Preface

Knowledge is power. Knowledge represents one of the few bases of sustainable competitive advantage available to the modern enterprise, but knowledge is distributed unevenly through most organizations. Rapid and reliable flows of knowledge across people, organizations, times, and places are critical to enterprise performance. Unfortunately, the leader and manager have negligible current guidance for assessing and enhancing knowledge flows in practice. A dearth of contemporary research addresses the dynamics of knowledge, which are fundamental to understanding knowledge flows.

For several instances, epistemology has much to say about the nature of knowledge, but it offers little actionable guidance for the leader and manager; information science and information technologies have much to say about flows of information and data, but knowledge is distinct (e.g., it enables action) and exhibits different dynamic behaviors; knowledge management has much to say about organizing static knowledge, particularly knowledge articulated in explicit form, but it remains largely silent concerning dynamics of tacit knowledge; and strategy has much to say about the benefits of competing on the basis of knowledge, but it offers little in terms of how such benefits can be obtained.

Alternatively, emerging knowledge-flow theory addresses the dynamics of knowledge — as distinct from information and data — directly. It also applies equally well to tacit and explicit knowledge. Techniques associated with knowledge-flow analysis enable the practicing leader and manager to visualize flows of knowledge using a multidimensional framework. Such techniques also facilitate diagnosing an enterprise's knowledge flows for problems such as bottlenecks, clumping, source inadequacies, and short circuits. Archetypal knowl-

edge-flow patterns associated with well-understood management interventions (e.g., training, mentoring, communities of practice, experience, technology) can be matched with diagnosed problems to generate practical plans for enhancing knowledge flows.

The knowledge of how to diagnose and enhance knowledge flows exists today. It is ready to emerge from the lab and to inform the leader and manager in a practical way. However, the practicing leader and manager are unlikely to piece together the numerous elements from academic journals and laboratory research. Knowledge-flow theory is emerging still and only beginning to cohere and coalesce into actionable principles. This book condenses, consolidates, and collimates such actionable principles into articulated form that can enable leaders and managers to depart from the prevalent current practices of trial and error and imitation. Trial and error represents a well-known approach to organizational knowing and learning: It is known well for being very slow and inefficient as well as error-prone. Imitation also represents a well-known approach to organizational knowing and learning: It is known well for copying the many mistakes of others as well as their occasional successes. In contrast, our principled approach to organizational knowing and learning can enable leaders and managers to directly identify and solve problems with knowledge flows. Through such principled intervention, an organization can set the standard to be envied and imitated by its competitors.

This book builds upon theory but targets practice; it takes knowledge known only by a few researchers and shares it with many leaders and managers. It translates what is arcane and controversial today into managerial guidance that is sophisticated yet practical. It complements the many extant management books on strategy, technology, knowledge, and systems while addressing a well-recognized and significant void. This book provides 30 principles on which to base the most important decisions and actions in an organization: harnessing knowledge dynamics. Such principled approach defines a unique place for and contribution of the book. This book also provides 30 leadership mandates to make actionable the principles and applications presented in this volume. Such integration of principles and applications defines another unique place for and contribution of the book.

The overall objective is to inform the practicing leader and manager about the importance of knowledge flows and to provide practical but principled guidance for diagnosing and enhancing such flows. The mission is to condense emerging knowledge-flow theory and to distill it into actionable form of immediate relevance and use by enterprise leaders and managers. The principal audience is the enterprise leader and manager (e.g., in business, government,

non-profit) with concerns about organizational knowledge. The book provides a set of actionable principles to understand the phenomenon of knowledge flows, and it includes many concrete examples to help ground such principles in the realities of practice. The book also includes several practical illustrations of key principles and techniques. A variety of organizations from the business, government, and non-profit sectors are selected for examination of their knowledge flows. The application cases in Part II offer detailed yet generalizable examples of how principles apply to operating organizations in practice. Such cases provide opportunities to induce new principles as well. Such induction leads to the 30 leadership mandates noted previously.

The academic is also likely to take interest in the book for use in teaching (e.g., on knowledge management, information systems, strategy, organization) and for research. The concise and articulated set of 30 principles for knowledge dynamics appears to be unmatched today in the scholarly literature. Each chapter also includes exercises to stimulate critical thought, learning, and discussion. These exercises are ready for classroom use and allow ample room for instructors to tailor the associated discussions. The references cited in this book point to a rich and integrated literature that remains fragmented largely among several different scholarly fields at present. Such references point to a substantial, growing intellectual basis for understanding knowledge flows and for harnessing the power of dynamic knowledge.

The book also includes a relatively large glossary of key terms. Each term is defined and includes a pointer to the chapter in which it is discussed. Although universal agreement on the definitions contained in this glossary would not be expected at this time, by including such glossary, we make explicit the meaning and usage of key terms used in the book. This helps to promote a common lexicon in the field of knowledge dynamics, and it enables one to understand, explicitly, what the various terms in this book are intended to mean. This provides a stark contrast with most books today.

The book further includes an appendix that lists the code of a small, simple, illustrative expert system discussed in the knowledge technology chapter. By including the complete code, the book enables an instructor to leverage the expert system discussion and gives students an assignment to develop a small system of their own. Students can learn much from developing expert systems, particularly when assigned to "knowledge engineer themselves"; that is, when the assignment is for students to make knowledge that they possess explicit. This helps students to better understand their own tacit knowledge, and it reinforces numerous important principles about knowledge from the book.

To harness knowledge, one must understand how it flows through the organization; that is, one must understand the dynamics of knowledge flows. The key to such understanding is knowledge: knowledge about knowledge dynamics. Such knowledge represents the focus of this book. Through its principles, the leader and manager can learn to harness knowledge dynamics.

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