

CRITICAL CAPABILITIES  
AND COMPETENCIES  
FOR KNOWLEDGE  
ORGANIZATIONS

# WORKING METHODS FOR KNOWLEDGE MANAGEMENT

Titles in this series

Knowledge Economies and Knowledge Work  
*Bill Lafayette, Wayne Curtis, Denise Bedford,  
and Seema Iyer*

Knowledge Assets and Knowledge Audits  
*Pawan Handa, Jean Pagani and Denise Bedford*

Designing and Tracking Knowledge Management Metrics  
*Alexeis Garcia-Perez, Farah Gheriss and Denise Bedford*

Translating Knowledge Management Visions into Strategies  
*Monique Ceruti, Angel Williams, and Denise Bedford*

Assessment Strategies for Knowledge Organizations  
*Dean Testa, Johel Brown-Grant, and Denise Bedford*

# CRITICAL CAPABILITIES AND COMPETENCIES FOR KNOWLEDGE ORGANIZATIONS

**ALEXEIS GARCIA-PEREZ**  
*Coventry University, UK*

**JUAN GABRIEL CEGARRA-NAVARRO**  
*Technical University of Cartagena, Spain*

**DENISE BEDFORD**  
*Georgetown University, USA*

**MARGO THOMAS**  
*Women's Economic Imperative, USA*

**SUSAN WAKABAYASHI**  
*Independent Scholar, USA*



United Kingdom – North America – Japan – India  
Malaysia – China

Emerald Publishing Limited  
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2020

Copyright © 2020 Emerald Publishing Limited.

**Reprints and permissions service**

Contact: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. No responsibility is accepted for the accuracy of information contained in the text, illustrations or advertisements. The opinions expressed in these chapters are not necessarily those of the Author or the publisher.

**British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-1-78973-770-7 (Print)

ISBN: 978-1-78973-767-7 (E-ISBN)

ISBN: 978-1-78973-769-1 (Epub)



ISOQAR certified  
Management System,  
awarded to Emerald  
for adherence to  
Environmental  
standard  
ISO 14001:2004.

Certificate Number 1985  
ISO 14001



INVESTOR IN PEOPLE

# CONTENTS

<i>Introduction to the Series – Working Methods in Knowledge Management</i>	<i>vii</i>
<i>Preface</i>	<i>xi</i>

## SECTION 1

### THE NEW WORLD OF WORK AND WORKERS

1. The Changing Landscape of Work	3
2. Building an Organization's Knowledge Capacity	19
3. Fundamentals of Knowledge Capital	33
4. Building Knowledge Capacity through Knowledge Capabilities	67

## SECTION 2

### MANAGING ORGANIZATIONAL CAPABILITIES

5. Knowledge Capabilities – Roles, Responsibilities, Placement	95
6. Revisiting Competence and Competencies	115
7. Competence, Proficiency and Performance	137

SECTION 3  
MANAGING INDIVIDUAL CAPABILITIES

8.	Human Capital Competence and Proficiency	161
9.	Structural Capital Competence and Proficiency	173
10.	Relational Capital Competence and Proficiency	189

SECTION 4  
CHANGING LANDSCAPE OF HUMAN  
RESOURCE MANAGEMENT

11.	Aligning Strategies – Business, Knowledge and Human Resources	203
12.	Implications for Human Resource Management Roles and Responsibilities	217
	<i>Appendix Pulling it all Together</i>	225
	<i>Index</i>	235

# INTRODUCTION TO THE SERIES – WORKING METHODS IN KNOWLEDGE MANAGEMENT

Knowledge sciences as a discipline has a rich and diverse history dating back to the 1950s. In the past 70 years, the discipline has drawn theory and practice from economics, engineering, communications, learning sciences, technology, information sciences, psychology, social sciences, and business and organization management. To craft this discipline, we have developed our own language and terminologies, established our own peer-reviewed journals and built a rich research foundation, created a gray literature, and established a series of networks and conferences. Over the decades there have been many knowledge management education programs, but there is no consistent curriculum and few have sustained. It has been challenging for new practitioners to gain an understanding of the field. And, while the practice of knowledge management is growing around the world, it has not yet achieved the expected organizational stature. For knowledge management to rise to the stature of other business functions and operations, it must be able to speak the language of business, align with, and support the way the organization works.

This series is designed for business and knowledge management practitioners. *Working Methods in Knowledge Management* is a multi-year and multi-volume series designed to address each and all of the methods required to establish and sustain an organization-wide knowledge management function. The goal of the series is to provide a business perspective of each topic. Each book begins by grounding the method in the business context, then translates established business models and methods to a knowledge management context. It is often the case that this translation expands and extends the business model and method.

The knowledge management literature is rich with introductory handbooks, guidebooks, cookbooks, toolkits, and practical introductions. This literature is an important starting point for anyone new to the discipline. We recommend any and all of these books as a way to build a fundamental understanding of the scope and coverage of the field. These texts will provide a good 10–20-page introduction to all of the key issues you need to be aware of as you embark on a new career in the field or have been assigned a new knowledge management role or responsibility. Once you have that grounding, though, we recommend that you look to the *Working Methods in Knowledge Management* texts as an intermediate source for understanding “What comes next? What now?”

Just as this series is not intended as a starting point for the field, neither is it an ending point. Each text is designed to support practical application, and to foster a broader discussion of practice. It is through practical application and extended discussion that we will advance theory and research. The editors anticipate that as practice expands, there will be a need to update the texts, based on what we are learning. Furthermore, the editors hope the texts are written in a way that allows business managers to extend their work to

include knowledge management functions and assets. We will learn most from expanding the discussion beyond our core community.

### JOINT ENTERPRISE, MUTUAL ENGAGEMENT, AND A SHARED REPERTOIRE

From the outset, the publisher and the editors have established a new and different approach for designing and writing the books. Each text is supported by a team of authors who represent multiple and diverse views of the topic. Each team includes academics, practitioners, and thought leaders. Every author has grappled with the topic in a real-world context. Every author sees the topic differently today than they did when the project began. Over the course of several months, through weekly virtual discussions, the scope and coverage were defined. Through mutual engagement and open sharing, each team developed a joint enterprise and commitment to the topic that is enduring. Every author learned through the discussion and writing process. Each project has resulted in a new shared repertoire. We practiced knowledge management to write about knowledge management. We “ate our own dog food.”

### ACKNOWLEDGMENTS OF EARLY SUPPORT

The series is a massive effort. If there is value in the series much of the credit must go to two individuals – Dr. Elias Carayannis, George Washington University, and Dr. Manlio Del Giudice, University of Rome. It was Dr. Carayannis who first encouraged us to develop a proposal for Emerald Publishers. Of course, this encouragement was just the most

recent form of support from Dr. Carayannis. He has been a mentor and coach for close to 20 years. It was Dr. Carayannis who first taught me the importance of aligning knowledge management with business administration and organizational management. Dr. Del Giudice has been generous with his guidance – particularly in setting a high standard for any and all knowledge management research and practice. We are grateful to him for his careful review and critique of our initial proposal. His patience and thoughtful coaching of colleagues is rare in any field. The field will reach its full potential as long as we have teachers and editors like Dr. Del Giudice.

# PREFACE

## OVERVIEW OF THE SUBJECT MATTER

Knowledge management is not a new discipline. Neither is it a new area of practice. Knowledge management has been emerging, evolving, and adapting for close to 60 years now. Over the decades it has drawn from many and diverse fields, including economics, education, computer science, business administration, communication, information science, and sociology. Over the decades, each of these contributing fields has influenced how we see and how we think of knowledge management. In fact, the heart of the field has always been knowledge and people. Seasoned researchers and practitioners have often lamented the “groundhog day syndrome” of knowledge management. We have been unable to break through most of the elementary issues to advance the discipline. To break through this syndrome, organizations need to see how knowledge management provides practical business value. To break through this syndrome, organizations need to know how to move forward to do knowledge management.

Transitioning from an industrial economy to a knowledge economy is the primary business challenge of the 21st century. Knowledge capacity building, knowledge capabilities, and knowledge capital are the critical success factors for a transition. This book walks the reader through what it means to build knowledge capacity, and how to build it at all levels of the organization. The investment in this business challenge

pays dividends for the field of knowledge management as well. By walking through these issues from a business perspective, a picture of knowledge management roles, responsibilities, competencies, and proficiencies emerges.

There is no one way to build capacity, to define capabilities, or to identify knowledge capital. There is no one way to define roles, responsibilities, and competencies. Each organization must design solutions that fit their internal and external environments – at a given point in time. The authors provide a framework that any organization can use to design a solution that suits their needs. This is not a short term or an easy task. It is not a task for a single individual. It requires alignment and engagement across the organization. It is not just a checklist or a matter of finding the right argument to convince the CEO to appoint a Chief Knowledge Officer. In fact, it first means understanding some key concepts – capacity building, knowledge functions and capabilities, and knowledge capital. It means getting a handle on how these issues are addressed in the business field, in the field of human resource (HR) management, and in knowledge management.

There are two dimensions to the topic of knowledge management capabilities and competencies. The first dimension focuses on knowledge capital in general and how organizations view and manage their knowledge capital. This dimension is relatively new and is changing rapidly. It addresses what we've traditionally referred to as "human resource" and "personnel management." These changes are fueled by the transition from an industrial to a knowledge economy. To understand these changes, we learn how the economy is changing and what those changes mean for work and workers.

The second dimension focuses on those new capabilities that organizations need to develop to manage this new knowledge capital. Over the past 20 years, these capabilities have been addressed by knowledge management professionals

and practitioners. Over the decades there have been many attempts to describe the knowledge management roles and responsibilities an organization should consider in staffing a knowledge management program or project in particular.

This book addresses these two dimensions. The book provides background information and context by referencing the current thinking and research. The book walks through the issues from a practical and applied perspective. The reader can generate a plan for their organization by addressing the issues raised in each chapter.

In the 21st century, organizations need to understand both of these dimensions and create a vision for supporting both in a way that aligns with and supports their business goals. This is a significant challenge. It means understanding how the knowledge economy is impacting the work their organization does, how that change is affecting who does that work, what those workers need to know, and how they work – today and in the future. It also means reviewing how the organization views those workers – are they viewed and managed as “human resources” that support a business process just like supplies and machinery? Or, are they managed as capital investments and sources of knowledge, growth, and innovation for the future? How does personnel management characterize the capabilities of these workers? Does it portray them as technical and behavioral competencies or does it look beyond simple skills and competencies?

The authors represent a wealth of research and experience on all of these topics in a variety of organizations – and organizations at different stages of economic transition. Their combined knowledge includes successes and failures. The common thread running through all of their theoretical and applied work is a belief that organizations should be aware of the changes in progress and the importance of having a plan for managing them.

The topics covered in this book are evolving. The issues covered in the book are not definitive. The authors intend the book to act as a catalyst for future discussions and collaborative learning across organizations. The practical experiences of organizations are essential to the advancement of these topics.

## WHERE THE TOPIC FITS IN THE WORLD TODAY

The topics of knowledge organizations, organizational capacity, knowledge capital, work, and workforce management are central to the HR and personnel management.

Economists were the first to perceive the shift from an industrial to a knowledge economy back in the 1950s. They first noted shifts in the national accounts that suggested the concentration of labor, jobs, and gross domestic product was changing to emerging sectors related to information, entertainment, education, and business services. Over the decades, economists noted the shifting balance of financial and physical capital to knowledge capital. Today, this transition is in full swing and the effects are felt by everyone. However, the transition is described at the macro level and in abstract terms. There is a gap in treatment at the micro working level. The authors fill this gap.

There are many references in the media, the literature, and our public conversations about the growing value of intellectual capital. While this is an important topic, it is not well understood – there are misperceptions about what intellectual capital is, who has it, and why it is important. The discourse about intellectual capital is disjointed from the HR management, from labor economics, from workforce development. There is a need to bridge the semantics of these traditionally distinct and sometimes adversarial perspectives and form a common understanding of the challenges of the 21st century knowledge economy. The authors bridge these topics.

The economic changes we are experiencing in the 21st century have a significant effect on these fields. The primary effect is to shift the focus from people as resources hired to support predefined business processes to people as knowledge capital and the primary source of capacity for knowledge organizations. The change calls into question our basic assumptions about how to manage and control people and replaces them with investments that grow knowledge capital. As a first step in the transition to a knowledge economy, organizations must strengthen and expand their capacity for knowledge management and knowledge capital. The authors speak to this topic.

Similarly, there is a rich discussion of capacity building, new organizational capabilities, and individual capabilities in the organizational management world. This rich discourse is disconnected from the discourse around knowledge and knowledge capital in the fields of knowledge management, education, and economics. It is critical to enrich this discourse by expanding the view from the organization as an abstract thing to people as the source of that organizational capacity. The authors connect these issues.

Knowledge management practitioners and professionals have developed a rich body of knowledge around tactics that enable individuals, groups, and organizations to increase their knowledge capabilities. The body of knowledge needs to be exposed to, adopted, and owned by business managers. This rich body of knowledge is the missing piece for building the knowledge capacity of organizations. The authors explain how the facets of knowledge management fill this gap.

#### WHERE THE BOOK FITS IN THE LITERATURE TODAY

This is the third book in the Working Methods in Knowledge Management series. This book extends the treatment of

knowledge capital presented in Book 1 to a practical discussion of the impact on workers, jobs, roles, responsibilities, and competencies. This book provides a context for Books 4, 5, and 6 by laying the foundation for the organizational and individual knowledge capabilities that might be assessed, measured, and audited.

While there is a rich literature on topics such as organizational capacity, knowledge organizations, knowledge economy, knowledge work, intellectual and human capital, this rich literature is fragmented and scattered across several domains. The authors hope to bridge these gaps, create a cross disciplinary discourse, and expose gaps in research into knowledge capital investment strategies.

There is a rich gray literature of case studies, personal experiences, and expert advice on implementing knowledge management tactics and practices. There is a need to relate these discussions to organizational functions and competencies. Additionally, the gray literature is rich with sample strategies for designing knowledge management projects but it is sparse on integrating the basic capabilities into an organizational structure. The authors explain why this is important and suggest a method for integration.

Additionally, the majority of the literature on knowledge management functions and competencies derives from public-sector organizations and agencies where functions and competencies are public knowledge. The authors describe methods which can be leveraged and adapted by any organization without exposing competitive information.

## DESCRIPTION OF THE TARGET AUDIENCE

This text is written for organizational executives who are experiencing and need to transition their organization from

an industrial to a knowledge economy. The book is written for business managers who are looking at work and business processes more broadly as organizational capabilities. The book is written for HR and personnel management professionals and practitioners who need to put some practical context around and translate the idea of human capital. The book is written for HR managers whose future role in knowledge organizations will be pivotal or non-existent depending on how they navigate that future. The book is written for knowledge management professionals and practitioners who need to focus on the future and to connect their tactics and activities to the bigger picture. Finally, the book is written for workers who are struggling to understand what work and their jobs might look like in the future.

## STRUCTURE OF THE BOOK

The book is organized into 4 sections and 12 chapters. Section 1 explains the new world of work and workers. Chapters in this section focus on the changing landscape of work, the shift in focus from people as process support resources to people as sources of knowledge capital, and the new capabilities needed to manage knowledge capital. Section 2 provides a deeper discussion of the knowledge capital, knowledge management capabilities, roles, and responsibilities. This section also explains how new these roles and responsibilities translate to knowledge capital attributes and competencies. Section 3 focuses on what the changes mean for individual workers. Developing individual capabilities means growing human capital, structural capital, and relational capital. Finally, Section 4 considers how these changes might affect HR management.

Each chapter is written like a project description. While the authors can explain the knowledge economy, knowledge

work, and knowledge capital, we cannot tell you what this means for you or your organization. Only an organization can interpret the change to suit their business goals. Each chapter provides background information on the topic as well as references to additional resources – both theory and practice. Each chapter highlights the thought leaders and practitioners in that topic. Finally, the Appendix provides a high-level project plan that the reader can use as a template for designing their own approach. Each Task and Subtask in the project plan traces back to a chapter in the book.

### Section 1. The New World of Work and Workers

- Chapter 1. The Changing Landscape of Work
- Chapter 2. Building an Organization’s Knowledge Capacity
- Chapter 3. Fundamentals of Knowledge Capital
- Chapter 4. Building Knowledge Capacity through Knowledge Capabilities

### Section 2. Managing Organizational Capabilities

- Chapter 5. Knowledge Capabilities – Roles, Responsibilities, Placement
- Chapter 6. Revisiting Competence and Competencies
- Chapter 7. Competence, Proficiency and Performance

### Section 3. Managing Individual Capabilities

- Chapter 8. Human Capital Competence and Proficiency
- Chapter 9. Structural Capital Competence and Proficiency
- Chapter 10. Relational Capital Competence and Proficiency

#### Section 4. Changing Landscape of Human Resource Management

- Chapter 11. Aligning Strategies – Business, Knowledge and Human Resources
- Chapter 12. Implications for Human Resource Management Role and Responsibilities

### CHAPTER SUMMARIES

Chapter 1 focuses on the changing landscape of work by explaining how the economy has changed over the past 70 years and how work has changed, specifically who works, when and where they work, who we work with. This chapter also defines knowledge capital and considers the role that knowledge capital has played in shifting focus and priorities in the new economy. This chapter raises the reader's awareness of how their organizations have responded to the economic changes, and how those organizations view knowledge capital.

Chapter 2 defines capacity and explains why knowledge capacity is important for a successful transition from an agrarian or industrial organization to a knowledge organization. The chapter walks through what it means to build capacity strategically, individually, and collectively. It further explains how what capacity looks like at an organizational capability level – and why it is important to build out knowledge management functions. The chapter also describes how individuals build organizational capacity by investing in and growing their knowledge capital. Building knowledge capacity is the responsibility of every member of an organization.

Chapter 3 goes into greater detail on the changing view of labor. In the industrial economy people have been viewed and

managed as resources – like financial and physical – that support a business process. Are people expendable when the process changes? The process view assigns people to jobs and job classes, describes people in terms of their technical competencies, and evaluates them based on their proficiency to support the process. This chapter explains the business value of labor shifts to knowledge capital and capabilities. The chapter also illustrates how increasing automation and artificial intelligence are changing, who does predictable routine work (i.e., agents and robotics) and the increased demand for people to take on problem solving, creative, design, and innovation work. In the knowledge economy, organizations assess what an individual can contribute to a context and the organization's current and future capabilities. As knowledge capital, people are seen as sources of growth and assets for investments. This chapter raises the reader's awareness of how their organizations think about future labor needs.

Chapter 4 shifts the discussion to capacity building as a critical factor in transitioning from an industrial to a knowledge organization. Capacity is considered from two perspectives – as a transition factor and as an organizational effectiveness factor. In both cases, building knowledge capacity means building a robust foundation of knowledge capabilities. Knowledge capabilities described in terms of facets drawn from the field of knowledge management. Knowledge management capabilities are interpreted for all capacity building roles.

Chapter 5 translates the knowledge management capabilities described in Chapter 4 in terms of roles and responsibilities. The chapter describes strategic roles and their responsibilities, specialized roles, roles that are aligned with and embedded in the business, and roles and responsibilities that are universal and applied to all workers. The chapter considers the current landscape of roles and responsibilities and the need to establish

a generic framework from which organizations can draw. The chapter further discusses the importance of aligning the placement of these roles and responsibilities with the organization's administrative structures and organizational cultures.

Chapter 6 takes the reader from roles and responsibilities to identifying the new competencies needed to support them. There are many different approaches for defining qualifications, competencies, and proficiencies. This chapter describes the concepts in a business-neutral way that allows the reader to adapt the ideas to their organizational setting. The authors review different models and approaches and explain the historical focus on technical and behavioral competencies. The definitions and characterizations of knowledge capital presented in Chapter 2 are reviewed and aligned with this traditional approach. The chapter walks the reader through a thought exercise of envisioning how their approach to competencies might change in the future.

Chapter 7 explores how we define proficiency levels to these new individual capabilities, and what it means to grow knowledge capital proficiency in general. How does our traditional approach to job training and learning relate to these new capabilities? Who defines what we need to learn? How does what we need to learn, who we learn from, where, how, and when we learn change? How do the concepts of lifewide and lifelong learning relate to the new knowledge capabilities and proficiencies?

Chapter 8 pulls together the ideas from Chapters 5–7 and focuses them on human capital – tacit knowledge, skills and competencies, and attitudes and behavior. These are capabilities owned and developed by individual workers. The chapter explains what it means to grow human capital. The chapter also poses and answers six key questions, including (1) How does this form of capital behave: (2) What is the individual's role in growing it? The organization's role? (3) How does it

affect the work environment? (4) How does it affect the work culture? (5) How do you know if it is changing? and (6) What kind of assessment is appropriate? What does it mean when tacit knowledge is no longer defined simply as a degree or a credential but must be demonstrated or vouched for? What does it mean when all the skills and competencies your workers need can no longer be demonstrated by simple test results? And, how do we incorporate the growing emphasis on “soft skills” such as emotional intelligence, social intelligence, team collaboration, etc. How do individuals learn these new capabilities? The chapter also considers what it means for individuals to develop the capacity to learn, unlearn, and relearn – rather than to “know.” The chapter considers how these shifts affect our traditional approach to performance evaluation.

Chapter 9 pulls together ideas from Chapters 5–7 and focuses them on structural capital – explicit sources of information, procedural know how, and organizational culture. Structural capital is the capital of groups or organizations – it is an aggregate. Growing structural capital is a new concept for some kinds of organizations, particularly those whose HR management cultures have emphasized individual competition. What does a focus on the aggregate mean for learning an investment? This chapter poses the same six key questions presented in Chapter 8. This chapter walks the reader through what it means to manage these three kinds of capital and considers how it affects management roles and responsibilities. The chapter considers how these shifts affect our traditional approach to performance evaluation.

Chapter 10 focuses on the most challenging type of knowledge capital – relational and reputational capital. While individuals and organizations historically have recognized these attributes, they are typically not accounted for or valued. The economic shift raises the profile of this type of capital and challenges us to define new approaches to growing and

managing it. This chapter poses the same six key questions presented in Chapter 8. The chapter considers how these shifts affect our traditional approach to performance evaluation. This is an emerging area which will require a wealth of ideas from researchers and practitioners. The authors encourage readers to contribute to the discussion.

Chapter 11 considers the challenges of aligning strategies across three important functions, including business management, knowledge management, and HR management. This chapter looks at the role of all three of these functions in building knowledge capacity. The chapter explains how organizations might leverage research in these three fields to align strategies. The chapter also explains how the absence of engagement of any one of these three functions might impede the organization's transition to a knowledge economy.

Chapter 12 brings the focus back to the organization level and the impact the changes may have on traditional HR and line managers and the HR management function. This chapter explores how the economic shifts and the changing definition of work affect the HR management function. What does it mean for what HR professionals do – how they manage job classes and schemes, their approaches to onboarding, retention, off boarding, to performance appraisal? What do the changes mean for HR managers' roles and responsibilities? What does it mean for what HR professionals do – how they manage job classes and schemes, their approaches to onboarding, retention, off boarding, to performance appraisal? What do the changes mean for HR managers' roles and responsibilities.

#### HOW THE BOOK IMPACTS THE FIELD

The authors hope the book will contribute to the literature of business and management by shifting the discourse about

“managing people” as business resources to be procured and disposed of as business changes to managing people as strategic knowledge capital investments. In some ways this is a back to the future book – taking us back to a time when organizations saw employees as community assets, as neighbors, and as sources of ideas and knowledge. In other ways, it is a radically new treatment of these topics, because it treats individual employees as capital assets. The book considers how organizations can identify, engage, and develop relationships with all employees in a way that best suits them and the organization. The book gives further definition to the general discourse of human capital through the build out of new and varied forms of employee relationships, new roles and responsibilities, competencies, and the growth of investment strategies. Ideally, the book stimulates a discussion about how business invests more in people and how it “right sizes” and “best fits” human capital to future business needs. Roles, responsibilities, competences, and proficiencies are no longer just staffing strategies. They are knowledge capacity building strategies. The text emphasizes the importance of aligning business, knowledge, and HR management strategies.

The authors hope the book will contribute to the field of HR management by increasing the visibility of knowledge capital. The expectation is that the book will highlight the value of knowledge capital to both individuals and organizations. It increases and expands the role of HR from simply managing job descriptions, staffing technologies, training and performance evaluation to the growth and development of capabilities. The focus on organizational capabilities is a new opportunity for both HR and the business to engage to build knowledge capacity. Hopefully, the book adds to the HR literature by expanding the discussion of “the future” well beyond the current focus on the digital workplace. Stimulate

a discussion of what role HR plays growing the organization's capacity to transition to the knowledge economy.

This text translates the generalized discussions of intellectual capital from the field of knowledge management to practical roles, responsibilities, and competencies needed to support knowledge functions. The text also refocuses the discussion within the field from a “knowledge management as project” approach – from sporadic and fragmented initiatives to a sustainable organization wide capability.

*This page intentionally left blank*

## SECTION 1

# THE NEW WORLD OF WORK AND WORKERS

*This page intentionally left blank*

# 1

## THE CHANGING LANDSCAPE OF WORK

### CHAPTER SUMMARY

Chapter 1 focuses on the changing landscape of work by explaining how the economy has changed over the past 70 years and how work has changed, specifically who works, when and where we work, who we work with. This chapter also defines knowledge capital and considers the role that knowledge capital has played in shifting focus and priorities in the new economy. This chapter raises the reader's awareness of how their organizations have responded to the economic changes, how those organizations view knowledge capital, what these changes mean for how organizations manage labor and work. The changes have implications for management – who manages, what they manage, and how they manage. The management culture built around command, control, and direction are shifting to collaboration, coaching, and mentorship.

## CHANGING ECONOMIC LANDSCAPE

Change is inherent to economies. Over the past 500 years we have experienced shifts from agrarian to industrial and now knowledge economies. Each new wave has brought change and synthesis. The previous economy remains in place but is affected by the new one. The agrarian economy was changed by the industrial economy, and the industrial economy is being changed by the knowledge economy. Each new wave takes decades to centuries to evolve. Over the past 70 years the U.S. economy has been shifting from an advanced industrial to a knowledge-based economy. Over the past several decades, economies in the United States and across the developed world have increasingly become knowledge-driven. This shift was first observed by Machlup in the 1950s, and has been further chronicled and characterized by other leading economists and researchers. Since the 1950s economists have attributed the shift to the rise in importance of services, information, an increasingly educated and trained workforce, technology, an increasingly virtual work environment, and increases in artificial intelligence and automation. The common element to all of these perspectives is the increased value of knowledge as capital. In the 21st century, knowledge is now a primary factor of production. It is equivalent to financial and physical capital in the industrial economy, and to land and physical labor in the agricultural economy.

Knowledge capital is defined to include the tacit knowledge of individuals, their skills and competencies, and their attitudes and behaviors. Knowledge capital is also an aggregate – the collective human capital of all members of a group, a unit, an organization, their collective explicit knowledge and information, their collective knowledge of what they do and how they work together, and their collective culture – their fundamental assumptions and beliefs, their values and

behaviors. Additionally, knowledge capital includes all of the interactions, flows, connections, and reputations of individuals who comprise the internal and the external networks. This definition of knowledge capital is inclusive of any and all knowledge that is at the foundation of all types of economies. There is no agricultural crop, no manufactured automobile, and no financial instrument that is not grounded on knowledge. No product or service has ever been produced without knowledge – as an input, a defining factor in a process, or as an output. The change over time – with each successive wave – is the role that knowledge plays and the speed at which that knowledge advances. Knowledge is the differentiating factor in the 21st-century economy. Knowledge is what fuels our 21st-century economic systems. Knowledge has always been part of our economic systems, but recent events and advances have made it more visible and accessible. Increased knowledge capacity in populations has increased our awareness of its value and its power to change economic relationships.

A knowledge economy is so named because the core commodity – the primary factor of production is knowledge. The definition of knowledge itself presents challenges. Knowledge is a term that has meaning in many and perhaps all fields. It is treated in some as a human process. In other fields it is a tangible or intangible thing. And, in others it is an attribute of a person. For the purpose of this text, the authors define knowledge as a core capital asset of individuals, of groups, and of organizations. Knowledge is inherently human – it is an attribute of people. This view of knowledge is central to how we view people. Traditionally, organizations have viewed people as resources assigned to business processes, managed as cost factors, and commodities to be acquired or disposed of as our business needs change. In the knowledge economy, this view shifts to people as capacity building resources, as critical capital we invest in and develop over their association with the

team and organization. In the knowledge economy, every individual is perceived as a source of knowledge. And, in the knowledge economy we have a broader view of an individual's knowledge beyond the tasks defined in a job description.

### ROLE OF KNOWLEDGE CAPITAL IN CHANGING LANDSCAPE

Knowledge capital is referred to in different ways by business managers and accountants, economists, human resource professionals, and technologists. Business managers and accountants treat knowledge capital as an intangible asset. This perspective compares the tangible and quantifiable attributes of physical and financial capital to the intangible attributes and hidden value of knowledge capital. Business managers and accountants have long recognized the value of human capital – the way they refer to knowledge capital. From this perspective knowledge capital includes reputation, know-how, process knowledge – no business process or operation can function without some working knowledge. Business managers also understand the value of knowledge to an organization's competitive status in a market, to the role it plays in redefining or remaking those markets, and the composition of those markets.

We can already see the impact of businesses that have realized the value and leverage that knowledge capital offers.

Economists frame knowledge capital as intellectual capital (Bassi & Van Buren, 1999; Bontis, 1996, 1998, 1999; Bornemann, Knapp, Schneider, & Sixl, 1999; Edvinsson & Malone, 1997; Roos et al., 1997; Sveiby, 1997) (. In fact there is a high-profile journal focused entirely on intellectual capital – *Journal of Intellectual Capital*. Economists treat knowledge

as an asset that can be used to produce wealth, multiply output of physical assets, gain competitive advantage, and/or to enhance value of other types of capital. Recently, economists have begun to classify intellectual capital as a true capital cost because (1) investment in (and replacement of) people is equivalent to or greater than the investment in machines and plants and (2) expenses incurred in education and training (to maintain the shelf life of intellectual assets) are equivalent to depreciation costs of physical assets.

Human capital and intellectual capital researchers focus on people as a form of capital. These researchers seek to look the economic growth and capacity that results from investments in human capital (Aliaga, 2001; Becker, 1993; Benhabib & Spiegel, 1994; Engelbrecht, 2003; Hendricks, 2002). Human capital theory holds that investments in human capital are a primary source of economic growth. In the 21st century, individuals are challenged to grow their human capital. In the 21st century, organizations are challenged to invest in and leverage their human capital. Human capital theory shifts our understanding of people as billets and “job seekers” to primary sources of economic growth, innovation and productivity. Human capital theorists and researchers explore learning as a deliberate investment that increases the capacity of individuals and organizations.

There is some discussion of human capital within the human resources domain. While there is discussion among professionals and in the literature, the concept of human capital, human capital investments and human capital growth has only translated into practice in selective organizations. Within the human resources field the discussion of human capital tends to focus on what have traditionally been characterized as “soft skills” or “non-technical competencies.” There has been progress in recognizing that some of these soft skills have a formal grounding, i.e. social skills, social

capital, emotional intelligence, etc. There is growing recognition that these non-technical skills have a significant effect on an individual's productivity, on a team or unit's ability to collectively generate knowledge, and the organization's overall knowledge capacity.

The prevailing view, though, continues to see people as a resource that needs to be managed in the context of how we work and what we do today. On a practical level, people are managed from the perspective of their salaries, their job classifications, skills and competencies. Today, human resource management is a support function – it is a set of activities and tasks focused on identifying, procuring, retaining and disposing of resources to support a business process. Knowledge organizations competing and thriving in a knowledge economy need to shift their focus on human capital to a business and an operational perspective. Human capital is managed and leveraged every day – at every interaction, in the way people work, what they bring to the task, and how they grow and learn each day. The focus of human resource management must also shift away from high performers, high skilled individuals, and technical competencies to the full knowledge capital and capacity of all individuals. In the past 20 years, organizations have begun to realize that it is the full scope of knowledge capital – tacit knowledge, skills and competencies, attitudes and behaviors, explicit knowledge, procedural knowledge, cultural registers, and relationships – that contributes to economic productivity. It is no longer sufficient to expect that an individual's qualifications and competencies at on-boarding represent his/her full potential. Knowledge capital grows with use, based on opportunity and depending on exposure. Managing and leveraging knowledge capital is now a core business function – a new responsibility of each individual, of each manager – in every business context.