

Evolution of Knowledge Management: From Expert Systems to Innovation 2.0

Thursday, 15 May 2014 09:50 (15 minutes)

Creation, retrieval, evaluating and using knowledge - summarized as knowledge management –becomes more important in the digitalized world. Hence the evolution of knowledge processing having its root in information technology and artificial intelligence resulting in Web 2.0 and moving towards Innovation 2.0 challenge thorough foundations and raise the question if theoretical framework are capable in dealing with the flexibility of the real world. The University of Vienna studies conceptual modeling as an instrument for knowledge management, resulting in the PROMOTE framework. This paper observes how it is continuously put into practice, by introducing projects in (a) research, (b) industry, (c) national governmental organizations and (d) international organization. In research we can see different waves starting with process-orientation like in PROMOTE, integrating with semantics like in AsIsKnown, moving towards hybrid solutions including workflows, knowledge workers and agents like in eHealthMonitor and moving towards collaborative innovation with game storming. Knowledge management using conceptual models in Industry is often coupled with existing management approaches such as business process management that is extended by information management or Big Data aspects. Projects in national governmental organizations –like the Austrian Defense Academy, or CBRN defense school –demonstrate the potential of conceptual models in form of knowledge scorecards monitoring not only the business process performance, but also the competences and necessary resource provision for a safe operation. International organizations - like IAEA –also benefit from conceptual models, as demonstrated with the CA process. Reflecting the observations over the past fifteen years of knowledge management, it can be clearly stated that thorough foundations dealing with the core aspects of knowledge can appropriately be adapted for real world challenges. This paper introduces foundations in conceptual modeling, introduces its application in aforementioned areas and provides an outlook how to approach the upcoming hype of innovation 2.0.

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Session Classification: Session 4A - Knowledge Management