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Knowledge Asset Management

Beyond the Process-centred and Product-centred Approaches

With 76 Figures

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to Lily and Maria
GM

to Tota
DA

to Carin and Flo
AA

to Emma, Benjamin and Nicholas
RY

Foreword

A new economy is emerging. An economy that is transforming the fundamental rules of business. An economy based on exploiting knowledge and innovation. An economy where knowledge is the main source of wealth for regions, nations, enterprises and people.

This new economy is based on economic values far removed from those of the industrial economy. Value has shifted towards intangibles and in particular towards increasing value by incorporating knowledge into services and products.

The advent of this new economy is rapidly changing the role and structure of global business. Winning enterprises are those best able to harness the benefits and opportunities of information and communication technology, capitalize on their knowledge base and move at the speed of the market.

Knowledge management lies at the heart of the European Community's competitiveness strategy. The European Commission facilitates and supports applied research in knowledge management through its Information Society Technologies (IST) programme, a major theme of research and technological development within the European Union's Research and Technology Development Framework Programme. Specifically, the New Methods of Work and Electronic Commerce action of the IST programme supports long-term applied research in areas combining technological innovation with new work practices and advanced business and work models.

Organizational knowledge management is a critical component of this action of IST. The Commission supports a plethora of applied research and technology development work in the knowledge management area by funding projects that aim at the development and validation of multidisciplinary solutions and practices for the acquisition, sharing, trading and delivery of knowledge in order to leverage individual and collective knowledge, and support worker and business innovation and entrepreneurship.

This book presents an innovative knowledge asset-centric solution to knowledge management that helps companies to tap into their corporate knowledge and enhance their competitiveness. The solution was developed and validated within two highly successful industrial research projects that were cofunded by the European Commission: the Know-Net (EP-28928) and the LEVER (IST-1999-20216) projects.

Applied research on the concepts and approaches proposed within the book is further elaborated by the authors in two additional projects supported by the European Commission: the DECOR (IST-1999-13002) and the INKASS (IST-2001-33373) projects.

The book outlines a conceptually rigorous yet pragmatic approach for managing knowledge assets in order to enable organizational growth, foster innovation and create responsiveness to market demands. The explicit development, nurturing and facilitation of knowledge assets presents tremendous opportunities for organizations of the future that will operate and thrive in the knowledge economy.

Rosalie Zobel
Director, New Methods of Work and Electronic Commerce
Directorate-General Information Society
European Commission

"One of the rare books today on Knowledge Management that addresses the leveraging of an organization's intellectual assets by using an integrative and holistic approach. Well worth reading!"

Michael Stankosky, Professor of Knowledge Management and Co-founder/co-director of the Institute for Knowledge Management, The George Washington University

"This book is a useful illustration of Knowledge Management implementation principles: it synthesizes theoretical and pragmatic approaches to the subject and does a competent job of embracing the various dimensions of a Knowledge Management initiative."

Daniele Chauvel, Director, European Center for Knowledge Management; Business School Marseille-Provence

"For those organisations who wish to take a strategic view of knowledge management, this book shows how they can take KM to the next level – not driven by a technology solution but based on the strategy and needs of the business."

Marc Auckland, Chief Learning Officer and Head of the BT Academy, BT

"The KM method proposed in this book enables enterprises to exploit their knowledge more effectively by making it easily available to employees and by facilitating the exchange and integration of information used by knowledge workers in a variety of business situations"

Ciro Maddaloni, SOGEI S.p.A., Gruppo Telecom Italia

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Introduction

Organizations of all kinds are coming to the realization that knowledge is their greatest competitive asset. As knowledge becomes the key strategic resource of the future, the need of organizations to develop a comprehensive understanding of knowledge strategies, processes and tools for the creation, transfer and deployment of this unique asset is becoming critical.

The task of developing and applying "knowledge management" (KM) as a new discipline is a challenging endeavour. This new discipline must respond successfully to the diverse needs of companies in a timely fashion. For businesses that must compete in a daily changing world, superior management of knowledge is the key to innovation, productivity and growth.

This book presents an innovative and holistic solution to KM that is theoretically sound, yet practical and easily applicable. The approach is explicitly based on managing an organization's knowledge assets in order to create value. It includes a management framework, a knowledge transformation methodology and an intranet-based tool. The solution was developed after 3 years of applied research and practical experimentation in eight companies in the financial services sector, the IT sector and the professional services sector.

Our motivation to write the book was the realization that practical KM efforts in organizations adopt one of two approaches: the *process-centric* approach, which mainly treats KM as a social communication process; and the *product-centric* approach, which focuses on knowledge artefacts, their creation, storage and reuse in computer-based corporate memories. We found evidence of this distinction not only in KM implementations in companies, but also in supporting methodologies and tools.

However, it is our true belief that in order for organisations of the twenty-first century to add value to their product and service "offerings", a holistic perspective is required that would fuse these two approaches. The presentation of a practical framework, method and a tool that provides a balanced fusion of these two KM views is the aim of this book.

About This Book: The Know-Net Solution

This book presents the Know-Net solution, an innovative KM solution, which is based on leveraging the knowledge assets of an organization, be it a profit business or a not-for-profit institution. The Know-Net solution is the result of a major

multipartner industrial research project that was cofunded by the European Scientific Programme of Research in Information Technology (ESPRIT) of the European Commission within the theme of IT for Learning and Training in Industry (under contract ESPRIT EP28928), the Swiss BBW and the participating companies.

The Know-Net consortium comprised the following companies: Planet, a Greek management consultancy company active in south-east Europe (now Planet Ernst & Young); Knowledge Associates, a UK-based global company specializing in knowledge management; DFKI, the German Research Centre for Artificial Intelligence; the Centre for Advanced Learning Technologies of the INSEAD business school; NAI Gooch Webster, a UK-based chartered surveyors firm; the Greek Institute of Communication and Computer Systems, a research institute of the National Technical University of Athens; Fachhochschule bei der Basel, a Swiss academic institution; and the Credit Risk Valuation Department of UBS, the global financial institution. The Know-Net project started in October 1998 and was finalized in March 2000. The world-wide web address of the project is *http://www.know-net.org*

The Know-Net solution presented in this book was further validated and enhanced in a second project entitled LEVER (Leveraging Knowledge in the Software Industry). The objective of LEVER was the customization and validation of the Know-Net solution to companies in the IT services sector. LEVER was funded by the Information Society Technologies (IST) programme of the European Commission under contract IST-1999-20216.

The LEVER partners included: Planet Ernst & Young and Knowledge Associates, which were also participating in Know-Net; Singular, the leading company in Greece in the areas of designing, developing, implementing and supporting integrated business software packages; AlphaNova, a UK-based global developer of collaborative customer relationship management (CRM) solutions; Debus, an ERP development and localization centre based in the Czech Republic; MDA, a Turkish software development company; the Software Research and Development Center of the Middle East Technical University of Turkey; and the Federation of Hellenic Information Technology and Communication Enterprises (SEPE), a non-profit organization with more than 350 members. The LEVER project started in November 2000 and was finalized in October 2001. The website of the project is *http://www.kmlever.com*

The Know-Net solution is based on the principle that the foundation of KM in contemporary enterprises lies on managing and leveraging knowledge assets. In Know-Net's view, KM is not an abstract proposition for the future. Its full realization is, indeed, a long-term goal, but implementing the practical solutions that are available today is not a case of following the latest management fad; it is a vital aspect of world-class management in today's business environment.

Know-Net is a *total* KM solution, which includes three components. The first component is a conceptual *framework* that can be used by managers as a roadmap for ensuring integrity of the KM effort. The second component is a modular *method* that helps organizations to define and document their knowledge management strategy, audit and design business processes that enhance and facilitate corporate learning, establish related organizational roles, facilitate knowledge sharing between people in the organization, and explicitly measure and evaluate the quality and business value of the organization's intellectual capital. The third component is an intranet-based *tool* that supports the collection and categorization of internal and external information, the reuse of stored knowledge using flexible and

customizable knowledge navigators, advanced search, both keyword based and concept based, and collaboration facilities via on-line workspaces that allow knowledge workers to work together from different locations.

Structure of the Book

The first chapter outlines the process- and product-centric approaches to KM. The chapter analyzes the differing perspectives adopted by these two approaches in three different issues: in KM-related software, in KM methods and consulting services, and in real-world KM implementations in various companies. Moreover, the need is identified for a consistent and coherent fusion of the two approaches.

Chapter 2 describes the Know-Net conceptual framework that aims to help consultants and implementers of KM to tie all of the different initiatives and different components into one holistic system. The main building blocks of the framework are the knowledge assets of the organization, but knowledge assets need a strategy to develop them, distribute them, store them, measure them and so on. These knowledge assets need KM processes to facilitate capturing new learning and ideas and building new knowledge assets. They also need communications and collaboration technologies to support them and organizational structures, that is, roles and responsibilities, to leverage them. So, around the knowledge assets we need to ensure that we have a strategy, processes, systems and structure, adequately in place. In addition to that, for KM to be successful, we have to be quite clear how it affects the individual, the team and the entire organization, where the power of collective and systematic application of knowledge assets begins. Finally, we have to look at the interorganizational dimension, which is the relationship between the organization and its customers, suppliers and strategic partners, and how we can better manage the knowledge assets across this whole community and not just within an organization.

Chapter 3 outlines the Know-Net method, which is modular so an organization can choose to start at different levels depending on its readiness, needs and requirements. In "Stage I: plan", an organization determines the vision and readiness for a KM initiative, and the scope and feasibility of the project. In "Stage II: develop", the structure and the design of a holistic solution (that covers processes, people and technology) are iteratively developed, tested and reviewed. "Stage III: operate" is the company-wide implementation of the KM initiative, while the measurement part of the method aims to provide consistent support for measuring the creation, sharing and use of knowledge assets within the company.

Chapter 4 provides an overview of the Know-Net tool, a KM software infrastructure that has been designed to be fully scalable, in order to support and enable either a small team of knowledge workers or a global enterprise-wide KM effort. The tool aims to help companies to collect and categorize internal and external information by allowing knowledge workers to capture knowledge assets and link them to their context into a knowledge repository, to reuse knowledge assets using customizable knowledge navigators, to find knowledge assets using both textual and graphical searching mechanisms, and to collaborate and share knowledge assets via on-line workspaces.

Chapters 5 and 6 give an account of our efforts to test the applicability of the Know-Net solution. We focused on organizations that exhibit high knowledge

intensity (the knowledge-intensive organizations or KIOs). Such organizations usually adopt network organizational structures, they are customer centric and their most critical asset is their people. Examples of KIOs can be found in sectors such as advertising, consulting, financial or legal advice, nursing care and software programming.

Chapter 5 presents the application of the Know-Net solution in four companies in the IT services sector (Delta-Singular, AlphaNova, Debus I.T. and MDA). These descriptions are relatively short and highlight how our methodology has addressed specific but different KM undertakings in companies of the same industry sector.

Chapter 6 summarizes the application of Know-Net in the case of the consulting firm Planet. This description covers the application of all aspects of the Know-Net methodology and aims to be a full example of our approach.

Chapter 7, Knowledge Asset Management and Beyond, starts by giving an account of how the presented KM solution truly integrates the product-centric and process-centric approaches, and continues by discussing how the explicit treatment and leveraging of knowledge assets opens up a wealth of both basic research and action-oriented directions for further exploration.

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