

Chapter 4

Case Study: HR-Management at DaimlerChrysler

Overview

Module 1: HR-Data Warehouse

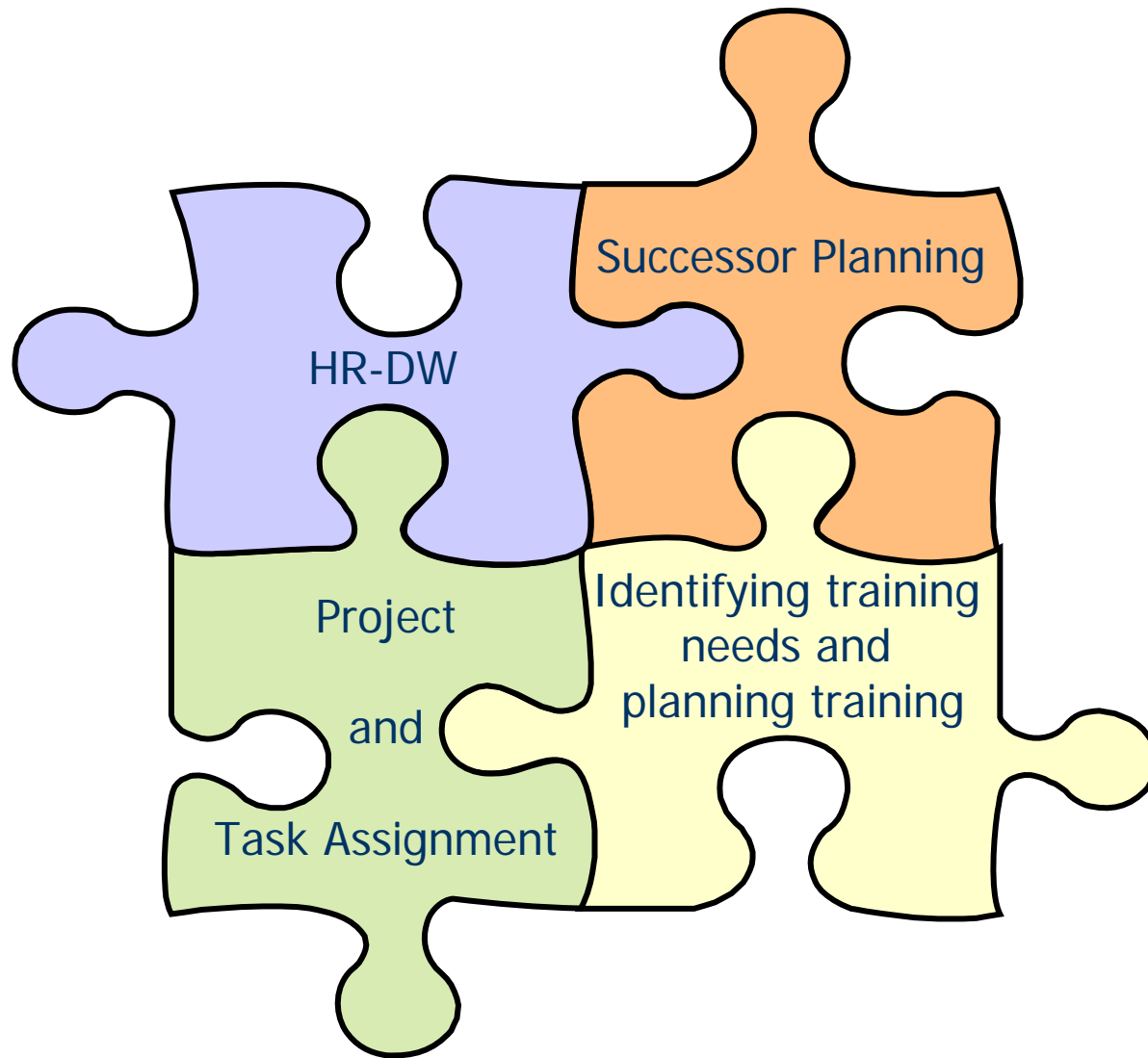
Module 2: Successor Planning

Module 3: Identifying training needs and planning training

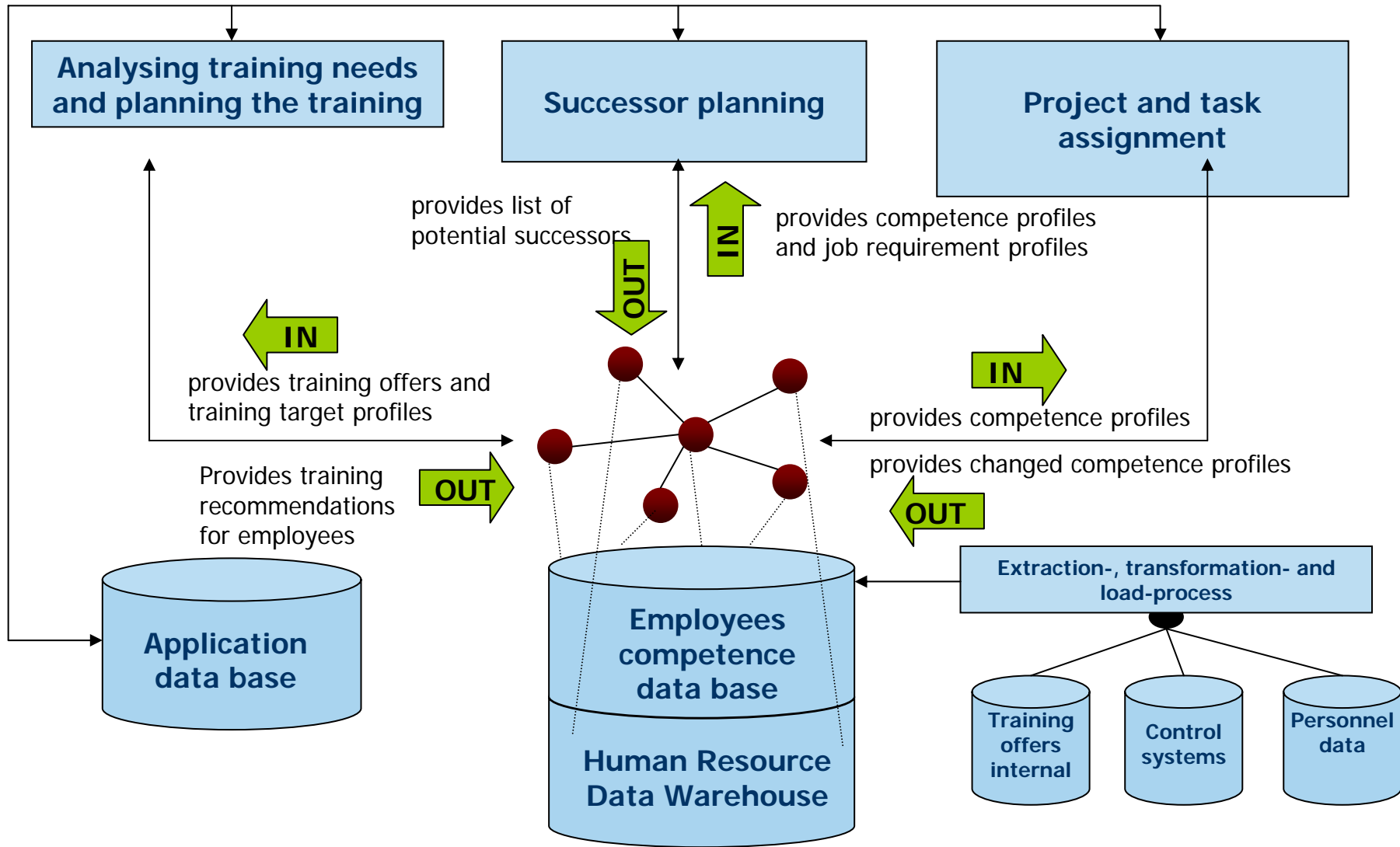
Module 4: Ontology-based Project and Task Assignment

Matching Competence and Requirement Profiles

Segmentation in four Modules



Architecture of the Modules in Context



Module 1: HR-Data Warehouse

Module requirements from the data perspective

- Basic information about employees and organisation
 - Personnel data
 - Organizational structure
- Further information about employees
 - Competence and qualification profile
- Job descriptions with their profiles of competence and qualification requirements
- Offer to train
 - Prerequisite and transferred competence

Module 1: HR-Data Warehouse

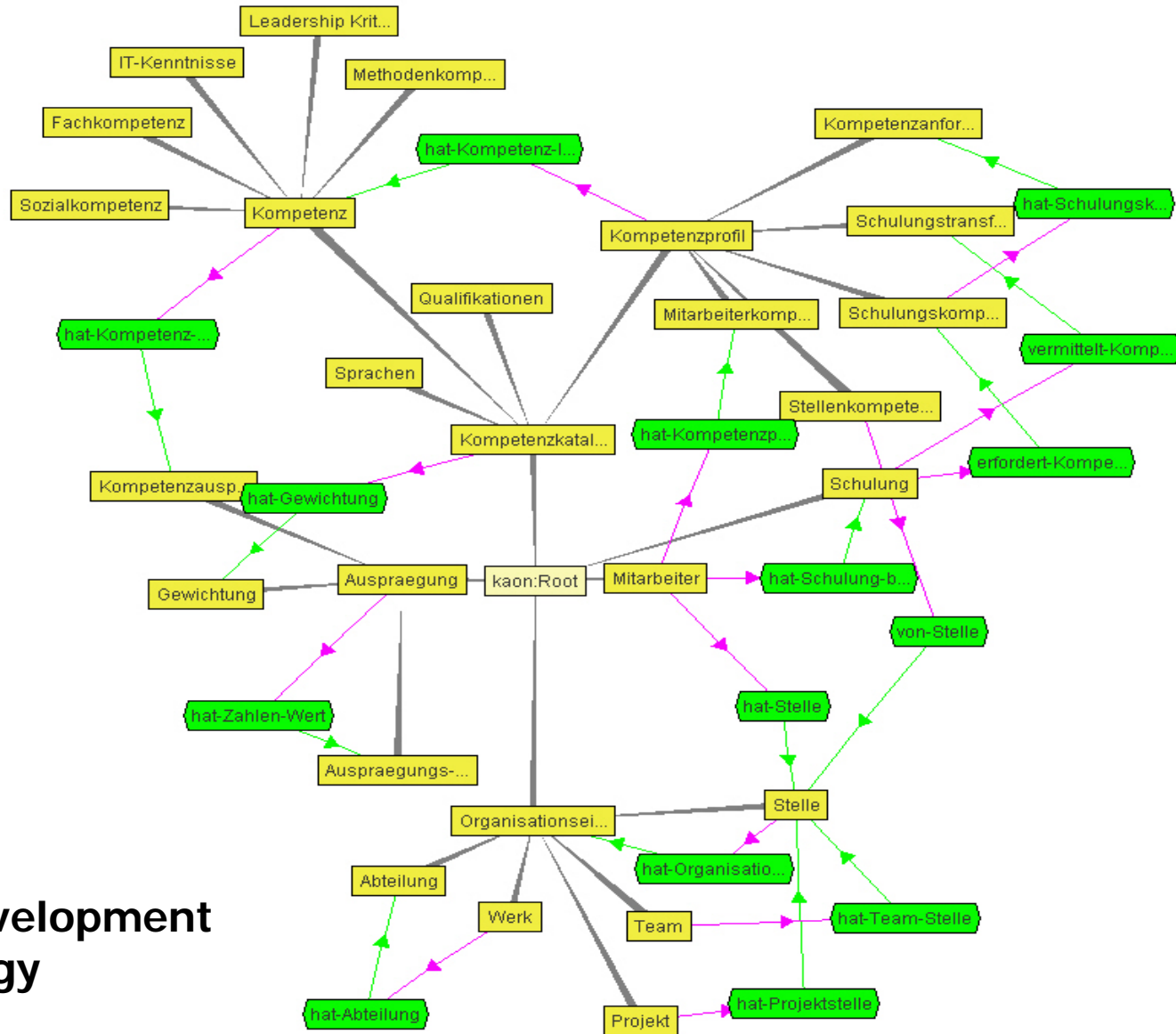
Operative Systems of the Human Resource Management

- Required data already exists in companies, spread over different systems
- Primary systems
 - ePeople (central HRM-system)
 - HR-DB (local part circumferences of Wörth fed from ePeople incl. local time data of Wörth)
 - LEAD (control system for identifying potential)
 - QualiOnline (training administration system)
- Complementary systems
 - External training institutions such as Haus Lämmerbuckel or the DaimlerChrysler University (DCU)
- Distribution over heterogeneous systems implies redundant and sometimes partially inconsistent information
- Accessing multiple systems is cumbersome



Integration of data in a central database

Module 1: HR-Data Warehouse

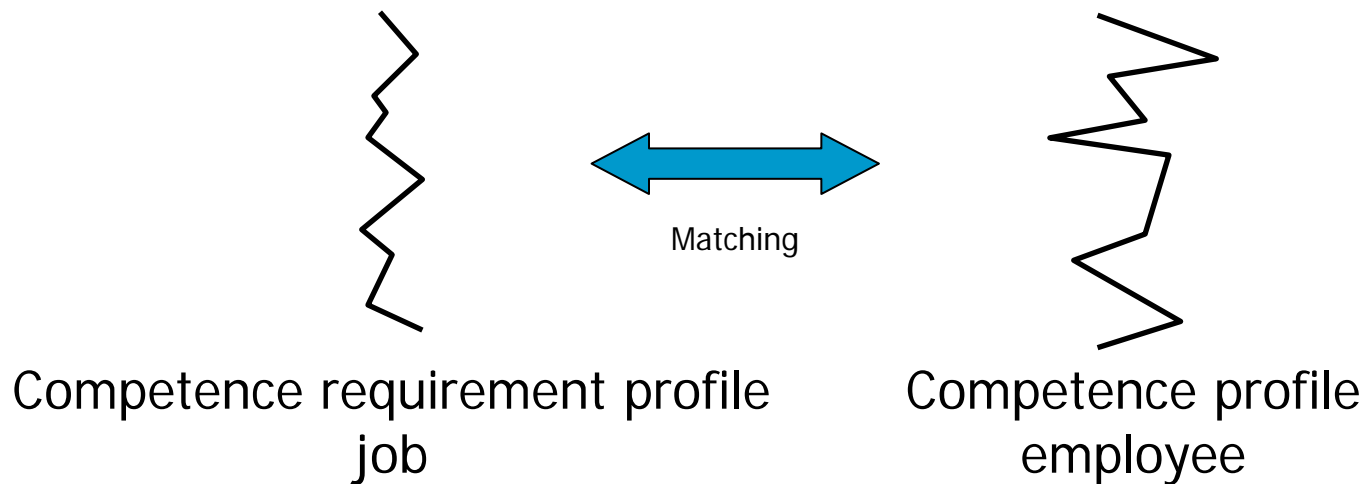


**HR-Development
Ontology**

Module 2: Successor Planning with the "Candidate Tree"

Successor Planning

- Optimal assignment of key positions to personnel
- Promoting employee potential
- Qualification-based successor planning



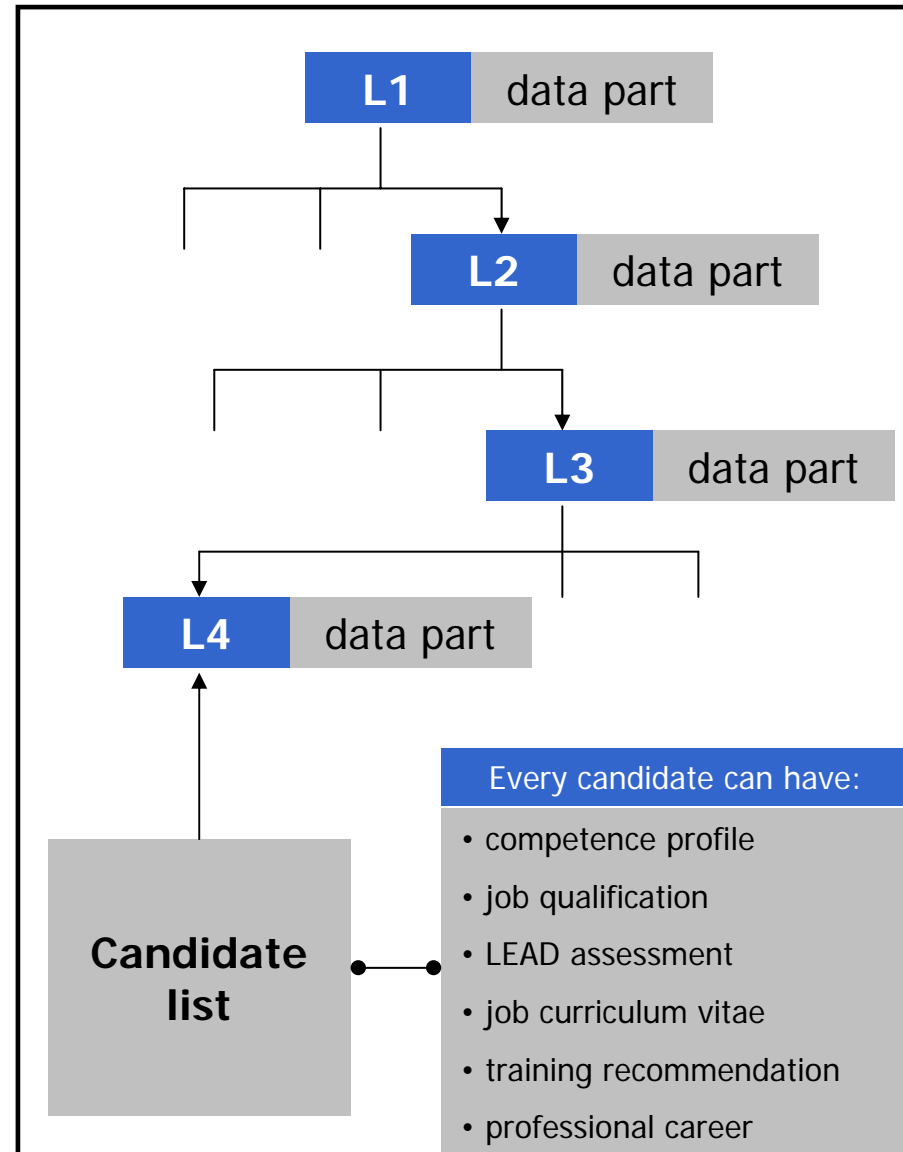
Initial situation

- No IT-System to support successor planning

Module 2: Successor Planning with the "Candidate Tree"

The Candidate Tree

- To support successor planning
- Every node has a data part
 - basis data of the job
 - job risk
 - competence requirement profile
- administrating candidate lists for every node
- Manual and semi-automated maintenance of candidate lists is possible
- Identifying qualified candidates through a Matching-Component



Module 3: Identifying training needs and planning the training

Initial situation

- No IT-System to support identification of training needs and planning the training

Identifying training needs (BBE)

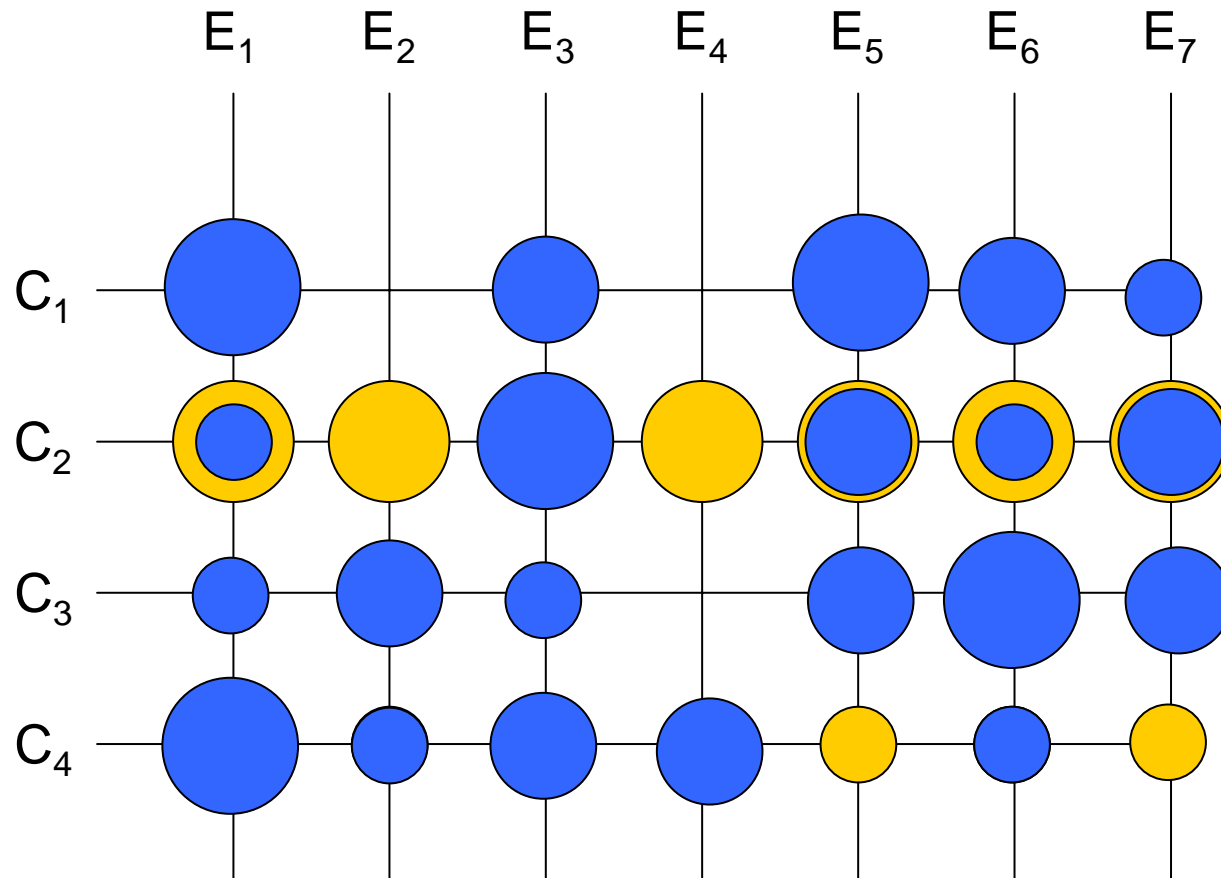
- Primarily to identify the cause and extent of the difference between training objectives and current state of training (competence profile based on a competence catalogue)

Strategic BBE

- Derive the training goals by higher-level strategic enterprise aims
- Strategic orientation of the training department

Module 3: Identifying training needs and planning the training

Visualization by a Knowledge Map



■ Strategically important
■ “Is-Competence”

Module 3: Ontology-based Project and Task Assignment

Selection process: project team

Project work:

- interdisciplinary cooperation of employees is very necessary
- dynamic allocation of employees for a limited time period
- reduced significance of classic organisational structures

Selection process: project team

- 1) identify the project requirements
- 2) specify the contextual constraints
(number of project jobs, schedule, etc.)
- 3) pre-select potential project team employees
- 4) detailed view and selection of candidates
- 5) get in touch with candidates, organisational context, initial talks
- 6) allocation of candidate to job

Module 3: Ontology-based Project and Task Assignment

Aims:

- Support transparency about employee competences
 - Design and specification of an ontology, in which the competences can be modelled in highly structured ways
- Analyse and include processes for building the project team
- Software support for the selection process
 - Analyse requirements and define use cases for the tool
 - Prototypical implementation of a portal solution

Module 3: Ontology-based Project and Task Assignment

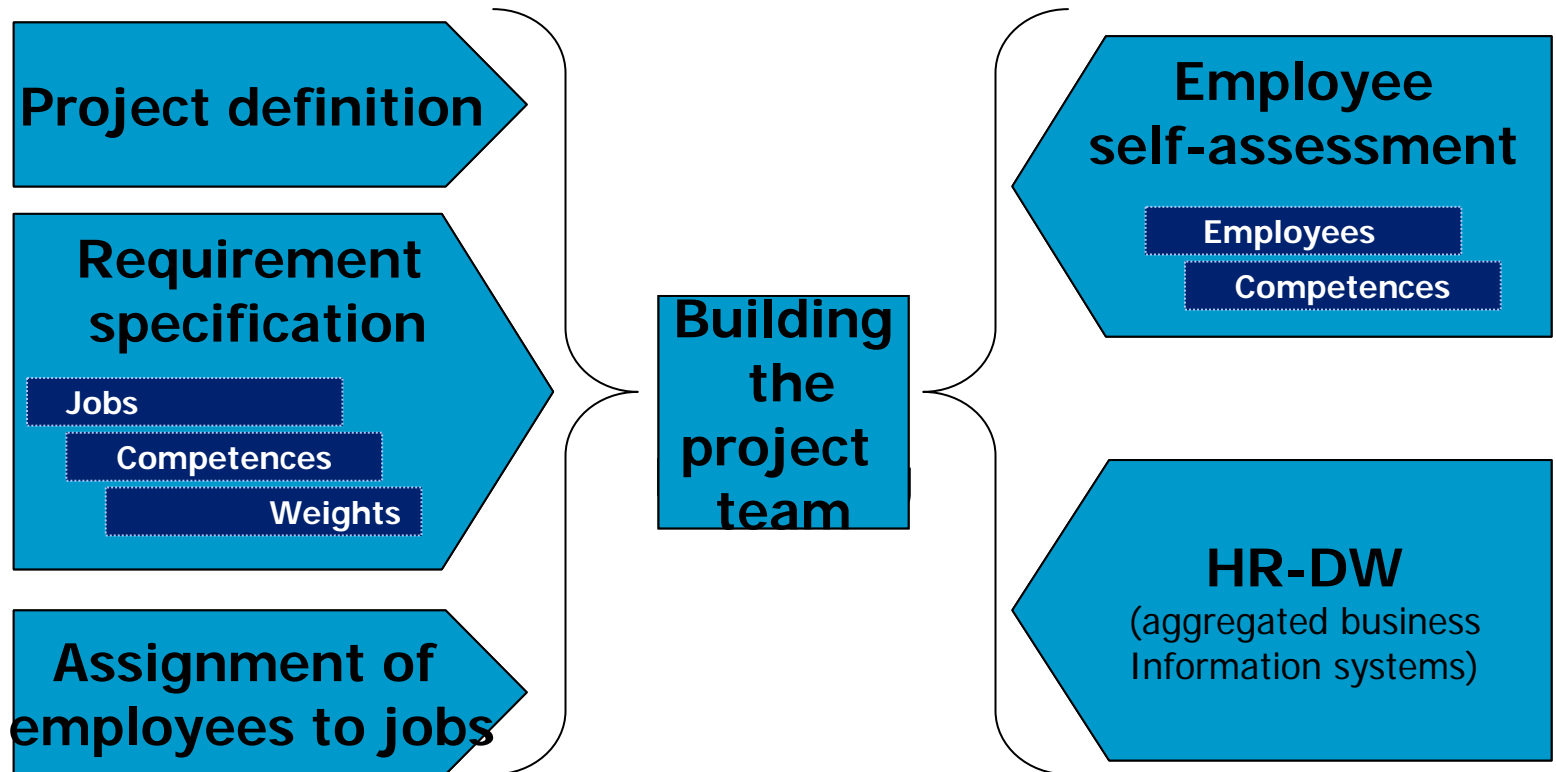
Target functionality

- Comprehensive project administration
 - planning projects
 - assignment of jobs
- Project jobs administration
 - definition of competence requirements (target profiles)
 - specification of requirement weightages
- Analysis and aggregation functions
 - overview: aggregated complete information for an employee
 - software-generated recommendations for the team positions (matching)
 - Difference between
 - Filled and defined jobs
 - Competence requirement profile of the project team and the actual instantiation of the team

Module 3: Ontology-based Project and Task Assignment

Building of the project team

Information sources



Matching of Competence and Requirement Profiles

Overview

- The matching objective:
 - Search for optimal employees for project teams
 - Evaluation of further education potential for employees
 - Appointment of successors for vacant jobs
- Assumptions:
 - KAON
 - Ontology with specified
 - Competence profiles for employees (by self-assessment)
 - Requirement profiles for jobs, projects etc. concerning competences
 - Similarity Framework by Qingli Wang, FZI
- Procedure
 - Comparison of required profiles with detected competence profiles

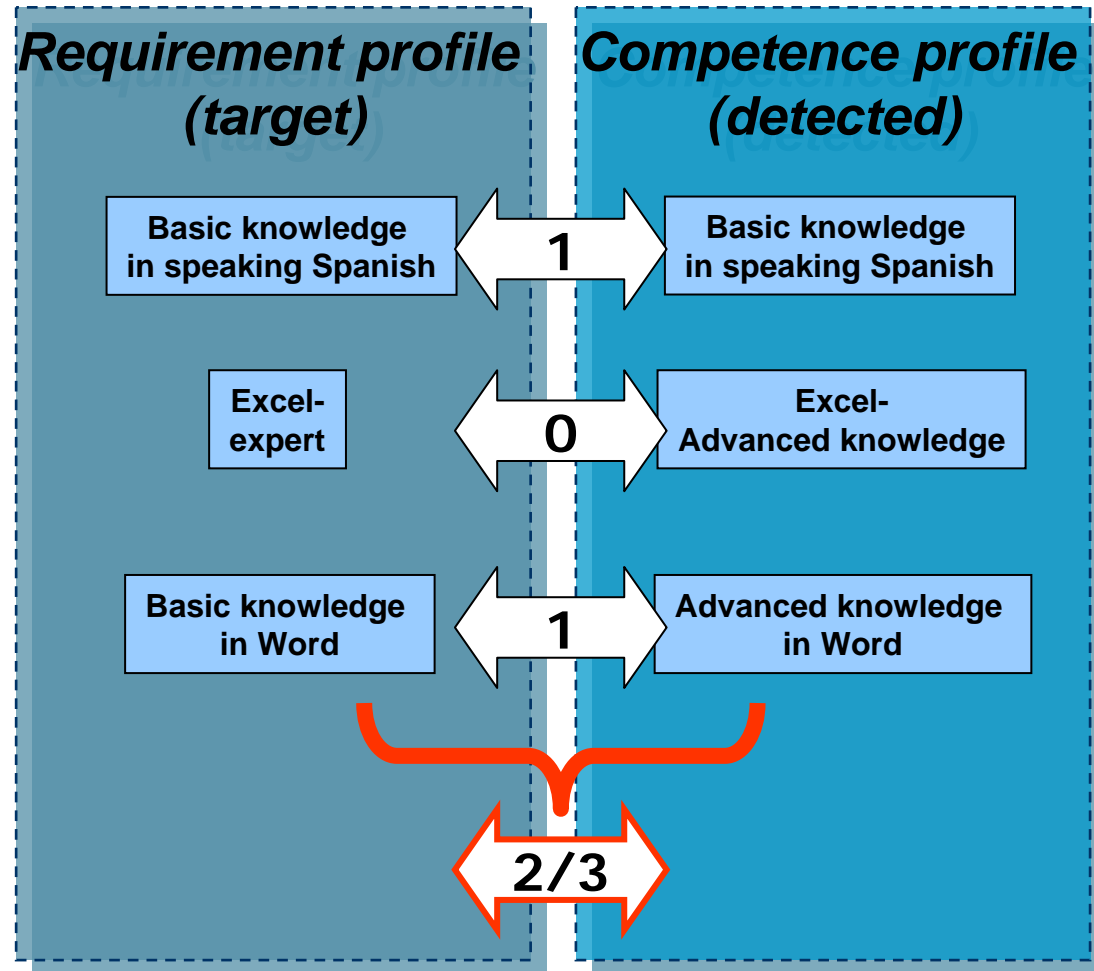
Extension of the Similarity Measures

- Field of application
 - Originally primarily intended for text comparisons
 - Due to application in different areas, the similarity measures had to be adapted

- Implementation of similarity measures for comparison of competence profiles with requirement profiles
 - Exact similarity of competence and requirement profiles
 - Relative comparison of competence profiles (under consideration of the degree of competence)
 - Taxonomic similarity of profiles

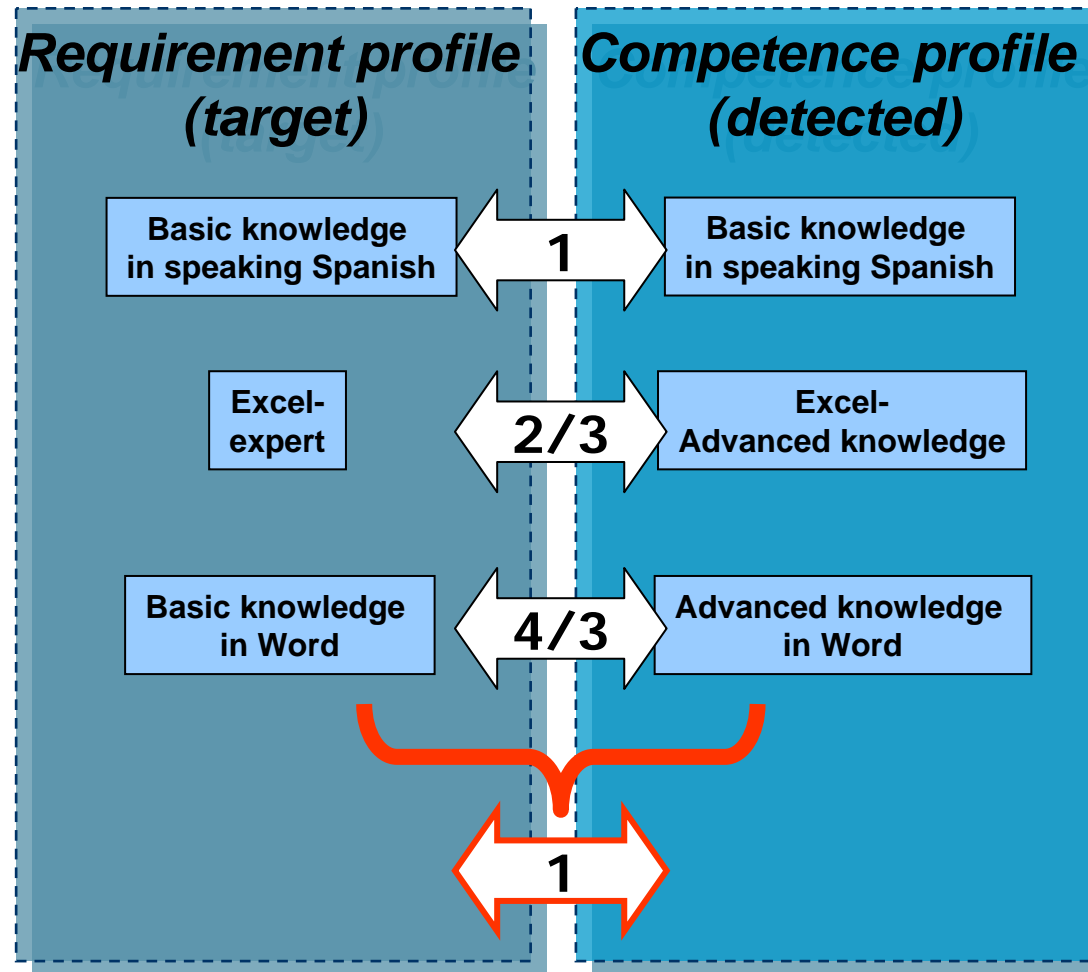
Example: Exact Similarity

- This similarity measure determines whether a candidate complies with *all requirements* exactly (competence with one characteristic).
- The result of the different comparisons is *equally rated* and *averaged* here for clarity.



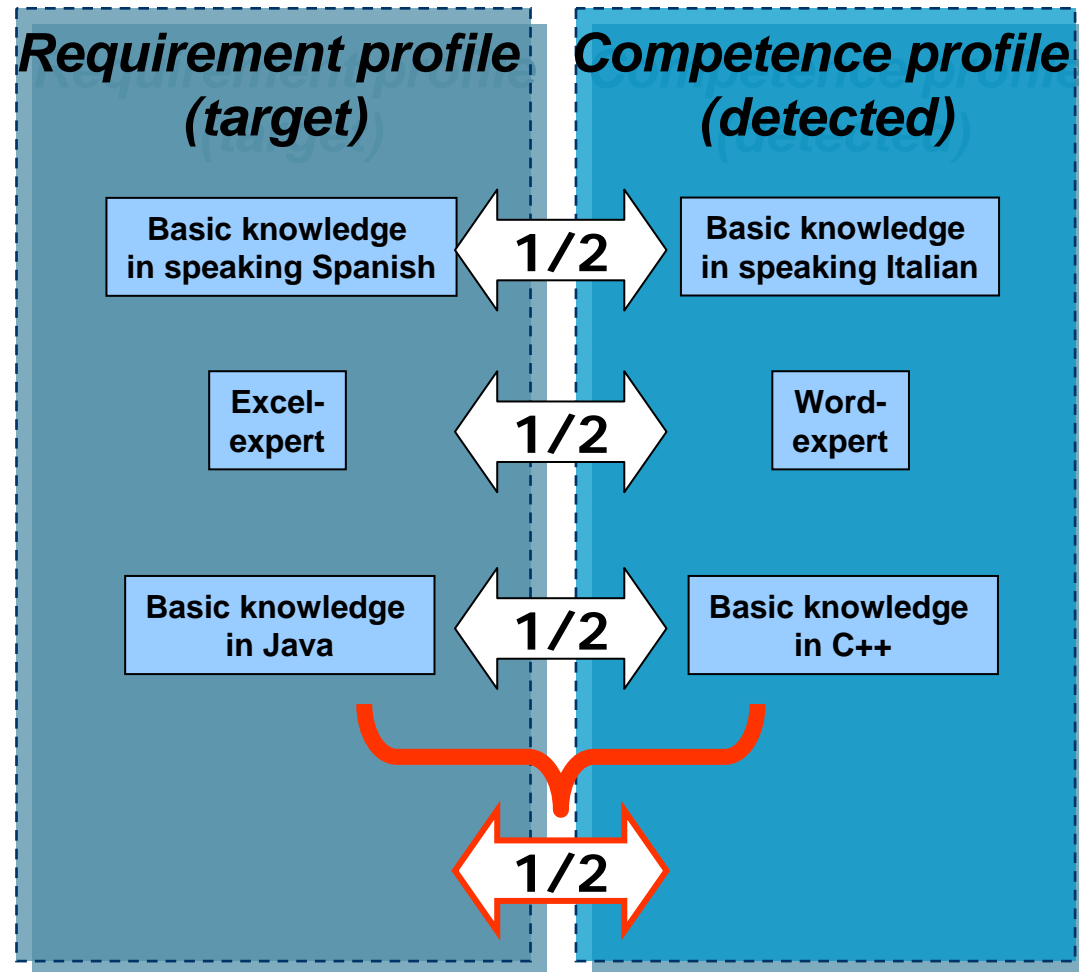
Example: Relative Similarity

- The relative similarity factors in *potential over / under qualification*.
- In contrast to exact similarity here the *deviation* is measured and the result is modified based on the deviation.
- Depending on the field, overqualification can be normalized to the maximum value "1" or, as in this example also be relatively rated.



Example: Taxonomic Similarity

- The taxonomic similarity allows the compensation of qualification deficits with other supplementary qualifications.
- The *competence catalogue* which structures the individual competences, allows semantic interpretation of the relations between the competences.
- If a person does not have the exact requirements, but very *similar competences*, these are factored in by the taxonomic similarity measure.



Conclusion

Expected surplus value

- “Intelligent search” of candidates
 - Increase of assortment quality (“Objektivierung”)
 - Enhancement of the “assortment scope”
 - Reduction of time effort for the candidate search
- Reduction of extern employment (to better benefit of the internal potential)
- Amelioration of planning the required formation
- Portability on equal allocation scenarios
 - E.g. constricted assignment of employees