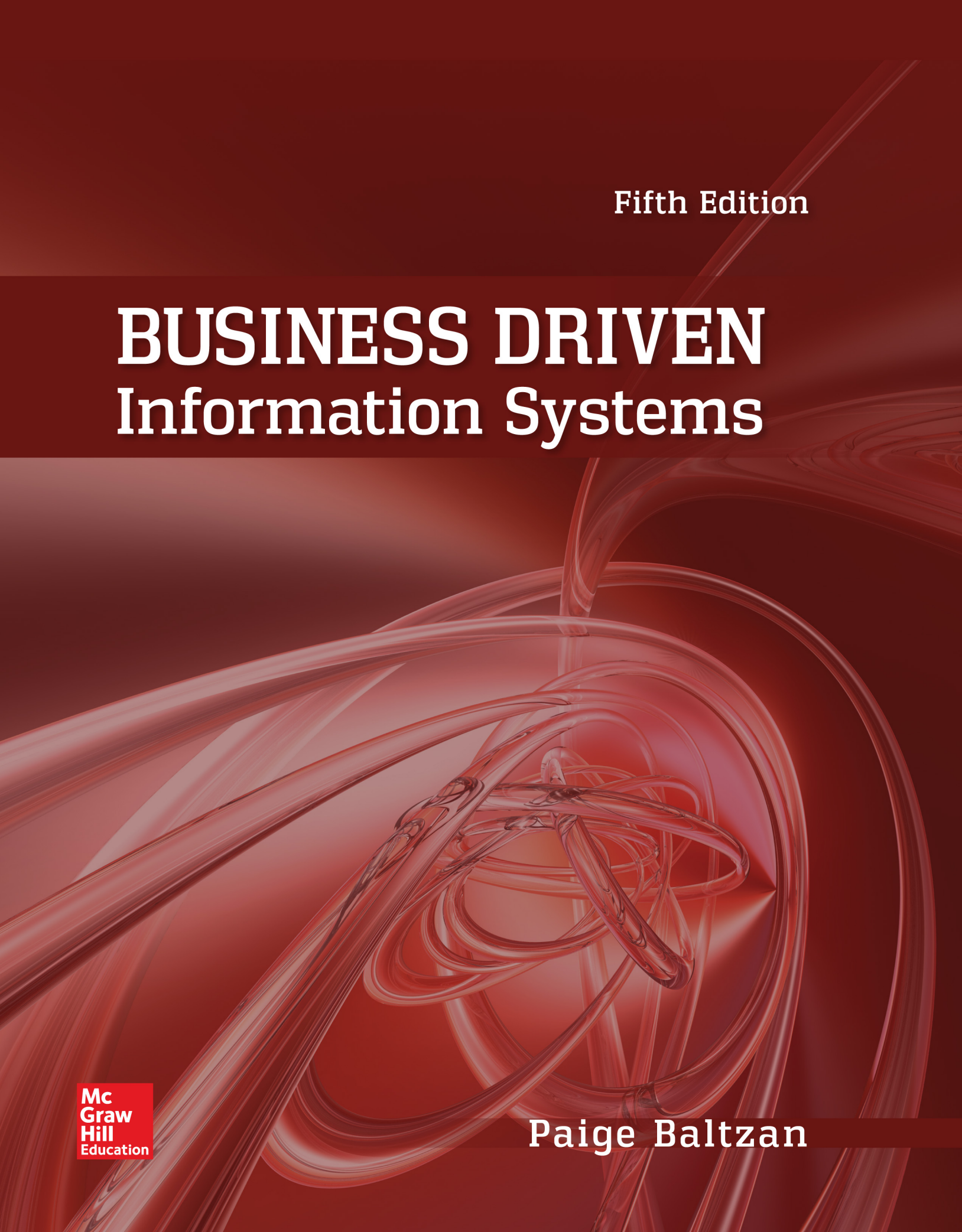
Fifth Edition

BUSINESS DRIVEN Information Systems



Paige Baltzan

Mc Graw Hill Education

Business Driven Information Systems

Paige Baltzan

Daniels College of Business, University of Denver

Business Driven Information Systems

FIFTH EDITION

Mc Graw Hill Education

BUSINESS DRIVEN INFORMATION SYSTEMS, FIFTH EDITION

This book is printed on acid-free paper.

1 2 3 4 5 6 7 8 9 0 RMN/RMN 1 0 9 8 7 6 5

ISBN 978-0-07-340298-7
MHID 0-07-340298-2

Senior Vice President, Products & Markets: *Kurt L. Strand*
Vice President, General Manager, Products & Markets: *Michael Ryan*
Vice President, Content Design & Delivery: *Kimberly Meriwether David*
Managing Director: *Scott Davidson*
Brand Manager: *Wyatt Morris*
Product Developer: *Allison McCabe*
Executive Marketing Manager: *Debbie Clare*
Marketing Manager: *Tiffany Russell*
Director of Development: *Meghan Campbell*
Digital Product Developer: *Kevin White*
Director, Content Design & Delivery: *Terri Schiesl*
Content Project Managers: *Lisa Bruflodt, Angela Norris, Sandy Schnee*
Buyer: *Jennifer Pickel*
Design: *Tara McDermott*
Content Licensing Specialists: *Keri Johnson, Deanna Dausener*
Cover Image: ©*Rebel Design Project/Glow Images*
Compositor: *Laserwords Private Limited*
Printer: *R. R. Donnelley*

All credits appearing on page or at the end of the book are considered to be an extension of the copyright page.

Library of Congress Cataloging-in-Publication Data

Baltzan, Paige.
Business driven information systems/Paige Baltzan, Daniels College of Business, University of Denver.—FIFTH EDITION.
pages cm
ISBN 978-0-07-340298-7 (alk. paper)
1. Information technology—Management. 2. Industrial management—Data processing. I. Title.
HD30.2.B357 2016
658.4’038011—dc23

2014047207

DEDICATION

To Tony, Hannah, Sophie, and Gus:
What do you always remember?
That I Love You! That I'm Proud of You!

Paige

BRIEF CONTENTS

CONTENTS

appendices

PREFACE

Business Driven Information Systems discusses various business initiatives first and how technology supports those initiatives second. The premise for this unique approach is that business initiatives should drive technology choices. Every discussion first addresses the business needs and then addresses the technology that supports those needs. This text provides the foundation that will enable students to achieve excellence in business, whether they major in operations management, manufacturing, sales, marketing, finance, human resources, accounting, or virtually any other business discipline. *Business Driven Information Systems* is designed to give students the ability to understand how information technology can be a point of strength for an organization.

Common business goals associated with information technology projects include reducing costs, improving productivity, improving customer satisfaction and loyalty, creating competitive advantages, streamlining supply chains, global expansion, and so on. Achieving these results is not easy. Implementing a new accounting system or marketing plan is not likely to generate long-term growth or reduce costs across an entire organization. Businesses must undertake enterprisewide initiatives to achieve broad general business goals such as reducing costs. Information technology plays a critical role in deploying such initiatives by facilitating communication and increasing business intelligence. Any individual anticipating a successful career in business whether it is in accounting, finance, human resources, or operation management must understand the basics of information technology that can be found in this text.

We have found tremendous success teaching MIS courses by demonstrating the correlation between business and IT. Students who understand the tight correlation between business and IT understand the power of this course. Students learn 10 percent of what they read, 80 percent of what they personally experience, and 90 percent of what they teach others. The business driven approach brings the difficult and often intangible MIS concepts to the student's level and applies them using a hands-on approach to reinforce the concepts. Teaching MIS with a business driven focus helps:

- Add credibility to IT.
- Open students' eyes to IT opportunities.
- Attract majors.
- Engage students.

FORMAT, FEATURES, AND HIGHLIGHTS

Business Driven Information Systems is state of the art in its discussions, presents concepts in an easy-to-understand format, and allows students to be active participants in learning. The dynamic nature of information technology requires all students, more specifically business students, to be aware of both current and emerging technologies. Students are facing complex subjects and need a clear, concise explanation to be able to understand and use the concepts throughout their careers. By engaging students with numerous case studies, exercises, projects, and questions that enforce concepts, *Business Driven Information Systems* creates a unique learning experience for both faculty and students.

- **Audience.** *Business Driven Information Systems* is designed for use in undergraduate or introductory MBA courses in management information systems, which are required in many business administration or management programs as part of the common body of knowledge for all business majors.
- **Logical Layout.** Students and faculty will find the text well organized with the topics flowing logically from one chapter to the next. The definition of each term is provided before it is covered in the chapter, and an extensive glossary is included at the back of the text. Each chapter offers a comprehensive opening case study, learning outcomes, closing case studies, key terms, and critical business thinking questions.

- **Thorough Explanations.** Complete coverage is provided for each topic that is introduced. Explanations are written so that students can understand the ideas presented and relate them to other concepts.
- **Solid Theoretical Base.** The text relies on current theory and practice of information systems as they relate to the business environment. Current academic and professional journals cited throughout the text are found in the Notes at the end of the book—a road map for additional, pertinent readings that can be the basis for learning beyond the scope of the chapters or plug-ins.
- **Material to Encourage Discussion.** All chapters contain a diverse selection of case studies and individual and group problem-solving activities as they relate to the use of information technology in business. Two comprehensive cases at the end of each chapter reinforce content. These cases encourage students to consider what concepts have been presented and then apply those concepts to a situation they might find in an organization. Different people in an organization can view the same facts from different points of view, and the cases will force students to consider some of those views.
- **Flexibility in Teaching and Learning.** Although most textbooks that are text only leave faculty on their own when it comes to choosing cases, *Business Driven Information Systems* goes much further. Several options are provided to faculty with case selections from a variety of sources, including *CIO, Harvard Business Journal, Wired, Forbes,* and *Time,* to name just a few. Therefore, faculty can use the text alone, the text and a complete selection of cases, or anything in between.
- **Integrative Themes.** Several integrative themes recur throughout the text, which adds integration to the material. Among these themes are value-added techniques and methodologies, ethics and social responsibility, globalization, and gaining a competitive advantage. Such topics are essential to gaining a full understanding of the strategies that a business must recognize, formulate, and in turn implement. In addition to addressing these in the chapter material, many illustrations are provided for their relevance to business practice.

WALKTHROUGH

Learning Outcomes

Learning Outcomes. These outcomes focus on what students should learn and be able to answer upon completion of the chapter.

section 3.1 | Web 1.0: Ebusiness

LEARNING OUTCOMES

3.1 Compare disruptive and sustaining technologies and explain how the Internet and WWW caused business disruption.

3.2 Describe ebusiness and its associated advantages.

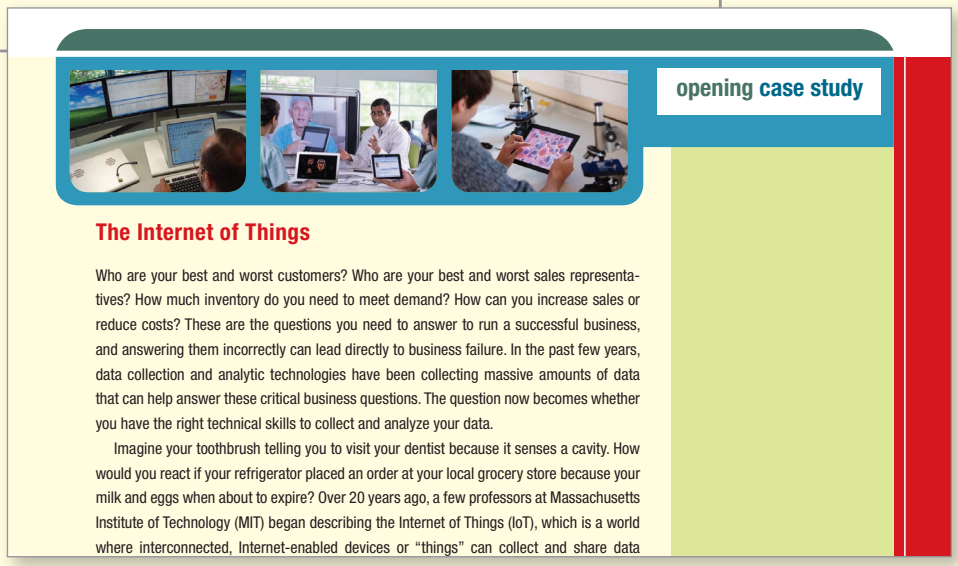
3.3 Compare the four ebusiness models.

3.4 Describe the six ebusiness tools for connecting and communicating.

3.5 Identify the four challenges associated with ebusiness.

Chapter Opening Case Study and Opening Case Questions

Chapter Opening Case Study. To enhance student interest, each chapter begins with an opening case study that highlights an organization that has been time-tested and value-proven in the business world. This feature serves to fortify concepts with relevant examples of outstanding companies. Discussion of the case is threaded throughout the chapter.



opening case study

The Internet of Things

Who are your best and worst customers? Who are your best and worst sales representatives? How much inventory do you need to meet demand? How can you increase sales or reduce costs? These are the questions you need to answer to run a successful business, and answering them incorrectly can lead directly to business failure. In the past few years, data collection and analytic technologies have been collecting massive amounts of data that can help answer these critical business questions. The question now becomes whether you have the right technical skills to collect and analyze your data.

Imagine your toothbrush telling you to visit your dentist because it senses a cavity. How would you react if your refrigerator placed an order at your local grocery store because your milk and eggs when about to expire? Over 20 years ago, a few professors at Massachusetts Institute of Technology (MIT) began describing the Internet of Things (IoT), which is a world where interconnected, Internet-enabled devices or "things" can collect and share data

Opening Case Questions. Located at the end of the chapter, poignant questions connect the chapter opening case with important chapter concepts.

OPENING CASE QUESTIONS

1. **Knowledge:** Explain the Internet of Things and list three IoT devices.
2. **Comprehension:** Explain why it is important for business managers to understand that data collection rates from IoT devices is increasing exponentially.
3. **Application:** Demonstrate how data from an IoT device can be transformed into information and business intelligence.
4. **Analysis:** Analyze the current security issues associated with IoT devices.
5. **Synthesis:** Propose a plan for how a start-up company can use IoT device data to make better business decisions.

Projects and Case Studies

Case Studies. This text is packed with 27 case studies illustrating how a variety of prominent organizations and businesses have successfully implemented many of this text's concepts. All cases are timely and promote critical thinking. Company profiles are especially appealing and relevant to your students, helping to stir classroom discussion and interest.

Apply Your Knowledge. At the end of each chapter you will find several Apply Your Knowledge projects that challenge students to bring the skills they have learned from the chapter to real business problems. There are also 33 Apply Your Knowledge projects on the OLC that accompanies this text (**www.mhhe.com/baltzan**) that ask students to use IT tools such as Excel, Access, and Dreamweaver to solve business problems. These projects help to develop the application and problem-solving skills of your students through challenging and creative business-driven scenarios.

APPLY YOUR KNOWLEDGE BUSINESS PROJECTS

PROJECT I Making Business Decisions

You are the vice president of human resources for a large consulting company. You are compiling a list of questions that you want each job interviewee to answer. The first question on your list is, "How can MIS enhance your ability to make decisions at our organization?" Prepare a one-page report to answer this question.

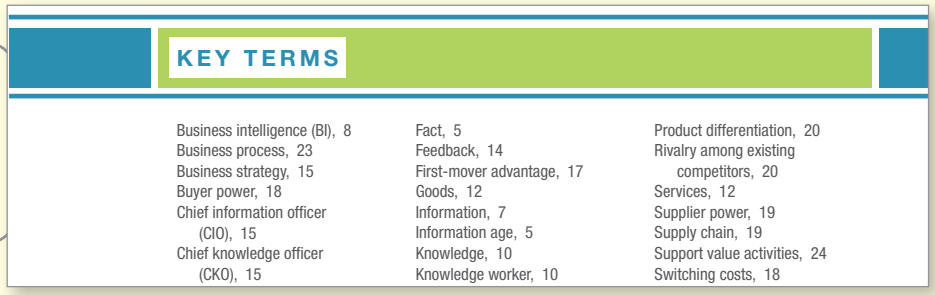
PROJECT II DSS and EIS

Dr. Rosen runs a large dental conglomerate—Teeth Doctors—that employs more than 700 dentists in six states. Dr. Rosen is interested in purchasing a competitor called Dentix that has 150 dentists

End-of-Chapter Elements

Each chapter contains complete pedagogical support in the form of:

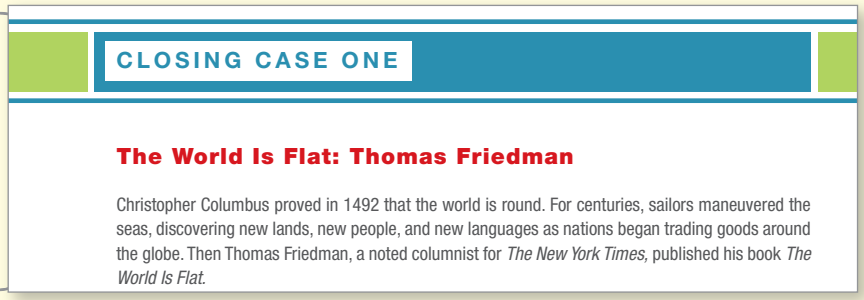
Key Terms. With page numbers referencing where they are discussed in the text.



KEY TERMS

Business intelligence (BI), 8
Business process, 23
Business strategy, 15
Buyer power, 18
Chief information officer (CIO), 15
Chief knowledge officer (CKO), 15
Fact, 5
Feedback, 14
First-mover advantage, 17
Goods, 12
Information, 7
Information age, 5
Knowledge, 10
Knowledge worker, 10
Product differentiation, 20
Rivalry among existing competitors, 20
Services, 12
Supplier power, 19
Supply chain, 19
Support value activities, 24
Switching costs, 18

Two Closing Case Studies. Reinforcing important concepts with prominent examples from businesses and organizations. Discussion questions follow each case study.

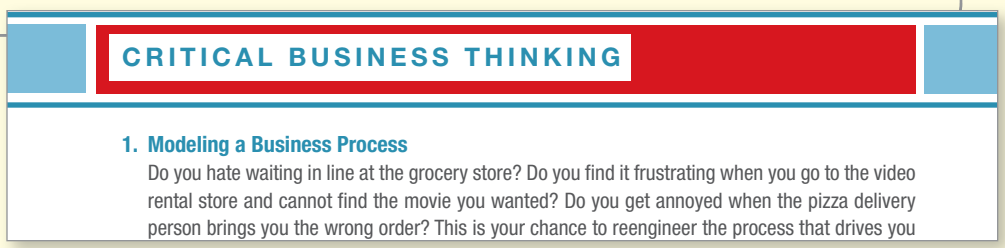


CLOSING CASE ONE

The World Is Flat: Thomas Friedman

Christopher Columbus proved in 1492 that the world is round. For centuries, sailors maneuvered the seas, discovering new lands, new people, and new languages as nations began trading goods around the globe. Then Thomas Friedman, a noted columnist for *The New York Times,* published his book *The World Is Flat.*

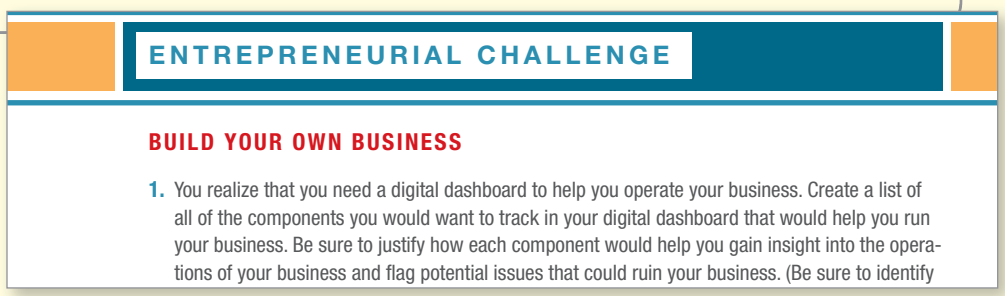
Critical Business Thinking. The best way to learn MIS is to apply it to scenarios and real-world business dilemmas. These projects require students to apply critical thinking skills and chapter concepts to analyze the problems and make recommended business decisions.



CRITICAL BUSINESS THINKING

1. **Modeling a Business Process**
   Do you hate waiting in line at the grocery store? Do you find it frustrating when you go to the video rental store and cannot find the movie you wanted? Do you get annoyed when the pizza delivery person brings you the wrong order? This is your chance to reengineer the process that drives you

Entrepreneurial Challenge. This unique feature represents a running project that allows students to challenge themselves by applying the MIS concepts to a real business. The flexibility of the case allows each student to choose the type of business he or she would like to operate throughout the case. Each chapter provides hands-on projects your students can work with their real-business scenarios.



ENTREPRENEURIAL CHALLENGE

BUILD YOUR OWN BUSINESS

1. You realize that you need a digital dashboard to help you operate your business. Create a list of all of the components you would want to track in your digital dashboard that would help you run your business. Be sure to justify how each component would help you gain insight into the operations of your business and flag potential issues that could ruin your business. (Be sure to identify

About the Plug-Ins

Located on the OLC that accompanies this text (**www.mhhe.com/baltzan**), the overall goal of the plug-ins is to provide an alternative for faculty who find themselves in the situation of having to purchase an extra book to support Microsoft Office 2010 or 2013. The plug-ins presented here offer integration with the core chapters and provide critical knowledge using essential business applications, such as Microsoft Excel, Microsoft Access, DreamWeaver, and Microsoft Project. Each plug-in uses hands-on tutorials for comprehension and mastery.

Plug-In	Description
T1. Personal Productivity Using IT	This plug-in covers a number of things to do to keep a personal computer running effectively and efficiently. The 12 topics covered in this plug-in are: ■ Creating strong passwords. ■ Performing good file management. ■ Implementing effective backup and recovery strategies. ■ Using zip files. ■ Writing professional emails. ■ Stopping spam. ■ Preventing phishing. ■ Detecting spyware. ■ Threads to instant messaging. ■ Increasing PC performance. ■ Using antivirus software. ■ Installing a personal firewall.

End-of-Plug-In Elements

Each plug-in contains complete pedagogical support in the form of:
Plug-In Summary. Revisits the plug-in highlights in summary format.
Making Business Decisions. Small scenario-driven projects that help students focus individually on decision making as they relate to the topical elements in the chapters.

T2. Basic Skills Using Excel	This plug-in introduces the basics of using Microsoft Excel, a spreadsheet program for data analysis, along with a few fancy features. The six topics covered in this plug-in are: ■ Workbooks and worksheets. ■ Working with cells and cell data. ■ Printing worksheets. ■ Formatting worksheets. ■ Formulas. ■ Working with charts and graphics.

T4. Decision Making Using Excel	This plug-in examines a few of the advanced business analysis tools used in Microsoft Excel that have the capability to identify patterns, trends, and rules, and create "what-if" models. The four topics covered in this plug-in are: ■ IF ■ Goal Seek ■ Solver ■ Scenario Manager

Support and Supplemental Material

All of the supplemental material supporting *Business Driven Information Systems* was developed by the author to ensure that you receive accurate, high-quality, and in-depth content. Included is a complete set of materials that will assist students and faculty in accomplishing course objectives.

Video Exercises. Each of the videos that accompany the text is supported by detailed teaching notes on how to turn the videos into classroom exercises to which your students can apply the knowledge they are learning after watching the videos.

Test Bank. This computerized package allows instructors to custom design, save, and generate tests. The test program permits instructors to edit, add, or delete questions from the test banks; analyze test results; and organize a database of tests and students' results.

Instructor's Manual (IM). The IM, written by the author, includes suggestions for designing the course and presenting the material. Each chapter is supported by answers to end-of-chapter questions and problems, and suggestions concerning the discussion topics and cases.

PowerPoint Presentations. A set of PowerPoint slides, created by the author, accompanies each chapter and features bulleted items that provide a lecture outline, plus key figures and tables from the text, and detailed teaching notes on each slide.

Image Library. Text figures and tables, as permission allows, are provided in a format by which they can be imported into PowerPoint for class lectures.

Project Files. The author has provided files for all projects that need further support, such as data files.

Tegrity Campus: Lectures 24/7

Tegrity Campus is a service that makes class time available 24/7 by automatically capturing every lecture in a searchable format for students to review when they study and complete assignments. With a simple one-click start-and-stop process, you capture all computer screens and corresponding audio. Students can replay any part of any class with easy-to-use browser-based viewing on a PC or Mac.

Educators know that the more students can see, hear, and experience class resources, the better they learn. In fact, studies prove it. With Tegrity Campus, students quickly recall key moments by using Tegrity Campus's unique search feature. This search helps students efficiently find what they need, when they need it, across an entire semester of class recordings. Help turn all your students' study time into learning moments immediately supported by your lecture.

To learn more about Tegrity, watch a two-minute Flash demo at **http://tegritycampus.mhhe.com.**

Assurance of Learning Ready

Many educational institutions today are focused on the notion of *assurance of learning,* an important element of some accreditation standards. *Business Driven Information Systems* is designed specifically to support your assurance of learning initiatives with a simple, yet powerful solution.

Each test bank question for *Business Driven Information Systems* maps to a specific chapter learning outcome/objective listed in the text. You can use our test bank software, EZ Test and EZ Test Online, or in *Connect MIS* to query easily for learning outcomes/objectives that directly relate to the learning objectives for your course. You can then use the reporting features of EZ Test to aggregate student results in similar fashion, making the collection and presentation of assurance of learning data simple and easy.

AACSB Statement

The McGraw-Hill Companies is a proud corporate member of AACSB International. Understanding the importance and value of AACSB accreditation, *Business Driven Information Systems* recognizes the curricula guidelines detailed in the AACSB standards for business accreditation by connecting selected questions in the test bank to the six general knowledge and skill guidelines in the AACSB standards.

The statements contained in *Business Driven Information Systems* are provided only as a guide for the users of this textbook. The AACSB leaves content coverage and assessment within the purview of individual schools, the mission of the school, and the faculty. Although *Business Driven Information Systems* and the teaching package make no claim of any specific AACSB qualification or evaluation, within *Business Driven Information Systems* we have labeled selected questions according to the six general knowledge and skills areas.

McGraw-Hill Customer Care Contact Information

At McGraw-Hill, we understand that getting the most from new technology can be challenging. That's why our services don't stop after you purchase our products. You can email our product specialists 24 hours a day to get product training online. Or you can search our knowledge bank of Frequently Asked Questions on our support website. For Customer Support, call **800-331-5094** or visit **www.mhhe.com/support** where you can look for your question on our FAQ, or you can email a question directly to customer support. One of our technical support analysts will be able to assist you in a timely fashion.

Apply Your Knowledge

Business Driven Information Systems contains 33 projects that focus on student application of core concepts and tools. These projects can be found on the OLC at **www.mhhe.com/baltzan.**

Project Number	Project Name	Project Type	Plug-In	Focus Area	Project Level	Skill Set	Page Number
1	Financial Destiny	Excel	T2	Personal Budget	Introductory	Formulas	AYK.4
2	Cash Flow	Excel	T2	Cash Flow	Introductory	Formulas	AYK.4
3	Technology Budget	Excel	T1, T2	Hardware and Software	Introductory	Formulas	AYK.4
4	Tracking Donations	Excel	T2	Employee Relationships	Introductory	Formulas	AYK.4
5	Convert Currency	Excel	T2	Global Commerce	Introductory	Formulas	AYK.5
6	Cost Comparison	Excel	T2	Total Cost of Ownership	Introductory	Formulas	AYK.5
7	Time Management	Excel or Project	T12	Project Management	Introductory	Gantt Charts	AYK.6
8	Maximize Profit	Excel	T2, T4	Strategic Analysis	Intermediate	Formulas or Solver	AYK.6
9	Security Analysis	Excel	T3	Filtering Data	Intermediate	Conditional Formatting, Autofilter, Subtotal	AYK.7
10	Gathering Data	Excel	T3	Data Analysis	Intermediate	Conditional Formatting	AYK.8
11	Scanner System	Excel	T2	Strategic Analysis	Intermediate	Formulas	AYK.8
12	Competitive Pricing	Excel	T2	Profit Maximization	Intermediate	Formulas	AYK.9
13	Adequate Acquisitions	Excel	T2	Break-Even Analysis	Intermediate	Formulas	AYK.9
14	Customer Relations	Excel	T3	CRM	Intermediate	PivotTable	AYK.9
15	Assessing the Value of Information	Excel	T3	Data Analysis	Intermediate	PivotTable	AYK.10
16	Growth, Trends, and Forecasts	Excel	T2, T3	Data Forecasting	Advanced	Average, Trend, Growth	AYK.11
17	Shipping Costs	Excel	T4	SCM	Advanced	Solver	AYK.12
18	Formatting Grades	Excel	T3	Data Analysis	Advanced	If, LookUp	AYK.12

(*Continued*)

Project Number	Project Name	Project Type	Plug-In	Focus Area	Project Level	Skill Set	Page Number
19	Moving Dilemma	Excel	T2, T3	SCM	Advanced	Absolute vs. Relative Values	AYK.13
20	Operational Efficiencies	Excel	T3	SCM	Advanced	PivotTable	AYK.14
21	Too Much Information	Excel	T3	CRM	Advanced	PivotTable	AYK.14
22	Turnover Rates	Excel	T3	Data Mining	Advanced	PivotTable	AYK.15
23	Vital Information	Excel	T3	Data Mining	Advanced	PivotTable	AYK.15
24	Breaking Even	Excel	T4	Business Analysis	Advanced	Goal Seek	AYK.16
25	Profit Scenario	Excel	T4	Sales Analysis	Advanced	Scenario Manager	AYK.16
26	Electronic Résumés	HTML	T9, T10, T11	Electronic Personal Marketing	Introductory	Structural Tags	AYK.17
27	Gathering Feedback	Dreamweaver	T9, T10, T11	Data Collection	Intermediate	Organization of Information	AYK.17
28	Daily Invoice	Access	T5, T6, T7, T8	Business Analysis	Introductory	Entities, Relationships, and Databases	AYK.17
29	Billing Data	Access	T5, T6, T7, T8	Business Intelligence	Introductory	Entities, Relationships, and Databases	AYK.19
30	Inventory Data	Access	T5, T6, T7, T8	SCM	Intermediate	Entities, Relationships, and Databases	AYK.20
31	Call Center	Access	T5, T6, T7, T8	CRM	Intermediate	Entities, Relationships, and Databases	AYK.21
32	Sales Pipeline	Access	T5, T6, T7, T8	Business Intelligence	Advanced	Entities, Relationships, and Databases	AYK.23
33	Online Classified Ads	Access	T5, T6, T7, T8	Ecommerce	Advanced	Entities, Relationships, and Databases	AYK.23

SIMnet
Keep IT SIMple!

SimNet Online is McGraw-Hill's leading solution for learning Microsoft Office skills and beyond! SimNet is our online training and assessment solution for Microsoft Office skills, computing concepts, Internet Explorer, and Windows content. With no downloads for installation and completely online (requires Adobe Flash Player), SimNet is accessible for today's students through multiple browsers and is easy to use for all. Its consistent user interface and functionality will help save you time and help you be more successful in your course.

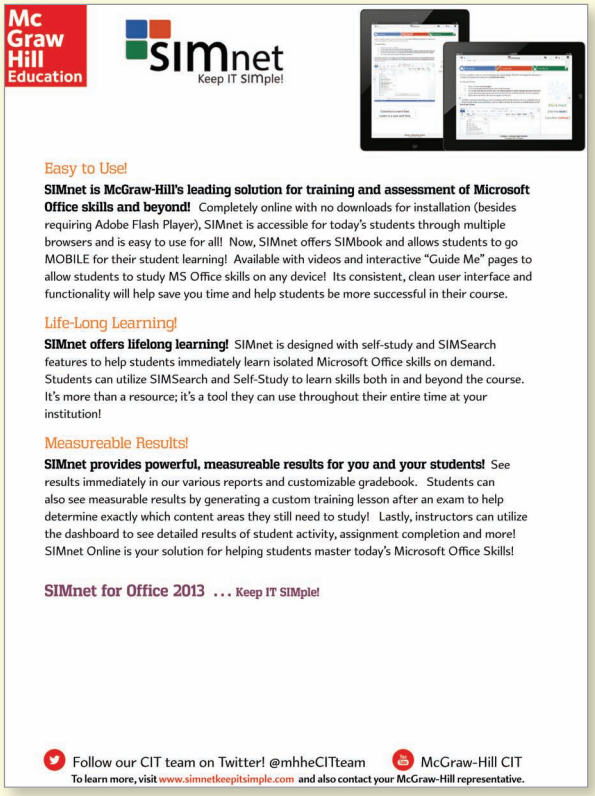
Moreover, SimNet offers you lifelong learning. Our codes never expire and the online program is designed with Self-Study and SimSearch features to help you immediately learn isolated Microsoft Office skills on demand. It's more than a resource; it's a tool you can use throughout your entire time at your higher education institution.

Finally, you will see powerful, measurable results with SimNet Online. See results immediately in the student gradebook and generate custom training lessons after an exam to help you determine exactly which content areas you still need to study.

SimNet Online is your solution for mastering Microsoft Office skills!

SIMnet: Keep IT SIMple!

To learn more, visit **www.simnetkeepitsimple.com**



McGraw-Hill Higher Education and Blackboard have teamed up. What does this mean for you?

1. **Your life, simplified.** Now you and your students can access McGraw-Hill's Connect™ and Create™ right from within your Blackboard course—all with one single sign-on. Say good-bye to the days of logging on to multiple applications.
2. **Deep integration of content and tools.** Not only do you get single sign-on with Connect™ and Create™, you also get deep integration of McGraw-Hill content and content engines right in Blackboard. Whether you're choosing a book for your course or building Connect™ assignments, all the tools you need are right where you want them—inside of Blackboard.
3. **Seamless Gradebooks.** Are you tired of keeping multiple gradebooks and manually synchronizing grades into Blackboard? We thought so. When a student completes an integrated Connect™ assignment, the grade for that assignment automatically (and instantly) feeds your Blackboard grade center.
4. **A solution for everyone.** Whether your institution is already using Blackboard or you just want to try Blackboard on your own, we have a solution for you. McGraw-Hill and Blackboard can now offer you easy access to industry leading technology and content, whether your campus hosts it, or we do. Be sure to ask your local McGraw-Hill representative for details.

Mc Graw Hill Education create™

Craft your teaching resources to match the way you teach! With McGraw-Hill Create, www.mcgrawhillcreate.com, you can easily rearrange chapters, combine material from other content sources, and quickly upload content you have written, like your course syllabus or teaching notes. Find the content you need in Create by searching through thousands of leading McGraw-Hill textbooks. Arrange your book to fit your teaching style. Create even allows you to personalize your book's appearance by selecting the cover and adding your name, school, and course information. Order a Create book and you'll receive a complimentary print review copy in 3–5 business days or a complimentary electronic review copy (eComp) via email in about one hour. Go to www.mcgrawhillcreate.com today and register. Experience how McGraw-Hill Create empowers you to teach *your* students *your* way.

ACKNOWLEDGMENTS

Working on the fifth edition of *Business Driven Information Systems* has been an involved undertaking, and there are many people whom we want to heartily thank for their hard work, enthusiasm, and dedication.

This text was produced with the help of a number of people at McGraw-Hill, including Brand Manager Wyatt Morris and Product Developer, Allison McCabe.

In addition, we would like to thank Scott Davidson (Director), Tiffany Russell (Marketing Manager), and Kevin White (Digital Development Editor) for your support and dedication to the success of this text.

Finally, we offer our sincerest gratitude and deepest appreciation to our valuable reviewers whose feedback was instrumental in successfully compiling this text. We could not have done this without you!

Stephen Adams
Lakeland Community College

Adeyemi A. Adekoya
Virginia State University—Petersburg

Joni Adkins
Northwest Missouri State University

Chad Anderson
University of Nevada—Reno

Anne Arendt
Utah Valley University

Laura Atkins
James Madison University

William Ayen
University of Colorado

David Bahn
Metropolitan State University—St. Paul

Nick Ball
Brigham Young University—Provo

Patrick Bateman
Youngstown State University

Terry Begley
Creighton University

Craig Beytien
University of Colorado—Boulder

Sudip Bhattacharjee
University of Connecticut

Meral Binbasioglu
Hofstra University

Joseph Blankenship
Fairmont State College

Beverly Bohn
Park University

Brenda Bradford
Missouri Baptist University

Casey Cegielski
Auburn University—Auburn

Amita Chin
Virginia Commonwealth University

Steve Clements
Eastern Oregon University

Cynthia Corritore
Creighton University

Dan Creed
Normandale Community College

Don Danner
San Francisco State University

Sasha Dekleva
DePaul University

Robert Denker
Baruch College

Hongwei Du
California State University, East Bay

Kevin Duffy
Wright State University—Dayton

Annette Easton
San Diego State University

Barry Floyd
California Polytechnic State University

Valerie Frear
Daytona State College

Laura Frost
Walsh College

Don Gaber
University of Wisconsin—Eau Claire

Biswadip Ghosh
Metropolitan State College of Denver

Richard Glass
Bryant University

Lakshmi Goel
University of North Florida

Mark Goudreau
Johnson & Wales University

Katie Gray
The University of Texas at Austin

Gary Hackbarth
Northern Kentucky University

Shu Han
Yeshiva University

Peter Haried
University of Wisconsin—La Crosse

Rosie Hauck
Illinois State University

Jun He
University of Michigan—Dearborn

James Henson
California State University—Fresno

Terri Holly
Indian River State College

Scott Hunsinger
Appalachian State University

Ted Hurewitz
Rutgers University

Yan Jin
Elizabeth City State University

Brian Jones
Tennessee Technological University

Robert Judge
San Diego State University

B. Kahn
Suffolk University

Virginia Kleist
West Virginia University

Meagan Knoll
Grand Valley State University

Rick Kraas
Kalamazoo Valley Community College

Chetan Kumar
California State University—San Marcos

Guolin Lai
University of Louisiana—Lafayette

Jose Lepervanche
Florida State College—Jacksonville

Norman Lewis
Wayne State University

Mary Lind
North Carolina A&T State University

Steve Loy
Eastern Kentucky University

Joan Lumpkin
Wright State University—Dayton

Linda Lynam
University of Central Missouri

Nicole Lytle-Kosola
California State University—San Bernardino

Garth MacKenzie
University of Maryland University College

Michael Martel
Ohio University—Athens

Dana McCann
Central Michigan University

David McCue
University of Maryland

Lynn McKell
Brigham Young University

Patricia McQuaid
California Polytechnic State University

Fiona Nah
University of Nebraska—Lincoln

Eric Nathan
University of Houston Downtown

Bill Neumann
University of Arizona

Richard Newmark
University of Northern Colorado

Kathleen Noce
Pennsylvania State University—Erie

Gisele Olney
University of Nebraska—Omaha

Kevin Parker
Idaho State University—Pocatello

Neeraj Parolia
Towson University

Gang Peng
Youngstown State University

Julie Pettus
Missouri State University

Craig Piercy
University of Georgia

Clint Pires
Hamline University

Jennifer Pitts
Columbus State University

Carol Pollard
Appalachian State University

Lara Preiser-Houy
California State Polytechnic University—Pomona

John Quigley
East Tennessee State University

Muhammad Razi
Western Michigan University

Lisa Rich
Athens State University

Russell Robbins
University of Pittsburgh

Fred Rodammer
Michigan State University

Steve Ross
Western Washington University

Mark Schmidt
St. Cloud State University

Dana Schwieger
Southeast Missouri State University

Darrell Searcy
Palm Beach Community College

Jay Shah
Texas State University

Vivek Shah
Texas State University

Vijay Shah
West Virginia University—Parkersburg

Jollean Sinclaire
Arkansas State University

Changsoo Sohn
St. Cloud State University

Toni Somers
Wayne State University

Denise Sullivan
Westchester Community College

Yi Sun
California State University—San Marcos

Mike Tarn
Western Michigan University

Mark Thouin
The University of Texas at Dallas

Lise Urbaczewski
University of Michigan—Dearborn

Hong Wang
North Carolina A&T State University

Barbara Warner
University of South Florida

Connie Washburn
Georgia Perimeter College

Bruce White
Quinnipiac University

Raymond Whitney
University of Maryland University College

Rosemary Wild
California Polytechnic State University

Marie Wright
Western Connecticut State University

Yajiong Xue
East Carolina University

Ali Yayla
Binghamton University

Grace Zhang
Midwestern State University

Lin Zhao
Purdue University—Calumet

Jeanne Zucker
East Tennessee State University

ABOUT THE AUTHOR

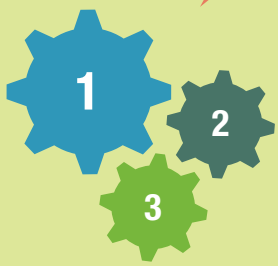
Paige Baltzan

Paige Baltzan teaches in the Department of Business Information and Analytics at the Daniels College of Business at the University of Denver. She holds a B.S.B.A. specializing in Accounting/MIS from Bowling Green State University and an M.B.A. specializing in MIS from the University of Denver. She is a coauthor of several books, including *Business Driven Technology, Essentials of Business Driven Information Systems,* and *I-Series,* and a contributor to *Management Information Systems for the Information Age.*

Before joining the Daniels College faculty in 1999, Paige spent several years working for a large telecommunications company and an international consulting firm, where she participated in client engagements in the United States as well as South America and Europe. Paige lives in Lakewood, Colorado, with her husband, Tony, and daughters Hannah and Sophie.

Business Driven MIS

module 1



MOST COMPANIES TODAY rely heavily on the use of management information systems (MIS) to run various aspects of their businesses. Whether they need to order and ship goods, interact with customers, or conduct other business functions, management information systems are often the underlying infrastructure performing the activities. Management information systems allow companies to remain competitive in today's fast-paced world and especially when conducting business on the Internet. Organizations must adapt to technological advances and innovations to keep pace with today's rapidly changing environment. Their competitors certainly will!

No matter how exciting technology is, successful companies do not use it simply for its own sake. Companies should have a solid business reason for implementing technology. Using a technological solution just because it is available is not a good business strategy.

The purpose of Module 1 is to raise your awareness of the vast opportunities made possible by the tight correlation between business and technology. Business strategies and processes should always drive your technology choices. Although awareness of an emerging technology can sometimes lead us in new strategic directions, the role of information systems, for the most part, is to support existing business strategies and processes.

Module 1: Business Driven MIS