

# HR2008

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## **All Roads Lead to Payroll — Best Practices to Help You Select the Right Time Management Strategy and Solution**

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## **In This Session ...**

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- **Get a detailed look at all of your options, both SAP and third-party, for evaluating and managing time in your SAP Payroll processes**
- **Review the seven variables that will drive your time management strategy and your decision of which tools to use**
- **Compare standard SAP Time Management functionality with third-party time management options and explore the various processes available for tracking time**
- **Explore how SAP Time Management integrates with other modules and applications and understand the impact this integration will have on the time management strategy you choose**

# What We'll Cover ...

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- **Exploring time management business processes**
- **Examining decision criteria**
- **Introducing time management players**
- **Understanding SAP Time Management functionality**
- **Developing custom solutions using SAP tools**
- **Selecting the right strategy**
- **Implementing SAP Time Management**
- **Wrap-up**

# Business Processes Within Time Management

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- **Time and attendance**

- ♦ Sets up and tracks adherence to policies for attendance and related elements like tardiness, discipline, and overtime
- ♦ Calculates the related rates of payment and benefit accruals

- **Absence management**

- ♦ Sets up and tracks adherence to leave policies for vacation, disability, and regulated benefits such as the U.S. Family Medical Leave Act (FMLA)

# Business Processes Within Time Management (cont.)

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- **Scheduling and optimization**

- ♦ Automatically creates schedules based on business drivers and employee constraints
- ♦ Advanced applications can optimize the allocation of labor resources across locations, times, and tasks, and based on employee skills, attributes, and preferences

- **Labor forecasting**

- ♦ Ability to predict staffing-level requirements using historical data inputs on business metrics such as sales or required tasks

# Business Processes Within Time Management (cont.)

- **Budgeting**

- ♦ Predicts costs of labor forecasts, in most cases long-time horizons such as quarters or years, either through top-down allocations of funds or bottom-up aggregation of labor requirements

- **Self-service**

- ♦ Allows frontline workers to interact with any of the modules to clock in and out, request leaves or specific shifts, see their schedules, etc.
- ♦ For some systems, this capability may be sold as a separate module; in others, this capability is a given of the Web-based interface

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# Seven Variables That Drive Your Time Management Strategy

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- **The following seven variables are essential as part of a decision process for selecting the right time management strategy:**
  1. **Data requirements**
  2. **Input/output requirements**
  3. **Functional requirements**
  4. **System scalability requirements**
  5. **Security requirements**
  6. **Employee mix and client culture**
  7. **Cost**

# Data Requirements

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- **Units (minutes/hours/days/miles)**
- **Attendance – elapsed time worked**
- **Attendance by code (regular, overtime, double time)**
- **Exception time vs. actual time**
- **Clock-in/clock-out/break-in/break-out**
- **Cost objects**
  - **Cost center, order, WBS, position, project, activity type, work center**
- **Wage types**
- **Direct vs. indirect labor indicator**

# Input Requirements

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- **Centralized vs. decentralized**
- **Corporate workstation**
- **Kiosk**
- **Internet/intranet**
- **Mobile device**
- **Swipe card reader, proximity reader, and biometric reader (finger, hand, optical)**
- **Interactive Voice response (IVR)**
- **Optical Mark reader (OMR)**
- **Paper timecard**
- **Real-time vs. off-line (replication)**
- **Interface**

# Output Requirements

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- **Payroll system**
- **Financial system**
- **Project system**
- **Plant maintenance system**
- **Business Warehouse**

# Functional Requirements

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- **All the time management business processes that should be part of the implementation scope have to be identified and defined in detail**
- **This includes end-to-end processes, including non system-supported steps as well as paper forms**

# Functional Requirements (cont.)

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- **Workforce scheduling**
- **Time entry**
- **Time approval**
- **Gross pay calculation**
- **Time balance tracking**
- **Quota accrual**
- **Absence and attendance tracking**
- **Time data reporting**
- **Employee Self-Service (ESS)**

# Workforce Scheduling

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- **Flexible work schedule setup**
- **Flexible holiday calendar setup**
- **Staff scheduling**
- **Schedule bidding**
- **Shift trading**
- **Schedule compliance**
- **Skills and competencies**

# Time Entry and Time Approval

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- **Time entry**

- ◆ Positive vs. negative (exception reporting)
- ◆ Data entry screen layout
- ◆ Data entry field list
- ◆ Time entry period (daily, weekly, bi-weekly)
- ◆ Single point of time entry for multiple downstream systems
- ◆ Multi-language front end
- ◆ ESS

- **Time approval**

- ◆ One approver required vs. two approvers
- ◆ Dynamic teams by supervisor (integration to HR or OM)
- ◆ Approval delegation to back-up or during absence/vacation

# Gross Pay Calculation and Quota Accrual

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- **Gross pay calculation**
  - ◆ Flexible gross-pay rule setup
  - ◆ Retroactive calculation capability
  - ◆ Integration with payroll
  - ◆ Integration with HR
- **Quota accrual**
  - ◆ Flexible quota accrual rule setup
  - ◆ Retroactive calculation capability
  - ◆ Integration with payroll
  - ◆ Integration with HR

# Absence and Attendance Tracking

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- **Flexible absence/attendance code setup**
- **Real-time checking against available balance**
- **Permissibility of codes by employee type/location**
- **Real-time check against work schedule**
- **FMLA (Family Medical Leave Act) balance tracking**
- **Absence donations to employees or absence pools**

# Time Data Reporting and ESS

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- **Time data reporting**
  - ♦ Flexible absence/attendance
  - ♦ Planned vs. actual hours worked
  - ♦ Overtime
  - ♦ Quota balance(s) and absence/vacation liability
  - ♦ Integration to data warehouse
  - ♦ Hours by cost object
- **ESS**
  - ♦ Time entry
  - ♦ Quota balance overview
  - ♦ Time statement
  - ♦ Leave request

# System Scalability, Security, and Employee Mix

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- **System scalability requirements**
  - ◆ Time entry
  - ◆ Time evaluation
- **Security requirements**
  - ◆ Access limitation by group of employees
  - ◆ Access limitation by role (employee, supervisor)
  - ◆ Delegation of data entry/approval
  - ◆ Employee time entry in specific location only
- **Employee mix and client culture**
  - ◆ High number of non-exempt employees
  - ◆ Skills
  - ◆ Work location(s)

# Cost

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- **License fees**
- **Implementation cost**
- **Hardware cost**
- **Long-term support cost (Total Cost of Ownership [TCO])**
- **Additional hidden cost**
  - ◆ **Additional hardware**
  - ◆ **Additional training**
  - ◆ **Integration cost (direct and indirect)**
  - ◆ **Cost for keeping compliancy**
  - ◆ **“Leap-frog” cost**

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# Who Are the Players in Time Management?

- **Workforce management software vendors can be divided into the following camps:**
  - ◆ **Full HCM suite vendors**
    - ▶ **Kronos, Softscape, Ultimate Software**
  - ◆ **ERP providers**
    - ▶ **SAP, Infor, Oracle**
  - ◆ **Workforce specialists**
    - ▶ **CyberShift, InVision, Kaba Workforce, ScheduleSoft, (scheduling capability only), ScheduleSource, Stromberg, TimeLink, Workplace Systems, Workbrain (bought by Infor)**

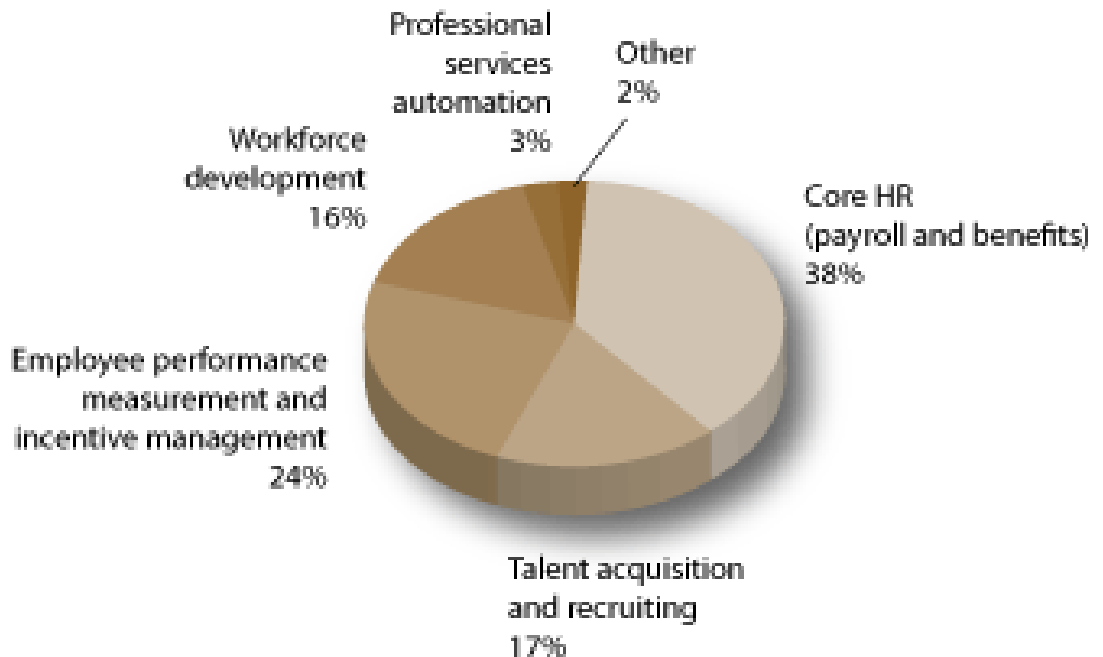
# Who Are the Players in Time Management? (cont.)

- **Time management software vendors can be divided into the following camps: (cont.)**
  - ◆ **Call center specialists**
    - ▶ **Aspect Software, NICE Systems, Witness Systems/Verint**
  - ◆ **Vertical market/process specialists**
    - ▶ **Deltek (project-based industries), JDA (retail), ORTEC (planning/distribution), RedPrairie/BlueCube (warehousing and distribution/retail), Reflexis (retail), Servigistics (field services), Tomax (retail)**

# Integrating WFM into Other Areas of the Business

- Companies are expecting to eventually integrate Workforce Management (WFM) into other areas of the business
- Core HR, for payroll purposes, seems to be the most important area to integrate with WFM

Human resource areas considered most important to integrate with WFM.



Base—schedules cover specific business hours  
n=168

Source: AMR Research, 2007

# Evaluating the Time Management Players

- **When deciding on a time management strategy, define the “to-be” design and then conduct a fit/gap analysis of SAP Time Management functionality**
- **In order to be able to satisfy certain functional requirements that cannot be covered by standard SAP, evaluate other WFM vendors to analyze the fit for eventually filling the SAP Time Management functionality gaps**
- **Conduct a cost analysis to compare SAP custom development vs. a bolt-on solution**
  - ♦ **Bolt-on license cost**
  - ♦ **Bolt-on implementation cost**
  - ♦ **Cost for integrating bolt-on with SAP**

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# Time Input Options in SAP

- **Time Management Infotypes via PA30 and PA61**
- **Time Managers Workplace (PTMW)**
- **Cross Application Time Sheet (CATS)**
  - ◆ **Classical (CAT2) SAP ERP transaction via SAPGUI**
  - ◆ **Regular (CATW) SAP ESS Web front end**
  - ◆ **For Service Providers (CATSXT)**
  - ◆ **Notebook (remote entry via off-line application with replication to CATS)**
  - ◆ **Instant (iView)**
  - ◆ **Calendar (iView)**
  - ◆ **Phone (Wireless Access Point [WAP])**

# Time Input Options in SAP (cont.)

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- **SAP xApp Mobile Time and Travel (MTT)**
- **Duet™ (Microsoft Office integration)**
  - ◆ Time entry
  - ◆ Leave request

# SAP Time Entry Front-End Solutions

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- **The current SAP time entry offerings cover a wide range of functionality, including the evolution from SAPGUI-based time entry via transaction PA61 to Duet™-based time entry**
- **The benefits of using a standard SAP time entry solution is the tight integration with all other SAP components**
- **The following screens show examples of SAP time entry front-end solutions**

# SAP ERP – PA61 Time Input

The screenshot displays the SAP PA61 'Maintain Weekly Entry w/Activity Allocation' interface. The top menu bar includes 'Infotype', 'Edit', 'Goto', 'Extras', 'System', and 'Help'. The title bar reads 'Maintain Weekly Entry w/Activity Allocation'. Below the title bar are navigation buttons: 'Choose', 'New page', and 'New page'. The left sidebar contains search options: 'Find by', 'Person', 'Collective search help', 'Search term', and 'Free search'. The main data area shows the following fields:

Personnel No	99999630	Name	John Do...	Status	Active
EE group	H Non-Perm. Limited	Personnel ar	4950	Dept of Agriculture	
WS rule	R030	24/7: M-S...	SSN	536-76-0471	

Below these fields is a weekly grid with columns for days (Sunday to Saturday) and rows for Standard, Abs. hrs, Att. hrs, Rec. hours, and Rest. All values are 0.00. At the bottom, a table lists activity entries with columns: D, Start Date, End Date, Hrs, From, To, P, Type, Att./absence type, O, E, Cost Ctr, Order, WBS Element, and Cost. The status bar at the bottom shows 'Week 12/16/2007 - 12/22/2007' and 'Record 1 / 0'.

Four callout boxes highlight integrations:

- Integration with SAP HR Personnel Number**: Points to the 'Personnel ar' field (4950).
- Integration with SAP HR Employee Organizational Assignment**: Points to the 'Dept of Agriculture' field.
- Integration with SAP Work Schedule**: Points to the 'WS rule' field (R030).
- Integration with SAP Holiday Calendar**: Points to the '24/7: M-S...' field.
- Integration with SAP Cost Objects**: Points to the 'Cost Ctr' column in the activity table.

# SAP CATS Classic Time Entry via CAT2

**Time Sheet: Data Entry View**

Personnel Number: 99999630 John Doe 99999630 Cost Ctr: 4950000000  
Data Entry Period: 12/16/2007 - 12/31/2007 Week: 50.2007

**Worklist**

Rec. CCtr	RecCostObj	Receiver fund	Receiving Func. Area	AFRS Projec...	AFRS A...

**Data Entry Area**

LT	Rec. CCtr	RecCostObj	RecFund	Rec.FuncAr	AWA...	Wa...	Position	AFRS Projec...	AFRS A...	MU	12/16	12/17	12/18	12/19	12/20	12/21	12/22	12/23	12/24
										H	24	24	24	24	24	24	24	24	24
										H	0	0	0	0	0	0	0	0	0

**Worklists can be defined to simplify data entry**

**In addition to the standard SAP integration points, the classic CATS time entry solution allows flexible design of the time entry screen via configurable profiles to define:**

- List of entry fields
- Time period
- Number of approval steps

Data entry view | Release view | Variable view | Entry 0 of 2

# SAP Duet™ Time Entry via MS Outlook

The screenshot displays the Microsoft Outlook interface with an appointment titled "Fabrikam Review" scheduled for Friday, 04/14/2006, from 8:00 AM to 8:30 AM. The appointment details include a subject, location, and start/end times. A green callout box points to the appointment details, stating: "This new SAP time entry solution allows for time entry via MS Outlook. Office users do not need SAPGUI to enter time." The Duet Action Pane on the right shows the "Time Recording" section with a list of project codes, including "1297, Project Lighting" which is selected. Other sections in the pane include "Recording Details" with a project code dropdown, "Recording Balance" showing "Time assigned: 15 hrs", and a list of links for "Open Time Recording in Portal ..", "View Detailed Report", "View Company Policy", and "Time Recording Options ...".

**This new SAP time entry solution allows for time entry via MS Outlook. Office users do not need SAPGUI to enter time.**

# Third-Party Time Entry with Interface to SAP

- **Business Application Programming Interface (BAPI) into the CATS table (CATSDB)**
- **Time recording via Communication Channel 1 (CC1)**
  - ◆ Old CC1 is based on Application Link Enabling (ALE)
  - ◆ New CC1 is based on a BAPI
  - ◆ Inbound: Into Infotype 2011 – Time Events
  - ◆ Outbound: HR mini master, quota balances, time balances
- **Plant data collection via Communication Channel 2 (CC2)**
  - ◆ Integration to PP, PP/PI, PP/SM, PS

## Third-Party Time Entry with Interface to SAP (cont.)

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- **B-COMM Connection – SAP-certified interface into CATS**
- **Custom Batch-Input (Batch Data Communication [BDC] or CALL TRANSACTION) into:**
  - ♦ **Infotype 2001 – Absences**
  - ♦ **Infotype 2002 – Attendances**
  - ♦ **Infotype 2010 – Employee Remuneration Info**

# SAP Certified Time Management Interfaces

- Examples for vendors who can provide SAP-certified interfaces are:
- Kaba GmbH
- TimeLink
- Kronos

\* see full list in Appendix A

**CERTIFICATE**  
Interface Software for **mySAP.com**<sup>®</sup>

SAP AG hereby confirms that the product  
**B-Comm für R/3 ERP**  
Release Partner Product: 2.10  
of the company  
**KABA Benzing GmbH**  
has been certified as interface software for  
the component **SAP Human Resources 4.5B**.

This certificate confirms the existence of product functionality in accordance with SAP's Certification procedure. It does not guarantee that the product is error-free.  
The certification test is documented in report: 1168/20/wlf from March 14, 2001.  
The test has been performed using an SAP Human Resources 4.5B System.  
Partner hardware: **Intel PC**  
Operating system: **Windows NT**  
This configuration meets the requirements for connecting **B-Comm für R/3 ERP** to the mySAP.com platform.

**HR-PDC / XML 4.5B**  
Time & Attendance, Employee Expenditures  
B-Comm für R/3 ERP  
for the mySAP.com platform

**Certified functions**  
Time events  
Employee expenditures  
XML communication via HTTP/HTTPS

Waldorf, March 14, 2001

*J. Höflner*  
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SAP AG

Partner  
**mySAP.com**  
Software

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# Kaba Benzing B-COMM Connection to SAP

- **B-COMM for ERP is a communications software for connecting Kaba Benzing terminals to SAP ERP systems**
- **B-COMM for R/3 ERP is for SAP versions 3.1-4.7**
- **The core of this software is a SAP-certified interface that ensures faultless data exchange between the individual SAP modules and the data collection devices**
- **Supported communication**
  - **Ethernet**
  - **HTTP(s)**
  - **XML**
  - **Radio frequency**

# KABA Benzing B-COMM Connection to SAP (cont.)

- **Supported data collection methods**
  - ◆ **Badge-based magnetic stripe**
  - ◆ **Barcode (visible and infrared)**
  - ◆ **Proximity**
  - ◆ **Biometric (hand geometry/fingerprint)**
  - ◆ **Touch screen kiosk**
  - ◆ **Telephone (IVR)**
  - ◆ **Windows CE/pocket PC**
  - ◆ **Web time clock**
  - ◆ **Mobile/wireless**
  - ◆ **Badge-based**



# Time Data Processing Options with SAP

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- **Approval**
  - ◆ Yes/No
  - ◆ 1-Step/2-Step
  - ◆ Integration to Org. Management via Structural Authorization
- **Time leveling**
  - ◆ Check against scheduled hours (IT0007 - Planned Working Time)
  - ◆ Integration to communication (IT0105 - Communication)

# Time Data Processing Options with SAP (cont.)

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- **Integration to other applications**
  - ♦ **Org. Management (Structural Authorization)**
  - ♦ **Human Resources (PTEX2000 and PTEX2010)**
  - ♦ **Controlling (CATSCO)**
  - ♦ **Plant Maintenance/Customer Service (CATSPM)**
  - ♦ **Project System (CATSPS)**
  - ♦ **Materials Management (CATSMM)**
  - ♦ **Workflow**
  - ♦ **Security**

# About SAP Time Evaluation

- **The heart of the overall time management functionality — encompassing all the business rules to process time data and generate wage-types and hours per employee**
- **Schemas and personnel calculation rules allow configuration of the most complex business rules**
- **Time evaluation generates:**
  - **Wage types and hours based on configurable business rules**
  - **Absence and attendance accrual based on configurable business rules**
- **Tightly integrated into payroll via cluster B2 table ZL**
- **Allows positive and negative time evaluation**
- **Supports full automatic retroactive calculation**

# Retroactive Calculation Capabilities

- **One of the core strengths of SAP Time Evaluation**
- **Retroactive time data changes to SAP infotypes trigger automatic recalculation of time evaluation results, payroll results, and quota accrual balances**
  - ♦ **No manual intervention required**
- **Typically late time entries and/or work schedule changes cause the majority of retro scenarios**
- **Infotypes that can trigger time management related retro calculations**
  - ♦ **Infotype 0001 – Org. Assignment**
  - ♦ **Infotype 2001 – Absences**
  - ♦ **Infotype 2002 – Attendances**
  - ♦ **Infotype 0007 – Work Schedule**
  - ♦ **Infotype 0041 – Date Types (can be configured to trigger retro)**

## Retroactive Calculation Capabilities (cont.)

- **Using bolt-on systems does not allow you to use the full power of SAP's retro calculation capabilities**
  - Manual calculations and adjustments are usually required to ensure correct calculations
- **Let SAP do the job for you**
  - Do not implement cumbersome manual processes to patch the problems that are a result of lack of integration
- **SAP retro-calculation can minimize time investment of your payroll support personnel to fix problems caused by late time entry or manually-entered retro time entry changes**

# Example of Retro Calculation: Variables

- **Employee type: Salaried exempt defined in IT0001**
- **Hourly rate: \$10 defined in IT0008**
- **Anniversary date: 01/15/1998 defined in IT0041**
- **Business rule configured in SAP Quota Accrual Rule**
  - ♦ **All exempt employees are eligible for vacation accrual**
  - ♦ **12 hours vacation accrual for 10+ years anniversary**
  - ♦ **Accrual rate is prorated based on worked hours per period  
(80 hrs worked/80 hrs planned) = 100%**

# Example of Retro Calculation: Initial Time Entry

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- **Initial time entry for bi-weekly period 01/06/08-01/19/08**
  - Entered 80 hours of “Regular Work” into CATS
- **Period pay results generated by SAP Payroll:**
  - ▶ **\$800 base pay → Update payroll cluster**
- **Period accrual generated by SAP Time Evaluation:**
  - ▶ **12 hours vacation → Update Infotype 2006 (Absence Quota)**

# Example of Retro Calculation: Retroactive Change

- **Retro change for bi-weekly period 01/06/08-01/19/08**
  - ◊ Changed 80 hours of “Regular Work” to 60 hours in CATS
  - ◊ Entered 20 hours of “Unpaid Leave” into CATS
- **Current period adjustment generated by SAP Payroll**
  - ▶ - \$200 base pay → Change of payroll cluster
- **Accrual adjustment generated by SAP Time Evaluation**
  - ▶ 9 hours vacation → Change of Infotype 2006 (Absence Quota)

# Time Data Reporting Options with SAP

- **SAP offers a wide range of reporting alternatives**
- **In addition to different levels of standard reporting, the SAP development environment allows for development of custom reports with full integration into all SAP data objects:**
  - ◆ **Human Resource Information System (HRIS)**
  - ◆ **SAP ERP standard reports**
  - ◆ **SAP NetWeaver® BI standard reports**
  - ◆ **SAP Query**
  - ◆ **SAP custom reports**

# Data Output Options with SAP

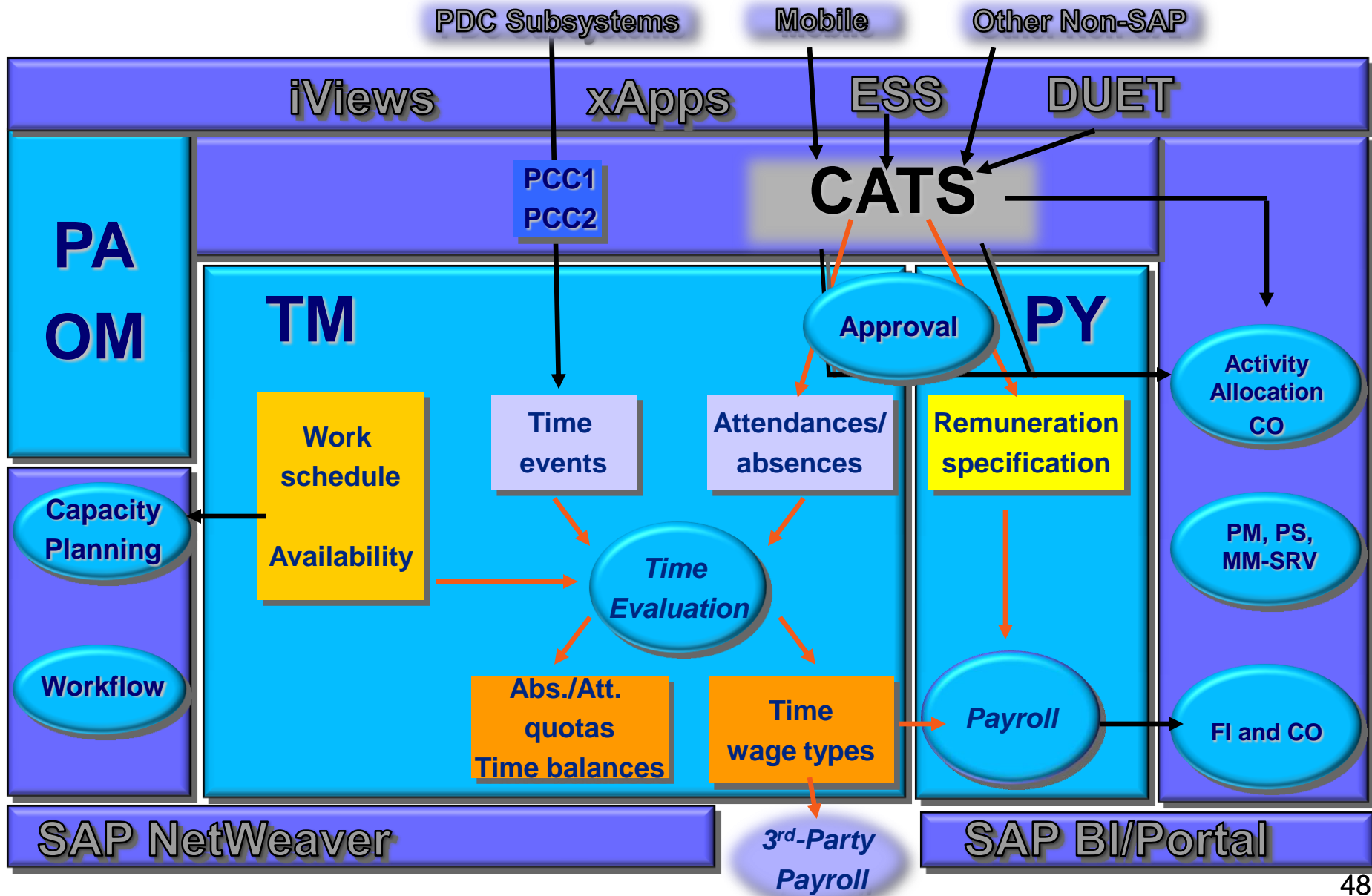
- **If gross payroll processing does not reside within SAP, there are several options to interface the time evaluation data to a to third-party payroll**
- **Depending on the scenario, there can be different flavors of time data that are interfaced out of SAP:**
  - **Raw absences and/or attendances (either directly out of CATS or out of Infotypes 2001/2002)**
  - **Raw employee remuneration data (either directly out of CATS or out of Infotypes 2010)**
  - **Wage types and hours by employee after time evaluation (out of cluster B2 table ZL after time evaluation)**

# Data Output Options with SAP (cont.)

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- **Possible approaches for outbound interfaces**
  - ◆ Custom interface using BAPIs
  - ◆ RPTEZL00 – Supply Third-Party Payroll System
  - ◆ PU12 – Interface Toolbox

# SAP Time Management Integration



# SAP Time Management Integration (cont.)

- **Integration points to SAP HCM processes**
  - ♦ Payroll — “All roads lead to Payroll”
  - ♦ Personnel Administration
  - ♦ Organizational Management
- **Integration points to other SAP processes**
  - ♦ Plant Maintenance (PM) – activity, receiving order
  - ♦ Project System (PS) – project code
  - ♦ External Services Management (MM-SRV) – service number, purchase order
  - ♦ Financials/Controlling (FI/CO) – cost center, WBS, activity

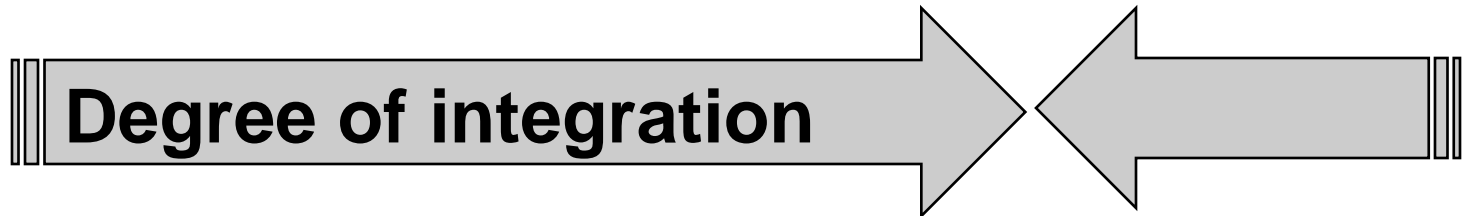
# SAP Time Management Integration (cont.)

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- **SAP Infrastructure**
  - ◆ Portal
  - ◆ ESS
  - ◆ BI/BW
- **SAP Security**
  - ◆ Structural authorizations
- **SAP Workflow**

# SAP Time Management Integration (cont.)

	Time Entry				Approval	Reporting	Scheduling	Accrual	Time Evaluation	SAP Integration Points					
	Badge	Biometrics	WEB	PC						Payroll	PA/OM	FI/CO/PS/MM	Workflow	Security	Infrastructure
SAP			X	X	X	X		X	X	X	X	X	X	X	X
Bolt-On	X	X					X								



- As part of your decision process to select the right strategy, do not underestimate the power of SAP integration and consider the downsides due to “disintegration” when decoupling functionality and data from your core SAP system

# Issues Due to Lack of Integration

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- **Common payroll issues due to decoupling time entry/time evaluation from SAP Payroll**
  - ◆ **Calculation of salaried exempt paid/unpaid absences**
  - ◆ **Regular Rate of Pay (RROP) calculation for overtime payments**
  - ◆ **Retroactive time entry changes**
  - ◆ **Retroactive organization assignment changes**
  - ◆ **Retroactive work schedule changes**

## Issues Due to Lack of Integration (cont.)

- **Common quota accrual and quota balance tracking issues due to decoupling time entry/time evaluation from SAP quota accrual:**
  - ◆ Quota accrual requires worked hours for proration
  - ◆ Absence entries greater than scheduled hours
  - ◆ Absence entries on “OFF” days
  - ◆ Retroactive time entry changes
  - ◆ Retroactive organization assignment changes
  - ◆ Retroactive work schedule changes
  - ◆ Retroactive anniversary data changes
  - ◆ Accurate sick and vacation liability reporting
  - ◆ Accurate ESS sick and vacation balance display to employees

## Issues Due to Lack of Integration (cont.)

- **Other common issues due to decoupling time entry/time evaluation from SAP HR/payroll:**
  - ◆ Time approval – employees by supervisor
  - ◆ Qualifications for scheduling
  - ◆ Detailed absence/attendance reporting
  - ◆ Accurate labor cost reporting
  - ◆ Redundant data definitions (cost objects, wage types, PERNR)
  - ◆ Additional interfaces required
    - ▶ **SAP HR mini master → time system**
    - ▶ **Valid SAP cost objects → time system**
    - ▶ **Quota balances → time system**
    - ▶ **Time extract → SAP Payroll**

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# Custom Solution Development with SAP Tools

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- **ABAP Workbench**
  - ◆ BAPIs
  - ◆ Standard user exits
  - ◆ Business Add-Ins (BAIs)
  - ◆ Enhancements
- **SAP NetWeaver Developer Studio**
- **SAP Visual Composer**
- **SAP Java Connector**
- **Test Workbench**
- **SAP Solution Manager**
- **SAP Correction and Transport System**

# Custom Solution Development with SAP Tools (cont.)

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- **SAP HCM-Specific Tools**

- ♦ **PM01 – Maintain/Create Personnel Admin. Infotypes**
- ♦ **PPCI – Maintain/Create Personnel Planning Infotypes**
- ♦ **PE03 – Maintain Features**
- ♦ **PE04 – Maintain Functions and Operations for Time and Payroll**
- ♦ **HRFORMS – HR Forms Workplace**

# Custom Solution Development with SAP Tools (cont.)

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- **Speed to market**
  - ◆ Quickly adapt to rapidly changing business and market conditions
  - ◆ Leap-frog and have a competitive advantage
- **Quality and upgradability**
  - ◆ Ensure quality and protect upgradability by leveraging SAP development methodologies
- **Lower risk**
  - ◆ Be confident that your solution is synchronized with SAP's release strategy

# Custom Solution Development with SAP Tools (cont.)

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- **Development resources**
  - ♦ **Leverage your existing SAP support resources/skills**
  - ♦ **SAP custom development**
  - ♦ **SAP consulting firms**

# Leverage What You Paid For

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- **Development workbench**
- **Extended Computer Aided Test Tool (eCATT)**
- **Version control**
- **Basis/Security/Job scheduling**
- **Change and Transport System (CTS)**
- **Performance monitoring**
- **Scalability**
- **No additional license fees**

# What We'll Cover ...

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- Exploring time management business processes
- Examining decision criteria
- Introducing time management players
- Understanding SAP Time Management functionality
- Developing custom solutions using SAP tools
- **Selecting the right strategy**
- Implementing SAP Time Management
- Wrap-up

# Checklist for Selecting the Right Strategy

## 1. Define your time management scope

- ♦ Organizational
- ♦ Functional
- ♦ Technical



*Checklist*

## 2. Define process and functional requirements

## 3. Evaluate existing SAP TM functionality

## 4. Conduct detailed gap analysis and identify SAP gaps

## 5. Compare Solution Alternatives for gap resolution

- ♦ Consult experienced SAP HCM Solution Architect
- ♦ Compare SAP enhancement vs. bolt-on system
- ♦  $TCO = \text{Implementation cost} + \text{license fees} + \text{support cost}$
- ♦ Include “soft benefits” in your comparison

# Methodology for Selecting the Right Strategy



## Define TM Scope

- Learn about all SAP TM capabilities
- Map SAP TM functionality to functional requirements
- Identify and document SAP TM gaps
- Analyze 3<sup>rd</sup>-Party TM products
- Analyze SAP Enhancement alternatives
- Document Final list of alternatives
- Conduct cost comparison:
  - License Cost
  - Implementation Cost
  - Support Cost
  - Hidden Cost

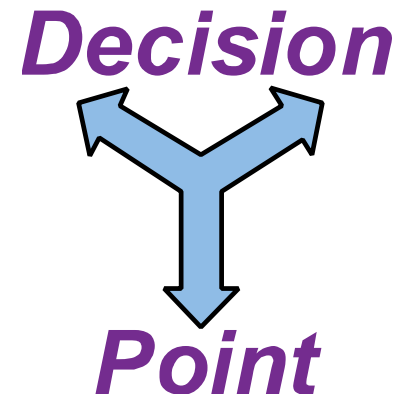
## Finalize TM Strategy

# Comparing SAP Enhancements to Bolt-On System Solution

Category	SAP Enhancement	Bolt-On
<b>Functionality</b>	Unlimited → Leap-Frog	Limited
<b>Integration</b> <ul style="list-style-type: none"> <li>•Other SAP Application data</li> <li>•Security</li> <li>•Workflow</li> </ul>	Integration	Interface(s)
<b>Data Unification</b> <ul style="list-style-type: none"> <li>•Accurate</li> <li>•No duplicates</li> <li>•Normalized</li> </ul>	YES	NO
<b>Development Environment</b>	Consistent	Different
<b>Skills</b>	Consistent	Different
<b>Version Management</b>	Consistent	Different or N/A
<b>Migration Pipeline</b>	Consistent	Different or N/A
<b>Security</b>	Consistent	Different or N/A
<b>License Fees</b>	No Additional	Additional
<b>Release strategy</b>	Consistent	Different
<b>Scalability</b>	Consistent	Different
<b>Testing</b>	Consistent	Different
<b>Support</b>	Consistent	Different
<b>Landscape</b>	Homogenous	Heterogeneous
<b>Standardization</b> <ul style="list-style-type: none"> <li>•Uniform reporting</li> <li>•Uniform codes (PERNR, chart of accounts, etc.)</li> <li>•Harmonization of master data</li> <li>•Optimization of business processes</li> <li>•Front-end look and feel</li> </ul>	Consistent	Different

# Your Current and Future ERP Strategy

- **IF your current and future ERP strategy is SAP**
  - ♦ “Put on your SAP hat”
  - ♦ Leverage your existing SAP investment
  - ♦ Leverage your existing SAP development and support staff and infrastructure
  - ♦ Avoid rebuilding a heterogeneous IT landscape
  - ♦ Explore the SAP toolkit to bridge functionality gaps
- **ELSE**
  - ♦ Why are you here?



# What We'll Cover ...

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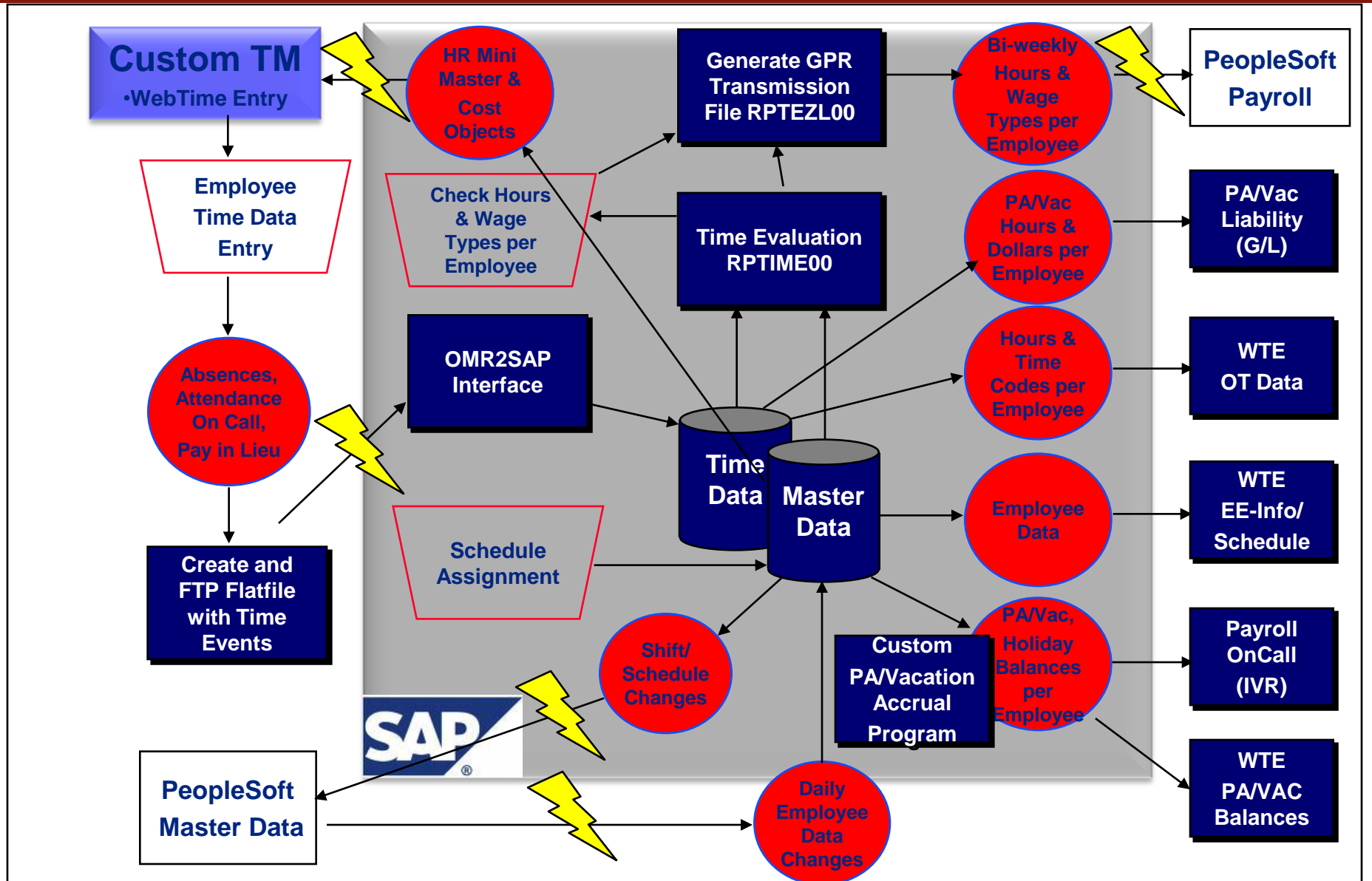
- Exploring time management business processes
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- Wrap-up

# SAP Time Management Implementation Scenarios

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- **With different time management system scenarios come various issues**
- **Interfaces and “dis-integration points” can be avoided by using SAP standard wherever possible**
  - ◆ **Interfaces cause:**
    - ▶ **Increase in overall system complexity**
    - ▶ **Higher long-term support costs (TCO)**
    - ▶ **Data redundancy**
    - ▶ **Slower adaptability to business changes**

# SAP Time Management Implementation Scenario 1



# SAP Time Management Implementation Scenario 1 (cont.)

- **SAP to PeopleSoft payroll interface issue**
  - RROP calculation for OT in payroll cannot be accurately made based on hours worked/week because the hours are accumulated on a bi-weekly level
  - Retro changes for RROP rate must be calculated manually

<i>RROP calculation for original time entry</i>				
	Hours	Rate	Factor	Earnings
Regular	40	10	1	400.00
OT	3	10	1	30.00
Bonus				100.00
<b>Total Base</b>	<b>43</b>			<b>530.00</b>
<b>RROP Rate</b>				
<i>FLSA Rate (Total Earnings/Total Hours)</i>				12.33
<b>Overtime Premium</b>				
	Hours	Rate	Factor	Earnings
OT	3	12.32558	0.5	18.49
<b>Total Compensation</b>				
Base Pay				530.00
Premium				18.49
				<b>548.49</b>

<i>RROP calculation after retroactive changes</i>				
	Hours	Rate	Factor	Earnings
Regular	40	10	1	400.00
OT	1	10	1	10.00
Bonus				100.00
<b>Total Base</b>	<b>41</b>			<b>510.00</b>
<b>RROP Rate</b>				
<i>FLSA Rate (Total Earnings/Total Hours)</i>				12.44
<b>Overtime Premium</b>				
	Hours	Rate	Factor	Earnings
OT	1	12.43902	0.5	6.22
<b>Total Compensation</b>				
Base Pay				510.00
Premium				6.22
				<b>516.22</b>

# SAP Time Management Implementation Scenario 1 (cont.)

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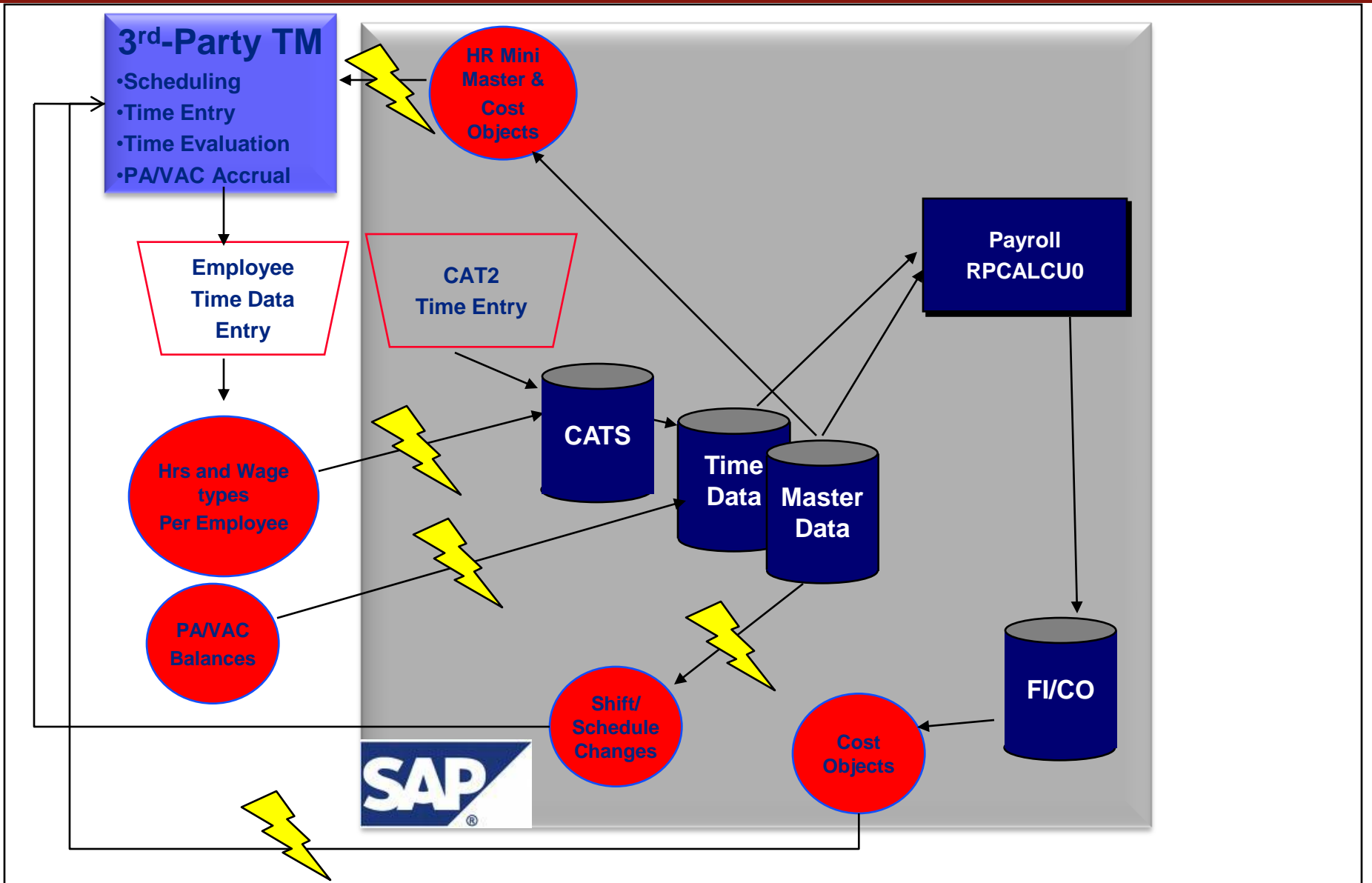
- **Third-party TM to SAP interface issues**
  - ◆ Paid and unpaid absence calculations and splits for salaried non-exempt employees
  - ◆ Retroactive time data changes
  - ◆ Absences on unscheduled days
  - ◆ Absences with hours greater than planned hours



# SAP Time Management Implementation Scenario 2 (cont.)

- **SAP to ADP payroll interface issue**
  - ◆ Limited retro calculation capability
- **ADP to SAP FI/CO interface issues**
  - ◆ No retro calculation capability for FI postings
  - ◆ No detail of internal technical wage types, period balances, QTD/YTD balances that can be tracked in SAP
- **Third-party TM to SAP interface issues**
  - ◆ Paid/unpaid absence calculations and splits for salaried non-exempt employees
  - ◆ Retroactive time data changes
  - ◆ Absences on unscheduled days
  - ◆ Absences with hours greater than planned hours

# SAP Time Management Implementation Scenario 3



# SAP Time Management Implementation Scenario 3 (cont.)

- **Absence/vacation accrual issues**
  - ◆ Limited retro calculation capabilities for accruals
  - ◆ No automatic triggering of retro-calculation based on SAP master data changes
- **Time evaluation issues**
  - ◆ Limited retro calculation capability for wage types and hours
  - ◆ No automatic triggering of retro-calculation based on SAP master data changes
  - ◆ RROP calculation and recalculation accuracy

# SAP Time Management Implementation Scenario 3 (cont.)

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- **Third-party TM to SAP interface issues**
  - ♦ **Paid and unpaid absence calculations and splits for salaried non-exempt employees**
  - ♦ **Retroactive time data changes**
  - ♦ **Absences on unscheduled days**
  - ♦ **Absences with hours greater than planned hours**

# Dos and Don'ts for SAP Time Management Implementations

- **Push-out as much functionality as possible into SAP to take advantage of the SAP “integration effects”**
- **Challenge the need for best-of-breed front-end functionality if you can provide a similar front-end with SAP**
- **Time evaluation and accrual can have a complex set of rules**
  - **Some vendors sell easy “plug & play” templates that usually require as much custom work as the set-up of time schemas and Personnel Calculation Rules (PCRs) in SAP**
- **SAP schemas and PCRs are very flexible and can reflect any calculation and accrual scenario – so build these rules in SAP rather than in a bolt-on**

# **Dos and Don'ts for SAP Time Management Implementations (cont.)**

- **If you have to build custom interfaces for time entry from third-party systems, design a robust error log that allows easy troubleshooting**
- **You do not have to have a “one-for-all” solution and can use different SAP time management processes for different types of employees and/or locations**
- **Define a proper regression test strategy to carefully test the time evaluation and accrual processes and results after any configuration change or enhancement to these processes**
  - **Electronic extract and comparison tools help reduce risk**

# Dos and Don'ts for SAP Time Management Implementations (cont.)

- **The main recipient of the time data is payroll: “All roads lead to payroll”**
- **Therefore the accuracy of time data has a direct impact on your payroll accuracy**
  - ◆ Federal and state rule compliance
  - ◆ Corporate rule compliance
  - ◆ Union contract compliance
- **Non-compliance can cause high cost**
  - ◆ Manual labor required to fix payroll calculation issues
  - ◆ Loss of manual labor for strategic HR/payroll work
  - ◆ Legal claims and lawsuits

# What We'll Cover ...

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- **Exploring time management business processes**
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- **Wrap-up**

# Resources

- **Personnel Time Management**

- [http://help.sap.com/saphelp\\_47x200/helpdata/en/8a/9868bc46c411d189470000e829fbbd/frameset.htm](http://help.sap.com/saphelp_47x200/helpdata/en/8a/9868bc46c411d189470000e829fbbd/frameset.htm)

- **SAP Note 897623: User exits and BAdIs in the PT area**

- **SAP PRESS Publications**

- Ewald Brochhausen, Juergen Kielisch, Juergen Schnerring, Jens Staeck, *mySAP HR: Technical Principles and Programming* (SAP PRESS, 2003).
- Christian Krämer, Sven Ringling, and Song Yang, *Mastering HR Management with SAP* (SAP PRESS, 2006).
- Martin Gillet, *Integrating CATS* (SAP PRESS, 2006).



## 7 Key Points to Take Home

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- **Consider all variables impacting a decision for your time management strategy**
- **Get to know all SAP Time Management capabilities and functions in detail**
- **Consider bridging potential SAP TM functionality gaps by building the missing functionality within SAP, using SAP development tools**
- **SAP Time Management is tightly integrated with SAP Payroll and SAP HR**
  - **Decoupling the three causes many downstream issues**
- **When choosing a bolt-on solution, ensure that the vendor offers SAP-certified interface(s)**

## 7 Key Points to Take Home (cont.)

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- **Don't buy redundant functionality that you own already**
- **SAP Time Management is complex, but very flexible**
  - ♦ **Consult an experienced SAP Time Management Solution Architect before finalizing your time management strategy**

# Your Turn!

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