









# **Human Capital Management (Personalwesen)**

Trends and Concepts of Business Application Architecture

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Enterprise Platform and Integration Concepts
Hasso-Plattner-Institut

### **Course Overview**

### Trends and Concepts of Business Application Architecture



- Digitalization of Business Processes
- Enterprise Resource Planning
  - Sales and Distribution
  - Finance, Accounting, and Controlling
  - □ Human Resources

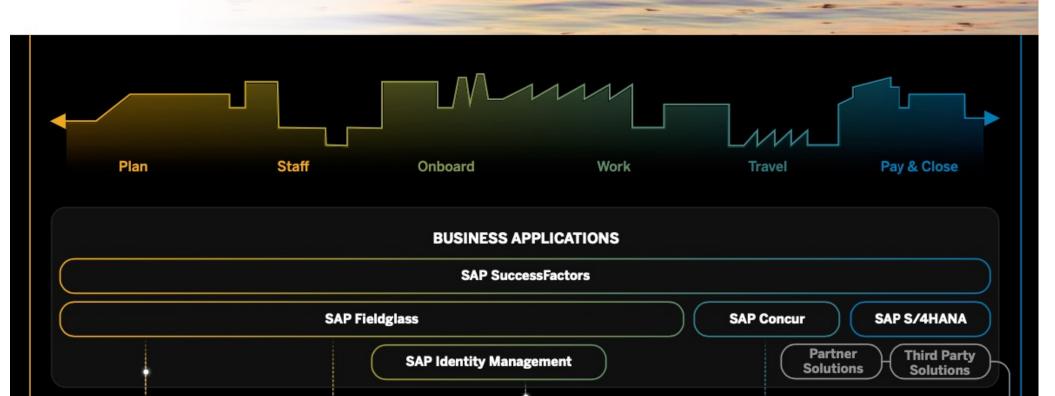
Which experiences do you have with HR?

- Material Management and Production Planning
- Columnar In-Memory Database Systems for Business Applications
- Customer Relationship Management
- Enterprise Cloud Platforms for Integration and Extensions
- Block Week: Architecture Deep Dives

### Recruit to Retire

Understand, manage and optimize all aspects of your workforce (employees and external workers) in line with business objectives and with clear financial impact.



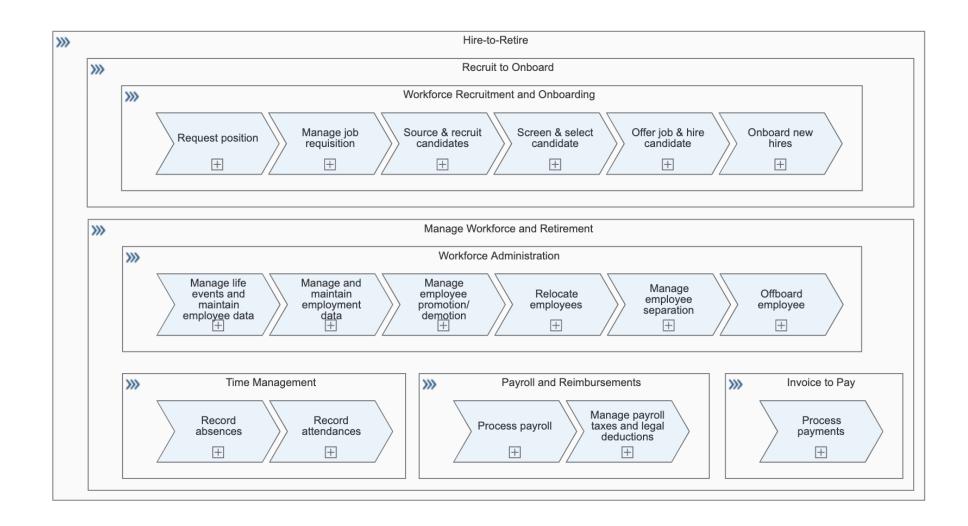




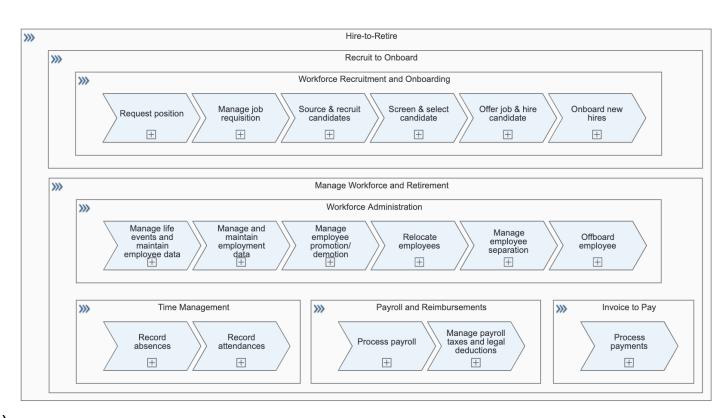




### Recruit to Retire E2E Process

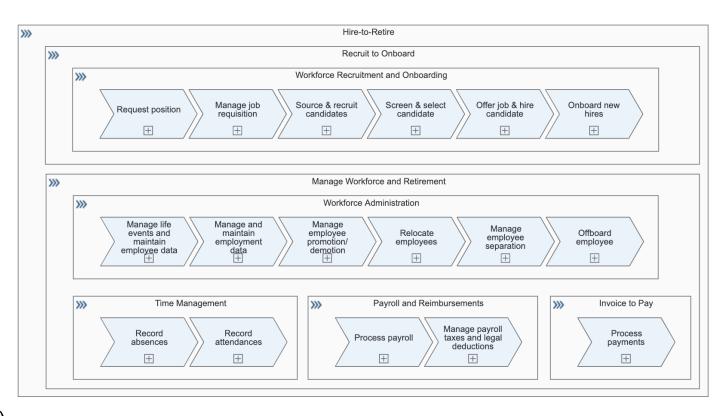


- HCM Organizational Structure
- HCM Master Data
- HCM Processes
  - Organizational Management
  - Recruitment
  - Personnel Administration
  - Personnel Development
  - Talent Management
  - Performance Management
  - Time Management
  - Payroll
  - Offboarding
  - Employee and Manager Self Services (ESS/MSS)
  - SAP SuccessFactors and SAP S/4HANA



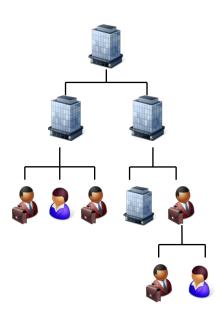
#### HCM Organizational Structure

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## **HCM Organizational Structure**

- Represents the structural and personnel organization of a company
- Consists of organizational units
- Illustrates the organizational structures and hierarchies
- Illustrates an employees responsibilities
- Is a precondition of various personnel processes' implementation
- Consists of three parts:
  - Enterprise Structure
  - Personnel Structure
  - Organizational Plan

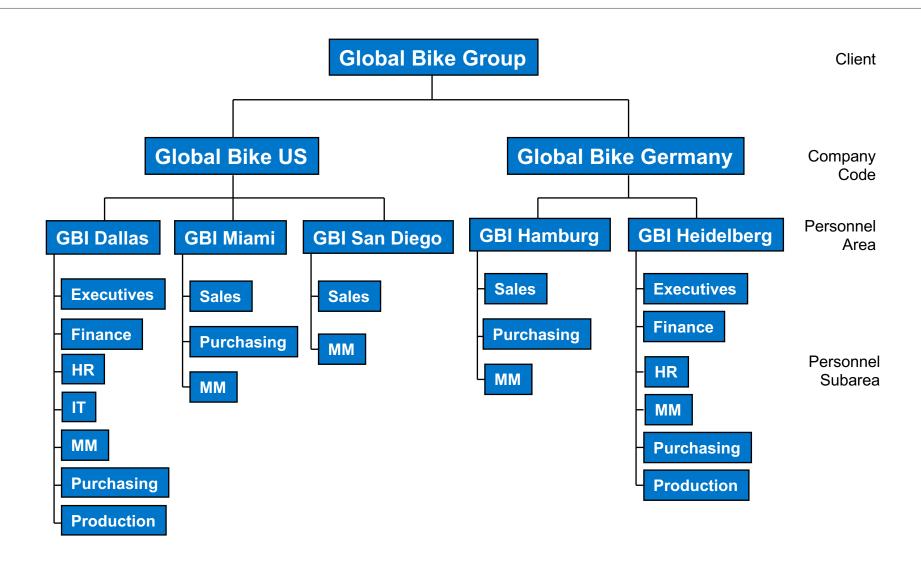


### **HCM Enterprise Structure**

#### Enterprise Structure

- Represents formal and financial structures in a company
- Each employee needs to be assigned to an enterprise structure.
- Basically, consists of company code, personnel area, and personnel subarea
- Client
- An independent environment in the system
- Company Code
- Smallest org unit for which you can maintain a legal set of books
- Personnel Area
- Represents a company area differentiated between personnel administrative, time management, and expensive organizational aspects
- Personnel Subarea
- Represents part of a personnel area

## Global Bike Enterprise Structure for HCM

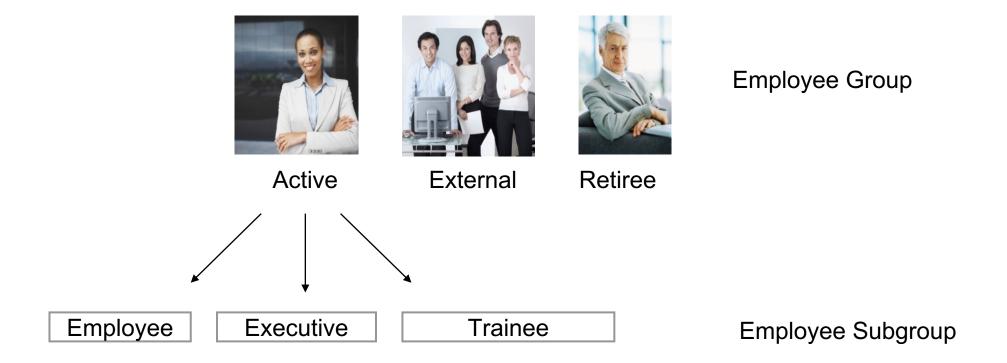


### **HCM Personnel Structure**

#### Personnel Structure

- Describes an employee's position within the company
- Is defined by employee group and employee subgroup
- Employee Group
- Organizational unit for which personnel related regulations can be specified
- Examples:
  - Active employees
  - External
  - Retirees
- Employee Subgroup
- Organizational unit within the employee group, for which personnel related regulations are specified
- Examples:
  - Industrial employees
  - Commercial clerks
  - Laboratory assistants

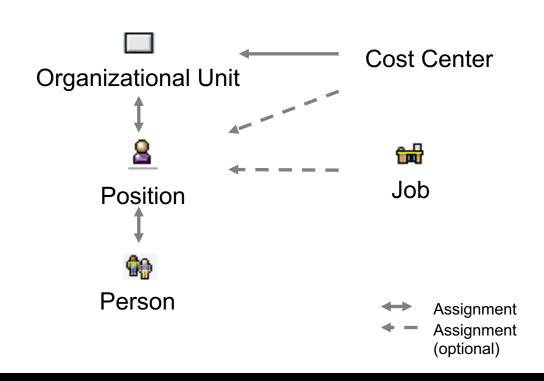
### **HCM Personnel Structure**



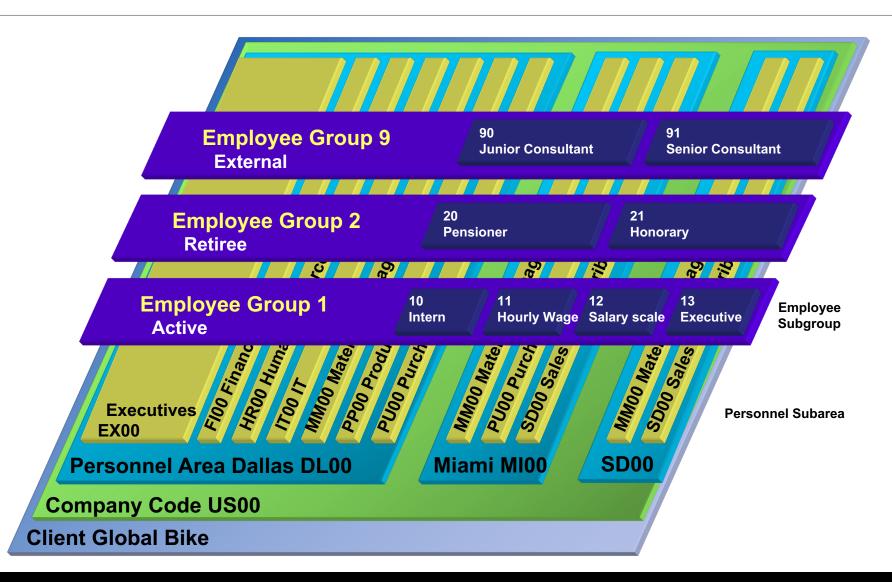
### **HCM Organizational Plan**

#### Organizational Plan

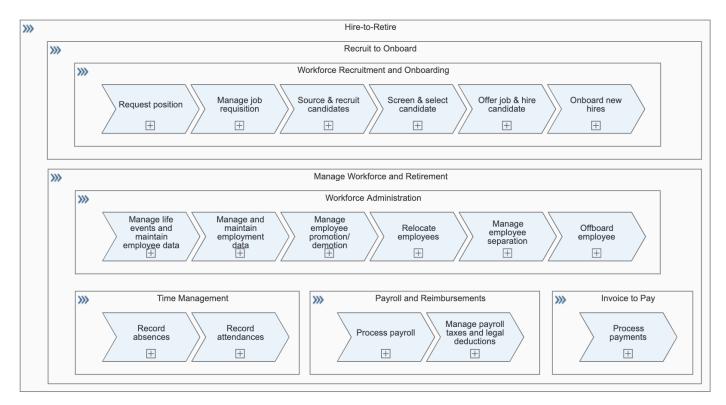
- Describes in which function an employee is acting
- Organizational Unit
- Can be grouped according to functional and regional aspects.
- Position (Headcount)
- Are assigned to organizational units and filled by employees
- Example: Position accounting clerk in the Accounting Department
- Person
- Are employees and fill positions
- Cost Center
  - originate from Controlling and can be linked with positions or organizational units
- Job
- General description of tasks which an employee should perform
- Are assigned to positions
- Example: Position Head of Department



# Global Bike Enterprise Structure in SAP ERP HCM (US)



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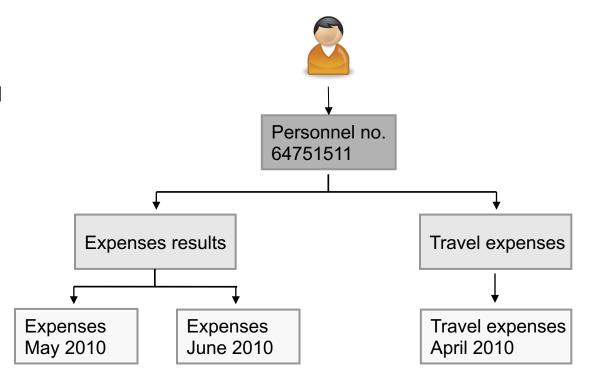


SAP SuccessFactors and SAP S/4HANA

### **HCM Master Data**

#### Personnel Number

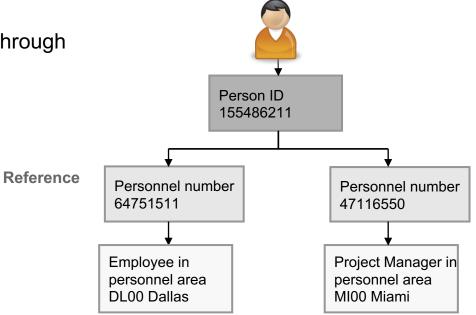
- Is used in SAP as a central identifier for an employee
- Can comprise up to eight alphanumeric characters
- Can be assigned either by the system or manually
- All employee data available in the system is identified on the basis of the personnel number



### **HCM Master Data**

#### Reference Personnel Number and Person ID

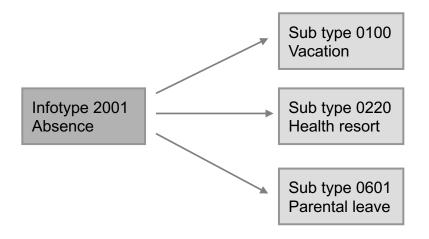
- Helps to map different contractual relationships
- Creates an existing employee again in the system with a new personnel number
- The old personnel number serves as a reference personnel number
- Certain data can be copied and assigned to the new number
- In the case of concurrent employment, the employee is identified through a person ID



### **HCM Master Data**

#### Infotypes

- HR master data is structured in infotypes
- They are collections of data fields that are logically linked
- They process employee data in an effective structure in accordance with business requirements
- Each infotype has an explicit four-digit ID, e.g., infotype Addresses 0006
- An infotype can have sub types, which represent a sub variant of the infotype





# **Time Constraints of Infotypes**



Exact always a valid period e.g., permanent residence



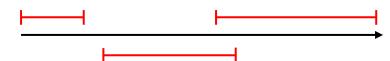
#### Time constraint 2

Max. one valid period, no overlaps e.g., husband

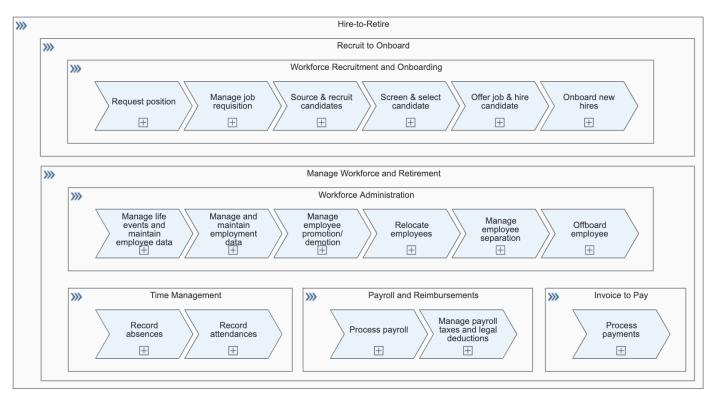


#### **Time constraint 3**

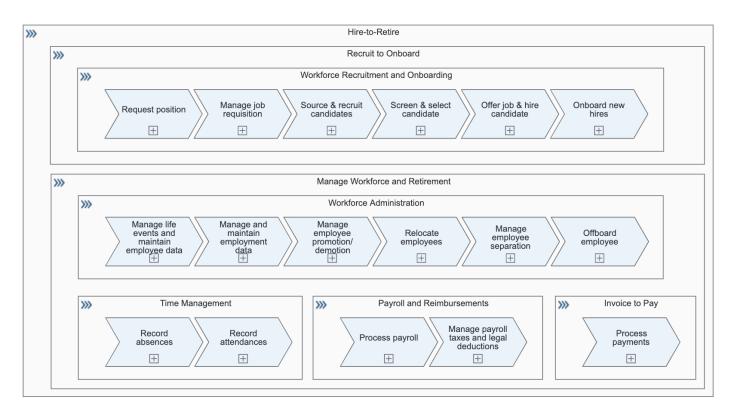
At any point in time, any number of valid periods e.g., secondary residence



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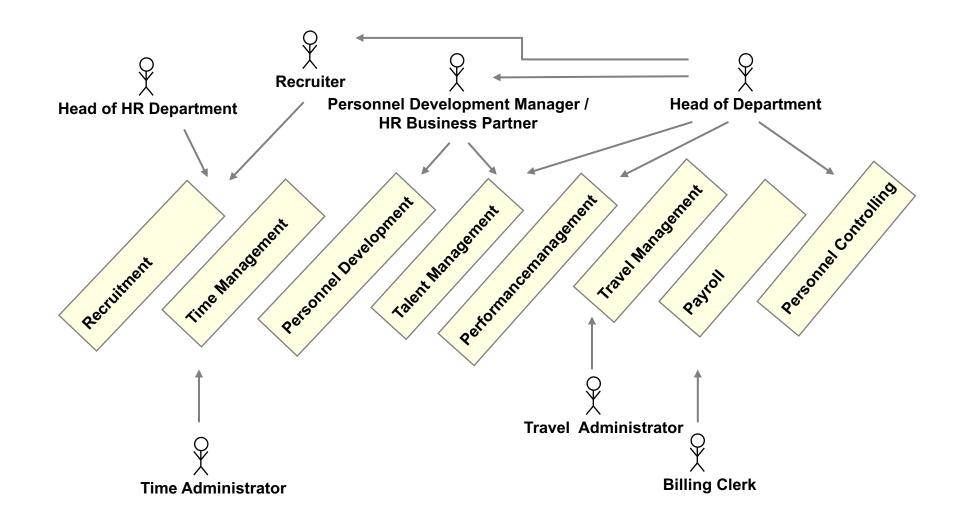


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SAP SuccessFactors and SAP S/4HANA

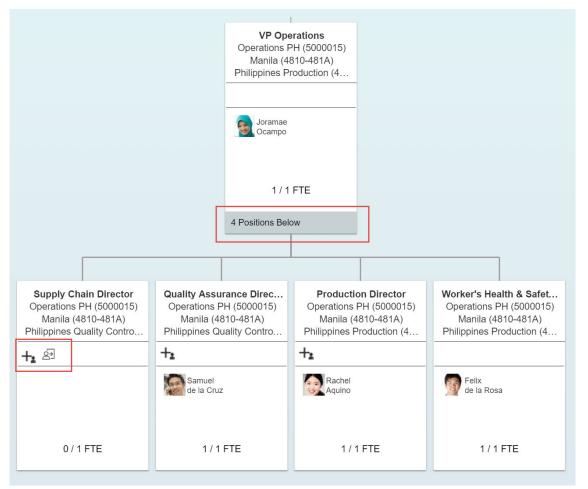
### Roles in Human Resources



# **HCM Processes - Organizational Management**

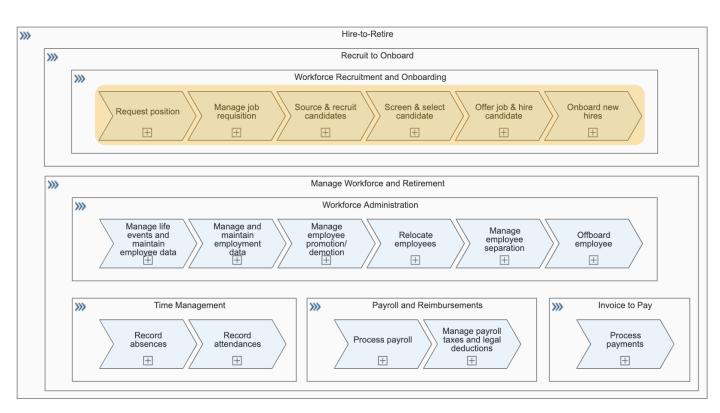
- Model the organizational structure of your enterprise
- Create, change and delimit organizational units
- Create, change and delimit jobs and positions
- Analyze an organizational unit to define workforce requirements and personnel cost planning
- Create further organizational units for planning scenarios or simulations

\* FTE = Full Time Equivalent



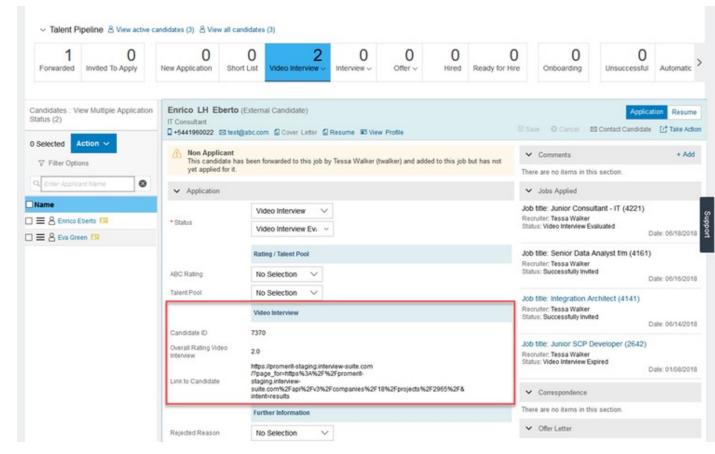
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### **HCM Processes - Recruitment**

- Recruitment, choice and selecting of applicants
- External recruitment
- Internal recruitment
- Developing a database for applicants
- Administration of vacant positions
- Applicant data is stored separately
- Use of infotypes
- Unique applicant number in the system

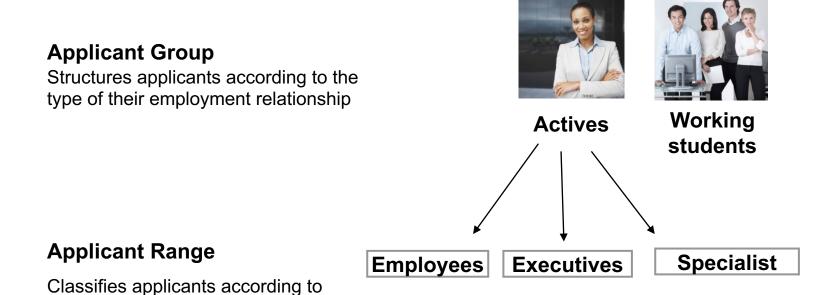


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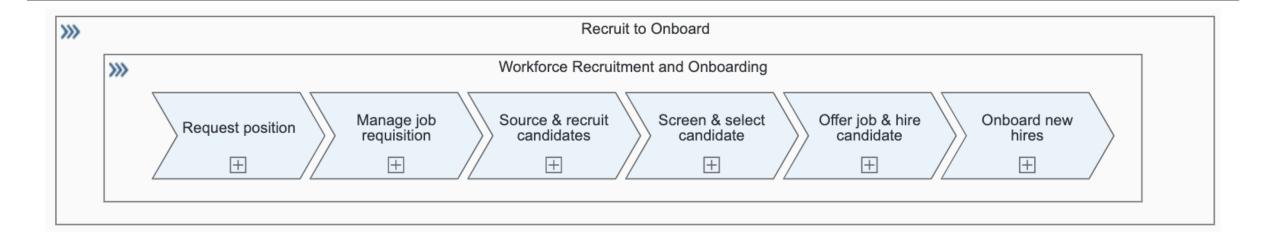
# **Recruitment - Organizational Assignment**

hierarchical or functional criteria

Applicants are assigned to the elements of the **applicant structure**:



## **Recruiting Process**

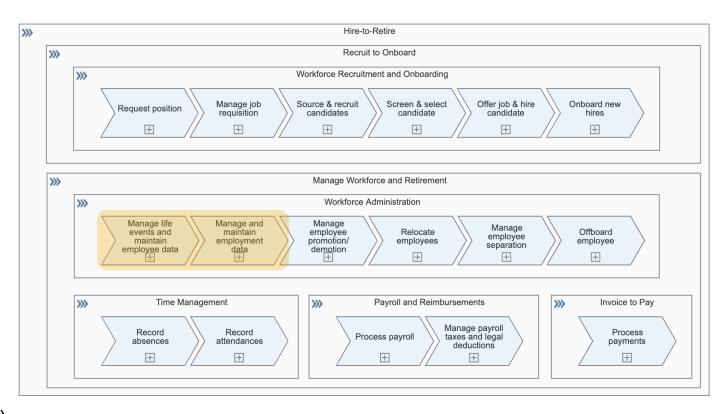


Global selection process (does a candidate fit the company) vs. selection process for each vacancy

The overall status indicates the status of the applicant within the selection process:

- In processing
- To hire
- Deferred
- Rejected
- Contract offered
- Offer rejected
- Invite

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### **HCM Processes – Personell Administration**

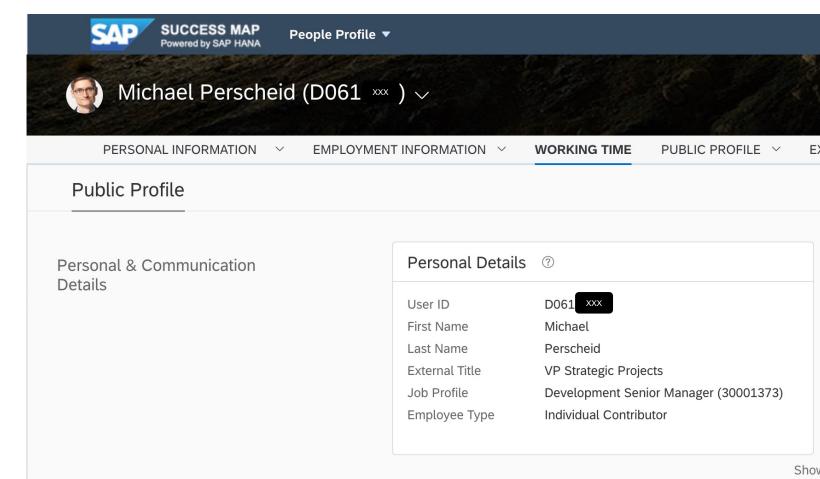
- Creation and management of personnel master data
- Plausibility checks
  - Timely error detection
  - Prevent transmission of incorrect data
- Automatic history
  - Is created when master data is changed
  - Can be used for reports and data review
- Personnel administration sets the basis for follow-up processes in human resources and reporting

IC = Individual Contributor

MMT = Manager Managing Team

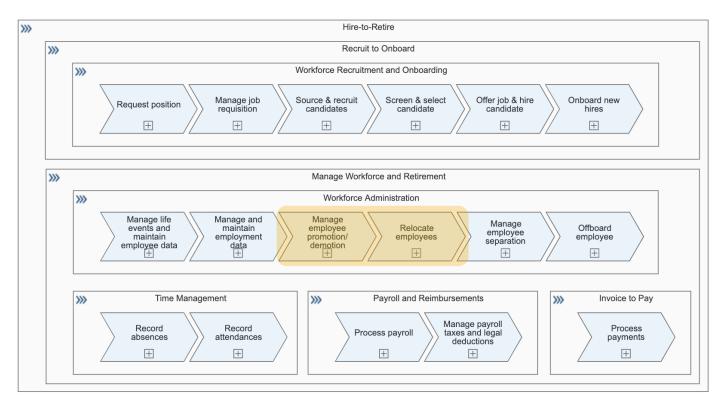
MMM = Manager Managing Managers

\*E = Executive (Leitender Angestellter)



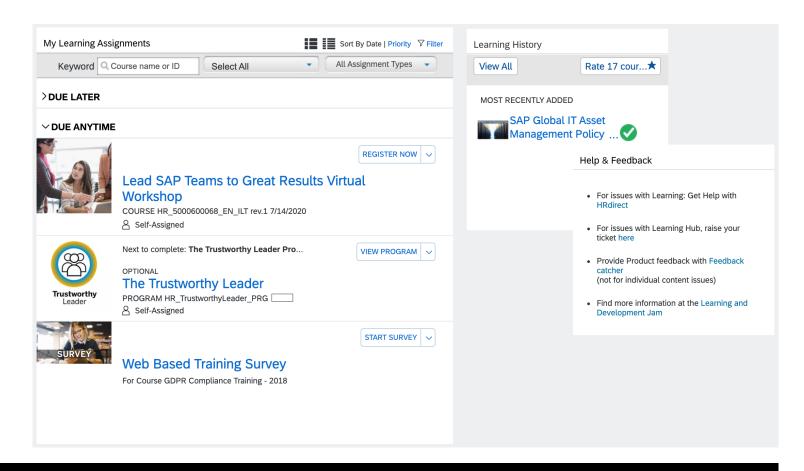
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SAP SuccessFactors and SAP S/4HANA



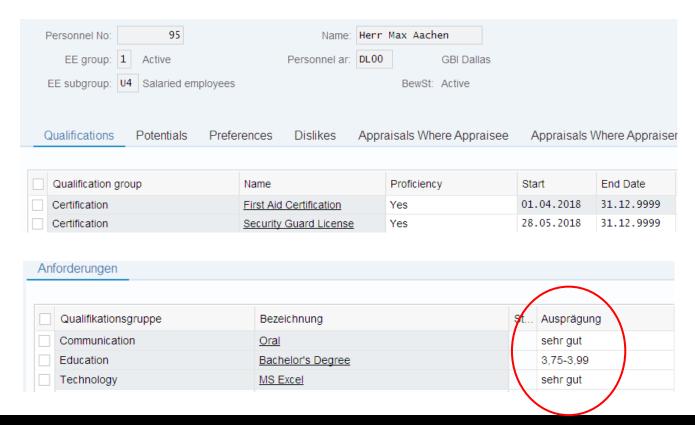
# **HCM Processes - Personnel Development**

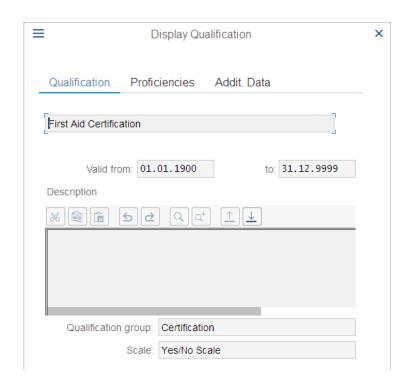
- Advance qualifications of employees
- Comparison: requirements of positions with qualifications of employees
  - Profile matchup
  - Identify further training need
- Introduce development actions
  - → Talent Management
- Book training course
  - → Training and Event Management
- Feedback and arrange appraisals
  - → Performance Management



# Personnel Development – Qualifications and Requirements

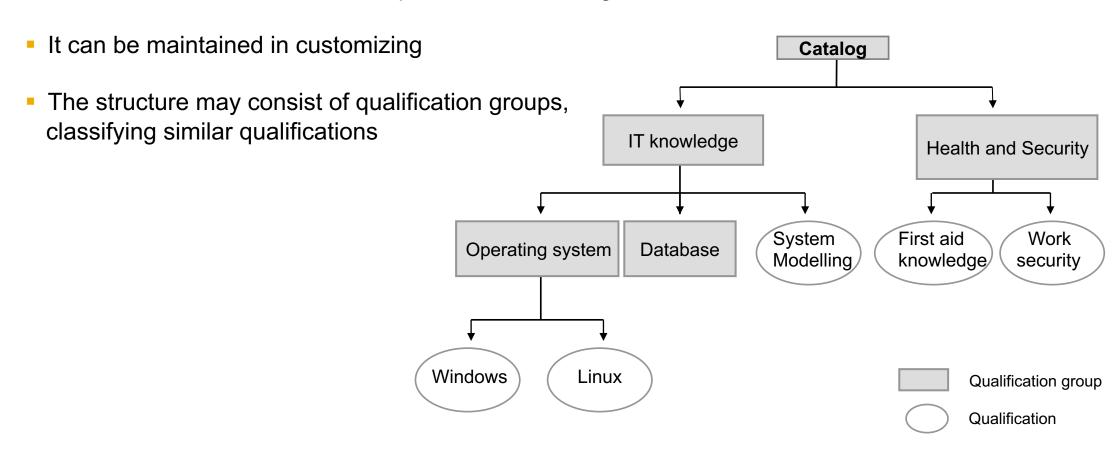
- Qualifications can be connected to persons and positions (then requirements)
- Need to be attached with attributes (e.g., grades)
- Can have a half-life period or a validity period





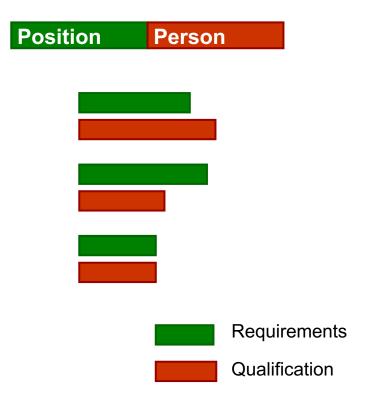
# Personnel Development - Qualifications Catalog

Qualifications are defined in the qualifications catalog



## **Personnel Development - Profile Matchup**

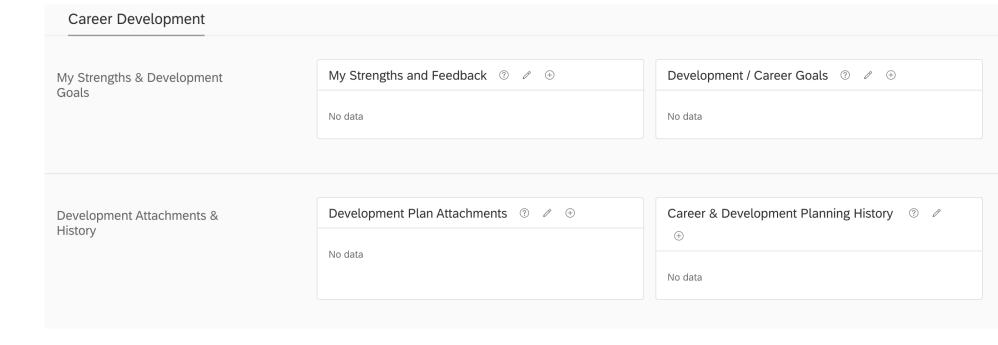
- With the help of the profile matchup, persons, positions and jobs can be compared to each other
- The difference between the characteristic of a requirement and the characteristic of a qualification is determined
- 3 results are possible:
  - Both characteristics are identical
  - The requirements are higher than the qualification (= underqualification)
  - The requirements are lower than the qualification (= overqualification)
- Events for specific qualifications can be assigned directly to characteristics.
   After success, the profile of the person changes.



# **HCM Processes – Talent Management**

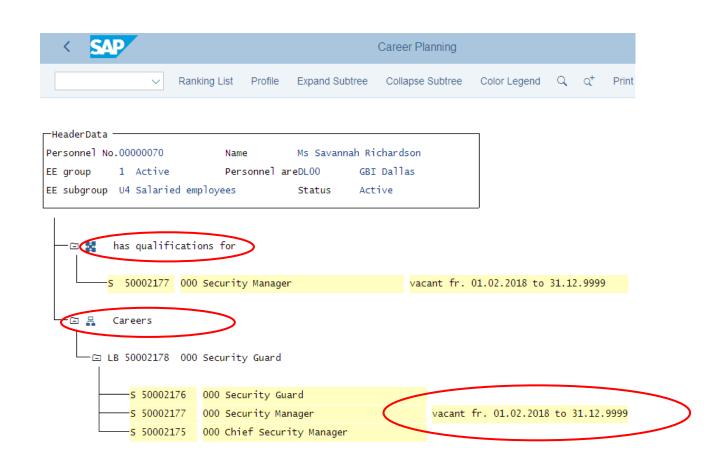
**Talent management** deals with career planning and the further training of employees and is integrated into personnel development

- Arrange CareerPlanning
- AccomplishSuccession Planning
- Generate generalDevelopment Plans
- Generate individualDevelopment Plans



# **Talent Management – Career Planning**

- Identify career goals
- Plan career
- Define and develop special stations of a career
  - Job
  - Position
  - Course of instruction
- Career planning: comparing qualifications with requirements of one station of a career,
   e.g., job, position → Personnel decisions,
   courses of instruction, etc.
- Derivate individual plans



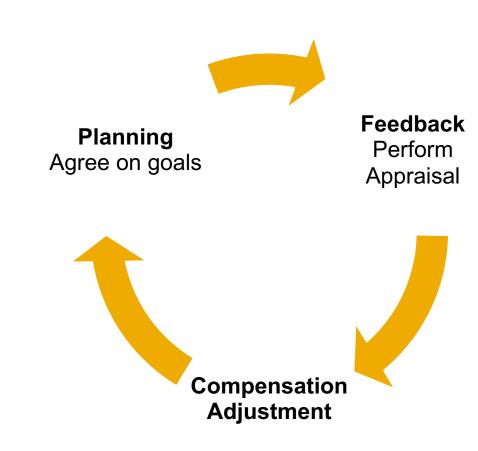
## **Talent Management - Succession Planning**

- Assure continuity in personnel allocation for key positions
- Proactive search for candidates to reallocate key positions
- Well-directed preparation on adoption of following job

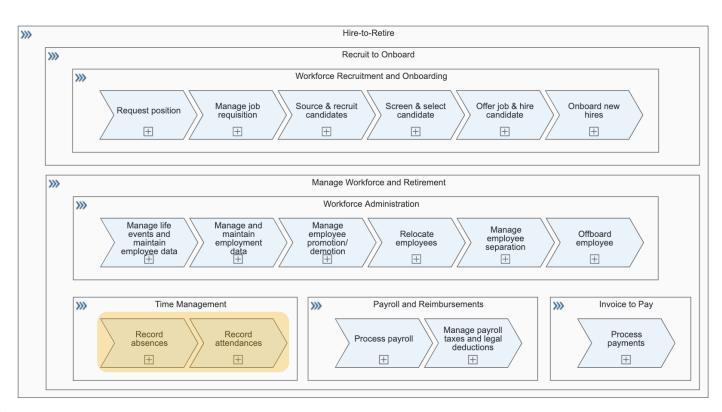


# **HCM Processes - Performance Management**

- Define objective setting between enterprise and employees
- Evaluate benefit of employees → Feedback
- → Have goals been achieved?
- Supervise operative goals of employees
- Adjust bonuses
- Goal: higher motivation and better benefits
- The assessment form consists of different elements
  - Forms e.g., 360° feedback, additional appraiser, documented 1:1s, (skip-level meetings)
  - Criteria groups
  - Criteria
  - Qualifications

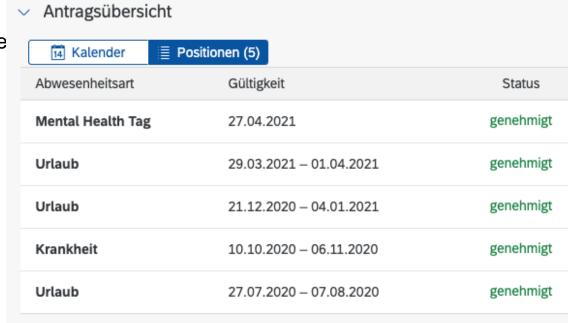


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### **HCM Processes – Time Management**

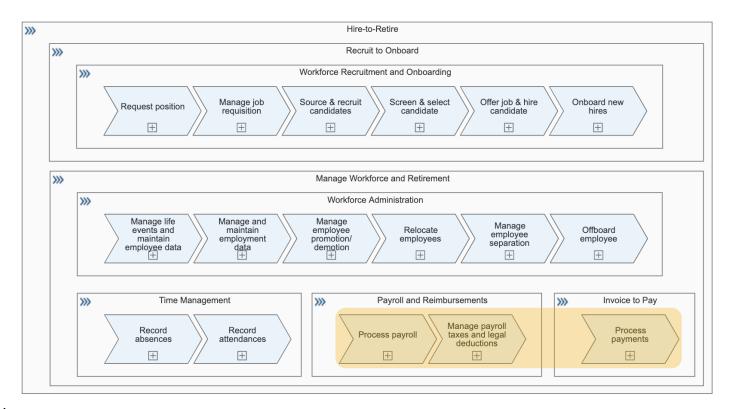
- Book days off
  - Supervisor and HR approval required
  - Vacation (20 days required by law, additional days optional, expiry of vacation days, unpaid vacation, special vacation)
  - Maternity leave
  - Lead times and agreements may be necessary
  - Illness (for information only, proof from three days)
  - Production planning, maintaining team calendars and out-of-office
- Record attendance
  - Temporary workers (hourly wage earners) vs. trust-based working hours
  - Insurance coverage and obligation to provide proof
  - Home office regulations
- Part-time individualizes the process further



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#### HCM Processes

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SAP SuccessFactors and SAP S/4HANA

# **HCM Processes - Payroll**

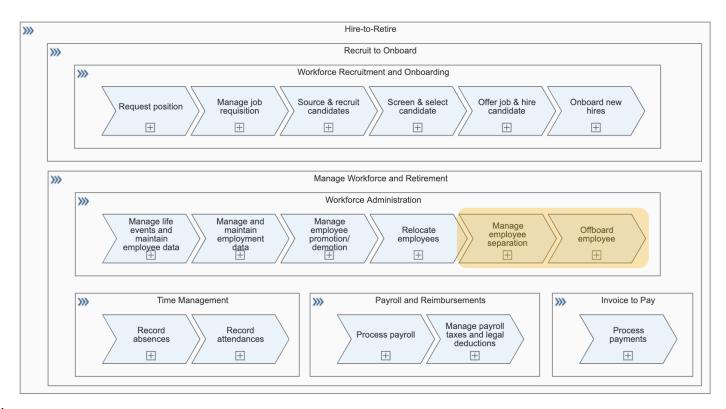
- Interaction of personnel data and accounting
- Payroll accounting is very individual (per employee (e.g. part-time, children, illness), region, changing laws, employer and employee shares)
- Basic pay (Basisbezüge)
- Monthly salary, one-off and annual payments
- Non-cash benefits (company car, lunch, share programs,...)
- Statutory deductions (Gesetzliche Abzüge)
- Income tax, solidarity surcharge and social security
- Deduction of monetary benefits (only necessary for taxation)
- Observe individual allowances and maximum limits
- Payments (Zahlungen)
- Private account and other accounts such as building societies
- Operating accounts for capital-forming shares
- Subsequent settlements from previous months
- Basis for the annual transmission to the tax office

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Sonstige Be- und Abzüge:		
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kumulierte Werte MAV AZK Entnahme Vormo.		

\*Kennzeichen: (E)inmalzahlung, (L)ohnsteuerpflichtig, (S)ozialversicherungspflichtig, (G)esamtbrutto, Bescheinigung nach §108 Absatz 3 Satz 1 GewO

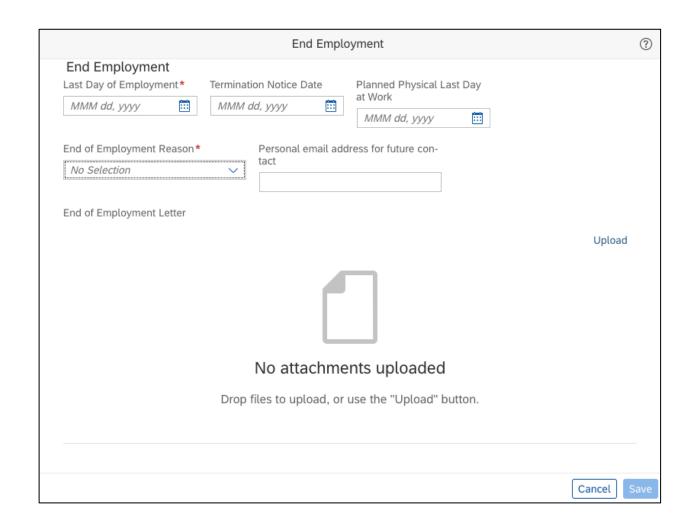
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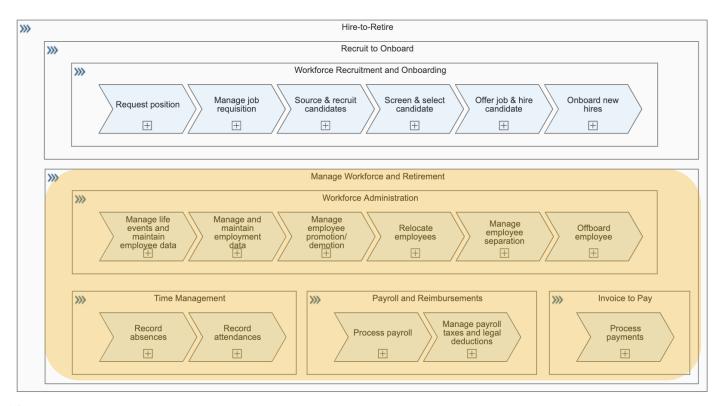


### **HCM Processes - Offboarding**

- Both employer and employee can terminate the contractual relationship
- Reasons: voluntary, retirement, restructuring, operational,...
- But even fixed-term employment or temporary work ends at some point
- Offboarding of employee
- Creation of job references
- "Routing slips" for returns and batch jobs to block access
- Change of employee group to "Former"
- The data will only be deleted after a retention period
- Replacement: Create a position/headcount
- Despite deadlines, an immediate lockout may be necessary



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## **Employee Self-Service (ESS)**

- Web-based user interface for employees
- Enables the time and location independent maintenance of personal data
- Provides access to several administrative functions, which usually are taking care of by other departments
- Employees can do following activities by ESS:
  - Submitting travel expenses
  - Browsing the employee directory
  - Displaying the calendar
  - Updating of personal data
  - Applying for employer benefits
  - Documenting of working hours
  - Updating of bank data
  - Register for training courses

#### Direkter Zugang zu Self Services



Mehr Informationen zu den aufgeführten Themen finden Sie unter Me@SAP. Brauchen Sie weitere Hilfe? Kontaktieren Sie HRdirect.

Quicklink: /go/ess

#### Meine Arbeitszeit (Generelles)

- Urlaub beantragen/stornieren
- Erkrankung melden
- Erkrankung des Kindes melden
- Einträge in Staffing-Listen, Zeiterfassung und Reisen
- Höchstarbeitszeit erfassen
- Zeiterfassung für Stundenlöhner
- Um externe und interne Projekte zu erfassen, logge dich ins ISP ein und rufe die Transaktion CATSXT / CAT2 direkt auf. Bei technischen Problemen, öffne bitte ein ITdirect ticket unter der Komponente IMAS ACT.

#### Meine Arbeitszeit (Spezielles)

- Elternzeit beantragen
- Übertragung von Elternzeit beantragen
- Sonderurlaub f
  ür Heirat/Geburt eines Kindes
- Pflegeauszeit beantragen
- Vergütung für Rufbereitschaft beantragen
   Bitte nutze den Internet Explorer für dieses Tool
- Wochenenddienst erfassen
- · Freizeitausgleich beantragen

#### Meine Arbeitsereignisse

- Neuen Job suchen
- Umzugskostenerstattung beantragen (mit eigenem Hausstand)
- Umzugskostenerstattung beantragen (ohne eigenen Hausstand)
- Nebentätigkeit melden
- Inventur von SAP Equipment
- Inventur meiner Software

- Erfassung der Fahrten zwischen Wohnung und Arbeitsstätte nach der 0,002% Regel
- MAV / AZK Umwandlung von Zusatzvergütungen
- MAV / AZK Umwandlung von laufenden Bezügen
- UAV Jährliche Wahl
- Meine Gehaltsabrechnung ansehen
- Löschen des Cache

Mein Geld

- EquatePlus account (SMP/SOP)
- ${f f Z}$   ${f i}$  REPORT A BUG | FEEDBACK | SUBSCRIBE | STATISTICS

#### Meine Daten

- Success Map
- Meinen Standort im SAP People@SAP aktualisieren (only in English)
- Meine Anschrift ändern
- Meinen Notfallkontakt aktualisieren
- Meine Bankverbindung aktualisieren
- Bescheinigung anfordern
- Meine Kenntnisse und Qualifikationen pflegen

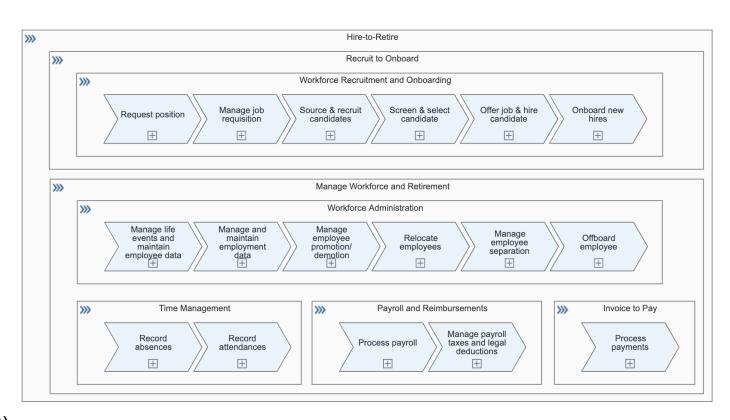
#### Meine Einkäufe

- Visitenkarten beantragen
- Einkaufen (Ariba Guided Buying)

## Manager Self-Service (MSS)

- Central web-based access point for managers
- MSS uses the backend systems of the human resources and finance departments and supports the management with enterprise-wide relevant information
- The self-service tools automate paper-based processes, e.g., inquiries regarding master data changes or performance assessments
- Managers can do following activities by MSS:
  - Gaining information
  - Hiring employees
  - Carrying out compensation planning
  - Controlling costs
  - Manage the budget and human resource planning
  - Change personal data
- The "four-eyes principle" often applies (further approval from, e.g., superiors, HR, board of directors)

- HCM Organizational Structure
- HCM Master Data
- HCM Processes
  - Organizational Management
  - Recruitment
  - Personnel Administration
  - Personnel Development
  - Talent Management
  - Performance Management
  - Time Management
  - Payroll
  - Offboarding
  - Employee and Manager Self Services (ESS/MSS)



#### SAP SuccessFactors and SAP S/4HANA

#### SAP SuccessFactors and SAP S/4HANA

- SAP SuccessFactors is the next HCM generation:
  - Acquired 2011
  - Suite in the public cloud
- Can be integrated with SAP S/4HANA
- SAP S/4HANA customers can continue to use SAP ERP HCM in the on-premise version

**Cost Center Data** 



#### SAP SuccessFactors and SAP S/4HANA

SAP Success Factors forms the new HR management in S/4HANA and is intended to replace the ERP HCM as
a cloud solution in the future. The functions are structured in combinable modules:

#### **HR Core Functions**

- Organizational management
- People and transactions
- Shared services for human resources
- Management of external employees
- Global Employer Benefits

#### **Learning and Development**

- Learning
- Personnel development and successor planning

# and Attandence

- Recruiting
- Onboarding

**Onboarding** 

Electronic signature

Recruiting and

# Time and Attendance Management

- Timesheets
- Working time measurement
- Workforce planning

# Performance and Compensation

- Payroll
- Performance and target agreements
- Compensation

# Personnel planning and analysis

- Personnel analyses
- Workforce planning
- Digital decision-maker portal

## **Advantages of SAP SuccessFactors**

- The cloud solution offers high security standards
  - Similar to military or banks
- Data can be called up at any time using a browser
- Upgrades every 3 months
- Simple administration
  - Training videos & numerous wizards
- Improved User Experience

- Customer-friendly because pay-per-use
- Scalable according to user, system performance and customer-specific processes
- Integration into all existing SAP applications
- Always up-to-date compliance requirements
- Proven process design instead of complicated processes
- Rapid implementation

### **Disadvantages of SAP SuccessFactors**

#### ... of cloud-based services in the SAP environment

- External management of personnel data
- Scepticism of HR departments due to possible data theft (despite high security measures)
- In particular, personal data (of talent management) is highly sensitive for companies (but not critical)

#### ... of SaaS applications in the SAP environment

- Often less customization (in-house development)
- Little or no customizing options
- Existing customer-owned on-premise solutions can no longer be used in SaaS applications
- (Lower data transfer speed than on-premise solutions)

### **Summary**

- The organizational structure in human resources consists of the organizational structure, personnel structure and enterprise structure
- Employee master data consists of a unique personnel number and infotypes (collections of data fields) that describe the individual employee
- In addition to the administration of employee data, the processes in human resources include the hiring of new employees, development of the same, time management, payroll and leaving the company
- Self services support employees and managers with regular inquiries and thus automate parts of human resources
- SAP SuccessFactors is a separate cloud solution for human resources, which is integrated with the ERP