Initial situation

Learning and Knowledge Management is becoming more relevant in times of dynamic corporate structures and in particular with regard to the demographic change. In addition, an increasing integration of learning into work processes can be observed. Given the growing importance of learning processes within the workplace environment, solutions are required that enable location-independent and requirement-specific learning and knowledge sharing between employees. With regard to the rapid distribution of mobile technologies, new possibilities for knowledge and knowledge sharing emerge. This is exactly where PRiME – a project which is initiated by Deutsche Bahn AG and RWTH Aachen and funded by the Bundesministerium für Bildung und Forschung – comes into play.

Goal of this project

For mobile employees (e.g. car inspectors) with a high demand for information, possibly highly complex documents are mostly only available on paper. The large amounts of work materials with which the employees usually have to work cannot be carried along on a daily work day due to their large weight. Therefore, these work materials are only partially available. At the same time, these documents also include information which is not relevant for the certain employees, either generally or in any specific situation. The relevant information, in turn, is often not easy to find, which considerably complicates searching for a solution. The goal of PRiME was to develop and to provide an IT platform as a basis for the everyday working life of mobile employees. As the basis, the approach of Personal Learning Environments is used such that the personal working environment and its contents can be adapted to each specific situation and preference.

Content of this project

PRiME includes a server-based learning and knowledge management system based on digital media and consisting of applications for mobile devices with which self-directed workplace learning as well as immediate assistance during the work process is made available. Employees have the opportunity to personally annotate available information, documentations, guidelines and working documents in an easy and timely manner and are also able to share these with other employees in the integrated social network. Creating this valuable information to the experts on site guarantees a continuous increase in experience and enables a productive exertion of influence on the design and the content of the present working documents.

Additionally, by having a self-selected compilation of the necessary working materials, the employees can focus on the elements that are relevant for everyday work.

The central requirements of PRiME are reflected and self-regulated learning. A three-stage reflection model is therefor used as the basis for knowledge management and is integrated into the working process with the help of learning analytics methods in the field of personalized feedback and context-sensitive search.

The innovation of this project mainly includes the various mobile and web-based applications. The applications enable the intelligent partitioning and storing of existing complex documents into the smallest possible, reusable units, regardless of the present format. With this division, relevant information can be filtered optimally and provided in a new context without creating redundancies. Existing implicit knowledge of the employees can be added to the mobile applications with the help of multimedia functions and are thus transferred into explicit knowledge in the following process, which in turn can be made accessible to others.