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# **Knowledge Management and Organizational Learning**

Volume 5

**Series editors**

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Editors

# Knowledge and Project Management

A Shared Approach to Improve  
Performance

 Springer

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## Prologue: Book Series on “Knowledge Management and Organizational Learning”

The book series “Knowledge Management and Organizational Learning” was born out of the editors’ wish to collect in one place the most relevant ideas, theories, and practices related to managing knowledge and learning at individual and collective levels, across world regions and industries in for- and non-profit sectors.

This editorial project was a risky endeavour given the high number of already existing conferences, journals, books, and series on the same topics. Nevertheless, the project received full support from the International Association for Knowledge Management (iakm.net) whose members saw it as an integral part of the association’s mission of helping the development of knowledge management (KM) as a scientific discipline.

Despite its increasing importance in academia, KM still suffers, like any other “new area”, from a problem of “recognition”. It aims to become an independent field, but as it has multidisciplinary roots—from psychology to computer science, from organizational science to business administration, just to mention some—it requires an integration of different perspectives and a robust clarification of its conceptual references. Research and practice often branch off in multiple directions, and no clear consensus on concepts and methods has emerged so far.

As scientists and professionals involved in KM, we need to develop “core” theories, common approaches, and standard languages that help us see the problem of managing knowledge under the same shared perspective. We also need to explore emerging new interdisciplinary and transdisciplinary ideas and align them with the foundation. The way to reach a credible agreement on what we are doing and to set a common ground for our future work calls for a capability to discuss, exchange, and, maybe, contrast our ideas and positions freely and openly. We need a place where we can do this in a rigorous but, at the same time, friendly atmosphere.

This book series is such a place. What inspires it is not the acceptance to a particular “school of thought” or “ideological” position, as sometimes happens even in the scientific world. Rather, what inspires it is a vision of KM as a “playground” where there is a lot to research, discover, and innovate and where curiosity, dialog, and openness to confrontation are the key ingredients.

With the same scrupulousness of scientific publications, but with a broader scope and more relaxed constraints than those that may characterize other editorial

channels, the series will put an emphasize on free discussions of new theories, methods, and approaches; on visions of the future and advances in the field; on critical reviews of recent or past empirical evidence; and on formulating ideas for new practical methods or applications. It aims to offer a constantly updated reference to researchers, practitioners, and also students involved in the field of KM and its application. So far, three volumes have been published as follows:

#### Volume 1

Advances in Knowledge Management:  
Celebrating 20 Years of Research and Practice  
Bolisani, Ettore, Handzic, Meliha (Eds.), 2015  
<http://www.springer.com/us/book/9783319095004>

The goal of this introductory book is to assess the “state of KM” as a discipline and to discuss its potential prospects. It includes a collection of chapters where different authors provide their fresh views of the various hot topics for research and practice.

#### Volume 2

Corporate Knowledge Discovery and Organizational Learning:  
The Role, Importance, and Application of Semantic Business Process Management  
Gábor, András, Kő, Andrea (Eds.), 2016  
<http://www.springer.com/us/book/9783319289151>

This second book offers an interesting perspective on how it is possible to extract, organise, share, and preserve the knowledge embedded in organizational processes in order to enrich the organizational memory in a systematic and controlled way, to support employees to easily acquire their job role-specific knowledge, and to help govern and plan the investments in human capital.

#### Volume 3

Social Knowledge Management in Action:  
Applications and Challenges  
Helms, Remko, Cranefield, Jocelyn, van Reijssen, Jurriaan (Eds.), 2017  
<http://www.springer.com/us/book/9783319451312>

The third book aims to outline and examine the potential of innovative applications of social media for KM, as well as the associated challenges, risks, and issues. The book provides not only updated and sound theoretical reference but also food for thought deriving from the analysis of experiences “on the ground”.

Now, we are proud to announce the publication of this volume of the book series entitled “Knowledge and Project Management: A Shared Approach to Improve Performance” edited by Handzic Meliha and Bassi Antonio. Compared to previous volumes that address more generic KM aspects such as the overall state of a discipline (Volume 1) and two competing strategic approaches to KM, technological (Volume 2) and social (Volume 3), this volume takes KM into one specific applied context—project management (PM).

The book argues that integrating effective KM with PM is key to improving the project success rate. Accordingly, it introduces several shared KM/PM concepts and models; describes cognitive as well as spiritual and emotional aspects of project-related knowledge; reviews various codification and personalization KM strategies implemented in projects; and contrasts descriptive and prescriptive, universalistic, and contingency KM approaches. Thus, the book contributes novel theoretical approaches and clear empirical evidence of the value of integrating KM and PM. Further details about this volume are provided in the follow-up preface section.

To conclude this presentation, a few words of acknowledgement are due to the Springer editorial team led by Dr Prashanth Mahgaonkar for continued professional support; to IAKM members and our colleagues for active participation as volume editors, authors, and/or reviewers; and to dear readers whose interest in our work made the inaugural volume of the series one of the top 25% most downloaded Springer eBooks in 2015. We hope that both specialized readers and, more generally, people interested in advanced KM issues will enjoy this fourth volume as well as those to come.

International Association for Knowledge Management

[www.iakm.net](http://www.iakm.net)

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## **Preface: Volume 5 “Knowledge and Project Management: A Shared Approach to Improve Performance”**

Since its beginnings twenty or so years ago, a lot has been done to advance knowledge management (KM) research and practice. Although its recognition as a scientific discipline is still debated, it has gained its place in the management scholarship. The recent appraisal of the field presented in Volume 1 of this Book Series has painted an optimistic picture and predicted a bright future for KM.

One important recommendation given for moving the field forward is turning away from the core issues of knowledge enablers, processes, and stocks towards KM outcomes and its value in different contexts. In the spirit of this recommendation, the main purpose of this book is to address the value of KM in the project environment.

The key motive for selecting project environment as a context of interest for the current book may be found in the staggering percentage (up to 70%) of reported failed projects that are not delivered on time and within budget and/or scope. The latest project management (PM) literature suggests that the main reason for such a high project failure rate is insufficient knowledge acquired and transferred from past projects to future ones.

The argument put forward in this book is that by integrating effective knowledge management (KM) with project management (PM), the overall project success rate can be improved significantly. Accordingly, this book brings together latest ideas and writings on shared approaches to improve performance founded on research and experience pursued by KM and PM academics and practitioners. Overall, the structured collection of articles presented in the book contributes novel theoretical approaches and clear empirical evidence of the value of integrating KM and PM. It provides readers with key lessons learnt from the past and guidance for future.

We are grateful to all contributors for supporting this project and giving their time and effort to make this book possible. Given that there is a visible discourse between academia and practice, one claiming that the other does not produce value, contributors to this volume are drawn from both academics and practitioners, in order to give a balanced view of both camps. A full list of authoritative contributors (in the alphabetical order) and their short biographies is provided in the Appendix.



The book is organized into four major parts, each containing two chapters. Each chapter can be read as an individual article to satisfy varying readers' interests. Hence, some chapters may exhibit a certain level of overlap in order to allow for selective reading. However, readers are advised to first familiarize themselves with the subject matter of this book/volume and its associated book series in two brief introductory sections (prologue and preface).

Part I of the book reviews relevant concepts and models of interest for KM and PM. In particular, chapter "Traditional Project Management" presents a traditional rule-based PM methodology. This traditional approach has been under recent attacks as being inadequate to respond to modern projects circumstances. Consequently, a number of new shared KM and PM models have been proposed to address the problem. Chapter "Integration Models of Project Management with Knowledge Management" analyses some of the latest developments and assesses their potential to address traditional PM shortcomings.

In Part II of the book, the focus is on major PM knowledge areas. The two chapters in this part illustrate different types of knowledge required for effective PM. Chapter "Project Management Body of Knowledge in the Context of PMI and ISO" summarizes the core cognitive aspects of knowledge as prescribed by PMBOK and ISO 10006 standards. Chapter "Emotional and Spiritual Knowledge" extends these to include emotional and spiritual types. The assumption here is that combining art with science (i.e. fusing sentimental with rational knowledge) can assist in enhancing project success (e.g. by better identifying potential value scenarios).

The next Part III of the book is devoted to two key KM strategies (codification and personalization) for PM. Chapter "Lessons Learnt Support System" is codification orientated and is concerned with collecting and organizing lessons learnt from past project experience. In chapter "Renovating Project Management: Knowledge Personalization and Sharing", the main emphasize is on social learning and knowledge transfer in projects through personalization.

Chapters in Part IV of the book examine prescriptive (which KM strategy should be implemented) and descriptive (which KM strategy is implemented) choices in PM. First, chapter "Knowledge Management Selection Model for Project Management" tests empirically contingency approaches to KM to determine the most suitable choices in varying project contexts. A descriptive case of actual KM implementation in a large innovation project is presented in chapter "Knowledge Sharing System under Open Project Perspective: Chinese Experience" to find out if practice follows research or not.

Finally, the epilogue to the book reflects on lessons learnt from previous eight chapters. It offers a perspective on what can be expected from the merger of KM and PM and where to go from here and how.

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We hope that the book will help readers to better understand the need for merger of KM with PM and appreciate its benefits. It is especially our wish for the book to help researchers get an idea of what lies ahead and how to get there. It is also hoped that the book will help practitioners to develop more suitable KM solutions for their project circumstances and turn them into successful project outcomes. With many researchers and practitioners working together in a holistic and systematic manner, we believe that, to quote David Hilbert, “we will know” because “we must know”.

Sarajevo, Bosnia and Herzegovina  
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## About the Authors

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**Constantin Bratianu** is professor of Strategic Management and Knowledge Management at the UNESCO Department for Business Administration, Bucharest University of Economic Studies, Romania. He is the founding Director of the Research Center for Intellectual Capital, and the founding co-editor of the international journals: *Management and Marketing*, and *Management Dynamics in the Knowledge Economy*. He is an active member and chair session of the ECKM, ECIC and ICICKM conferences. He has been Visiting Professor at: University of Applied Sciences, Steyr, Austria; Our Lady of the Lake University, San Antonio, Texas, USA; Tokyo University of Science and Technology, Kobe University, and Osaka University, Japan. Constantin Bratianu proposed a change from the Newtonian paradigm of understanding knowledge based on the dyad of tacit and explicit knowledge to a new paradigm based on thermodynamics, and the concept of knowledge as a field. Also, he developed an entropic model for the organizational intellectual capital based on the idea of integrators and of transformation of the intellectual capital potential into an operational intellectual capital. He used to hold the position of General Director for Higher Education in the Ministry of Education and Research in Romania (1998–2000), and that of Expert for Science and Education in the Romanian Parliament (2001).

**Ettore Bolisani** (Laurea “Electronic Engineering” and Ph.D. “Innovation Studies”—Padua University), after being an E.U. “Marie Curie” research fellow at PREST (University of Manchester) and a researcher at the Universities of Trieste and Padua, is now Associate Professor at the Faculty of Engineering of the University of Padua. His research now mainly focuses on Knowledge Management. He was Chair of the 10th European Conference on Knowledge Management (University of Padua, 2009). He is Series co-Editor of “Knowledge Management and Organizational Learning” (Springer). He is co-founder and first President of the International Association for Knowledge Management.

**Stefano Debei** is Associate Professor of Thermal and Mechanical Measurements at the University of Padova. He co-ordinates the specialization in Mechanical Measurements of the Doctoral Course on Space Sciences, Technologies and Measurements. He is Director of CISAS (Center of Studies and Activities for Space—University of Padova). He has long experience as leader and participant in national and international space research projects (e.g., Rosetta Lander, MARSIS and SHARAD, Lisa Pathfinder, Exomars 2016, ESA SolarOrbiter, ESA BepiColombo). He has worked with international Space Organizations such as ESA and JPL. He has authored more than 180 publications and has achieved, for his research, many scientific awards.

**Nermina Durmic** is Assistant Professor in Department of Information Technologies at International Burch University, Sarajevo, Bosnia and Herzegovina. She completed her Ph.D. in Technical Sciences in the field of Information Technologies at the same university in April 2014. Nermina’s main research interest lies in the area of IS project and product management. Recently, she has mainly been focused on investigating ways to introduce other disciplines in project management area, with the aim of adding a new dimension to IS project development. She has co-authored a number of published papers. Nermina is active in the industry world as well. She is a notable Product Manager, working with international customers from various industries on developing new products and guiding their business strategy following agile principles. With the aim of promoting agile methods in Bosnian software industry, Nermina co-founded Bosnia Agile Association in November 2013. As Bosnia Agile trainer and coach she participates in many projects and events.

**Enrico Masciadra**, PMP<sup>®</sup>, Degree in Electronic Engineering at Politecnico di Milano, certified Project Management Professional (PMP) by the Project Management Institute (PMI). He has been working for a consultancy firm for more than 15 years, specialising in the Insurance, Finance, Telco, and Automotive markets and related Information Technology issues. During these years, he had the opportunity to work as Project Manager on a variety of projects on a wide range of major customers all over Italy, Europe and Canada.

Actually he is Chief Information Officer near Exten and responsible for Defining and implementing hardware and software strategy.

He is also teacher for Agile Project Management course near SUPSI. He is coauthor for the following books about Project Management themes: PMI-NIC: “Maturità nei Progetti” (Maggio 2011) Edizioni Franco Angeli; PMI-NIC: “Gestire l’innovazione nelle PMI” (Dicembre 2006) Edizioni Franco Angeli; Politecnico di Milano “Maturità delle organizzazioni: metodi di misurazione ed osservazione sul campo” (Genn. 2006).

He collaborates with PMI to Italian version of PMBOK® Third Edition (Dic. 2004).

**Liliana Mitkova** is full professor at University d’Evry Val-d’Essonne, France in management science. Her areas of expertise are in the fields of Innovation Management, especially concerning patent strategy and technological market. She has worked with several French industrial groups in the domain of intellectual property management under different approaches: strategic, organizational and marketing. Mrs. Mitkova has published several articles, book chapters and has coordinated international research projects in this area, particularly with partners in China and Brazil.

**Meliha Handzic** is Professor of Management and Information Systems at the International Burch University, Sarajevo, Bosnia and Herzegovina. She received her Ph.D. in Information Systems from the University of New South Wales, where she was Inaugural Leader of the Knowledge Management Research Group at the School of Information Systems, Technology and Management. Handzic’s main teaching and research interests lie in the areas of knowledge management and decision support, with a particular focus on the processes and socio-technological enablers of knowledge creation, sharing, retention and discovery. She has published widely on these topics in books, book chapters, international journals and conference proceedings. Presently, Handzic is an active member of several professional societies and groups including IAKM and IFIP, Regional editor of *Knowledge Management Research and Practice* and serves on editorial boards, executive and program committees for numerous international and national journals and conferences. Prior to joining academia, Handzic worked for the United Nations Development Programme in Asia and Africa. She also had a wide ranging industrial experience in Europe

**Mauro Romani** (Milan, 1965) has a degree in Information Science from the State University of Milan. After accumulating substantial experience as a functional analyst and consultant in the field of quality management and management consultancy (mainly in the financial and automotive sectors), he specialized as Project Manager. Since 2008 he lives in Switzerland, where as Senior Project Manager, he currently works as consultant for a Swiss bank, leading IT and organizational projects. In 2006 he obtained the PMP® credential and in 2009 the PRINCE2® Foundation certification. For some time, he has approached the academic and educational world, taking advantage of many years of experience working on projects and his keen interest in the qualitative, methodological and interdisciplinary aspects of Project Management. Since 2015 he has been giving workshops on

“Distilling Lessons Learnt”, where he shares the method developed by him in order to transform the everyday work experience into articulated and structured Lessons Learnt, and therefore applicable under the Project Management discipline. The general principles of storytelling are also highlighted during the workshop, these being the narrative of our own experiences (characterized by the inevitable emotional component) which becomes the springboard for reflection necessary to the knowledge phase, as the starting point for the final transformation into Lessons Learnt.

In the last year he has been providing a specific course of Project Management for the No Profit world, addressed to the roles of responsibility in those organizations in order to improve the planning, managing and control of No Profit projects.

**Nicolo Savino** has a bachelor degree in Engineering Management and is currently a post-graduate student of Engineering Management at the University of Padova (Italy). He was part of the 2016 Morpheus Project Team that participated in the European Rover Competition organized by ESA. He has experience as Project Manager of a graduate student research team.

**Xi Wang** is an associate professor at Central University of Finance and Economics. She is also a senior researcher of China Institute for Science and Technology Policy at Tsinghua University (CISTP). Her research fields include: public finance, innovation policy and economic growth. She is also a senior consultant expert for several investment companies, such as achieve investment company, fortune investment company, etc. Dr. Wang Xi has published more than 30 articles in Chinese and international journals. She has established 5 years relationships with partners in France.