

KP-Lab

KP-Lab is an ambitious project that focuses on developing a learning system aimed at facilitating innovative practices of creating, sharing, and working with knowledge in education and workplace. Learning is seen as shared effort in developing ideas, artifacts, and social practices, not just individual knowledge acquisition or social interaction.

The objective of KP-Lab is to develop a novel theoretical approach, tools, and practical models to elicit deliberate advancement and creation of knowledge, as well as corresponding facilitation of knowledge practices.

KP-Lab entails design experiments and longitudinal studies in educational institutions and professional organisations. The collaborative development work is carried out by way of a co-evolutionary process involving researchers, technological experts and users, mediated by tools. The tools and methods will be extended and refined in several cycles collaboratively.

KP-Lab builds on emerging technologies such as semantic web, real-time multimedia communication, ubiquitous access, wireless devices and inter-organizational computing. The development is mostly based on open-source software.

This Integrated Project, sponsored by the European "Sixth Framework Programme", will run for 5 years (2006-2011). The first 3 years will be the R&D phase, and the last 2 years dissemination and exploitation activities. The partners are committed to make the project and its progress widely known, ensuring that its outcomes appeals to a significant academic audience and applicable to commercial exploitation to enable a sustainable basis for further research and development.

Tools to be developed

KP-Lab will provide a cluster of inter-operable applications:

- a virtual collaboration space
- common tools for working with knowledge artifacts and for managing knowledge creation processes
- specific tools that will facilitate the discovery and exploitation of tacit and practice-related knowledge
- shared multimedia annotation tool
- ubiquitous cooperative conferencing and communication services
- a generic semantic web knowledge middleware for learning applications.

The KP-Lab technological framework will provide an operational technical architecture for KP-Lab tools and services, software modules allowing for interfacing KP-Lab tools with third-party software, as well as set of guidelines and reference documents to support the implementation.

Research on KP-Lab

Researchers will examine and model pedagogical practices related to collaborative teamwork. In educational institutions, KP-Lab courses will be designed to encourage the crossing of boundaries between educational and professional communities, by way of actual or simulated contacts with professional knowledge practices. In the workplace, specific development cases will aim at providing tools that can be used to reflect and improve workplace practices, organisational routines and to identify underlying problems.

The design-based research will examine the role of KP-Lab tools in these processes, including knowledge creation, collaboration, argumentation, team training, and ubiquitous access to knowledge resources. Longitudinal research activities attempt to capture and trace individual and collective transformations that take place in higher education: engagement in sustained inquiry, development of agency, metaskills of collaboration, practices of working with knowledge, and cultural learning.

Who will benefit from KP-Lab?

Modern society requires management of complex knowledge through dynamically evolving teamwork and knowledge – sharing. Innovation and knowledge creation are becoming the most important sources of new material and intellectual wealth. KP-Lab provides tools, methods and models for everyone working with knowledge in education and workplaces who are facing the challenges of communication, interaction and coordination of collaborative activities.

In educational practices, KP-Lab aims to provide not only versatile tools, but pedagogical models and practical case descriptions to support teacher training and the realization of learning as a knowledge creation processes. The R&D efforts will also highlight new methods for context and process-sensitive data collection, ubiquitous collaboration and video annotation in training complex cases.

In professional knowledge practices, KP-Lab provides methods and tools to capture and create knowledge in different representational modes as well as methods to engage workplace communities in active reflection on their practices..

In general, both in learning and working environments, the KP-Lab project aims to contribute to more effective management of knowledge, and provide tools and models for supporting advancement of knowledge practices.

KP-Lab Participants

The multinational KP-Lab consortium involves 22 partners from 14 countries and integrates expertise from various domains, including pedagogy, psychology and engineering. In addition, end-users and representative from corporate/business sector take part in the project to provide authentic environments for research and piloting.

KP-Lab Partners

[Helsingin yliopisto](#) - Finland

[Helsinki METROPOLIA University of Applied Sciences](#) - Finland

[The Hebrew University of Jerusalem](#) - Israel

[Akka](#) - France

[Pöyry Forest Industry Oy](#) - Finland

[Eotvos Lorand Tudományegyetem](#) - Hungary

[Tehnicheski Universitet - Sofia](#) - Bulgaria

[Karolinska Institutet](#) - Sweden

[Universiteit Utrecht](#) - The Netherlands

[FH OÖ Forschungs und Entwicklungs GmbH](#) - Austria

[Scienter Societa Consortile a Responsabilita Limitata](#) - Italy

[Universita Degli Studi di Genova](#) - Italy

[Vysoka skola ekonomicka v Praze](#) – Czech Republic

[Université de Neuchâtel](#) - Switzerland

[Institut National Polytechnique de Toulouse](#) - France

[Technicka Univerzita v Kosiciach](#) - Slovakia

[Universitetet I Oslo](#) - Norway

[Foundation for Research and Technology Hellas](#) - Greece

[Tessera Multimedia S.A.](#) - Greece

[Universite Paris-Sud](#) - France

[Skelleftea Kommun Skeria Utveckling](#) - Sweden

[Radvision Ltd.](#) - Israel

InterMedia: The WP10 leader

WP10: Knowledge Practice in Workplaces

Through several case studies we analyze knowledge creation and transformations of knowledge practices in professional contexts. Knowledge creation involves crossing professional and organizational boundaries, and takes place in hybrid shares spaces. Comparing findings across practices will point to characteristics of the interventions and technological tools leading to practice transformations. The case studies are

1) KIKK (Kunnskapsstyring for Intern Kommunikasjon og Kundebehandling) explores Knowledge Management for Internal Communication and Customer Relations. The study focus on 1) adaptive product development, 2) mentoring arrangements for horizontal boundary crossing and 3) knowledge construction in the company with customers.

2) DiCAP-Ullern address collaborative knowledge creation mediated by innovative technologies and shared knowledge objects during tool-mediated redesign of institutional leadership practices, and workplace learning for teachers. The focus is how school leaders assess, theorize and change practices, over time and across institutional levels.

3) Knowledge creation and production processes in transforming social practice (Ahus Competency) investigate a knowledge management infrastructure's potentialities for knowledge creation and knowledge artefact use and re-use in virtual and f2f spaces. The ongoing knowledge production processes and knowledge accumulation during knowledge practice transformations add analytic understanding by historical, longitudinal analysis of the evolving practices.

4) Multi-disciplinary knowledge practice in nano-technology explored knowledge practices in a laboratory engaged in inter-disciplinary collaboration to create, experiment and stabilize evolving microfluidics nanotechnology. We explore conditions for transformations and accumulation of knowledge by the team's tool use.

5) ChronICT explored features of wiki, blog and feed functionalities to illustrate collective knowledge advancement in activities of daily living focusing on 1) self-care and "live well" with chronic condition, 2) information and knowledge sharing and 3) ICT-resources as infrastructure to create knowledge and share experiences.

6) PlictE explored wiki functionalities for students and teachers collective advancement of knowledge. In the virtual environment the teacher's presence was challenged. The students readily improved each other's writing, but hesitated to revise other's content. They added complementary content as their knowledge advancement processes.

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