Knowledge management in software development and project management is an exciting problem, as it involves tacit knowledge (e.g. about processes), distributed knowledge (different people, different systems), and many different kinds of semantically rich content (e.g. source code, documentation, tutorials, project work plans) that is strongly connected on the conceptual level. Current knowledge management systems only insufficiently support knowledge management in such areas, as they are not flexible enough to handle and integrate these kinds of content and provide only insufficient support for tacit knowledge.

The objective of the project KIWI is to develop an advanced knowledge management system (the “KIWI system”) based on a semantic wiki that will address this problem. This system will support collaborative knowledge creation and sharing, and use semantic descriptions and reasoning as a means to intelligently author, change and deliver content. A particularly salient aspect of combining wikis with advanced semantic technologies is that the wiki still is a generic and flexible tool, but semantic technologies allow to provide specific support for the user based on domain, context, role, and experience.

In the course of the project, we will work out an enhanced wiki vision (the “KIWI vision”) describing how the “convention over configuration” paradigm of wikis combined with semantic technologies can lead to flexible and problem-oriented knowledge management, I implement a collaborative, web-based environment (the KIWI system) that provides support for knowledge sharing, knowledge creation, and coordination in software and project knowledge management, and I evaluate it in two concrete, industry relevant use cases at our industry partners in the areas of software and project knowledge management, which are representative of many forms of knowledge management in knowledge-intensive areas. The experiences with the system will then result in the “KIWI handbook”, describing the project vision, the KIWI system functionalities, as well as giving recommendations and best practices for using the system in concrete knowledge management scenarios.

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The research leading to these results has received funding from the European Community’s Seventh Framework Programme (FP7/2007-2013) under grant agreement No. 211932.