Time2Competence: The PROLIX Project

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Abstract. The poster introduces PROLIX, an integrated project funded by the European Commission. PROLIX overall objective is to align learning with business processes in order to enable organisations to faster improve the competencies of their employees according to continuous changes of business requirements. To reach this goal, PROLIX is developing an open, integrated reference architecture for process-oriented learning and information exchange. The key innovation in PROLIX consists of a process- and competency driven framework for interlinking business process intelligence tools on the one hand with knowledge management and learning environments on the other.

1 Introduction

PROLIX (PRocess-Oriented Learning and Information eXchange) is a 48 months research and development integrated project funded by the European Commission under the Sixth Framework Programme, Priority 2 "Information Society Technologies" started the 1st December 2005.

The objective of PROLIX is to align learning with business processes in order to enable organisations to faster improve the competencies of their employees according to continuous changes of business requirements. PROLIX is developing a process- and competency driven framework for interlinking business process intelligence tools on the one hand with knowledge management and learning environments on the other.

2 Project Objectives

PROLIX is developing a process-oriented learning approach and a flexible and adaptive service-oriented architecture system which is capable of aligning training and knowledge product ion of people faced with so-called "complex situations" such as work and business process changes, or other complex multivariable learning

environments, which cannot be solved with traditional eLearning or knowledge management approaches. In order to face these challenges, PROLIX will:

- *enable an organisation to close the learner's life cycle* by providing support for the implementation of the international acknowledged P(lan)-D(o)-C(heck)-A(ct) Philosophy within Organisations.

- *make it easier to define Learning Goals based on business needs and business processes* by providing methodologies, tools and services within business process management that link to learning design methodologies.

- **deliver a methodology for matching of needed competencies with "as-hoc" profiles** resulting in an accurate didactical learning scenario definition and configuration.

- **provide competence oriented process decision support through simulation** for the benefit of organisational and individual team learning with a quantitative feedback for business processes and required/ changed competencies by providing a concept for the PROLIX competency oriented process simulator, developing scenarios for competency oriented process simulations according to company needs and providing a service to simulate real work situations for the benefit of individual and team-oriented competence development in different branches, under different conditions and requirements.

- **integrate Learning Technology Solutions with Business Information Systems** by providing a Learning Process Execution Platform to enable the measurement of the individual qualification needs based on valid tests ("diagnosis") and instantiate configured learning processes based on the competency analysis and matching according to the learner, providing Learning Process Workflow Services (LPWS) to manage the learning processes. These Services have the "knowledge" of the configured learning processes and execute the various learning application services within SMS Skill Management, LMS Learning Management Systems, LCMS Learning Content Management Systems and KMS Knowledge Management Systems.

- *monitor Learner 's Performance according to Business Needs* by providing services to measure the resulting learner performance both in terms of competencies acquired and in terms of effectiveness in solving the original problem, performing the ´job' or coping with the (business) process change and providing models for corporate learning success and react ion pat terns to training results.

3   Time2Competency

The delay between the identification of learning needs and actual learning effects the competitiveness of any Company. PROLIX will make people and organisations more competitive by reducing the time it takes to fill competency gaps and build proficiency according to the business needs and daily work processes. PROLIX couples business processes with learning processes in corporate environments, enabling business process driven learning at the workplace, taking into account the single learner and his needs as well as corporate requirements. PROLIX solutions support and

enhance the speed and effectiveness of both formal and informal learning processes, integrating learning management platform technology (such as learn eXact [1] and CLIX [2]) and support services. The PROLIX project is aiming to reduce the time needed from identifying a business need to meeting the competency requirement through learning (Time-to-Competency) by an average of 20%.
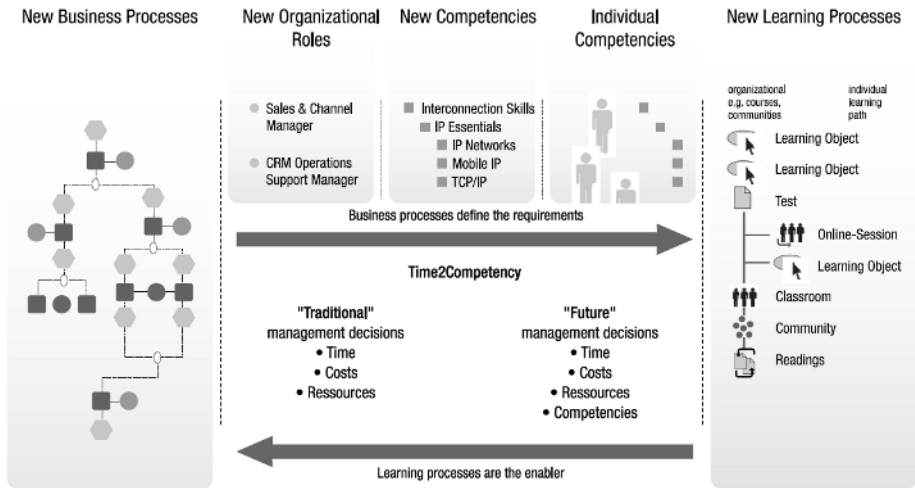
Fig. 1. Learning as „key enabler" for business process management

Overall and seen from an organizational point of view, PROLIX will significantly contribute to the change management within companies that needs to develop into a holistic learning organization enabling the integration of learning into the daily working tasks. Corporate culture requires the provision of strategies, methods and concepts to satisfy heterogeneous learning needs. Mechanisms and concepts for the organizational introduction of technology enhanced learning in corporations have to be co-ordinated with its philosophy and company vision.

4   Approach

PROLIX supports a complete learning process life cycle comprising (Fig. 2) 1) the analysis of complex business situations; 2) the identification of individual and organisational learning goals; 3) the analysis of competencies describe according to the IEEE standard RCD [3] and their matching with individual skills; 4) the definition of appropriate learning strategies according to the IMS Learning Design specification [4] and the simulation of competency-oriented processes; 5) the execution of improved learning processes; 6) the monitoring of learners' performance according to the goals defined.
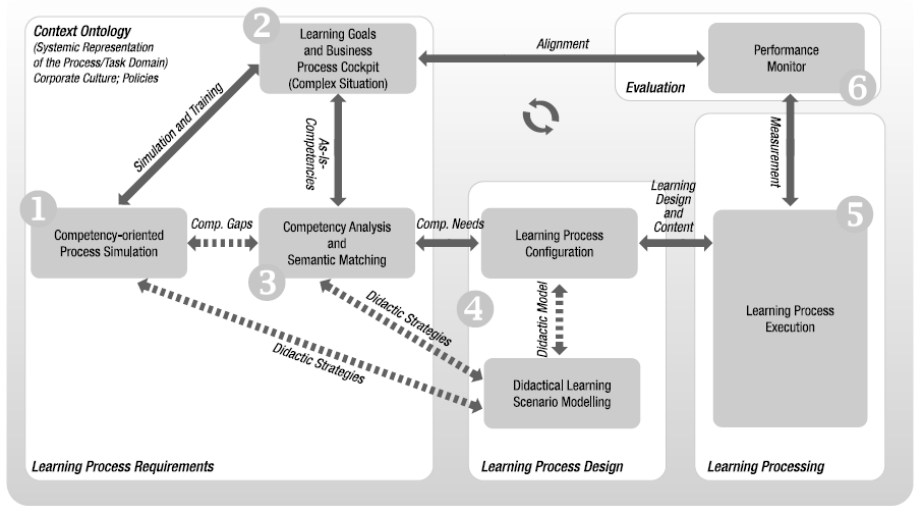
Fig. 2. PROLIX architecture

The PROLIX approach includes a feedback mechanism that ensures a ´self-healing´ process to improve the learner performance. Having gathered the skills based on the defined learning goals, the same procedure will happen on higher skill levels, so that a continuous procedure is a result.

PROLIX will deliver an open learning platform integrating the needed systems to close the learning life cycle by providing interfaces from learning management systems
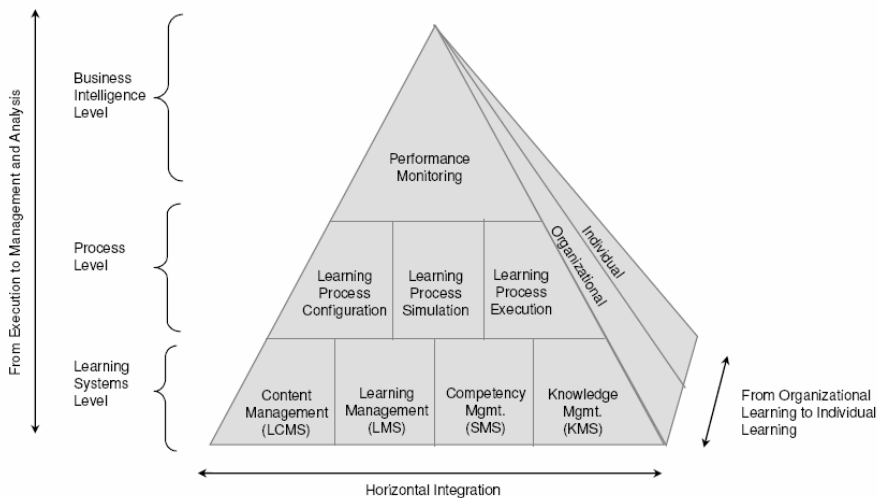

Fig. 3. Innovation dimensions of PROLIX

to business process management systems, competency management systems, learning content management systems as well as performance measurement systems (Fig. 3).

5 Test Bads

In order to demonstrate its concept, PROLIX set up three test beds in different fields of application. PROLIX will specify, design, implement and start to demonstrate its tools and services in more mature eLearning-aware and, therefore, lower risk environments, i.e. the "Government test bed" with UK Government Care Programme (Social Care Institute for Excellence), the "Telecom test bed" with British Telecom (BT) learning, and the "Educational Publishing test bed" with publishing houses Klett and EDITIS.

6 Open Business Enterprise Learning and Information Systems Exchange Reference Architecture (OBELIX)

PROLIX will deliver services (or alternatively called "modules") of process-oriented learning technologies that are integrated on the basis of a service-oriented architecture likely based on Web Services described in WSDL.

Based on the flexible PROLIX architecture, each module will be self-sustainable, thus reducing the risk of a single point of failure within the system. Furthermore, based on the company requirements PROLIX foresees the possibility that there might be several implementations of one module, each tailored to the needs of the various test beds.

PROLIX will open its results to the learning industry by developing an open reference architecture for process-oriented learning (OBELIX). This architecture will ensure that third party vendors can integrate specific solutions into the overall approach and by this replacing other components.

PROLIX will link learning with business; process-oriented learning will avoid outsourcing of personnel training and ensure learner's employability since they efficiently learn according to needs. Management will have a technology to see learning as the **b**usiness enabler of competitive enterprises.

Acknowledgments

References

1. learn eXact LCMS, http://www.learnexact.com
2. CLIX, http://www.clix.de/
3. IEEE RCD, Reusable Competency Definition, http://ieeeltsc.org/wg20Comp/ wg20rcdfolder/
4. IMS Learning Design, http://www.imsproject.org/learningdesign/index.html