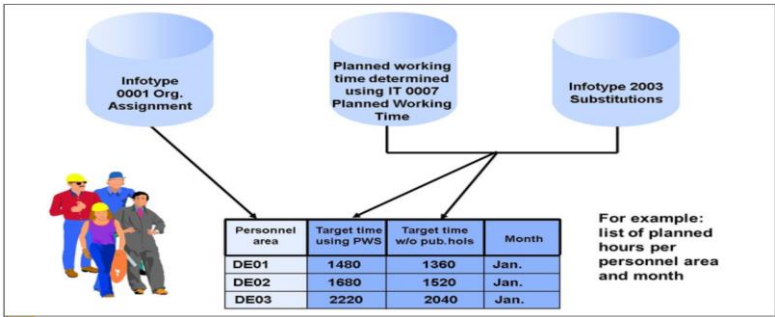
Time Management Reporting with Simulated Infotypes
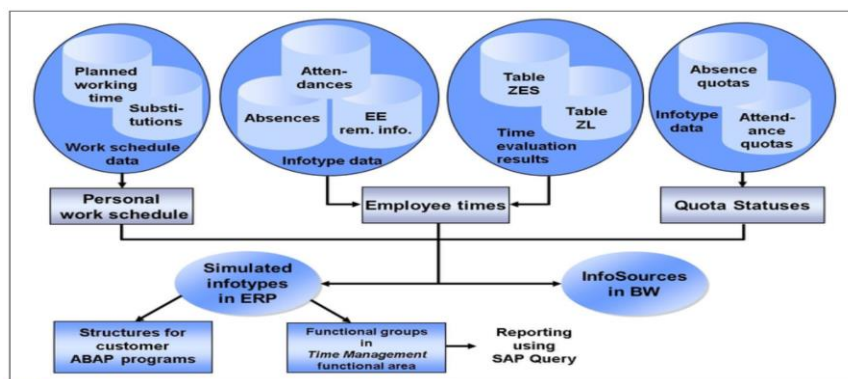
Simulated infotypes enable you to run reports for a wider range of business purposes. The infotype concept provides data from various sources (infotype data, time evaluation results, and data from the personal work schedule) in a clear overview. For example, you can use simulated infotypes to read and evaluate cluster data (cluster tables ZES, ZL with ALP and C1)using infotype structures.

Simulated infotypes are simulated because infotype data is not stored in an infotype database table, as is usually the case. Instead, it is retrieved from a variety of database tables at runtime by a function module in Time Management.

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Simulated Infotype: Personal Work Schedule

Personnel area	Target time using PWS	Target time w/o pub.hols	Month
DE01	1480	1360	Jan.
DE02	1680	1520	Jan.
DE03	2220	2040	Jan.

For example: list of planned hours per personnel area and month

The simulated infotype Personal Work Schedule Times (2500) includes the following data:

●Data from the Organizational Assignment(0001) infotype and the Planned Working Time(0007) infotype
●Additional information, such as target time according to the personal work schedule and target time without public holidays

Target time is determined using the following data:
●Daily work schedule (determined by applying the relevant work schedule rule from the Planned Working Time(0007) infotype)
●Employment percentage from the Planned Working Time(0007) infotype
●Substitutions(2003) infotype

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Simulated Infotype: Employee Times
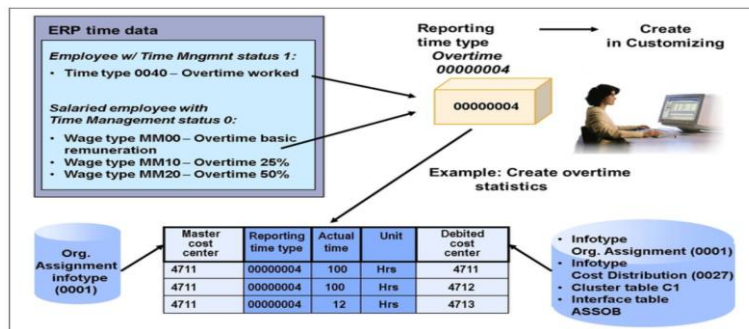
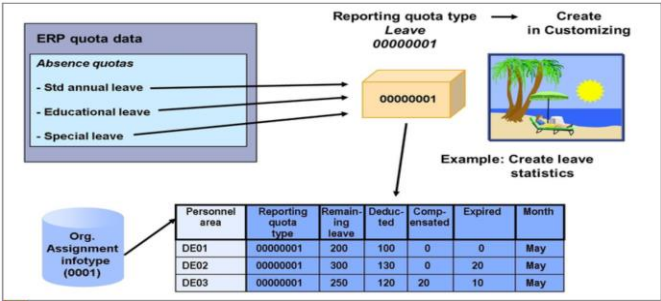The simulated infotype Employee Times (2501) includes the following data:

●Data from the Organizational Assignment(0001) infotype and the Planned Working Time(0007) infotype
●Employee time data, such as there porting time type(REPTT field) with the number of hours and days
●Cost assignment data
●Activity allocation data
●Different payment data

There porting time type facilitates a standard view of employee time from a variety of Time Management datasets, such as attendances, absences, employee remuneration information, and time evaluation results from tables ZES, ZL, C1, and ALP of cluster B2.
You create the reporting time type in Customizing and use it to group the required time data together.

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Simulated Infotype: Quota Statuses

The simulated infotype Quota Statuses (2502) includes the following data:

●Data from the Organizational Assignment(0001) infotype and the Planned Working Time(0007) infotype
●The following quota transaction data:
    Reporting quota type (field QUOTA)
    Data from the Absence Quotas(2006) infotype
    Data from the Attendance Quotas(2007) infotype

The new term reporting quota type facilitates a standard view of quota data from a variety of Time Management datasets, such as attendance quotas and absence quotas. You create there porting quota type in Customizing, and use it to group required quota data together. For example, you can use a reporting quota type to create leave statistics that are based on a variety of absence quotas

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Creating HCM Reports with SAP NetWeaver Business Warehouse

Human Capital Management (HCM) reporting is integrated with analytics using SAP Business Warehouse (SAP BW).

Business Example:

Management regularly requires reporting information from Human Resources (HR). You arean employee in the HR Controlling department. SAP BW enables you to provide authorizedpersons with the up-to-date key figures and reports.

●An understanding of how SAP Business Warehouse is used in HCM

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## SAP BW for HCM

HCM in SAP BW and SEM – Overview
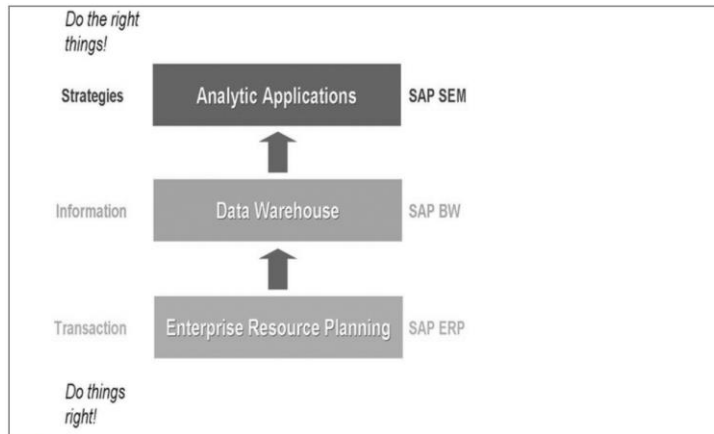
A data warehouse is a standalone application environment with its own database that extracts data from different data sources. It is used to perform queries and analyses.

SAP BW has the following features:

●It combines state of the art data warehouse technology with SAP business expertise.
●It is a standalone system with its own release cycle.

Human Resources Analytics
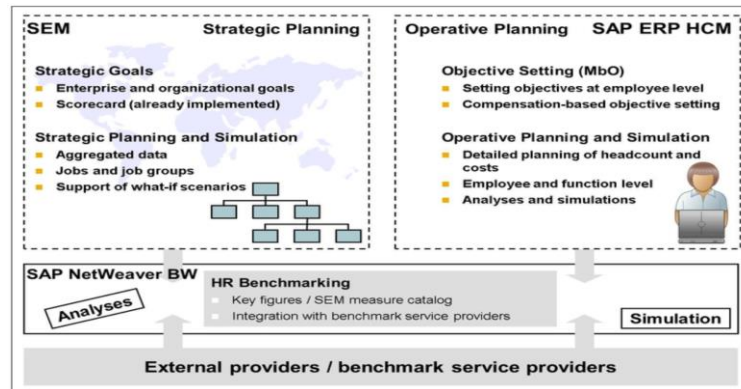
The figure shows the comparison between strategic planning in SAP SEM and operative planning in SAP ERP HCM.

Human resources analytics combines the strategic planning of SAP SEM with the operative planning of SAP ERP HCM to provide integrated business content for extensive analyses and benchmarking.

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SAP BW for HCM
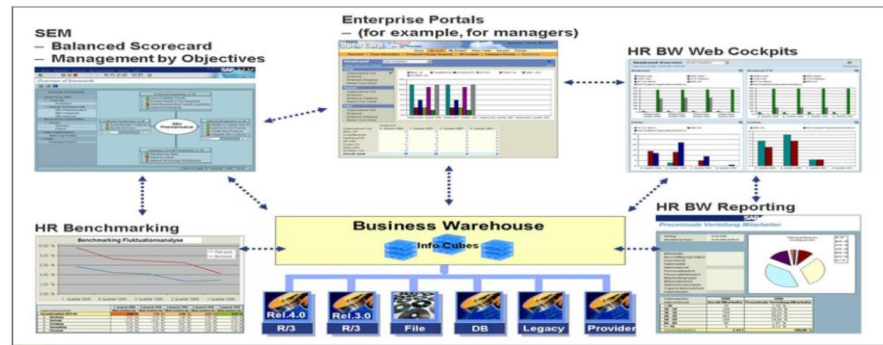
Data from SAP BW is used as a basis in different ways.

Decision makers require reliable information from Production, Purchasing, Sales, Financial Accounting, and Human Resources. They require an up to date and comprehensive overview of a given business area, and also of the whole business environment. This necessitates highly efficient and reliable data retrieval from the relevant data sources.

Information needs to be collated at a central point from which all data can be accessed.

Efficient analysis technologies with meaningful, multimedia display options are in dispensable. The information requirements of a wide variety of user groups must be met.

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Continue…

The advantages of SAP BW are as follows:

- ➢ Standardized structure and display for all corporate information
- ➢ Easy access to corporate information through single point of entry
- ➢ Highly sophisticated reporting for analyses
- ➢ Environment conducive to high performance
- ➢ Data retrieval from heterogeneous environment

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Summary

In this Course, you have learnt:

- Human Capital Management (HCM) Reporting
- Standard SAP Reports
- Ad Hoc Query
- SAP Query
- Payroll and Time Management Infotypes
- Analytical Reporting for HCM

Summary

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