

# TECHNOLOGIE INFORMATYCZNE W ZARZĄDZANIU WIEDZĄ – UWARUNKOWANIA I REALIZACJA

Pod redakcją naukową  
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Nr 22 rok 2009

ZESZYTY NAUKOWE  
Wyższej Szkoły Bankowej  
w Poznaniu



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ISSN 1426-9724

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Nakład 250 egz.

Skład i łamanie: Danuta Pijańska, Poznań

Druk i oprawa: Zakład Poligraficzno-Wydawniczy M-Druk

Wągrowiec, tel. (0-67) 262 02 38

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## **Summary**

Jerzy Gołuchowski

### **Trends in improving knowledge technologies in organization**

In the article current trends in improving knowledge technologies used in organization are pointed. Considerations are conducted in context of development Web 2.0 and Web 3.0 which currently are pointing basic paths of advanced information technology improvement. Analysis of the evolution of knowledge technology shows the integration of solution in the knowledge management area with tools used in area of artificial intelligence. Author shows new solutions in the knowledge localization, knowledge codification, knowledge gathering, knowledge searching and sharing knowledge technology in organization. Particular attention is paid to technologies supporting learning processes in organizations and creating organizational knowledge.

Katarzyna Dajczak, Kinga Kijewska

### **The meaning of organizational culture in knowledge management**

The process of knowledge management be supported by four factors: leadership, organizational culture, technology and measuring system. The culture matters special because of influence on the workers' behaviour, their desire of cognition, creating, processing and using the knowledge in everyday work for good of organization. However, it is important not only her diagnosis and description of consequence of representing specific attitudes and cultural behaviours, but also competent exploration and usage formative culture instruments for development and the utilization of organizational knowledge.

Andrzej Stańda

### **Intellectual capital – value and measurement**

The purpose of the following article is to analyze the essential determinants of the idea of the intellectual capital. The author has also focused on revealing the process of creation of values of the intellectual capital. Furthermore a particular approach concerning measuring its value has also been presented in article the following.

Szymon Cyfert

### **Knowledge management via a balanced scorecard methodology**

The aim of this article is to join in the discussion concerning Knowledge Management process via a Balanced Scorecard methodology. The article starts with presentation of idea of Balanced Scorecard and assumption of Knowledge Management. This helps to present four dimensions of Knowledge Management in Balanced Scorecard – perspectives, goals, measures and initiatives.

Jarosław Mielcarek

### **Activity – Based Costing as a Tool of Enterprise Knowledge Management**

The ABC concept as the positive theory delivers premises for the selection of the information on indispensable and superfluous, in other words necessary and unnecessary for the maximization of the profit. This concept determines identifying, measuring, accumulating, classifying, preparing, analysing, interpreting and communicating of the necessary information for enterprise management. It decides about the manner of the management with the knowledge on the stage of its creation, spreading and utilization. The organizational knowledge, the selected and new base knowledge, the transformed knowledge and the metaknowledge are created as a result of making use of it. The ABC concept is a tool which transforms the information flow into the knowledge, that is to say into the strategic production factor and as such a tool also becomes the strategic production factor.

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Maciej Zakrzewicz

### **Business intelligence technologies**

Business Intelligence Systems focus on statistical analysis of historical business data in order to support future business decisions. Their architectures are centered around data warehouses – dedicated, subject-oriented, versioned databases designed to store aggregated historical business data. Users – business analysts – perform complex queries on the data warehouses to find interesting patterns, schemas, correlations, rules. Data warehouse queries are usually time – and resource-consuming. In this paper we give an overview of methods and techniques to improve performance of analytical data processing. We discuss the concepts of data warehouse models, data partitioning, materialized views, bitmap indexes, star transformation.

Piotr Adamczewski

### **ERP-Systems in Enterprise Architecture of Knowledge Management**

Knowledge is considered as an enterprise's invisible assets. Surviving in today's highly competitive and ever expanding global economy requires efficiently managing corporate knowledge. Increasing requirements for extended enterprises have stimulated the integration of knowledge management (KM) function into ERP systems for knowledge asset management. So far enterprise information systems such as ERP systems are developed and implemented for mainly managing physical assets of an enterprise since 1990s. Due to the fact that both types of assets need to be properly managed, the integration of KM and ERP becomes a strategic initiative for providing competitive advantages to enterprises. This paper discusses how to deploy KM and ERP concurrently in the framework of enterprise information systems, with a discussion of the interaction of KM and ERP systems in systems perspectives.

Ewa Ziemba

### **Functionality of Corporate Portals in the Context of Knowledge Management in an Organization**

Depiction of corporate web portal's position and function, from a holistic view on knowledge management in organizations, is an objective of the following article. An introduction of the article describes the essence of a knowledge management process and the knowledge spiral model.

Knowledge management would not have been possible without information technology. Thus, the importance of IT was highlighted. Moreover, a corporate portal was presented as a technology assisting organizational knowledge management. Additionally, principal functions of a corporate portal were described, i.e. information, communication and a function connected with making information systems available to different kinds of users. The last part of the article includes a presentation concerning functionality of a corporate portal in the Polish company Kompania Węglowa S.A. Advantages of a corporate portal implementation close the article.

Bogdan Pilawski

### **CRM solutions and social web**

This paper undertakes to find whether the traditional CRM solutions might benefit when joined to recent developments of the phenomenon of the Social Web. Some typical characteristics of the social Web which might be of interest are presented and discussed, enhanced by views and opinions of research organisations and social Web gurus. Some of the difficulties in getting both worlds to work together are highlighted and explained. Author believes there is a huge potential hidden in the subject, waiting to be freed and exploited in business.

Arkadiusz Zimniak

### **Balanced scorecard module in microsoft dynamics AX 4**

Balanced scorecard is management methodology, originally developed by Robert Kaplan. This methodology takes into account apart of financial measures other intangible assets like for example employment satisfaction, customer loyalty or internal business processes. Microsoft Dynamics AX 4 is Enterprise Resource Planning system, which contains module for supporting balanced scorecard management concept. This module is described in article.

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Stanisław Kędzierski

### **Business process knowledge formalisation**

Formalization plays a significant role in systems modelling. One of tools used during formalisation of business processes is first order logic. In this paper an attempt of axiomatization of basic elements of business processes (organisational structures, activities) is presented.



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Mirosława Lasek

**Building information systems in enterprises using service oriented architecture (SOA)**

In the article a new architecture of information systems called SOA (*S*ervice *O*riented *A*rchitecture) is presented. Due to advantages and superiority over other architectures SOA gains more and more popularity as information architecture in the “computer” world and increased attention to it is paid in Poland. It is anticipated that in the near future this information architecture will become a standard in the field of information systems applications in enterprises. In the article general idea of architecture, foundations of building, effects for software producers and software users, and advantages of SOA as a standard architecture are shortly discussed.

Kazimierz Waćkowski, Zbigniew Prussak

**Experiences from Implementation of SOA Environment for Knowledge Management System In Large Organizations (GK PGNiG SA & ARiMR)**

At this paper we describe an experiences from implementation of SOA architecture for Knowledge Management System in two polish Large Organizations – Polish Oil & Gas Company (PGNiG) and Agency for Restructuring and Modernisation of Agriculture (ARiMR). The main goal of PGNiG Group is to strengthen its position as a leading gas company in Central Europe. The Agency for Restructuring and Modernisation of Agriculture (ARMA) has been designated by the Government of the Republic of Poland to perform the role of an accredited paying agency. It deals with the implementation of instruments co-financed from the European Union budget and provides aid from national funds.

Wojciech Fliegner

**Implementation aspects of the procedural knowledge management in public administration**

This paper describes conceptual framework to represent procedural knowledge. It proposes to implement the workflow management systems and makes its more flexible by introducing modifications to process definitions. This proposal extends the process definitions by dynamic constraints and rules (instead of static ones present in the existing WfM systems).

Łukasz Balicki

### **Knowledge management in large and geographically scattered organisations**

Komputronik SA is a typical example of large and geographically scattered joint stock company. It's fast growth caused many problems considering management of such a big organisation. One of the most crucial problem concerned the level of knowledge the employees own and diagnosed cause: lack of communication between employees after limitation of contacts in face to face way. The developed solution supposed to change the process of knowledge management in Komputronik SA. In details it is described as combination of typical knowledge management and knowledge management by Internet. The e-learning team makes some e-learning courses for whole scattered organisation starting much bigger knowledge management process. With e-learning system called e-Expert (based on OpenSource solution) Komputronik conducts product trainings and software trainings. In both cases measured efficiency points trainings consisting of interactive elements created with Flash technology as most important factor. The other important tool to build company knowledge base was implementing Customer Relationship Management system – Microsoft Dynamics CRM 3.0. Komputronik's strategy to implement e-learning system and CRM system to manage knowledge management processes turned out a innovative and recommendable solution.

Dariusz Ceglarek

### **The idea of component system using semantic network to protect intellectual property**

The paper describes distributed system SOWI designed to protect intellectual property included in documents. The SOWI system is intended to find plagiarism and mark similar phrases from a document base and from the Internet. The system is insensitive to stylistic changes and word order in compared documents thanks to introducing semantic network as a form of knowledge representation and owing to use algorithms working on structural similarities between parts of texts. Finally the idea of component and distributed architecture of the SOWI system based on .NET Remoting technology is suggested.