



Getting to Know the User

User Profile Services for Work-integrated Learning

aposdle – New ways ...
... to work, learn and
collaborate!

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Topics

Focus

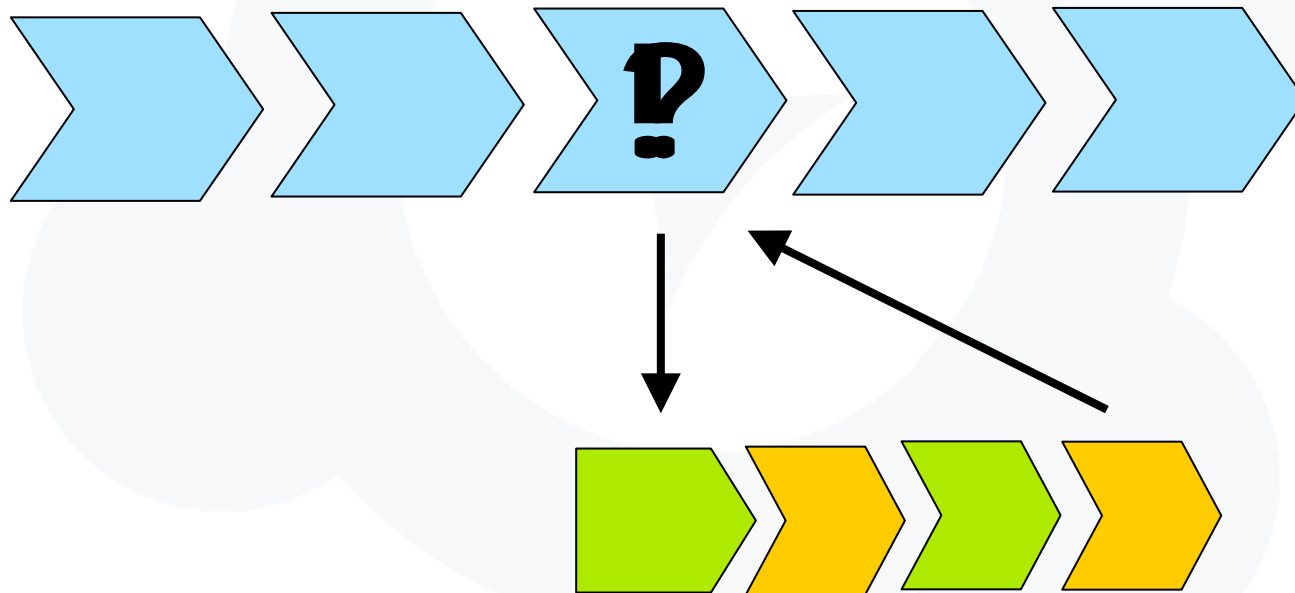
- Personalization to current work task

Outline

- Challenges
- Szenario
- Approach
- User profile services
- Outlook

Work-integrated Learning

Work Tasks



(Collaborative) Learning Steps

APOSDLE Key Distinctions: Learning Perspective

- **Integrated support for Learner, Knowledgeable Person and Worker**

- Real Time
- Real Work Environment
- Real Content

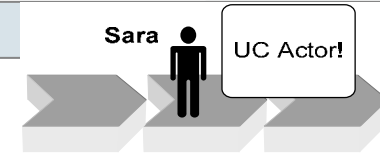
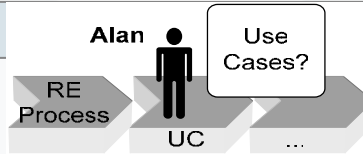
Work-integrated Learning



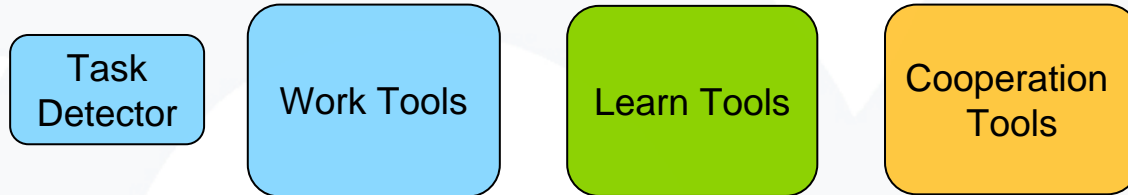
APOSDLE Key Distinctions: Technological Perspective

- **Hybrid Approach: Coarse grained semantic models complemented with “scruffy” technologies**
 - Automatic discovery of work task based on user interactions
 - Automatic inference of prior knowledge based on task executions
 - Automatic identification of similarities based on text, multi-media data and semantic analysis
 - Automatic maintenance of similarity measures and user profiles based on usage data and user feedback

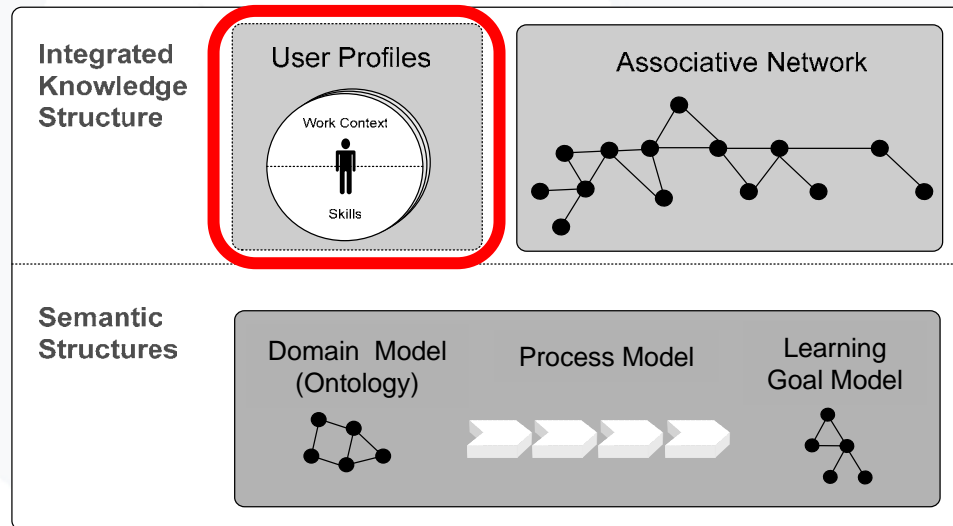
Users



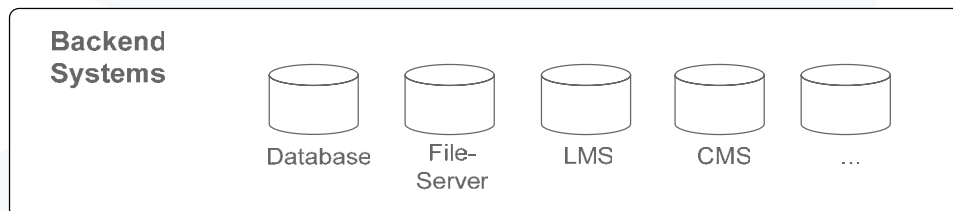
APOSDLE Services



APOSDLE Platform



Organizational IT-Infrastructure



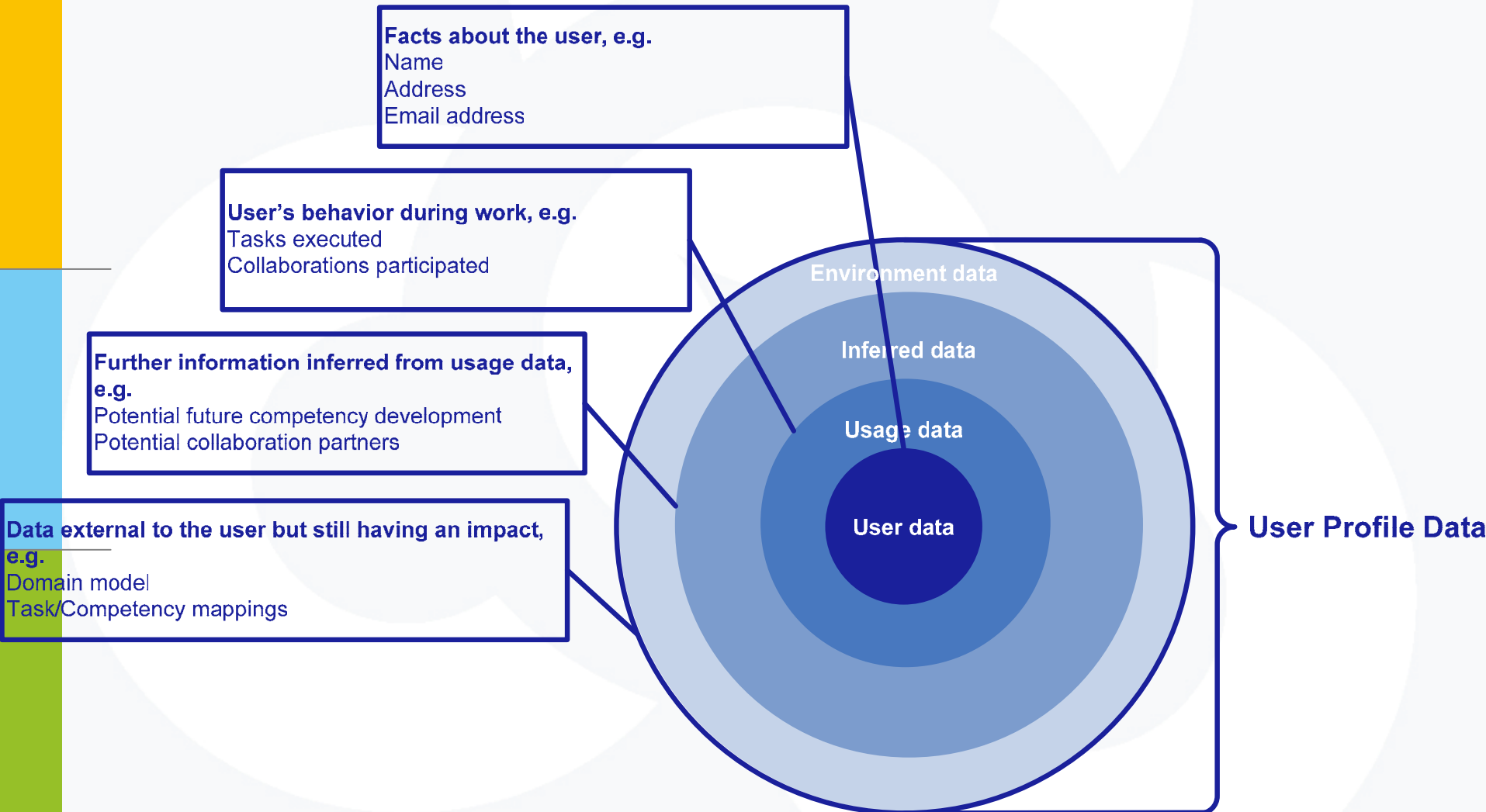
User profile challenges in work-integrated learning

How to get to know the user?

- What is she doing?
- What has she achieved?
- Which goal is she persuing?
- Where does she need help?
- ...

Approach

- Automatically recognize user's task executions, collaboration and learning events
- Store interaction history in User Profile
- Apply a multitude of mining techniques to user profile data
- Interpret mining results in relationship to organizational knowledge structures (domain model, task model, learning goal structure)
- Embed mining and interpretation functionality within knowledge services



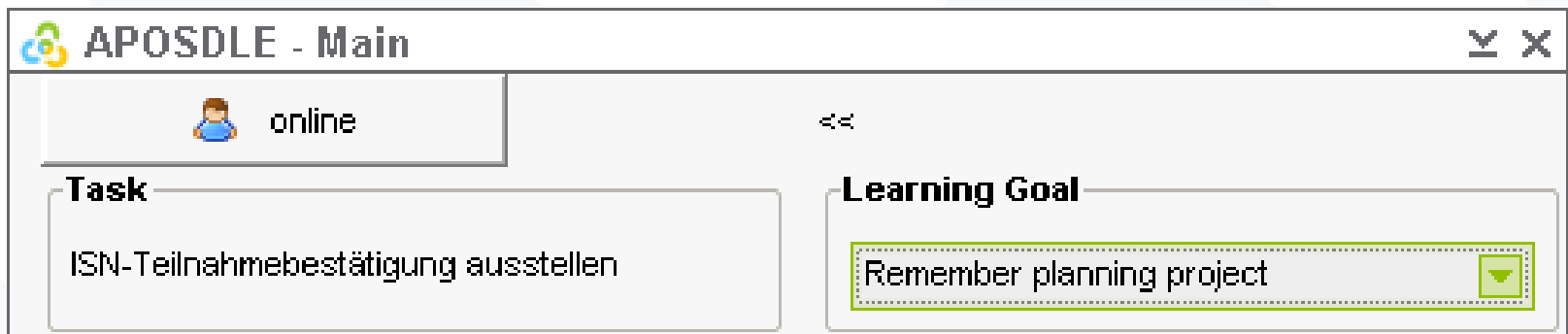
Types of User Profile Services

- Logging Services
- Inference Services
- Visualization Services
- Adaptation Services
- Recommendation Services

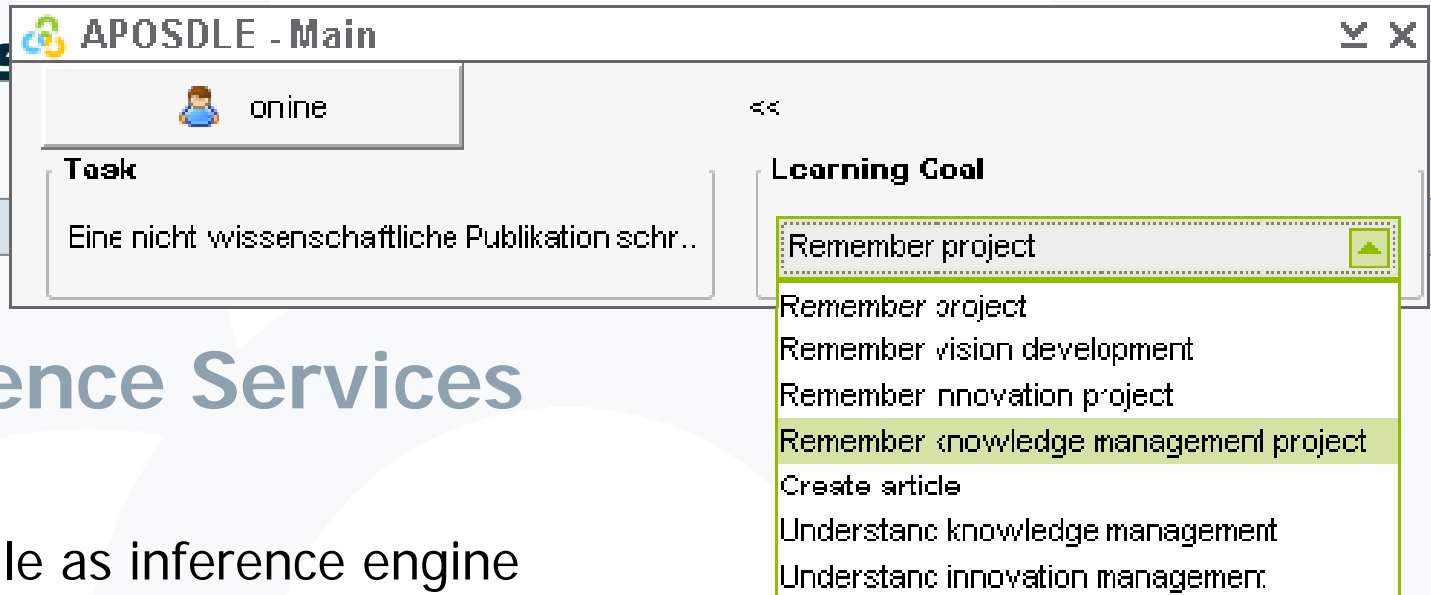
Logging Services

User profile as repository for user-related information

- Task executions
- Collaboration events and status
- Learning events



The screenshot shows a window titled "APOSDLE - Main" with a user icon and the text "online". Below this, there are two sections: "Task" and "Learning Goal". The "Task" section contains the text "ISN-Teilnahmebestätigung ausstellen". The "Learning Goal" section contains a dropdown menu with the text "Remember planning project" and a green arrow icon.



The screenshot shows a web application window titled "APOSDLE - Main". At the top, there is a user profile section with a user icon and the name "online". Below this, the interface is divided into two main sections: "Task" and "Learning Goal".

Task: Eine nicht wissenschaftliche Publikation schr..

Learning Goal: A dropdown menu is open, showing a list of goals. The first goal, "Remember project", is highlighted with a green background. The other goals in the list are:

- Remember project
- Remember vision development
- Remember innovation project
- Remember knowledge management project
- Create article
- Understand knowledge management
- Understand innovation management

Inference Services

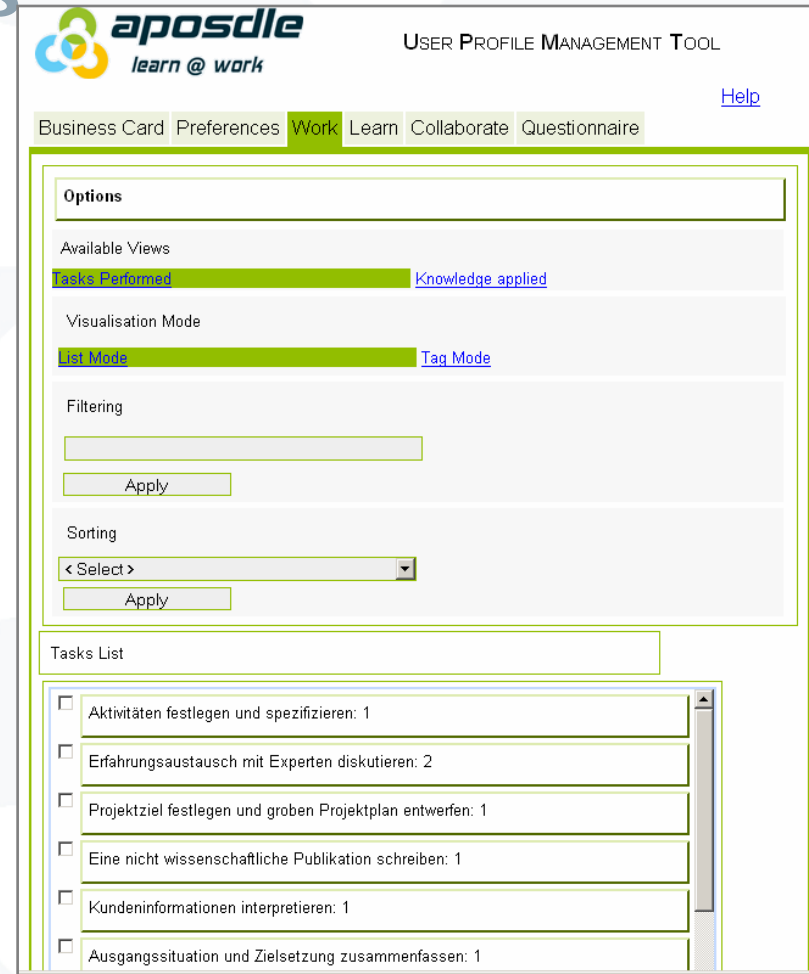
User profile as inference engine
for user characteristics

- Identify prior knowledge based on relevant task executions, collaboration events and learning events
- Compute and rank possible learning goals based on gap analysis

Visualization Services

User profile

- Allow user to examine context snapshot and interaction history
- Allow user to examine relationship between work tasks and learning goals



apostle learn @ work

USER PROFILE MANAGEMENT TOOL

[Help](#)

Business Card | Preferences | **Work** | Learn | Collaborate | Questionnaire

Options

Available Views
[Tasks Performed](#) | [Knowledge applied](#)

Visualisation Mode
[List Mode](#) | [Tag Mode](#)

Filtering

Sorting
< Select >

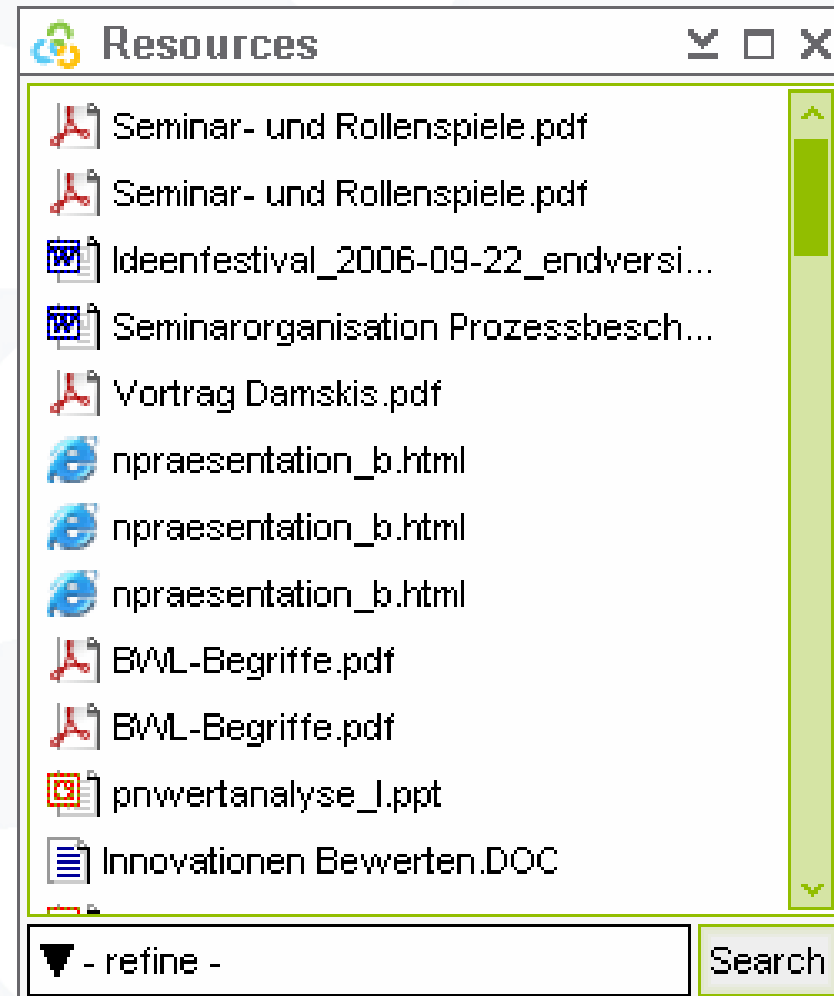
Tasks List

- Aktivitäten festlegen und spezifizieren: 1
- Erfahrungsaustausch mit Experten diskutieren: 2
- Projektziel festlegen und groben Projektplan entwerfen: 1
- Eine nicht wissenschaftliche Publikation schreiben: 1
- Kundeninformationen interpretieren: 1
- Ausgangssituation und Zielsetzung zusammenfassen: 1

Adaptation Services

User profile for personalization

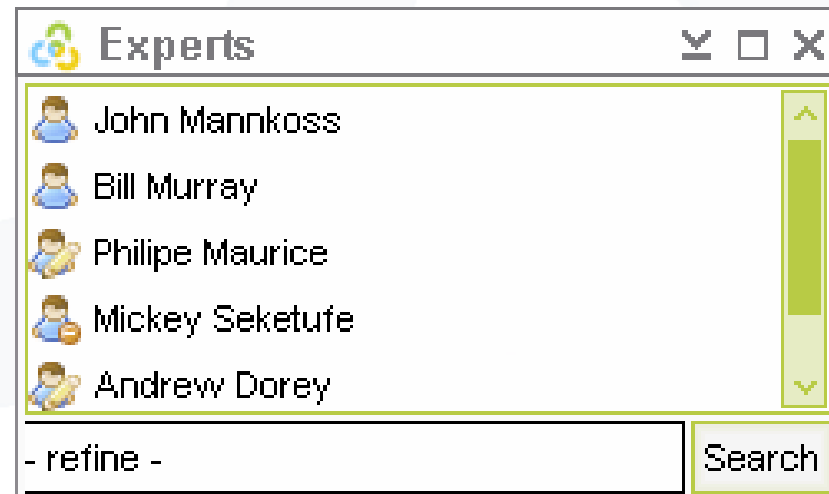
- Tailor recommended knowledge artefacts to user's prior knowledge
- Tailor recommended learning events to user's prior knowledge



Recommendation Services

User profile for personalization

- Recommend people based on user's skills and work tasks
- Recommend people based on their role within social network



Outlook

- Further extension of user profile services, e.g.
 - Social Network Analysis to build learning groups
- User Evaluation, e.g.
 - Longterm observation at application partners
 - Feedback on service usability
- Privacy, e.g.
 - Legal
 - Social
 - Technical

Thank you for your attention

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Back-Up Slides