

Introductory Chapter

You would have to have been living on the moon over the last few years not to know that baby boomers are fast approaching retirement age. This phenomenon has gotten plenty of media attention, since the post–World War II generation now ranges in age from 40 to 58 and is almost twice as big as the generation behind it, popularly known as Generation-X. A lot of these younger workers will probably be happy to see the veterans go. You know, more promotion opportunities, better parking spaces, and so on. Many baby boomers have spent their entire careers, or good chunks of them, with one company, government agency, or nonprofit organization. And, in the process, lots of them have built up a tremendous amount of knowledge about how things work, how to get things done, and who to go to when problems arise. In some cases, this practical knowledge will be extremely hard to replace because it has been developed in an era of unprecedented technological and scientific advances.

For example:

- A senior nuclear weapons designer retires from the Los Alamos National Laboratory after 30 years, leaving no one in the lab who understands the design of missiles built in 1950s and 1960s, which are still deployed in military bases worldwide.
- A chemist who invented a new polymer retires and soon afterward his company loses the ability to fix variations in quality when manufacturing the polymer product.
- A senior sales executive departs from her company with years of detailed knowledge about key strategic accounts and strong personal relationships with decision makers in client organizations.

As managers and professionals work in rapidly evolving scientific and technical fields, they gain tremendous experiential knowledge, only some of which is formally documented and shared. Inevitably today, employees leave without passing on enough of this valuable expertise. And, often, the only way their successors discover that they are missing key insights that their predecessors had is through mistakes, unexpected quality problems, or other costly disruptions in performance. These knowledge gaps can be very hard to pinpoint and diagnose at first because many work processes today are so intangible and complex. Even more important, because technology and work systems are increasingly interdependent, delays in problem recognition and diagnosis can be very costly. And, in the time it takes to recover this lost knowledge, organizational productivity inevitably suffers.

This book answers three questions: Why should you care about the threat of lost knowledge in your organization? What are the different types of scenarios where knowledge disappears and how do they affect performance? Most important, what can you do to retain more critical knowledge in the face of major turnover due to an aging workforce and increased attrition among mid-career employees?

Lost knowledge has been a problem throughout human history, but its significance has taken a quantum leap in the last generation. The proliferation of computer technologies has not only

produced advances in knowledge in all technical and scientific fields, but also work processes have become much more integrated and interdependent, creating all kinds of new knowledge needed to make things work. And this isn't knowledge that managers can afford to lose if they expect to sustain, much less improve, performance levels. For example, special capabilities might include:

- Safely disarming an aging nuclear weapon. (No kidding. We don't want to forget how to take those suckers apart.)
- Building and leading a cross-functional team to quickly solve a customer's supply chain problem (sounds mundane by comparison but still important).
- Creating and sustaining interagency cooperation needed to implement major government reforms.
- Maintaining legacy computer systems that still provide core operational applications.

In the future, organizations serious about improving performance are not going to have any choice. Leaders will have to address the challenges of knowledge retention if they hope to avoid the unacceptable costs of lost knowledge. The question is how to go about it. A fundamental premise of this book is that the primary reason executives avoid addressing threats of lost knowledge is that they have no idea how to attack the problem. This book will change that. It is written with a strategic orientation to serve leaders who want to understand how shifting demographics are threatening the future capabilities of their workforce, and what they can do about it. *Lost Knowledge* will help senior executives in organizations both large and small think strategically about the threats and opportunities posed by changing workforce demographics and how to formulate responses. But readers in other roles will also find help here.

Policy makers will get insights into the effects of an aging workforce and the loss of critical expertise on economic productivity. Management responses described in the book suggest where government can help support new solutions. For example, how are U.S. laws and programs currently failing to help retain and retool older workers? And how are current regulations providing financial incentives for veteran employees to retire early, taking their knowledge with them?

Line managers will learn how to diagnose and prioritize specific lost knowledge threats in their unit. The book clearly describes the options managers have for responding to different lost knowledge scenarios and, equally important, what organizational and psychological barriers leaders will have to overcome to create meaningful change.

Managers in staff functions, such as human resources (HR), knowledge management, and information technology (IT), will gain a cross-disciplinary understanding of the challenges posed by knowledge loss both for the organization as a whole and for their departmental objectives. The book provides a framework for understanding how one group's initiatives can be integrated into a broader organizational strategy that supports the development of future workforce capabilities.

Individual employees will also find help here if they are thinking of leaving a job where they have developed important expertise. Often, as an individual employee, you know best what essential knowledge you have gained in your role.

- Where is that vital document stored on the server?
- On that recent research and development (R&D) project, what costly design approaches did you learn couldn't possibly work?
- Who is the one person working for your company's vendor who knows the history of undocumented changes made on your computer system?
- What procedure in the maintenance manual have you learned to ignore because you know it's wrong?
- What is it that you always do on sales calls to retain the trust of your most valuable customer?

What would it cost your successor and the organization if this know-where, know-how, and know-what was to disappear suddenly when you leave? This book will lead you to think differently about the importance of the knowledge you have gained in your job and the value it has for the organization. (If your boss reads this, you might even get a raise!) Unfortunately, when many people leave jobs today, they are angry and alienated from the people they are leaving behind. Undoubtedly, many readers will feel they have not been treated well by their employers, and they have little interest in sharing their knowledge before leaving.

But, perhaps you are one of the lucky ones, and you really care about the mission of the organization you are leaving and the success of the people who take your place. Then this book will give you lots of ideas about how to begin transferring your unique knowledge before it is too late. And, if your colleagues don't seem overjoyed at your interest in sharing what you know, this book can help you understand their behavior, too.

Lost Knowledge is divided into three parts. Part I describes the macro forces in play that will make lost knowledge threats such a serious problem in the years ahead. It also shows how to identify different types of lost knowledge problems and which ones have strategic implications. A key finding of the research underlying this book is the need to recognize the interplay between retirements, recruiting, and the retention of mid-career employees. Effective workforce strategies must take all three issues into account. Finally, this part provides a framework for diagnosing current knowledge retention practices and for formulating new initiatives. One of the strengths of the framework is its holistic approach to the problem of knowledge loss. Effective knowledge retention efforts require an approach that integrates elements of an HR infrastructure and culture, along with the most appropriate transfer practices, given the types of knowledge involved. These practices should be supported by IT applications where they can be helpful.

Part II consists of five chapters that describe in detail the essential elements of the retention framework, including relevant HR processes and practices, a broad range of transfer approaches for explicit, implicit, and tacit knowledge, as well as supporting IT applications. There is also a chapter on strategies for recovering knowledge once it has left your organization.

Part III addresses the specific challenges of implementing retention initiatives. One chapter provides lessons from some organizations, such as Sandia National Laboratories, Northrop Grumman, the Tennessee Valley Authority, and a division of the energy company BP, which have already begun addressing the challenges that lost knowledge poses for future workforce development. Other chapters give advice on launching new retention programs and overcoming barriers to organizational change, which pose special problems for management. Another premise underlying this book is that many organizations are going to be overwhelmed with threats of lost knowledge, as gaps in skills and capabilities grow more serious, due largely to baby boomer retirements. Leaders will have to make difficult decisions in the future about where and how to focus their investments in retention activities. Thus, the book ends with a chapter on how to approach knowledge retention as a strategic problem. This chapter will guide executives in thinking about the tough choices that lie ahead.

Lost Knowledge is a solution-oriented book, but it's not a cookbook. In fact, recipes are one of several things that you won't find here. Because every organization represents a different context for knowledge use, don't look here for a definitive "solution" to your lost knowledge problems. Nor is there a strict formula for developing a knowledge retention strategy. The book does, however, identify most of the variables you will need to consider, and it provides guidance for how to undertake a process for designing and implementing your own approach to retention. Ultimately, however, the answer will have to come from inside your organization.

Also, you will not find rigorous benchmarking or quantitative comparisons of different sites in this book because contexts defining threats of lost knowledge and the potential responses are always unique. The exploratory research reported here is broad-based and thoughtful, but it is not scientific. If you wait for quantitative studies before taking threats of knowledge loss seriously, not only is it going to be too late, but also the results will most likely be irrelevant to your situation.

- One thing that makes *Lost Knowledge* both timely and useful is that it is based on more than 200 original interviews in dozens of organizations around the world. Examples and quotes drawn from these interviews are used throughout the book, and readers should assume they are the source of all materials unless otherwise footnoted. The threat of losing knowledge can be politically sensitive or embarrassing in many organizations, so sometimes interviewees have asked that their comments be kept anonymous as a condition of participating in the research.

This book has an ambitious goal. That is, to speak about the problem of lost knowledge in a way that is relevant across sectors and across functions. Others no doubt will choose to dive deeper and focus more narrowly on the retention challenges for specific industries and functions. But there is a larger need at the moment, which is to define the landscape of what is shaping up to be a very serious problem in many organizations and to provide managers with frameworks to begin addressing issues in their context.

There have been a number of excellent books in the last few years describing the demographic shock waves that are about to hit the industrialized world.² This book is not one of them. Nor is

Lost Knowledge another book on the general problem of “managing knowledge,” which has received a lot of attention in the last decade.

Retaining organizational knowledge is a complex challenge that cannot be addressed solely with a knowledge management solution. Meeting this challenge means improving career management practices, phased retirement programs, and succession planning, as well as creating a culture that retains valuable employees, among other things. Ultimately, this book argues that knowledge retention is a matter of survival because lost knowledge directly threatens the existing capabilities that many organizations need in order to sustain their current performance levels, much less to innovate and grow. Unlike the pursuit of opportunities to manage knowledge better, executives have no choice when it comes to knowledge retention. They must act or they will lose critical competencies they depend on already. *Lost Knowledge* will show you how you can make a difference in shaping future workforce capabilities by taking action today.