

- The no-nonsense guide for every decision-maker, manager, and e-business strategist
- Beyond CRM! Knowledge-enabled customer relationship management for e-business
- A proven 7-step implementation roadmap
- Aligning e-business strategies and technologies
- Results-driven development and deployment
- Team building, goal setting, and corporate culture
- Real-world case studies: Lands' End, Gateway®, and Dell®

E-Business and CRM Applications

**AMRIT TIWANA** 

# The Essential Guide to Knowledge Management

E-Business and CRM Applications

AMRIT TIWANA



Prentice Hall PTR, Upper Saddle River, NJ 07458 www.phptr.com

### Library of Congress Cataloging-in-Publication Date

Tiwana, Amrit.

The essential guide to knowledge management: e-business and CRM applications / Amrit Tiwana.

Includes bibliographical references and index.

ISBN: 0-13-032000-5

1. Knowledge management. 2. Electronic commerce. 3. Customer relations. I. Title.

HD30.2.T498

658.4/038.21

12188469

Editorial/Production Supervisor: Kerry Reardon

Project Coordinator: Anne Trowbridge Acquisitions Editor: Miles Williams Editorial Assistant: Richard Winkler Manufacturing Manager: Alexis Heydt Marketing Manager: Kate Hargett Art Director: Gail Cocker-Bogusz Interior Series Designer: Meg Van Arsdale

Cover Designer: Bruce Kenselaar Cover Design Director: Jerry Votta



© 2001 Prentice Hall PTR Prentice-Hall, Inc. Upper Saddle River, NJ 07458

All rights reserved. No part of this book may be reproduced, in any form or by any means, without permission in writing from the publisher.

Prentice Hall books are widely used by corporation and government agencies for training, marketing, and resale. The publisher offers discounts on this book when ordered in bulk quantities. For more information, contact

Corporate Sales Department Prentice Hall PTR One Lake Street

Upper Saddle River, NJ 07458

Phone: 800-382-3419; FAX: 201-236-7141 E-mail (Internet): corpsales@prenhall.com

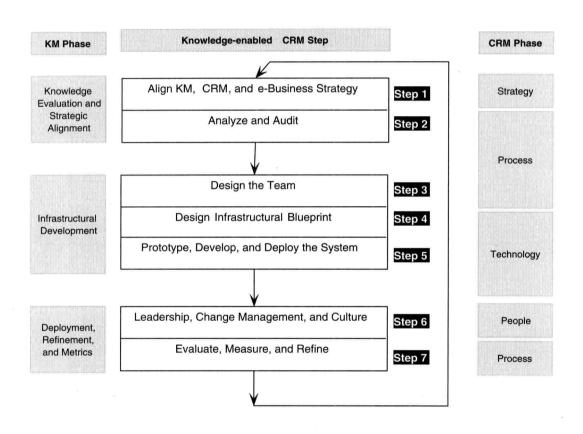
Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

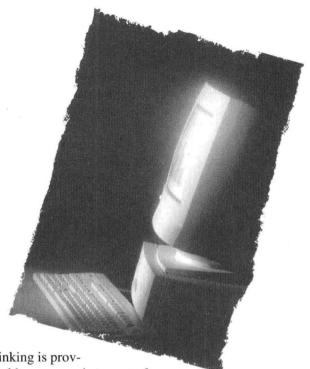
ISBN 0-13-032000-5

Prentice-Hall International (UK) Limited, London Prentice-Hall of Australia Pty. Limited, Sydney Prentice-Hall Canada Inc., Toronto Prentice-Hall Hispanoamericana, S.A., Mexico Prentice-Hall of India Private Limited, New Delhi Prentice-Hall of Japan, Inc., Tokyo Pearson Education Asia, Pte. Ltd. Editora Prentice-Hall do Brasil, Ltda., Rio de Janeiro





# **Preface**



In the digital economy, traditional thinking is proving its futility. Assumptions from the old economy that most of us are comfortable with do not carry over to the now-mainstream digital economy. The proof is in the mirror. MrWakeup.com calls my phone at 7 A.M. to wake me to a fresh cup of Starbucks.com coffee brewed in a coffee maker bought at Gevalia.com. As I munch on a bagel that WebGrocer.com delivered last night, I read the *NewYorkTimes*.com delivered every 10 minutes to my wireless hand-held purchased from OfficeDepot.com. I am still waiting for a new suit that I ordered from LandsEnd.com, but I know that FedEx.com will send me an e-mail as soon as the package is delivered at my door. After a shower and quick shave with a DrugStore.com-delivered razor, I pick the navy blazer that I got from Overstock.com, get dressed, and drive to the subway station. I can't help but notice the blooming flowers that my neighbor bought at Garden.com, and so religiously waters with his Web-based X10 pump controller. A short drive filled with PhoneFree.com commercials brings me to the subway station.

I swipe the MARTA smartcard that WebVan.com delivers on the last day of every month as I notice the gloomy look on the newspaper vendor's face. A train finally arrives as I step away from the LastMinuteTravel.com banner only to end up sitting right under a big AtlantaYardSale.com sign. Do I care? Not when I listed my old notebook PC on eBay just the night before. The only "e-free" part of my day—my train ride—was ruined last year when Palm Computing took the Web wireless.

As I begin to pull out the latest issue of *Business Week* that I ordered at Magazineoutlet.com from my briefcase, I remember that I left my presentation Zip disk on my desk at home. I need not panic, because in just a few minutes I'll get into my iMac at home from my work PC through the Web. I continue browsing through my copy of

Business Week and highlight a couple of interesting tidbits with my C•pen digital highlighter. As I step out of the train, I toss my magazine into the trash; I'll soon have all the highlighted material on my desktop PC as soon as I dock my highlighter. Thank God, I still write with a real Waterman fountain pen that I got from Ashford.com that uses real ink that I can always find at Onvia.com. The calendar in the hallway reminds me that Mother's Day is close. The card from Sparks.com must be in the mail.

As I step out of the station in downtown Atlanta, I remember that life was not this way a few years back. More daunting is the realization that all this is just the tip of the iceberg. Electronic commerce is hardly a whiff of the impending change of which e-business is a harbinger.

Whether by choice or lack thereof, we are all bearers of the Chinese curse-blessing, "May you live in interesting times." While the newspaper boy is among the many left far, far behind, the dot-com era is unstoppably altering the structure of our economy. This book is written for those who do not want to be left behind, and for those who are keen to understand how e-business success is defined by knowledge and relationship capital—the only meaningful assets in the digital economy. Because it is meant to *explain* the underlying ideas behind relationship management and e-business applications of knowledge management to nontechnologists, I assume no significant prior knowledge of e-business or knowledge management. For readers who might want to dig deeper into the technicalities of knowledge management, I'd suggest taking a look at excerpts and chapters from my previous knowledge management book (freely available at www.kmtoolkit.com). Think of this book as a continuing dialogue between us, and feel free to carry on the conversation with me at *atiwana@acm.org*.

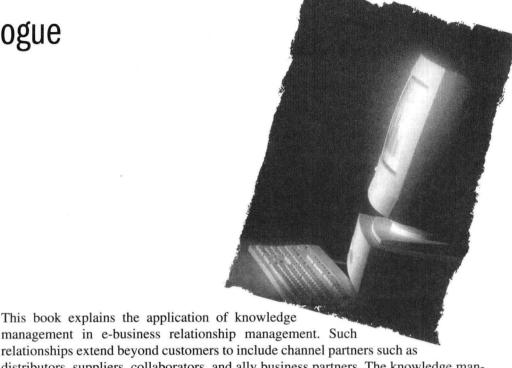
Amrit Tiwana Atlanta, Georgia

### ACKNOWLEDGMENTS . . . . .

No book is a solo effort. Much credit for this one goes to my editor Miles Williams (the source of the idea), and to my friend Ashley Bush, whose unfailing encouragement and heated intellectual debates have found their way into what you hold in your hands.

I am intellectually indebted to Eph McLean, Arun Rai, Bala Ramesh, Herbert Simon, and Peter Keen, who have taken the time to express their ideas, opinions, and differences with gracious humility. To repeat Isaac Newton, I can see far because I stand on the shoulders of giants. I also want to thank my mentors, colleagues, students, and collaborators from whom I have only learned. Most above all, this was an impossible task without the support of my virtually and globally distributed family who are finally going dot-com!

# **Prologue**



management in e-business relationship management. Such relationships extend beyond customers to include channel partners such as distributors, suppliers, collaborators, and ally business partners. The knowledge management focus here is not enterprisewide, but customer-centric. I use the term knowledge-enabled customer (and channel) relationship management (KCRM) to describe this concept throughout the book. KCRM extends beyond traditional customer relationship management (CRM) and eCRM (CRM on the Web) in its strong knowledge management (KM) focus.

### WHAT THIS BOOK IS ABOUT . .

This book is not about knowledge management in general, but customer-centric knowledge management in e-businesses. The purpose of this book is to explain the fundamental concepts and applications of knowledge management in e-business and customer relationship management. It is not supposed to be a toolkit for actual implementation. Detailed technology design for knowledge management is not described here; a higher-level explanation of the strategy-driven technology blueprint is instead the focus. Readers interested in that level of detail are pointed to two other books of mine, The Knowledge Management Toolkit (Prentice Hall, 2000) and Web Security (Butterworth Heinemann, 1999).

### Intended Audience

This book is primarily intended for a nontechnical audience. This includes three types of readers: (1) managerial readers—CEOs, CIOs, corporate management, business development managers, and strategists—who are interested in e-business and relationship management applications of KM, (2) nontechnology managers such as sales, marketing, field support, and help desk staff interested in understanding knowledge management applications, and (3) information systems (IS) staff—e-business developers, Internet specialists, Web-enabled CRM developers, senior IS executives—who want to understand various business facets of knowledge management applications in an e-business context. Although basic familiarity with the Internet and computers is expected, no assumptions of prior technical knowledge are made. If you come across a term that you have never encountered before, or one that is technical, look for an explanation in a nearby sidebar or in the glossary at the end.

## How This Book Is Organized

Specifically, you will understand seven broad areas of KCRM that are described along a conceptually simplified seven-step roadmap (see the table on page xxiii). The roadmap consists of three phases: (1) evaluation and strategic alignment, (2) infrastructure development and technology deployment, and (3) leadership, change management, measurement, and refinement.

Specifically this book will explain how the following issues are addressed in the context of knowledge management applications in an e-business relationship management context:

# Align Strategy and Technology

The first step of the roadmap explains the key issue of aligning e-business strategy and technology investments. We identify opportunities for knowledge management in various categories of e-business to examine opportunities for strengthening relationships with customers and across the channel. We see how gap analysis methods are used for strategy analysis, how various critical success factors (CSFs) influence technology choices, and how an e-business vision is translated into digital capabilities.

Chapter	What is Covered	Roadmap Step
Part 1	Fundamentals	
1	Introduction, structure of this book.	
2	Understanding e-business, customer relationship management, and knowledge management; understanding how the three intersect to deliver KCRM.	
3	A seven-step roadmap metaphor-based outline of KCRM issues	
Part 2	A Roadmap for Implementing Knowledge-enabled Customer Relationship Management	
4	Aligning and strategy and technology	1
5	Audit and analysis of knowledge and relationship assets	2
6	Building an implementation team	3
7	Blueprinting the technology infrastructure	4
8	Results-driven incremental deployment of the system	5
9	Leadership, cultural change, and rewards systems needed to make KCRM work.	6
Part 3	Planning for Success	
10	Evaluation metrics, selecting measure of success, and refinement	7

# Audit Existing Knowledge and Relationship Assets

Knowing where you want to go requires knowing where you already are. The audit and analysis step explains how current customer and channel relationships are analyzed, and how existing customer knowledge is evaluated. Audit and analysis provide guidance for directing KCRM resources in directions that hold the most promise.

### Design a Team

In the third step, we see how an effective team is built. This team includes employees who create the relationship management strategy and those who build the technology. We identify conflicts that you should expect, methods used to resolve them, and common but often overlooked pitfalls.

xxiv Proloque

### Blueprint the Technology Infrastructure

We use a customer knowledge management technology framework to understand various pieces of technology used for KCRM. We will attempt to understand the functionality, role, and relative fit of each piece. A closer look at KCRM system architecture will provide a clearer picture of how these pieces fit together in an e-Business system in a manner that is well aligned with business strategy.

# Deploy Using Results-Driven Incremental Methods

Rapidity, results, and time-to-market are key to implementation success in e-business. Traditional systems deployment methods offer none of these. Deployment must be broken into small independent increments; results of each drive the next increment. Such incremental approaches to deployment are described with examples along with problems associated with other popular development approaches that served us well until recently.

# Lead, Manage Change, and Adjust Corporate Culture

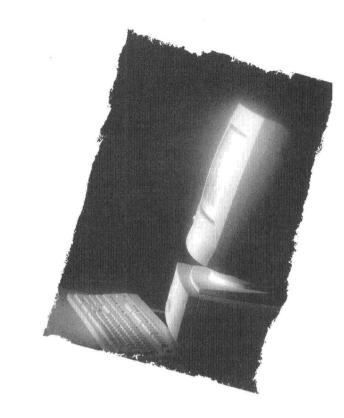
Knowledge management and all its variants fail to produce results until organizational culture is made more open and sharing, strong leadership exists, and change and reward systems are aligned. The sixth step on our roadmap explores these issues: lessons learned from exemplary e-business successes and failure, leadership expectations and choice, and the touchstones for this transition.

### Evaluate, Measure, Refine

You cannot control what you cannot measure. Customer relationships and knowledge assets are hard to measure; so are the effects of your KCRM initiative. The final stop on our journey explains various measures that worked well before the e-economy upsurge and reasons why they do not fare well now. We examine measures such as Bohn's Scores and the Balanced Scorecard that do work, and understand how they are used to incrementally refine knowledge-enabled customer relationship management strategy and technology.

# The Essential Guide to Knowledge Management

# Contents



**Preface** 

xix

**Prologue** 

xxi

Part 1

**Fundamentals** 

1

1 Introduction

3

In This Chapter

3

KNOWLEDGE MANAGEMENT, E-BUSINESS, AND CRM

5

THE NEW ECONOMY'S NEW FACE

7

Knowledge Centricity

/

Increasing Returns and Network Effects

7

Accelerated Clockspeed

8

Transparency, Information Symmetry, and Knowledge

Asymmetry

Low Switching Costs, Lock-ins, and Price Discovery 9	
Modular Innovation and Recombinations 10	
Rapid and Ad Hoc Alliances 10	
Products as Experiences 11	
Troducts as Experiences	
HOW WE GOT HERE: THE LONG-WINDED ROAD	11
THE NEW-NEW IMPERATIVES 12	
Customer Knowledge Integration 13	
Relationship Management in E-Business 14	
Value Proposition 14	
The Devil Is in the Details 16	
Test Your Understanding 16	
2 Understanding E-Business, CRM, and KM In This Chapter 19	19
THE NEW DIGITAL LANDSCAPE 20	
Death of the Four Ps 20	
Building Digital Capital 21	
GETTING DOWN TO E-BUSINESS 21	
Getting Real About Virtual Commerce 22	
CUSTOMER RELATIONSHIP MANAGEMENT 23	
Fundamentals of Customer Relationships 26	
Lifetime Value of Customers 26	
The Good, Bad, and Ugly 27	
The Four Tenets of CRM 28	
The CRM Lifecycle 30	

is CRM Right for All Businesses?
From Bits and Bricks to Clicks-and-Mortar 33
KNOWLEDGE MANAGEMENT 34
Knowledge, Market Value, and Prosperity 35
Comprehending Knowledge 36
Components and Characteristics of Knowledge 38
KM's Value Proposition 40
Weaving the Web of Knowledge 42
KNOWLEDGE-ENABLED CUSTOMER RELATIONSHIP MANAGEMENT 43
Evolution of KCRM 45
Understanding the Customer Knowledge Value Chain 46
Knowledge-Based Individualization 52
Thinking Beyond Customer Segments 53
Building Learning Relationships 53
The Three-Phase Customer Knowledge Cycle 54
SUMMARY 56
TEST YOUR UNDERSTANDING 58
A Roadmap for Success 59

# THE KNOWLEDGE-ENABLED CUSTOMER RELATIONSHIP MANAGEMENT ROADMAP 60

59

The Road to the Map 61

In This Chapter

4

Step 1: Strategic Alignment Step 2: Audit and Analysis 63 PHASE II: INFRASTRUCTURAL DEVELOPMENT AND DEPLOYMENT 63 Step 3: Designing the Team 64 Step 4: Blueprinting the Technology 64 Step 5: Development and Results-Driven Deployment 65 PHASE III: LEADERSHIP, CHANGE MANAGEMENT, MEASUREMENT, AND REFINEMENT 66 Step 6: Leadership, Change Management, and Cultural Step 7: Evaluation, Measurement, and Refinement 67 **SUMMARY** 68 **TEST YOUR UNDERSTANDING** 68 PART 1 SUMMARY 70 Part 2 A Roadmap for Implementing KCRM 73 Aligning Strategy and Technology Choices 77 In This Chapter 77 GETTING PAST THE INNOVATOR'S DILEMMA 78 THE KCRM STRATEGIC FRAMEWORK

80

Four Barriers to KCRM Actualization 81	
Outcome Indicators of Effective KCRM Strategy Formulation	81
Valuable, Rare, and Inimitable Digital Capital 82	
Synergy 82	
Complexity 83	
Balance 83	
ANALYZING THE BUSINESS ENVIRONMENT 84	
Knowledge Evolution in E-Business Settings 84	
Market Positioning 86	
Gap Analysis 87	
Exploit or Explore? 89	
Mapping Knowledge Assets 89	
Drivers of Knowledge Management 91	
Divers of knowledge Mainagement 71	
UNDERSTANDING THE CONTEXT 96	
E-Business and Web-Hub Strategies 96	
Three Keys to Customer Loyalty 99	
Integrating Demand Chain Knowledge 102	
STRATEGIC TECHNOLOGY 104	
Examples of Relationship Management Processes 108	
Richness or Reach 109	
Examples of Web-Only Relationship Tactics 110	
Encouraging Web Self-Service 111	
Collaborative Communities 113	
Adaptive Real-Time Cross Selling 114	
Intelligent Personalization 115	
Critical Success Factors 117	
SUMMARY 121	