# Knowledge Management

## An Introduction

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# Preface

*Knowledge management is getting the right information in front of the right people at the right time.*

—Gordon Petrash

The discipline of knowledge management has matured over the past decade. Much of the interest in the field results from the simple reality that organizations compete on their *knowledge-based* assets. Even noncompetitive organizations (e.g., nonprofits and governmental departments) thrive or wither based on their ability to leverage their knowledge-based assets. Consider the case of nation-states, where indicators such as standard of living, economic prosperity, and even safety can be traced to the ability of the nation to leverage its knowledge assets in innovative ways. Similarly, nonprofits of all kinds compete for grants and funding based on their ability to show stakeholders that they are best equipped to use their knowledge toward social good. Even individuals, from students to budding entrepreneurs or information professionals, are assessed and rewarded on how they put their knowledge, expertise, and skills toward productive purposes. Simply put, all organizations strive to acquire the most advanced technology assets (within their budgetary constraints), hire the smartest people, and build robust, and innovative, business processes. In each of these efforts, successful organizations will be able to leverage knowledge in, and around, their midsts; connect disparate pieces of knowledge; and leverage it toward attaining organizational objectives.

The fundamentals presented in *Knowledge Management: An Introduction* hold equally applicable to all types of organizations: from hospitals to government agencies to *Fortune* 500 companies. The only factor that does change is the nature of *knowledge* one must manage. In this book, we take a discipline-agnostic view of knowledge management. Our goal is to help you appreciate the art and science of knowledge management through multiple lenses. We will share examples from corporations, libraries, nonprofits, government agencies, and even from lone rangers (such as individual entrepreneurs). We will share practices for enabling knowledge creation and transfer that can be applied in large or small organizations, government or nonprofit, albeit with some minor tweaking. To truly appreciate knowledge management, one must take a broad view of the concept and learn how to adapt practices and techniques found in a multitude of environments. After all, at the end of the day, we are concerned with the management of *knowledge*, which is a deeply human experience, and much can be learned from studying how diverse professionals, organizations, and even

individuals engage in the acts of discovering, creating, transferring, and applying knowledge.

In the pages that follow, we aim to present actionable and foundational knowledge for the next generation of knowledge managers and workers. This book will draw heavily on both our research and practice experiences. Since 2000, we have been involved in knowledge management projects. These projects have run the gamut of knowledge management efforts: from the technical domain of knowledge discovery from databases, to the behavioral challenges associated with crafting incentives for knowledge transfer and consumption and the strategic realm which has looked at, among other issues, the crafting of organizational innovations. These experiences have profoundly impacted our views of what knowledge management is and how to do it right. We will attempt to share as much of our experiences as possible in the pages that follow. This effort will bring together practice-driven knowledge which is synthesized with knowledge arrived at from rigorous scientific inquiry.

The primary audience for the book is upper-level undergraduate and graduate students who are interested in the concept of knowledge management. Knowledge management courses are found in a wide assortment of academic disciplines from information and library science, to public policy and administration, management, and even engineering (e.g., industrial engineering). The only prerequisite for reading and comprehending this text is an open and inquisitive mind. We do not assume the reader to have any specific background or experience. Knowledge management courses are interdisciplinary in their orientation. As noted, due to the multifaceted nature of managing knowledge and the parallels one can draw from examining practices across a range of disciplines, it is not possible to teach a course on knowledge management that is specific to a given discipline. Therefore, we have written a book that students across a wide range of disciplines and lines of inquiries can appreciate and gain from.

The book is written in a conversational tone, which we hope will be engaging for the reader. When discussing concepts, we share some personal stories and experiences to help the reader digest the intricacies of critical issues. Illustrations come from our consulting and research experience. In each chapter, sidebars illustrate a multitude of examples of how knowledge management concepts play out in practice. In addition, a concluding sidebar highlights the top ten critical issues that knowledge management professionals need to pay attention to. Questions for discussions appear at the end of each chapter and can be used as springboards for constructive dialogue. Finally, each chapter's reference list may be consulted for deeper coverage on critical issues or used by instructors to assign additional reading.

## ROAD MAP OF THE BOOK

The book is divided into three main sections. Part I, which consists of three chapters, covers the foundational concepts and introduces the reader to the key elements of knowledge management. Chapter 1 frames the concept of knowledge management within the larger agendas of information management and organizational innovation.

The focus of this chapter is that an organization must gain value from its efforts in knowledge management. This may occur when an organization realizes value from knowledge management in terms of operational and tactical efficiencies (e.g., optimized business processes) or even strategic gains (e.g., competitive advantages). The concept of knowledge management draws on, and contributes to, the information management and innovation agendas of organization.

Chapter 2 explores the concept of *knowledge*. It answers key questions including: What do we mean by knowledge? How do we differentiate knowledge from information or data? Is knowledge the same as intelligence (or wisdom)? Are there different types of knowledge? Who owns or controls knowledge (individuals, groups, organizations, interorganizational networks, or society)? The goal of this chapter is to help the reader understand the multifaceted nature of knowledge and how the lens through which it is viewed impacts the management of knowledge.

Chapter 3 concentrates on the concept of *management*. This chapter is not intended to serve as a replacement for a management textbook or course. Rather, the focus of this chapter will be on exploring how the management of an intangible asset, such as knowledge, differs from the management of a tangible asset (e.g., capital, land, machinery). The goal of this chapter is help students who do not have a background in management to gain an initial understanding of its various elements—planning, control, organizing, and directing. The chapter concludes with a set of guidelines for the management of knowledge (and information) assets.

Part II consists of four chapters that explore critical activities of knowledge management. Chapter 4 focuses on *knowledge creation*, the mechanics by which knowledge is drawn from information. The manner in which knowledge is discovered in organizations will depend on different circumstances. For example, when an organization encounters a problem, knowledge discovery might occur when a solution is crafted by exploiting its reservoir of knowledge. This effort has distinct mechanics when compared to the case where an organization needs to engage in blue-sky, broad-range thinking to chart its future course. Here an exploratory approach might be better suited. The process by which knowledge might be discovered here will be of a different nature. Both the discovery of knowledge from explicit information sources (e.g., databases and information records) through automated mechanisms (e.g., machine learning or statistical analyses), and the generation of tacit knowledge are covered here.

Chapter 5 focuses on *knowledge organization*. How do we organize knowledge? This chapter takes as it starting point the various dimensions of knowledge (covered in Chapter 2) and then explores the organization problem. In addition to traditional organization methods (e.g., by type of knowledge, source, or form), this chapter will explore nontraditional classification schemes (such as by value proposition or risk). Top-down and bottom-up (emergent) methods of organizing knowledge will be covered. For example, the chapter will discuss the concept of tagging, an emergent organization mechanism. Tagging, in its many variants, is a popular concept today, and raises many questions: How should organizations manage tagging of knowledge objects? Who should tag knowledge objects (producers or consumers, experts or novices)? How is tagging of information objects different than tagging of knowledge objects? While the

majority of the chapter focuses on the organization of *explicit* knowledge artifacts, due attention is given to the organizational challenges surrounding knowledge of a *tacit* nature.

Chapter 6 explores the design and management of *knowledge transfer and sharing*. This chapter centers on the knowledge transfer problem and the issues that arise when trying to transfer knowledge across contexts (e.g., human to human, human to machine, or vice versa). It addresses design considerations for knowledge service, such as the design of push and pull mechanisms. The chapter also covers newer technologies such as web services and social media.

The purpose of Chapter 7 is to explore the manner in which knowledge is *applied* to meet organizational goals. An organization certainly gains value from knowledge management efforts if it can systematically use, and reuse, knowledge to further its goals and objectives. Today, we must manage both how humans use knowledge and how to build technologies that automate the application of knowledge. For example, think about customer service and other self-service technologies: these artifacts are coded with knowledge and act as interfaces for us to get work accomplished. The questions of how these technologies should be designed and managed (e.g., knowledge be updated, systems maintained) are non-trivial issues that require due consideration.

The third and final part of the book contains three chapters. These chapters take a strategic view of knowledge management in organizations. Chapter 8 covers salient issues surrounding the design of *global knowledge management systems*. Today organizations spread across continents, spanning multiple cultures, countries, and time zones. Organizations must be flexible enough to tap into knowledge resources anywhere on the globe and then to leverage them. This chapter will provide an overview of some of the pragmatic issues involved in building global knowledge management programs. For example, today it is commonplace for an intranet (i.e., an internal information space) to be constructed in the English language. Yet, when taking into consideration that there are many more Chinese students learning English than there are American or British students learning Mandarin, what language should be used?

Chapter 9 looks at the process a manager uses in *building a business case* for a knowledge management effort. When organizations do not devote the necessary resources to knowledge management efforts, it is often not due to a lack of resources, but rather because mangers have not made an appealing business case. You will be provided with guidelines of how to tie knowledge management efforts to an organization's goals, objectives, and key indicators (e.g., profit, revenue, and customer retention). In our experience, knowledge managers and information professionals are some of the least adept at making a business case for their efforts. One of the reasons is their failure to capture the true value of the effort in terms that matter to the organization stakeholders. This chapter provides actionable guidelines on how to craft a solid, valuable, and defensible, business case.

Chapter 10 provides a summary of the key issues explored in the book. In addition, it proposes guidelines for professionals who are about to embark into knowledge management jobs. It concludes with a look at how the future of organizations will undergo radical changes in the next few years, and why the criticality of managing knowledge will be as important as ever.

# CONCLUDING THOUGHTS

As you begin to read this book, here are five critical things to bear in mind:

1. Knowledge management is a critical capability for organizations to master if they are to compete, and even simply survive, in their environments.
2. Managing knowledge begins, and ends with, empowering humans within and across the organization.
3. Technology plays an essential, albeit supporting, role in enabling organizations to manage knowledge effectively and efficiently.
4. Today, organizations have to build knowledge management programs that are relevant in a global context.
5. Knowledge management is an art and a science. The art comes from the fact that knowledge management practices need to be innovative in order for them to deliver differential value to the organization. The science stems from the fact that organizations of all kinds must engage in certain general principles and practices and do so in a systematic manner if they are to manage knowledge.

We welcome comments, feedback, and suggestions. Please do not hesitate to contact either of us. We do our best to respond to the e-mails that we receive and we will gladly incorporate feedback into future editions of the book. Happy reading!