

GLOBAL
EDITION



Using MIS

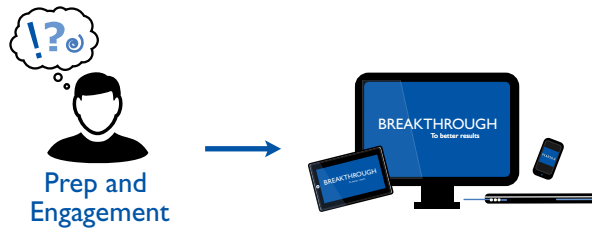
NINTH EDITION

David Kroenke • Randall J. Boyle

ALWAYS LEARNING

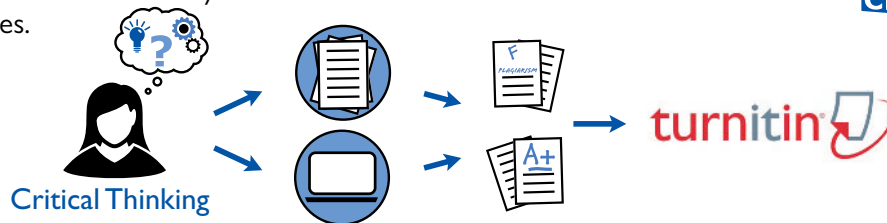
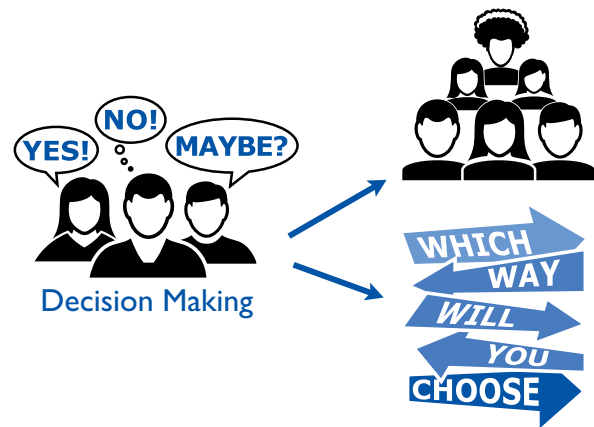
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Dear Student,

College is a fun time in your life. You've experienced the freedom of living on your own, made new friends, and enjoyed once-in-a-lifetime experiences. However, at this point in your college career you've begun to realize that a life transition is on your horizon. You will graduate and you will need to find a career—not just another job. Now is the time for you to start thinking about that career and how to prepare for it.

Most students say they want a successful career. But defining *successful* is different for each person. Most students want an exciting, stable, well-paying job. You owe it to yourself to think about what that job is and how you're going to get it. Which jobs pay the salary you want? Are some jobs more stable than others? What type of work do you want to do for the next 40 years?

This MIS course is important for answering those questions. Over time, technology creates new jobs... examples today are mobile application developers, social media analysts, information security specialists, business intelligence analysts, and data architects, to consider just a few jobs that didn't exist 20, even 10, years ago. Similarly, the best jobs 20 years from now probably don't currently exist.

The trick to turning information systems to your advantage is getting ahead of their effect. During your career, you will find many opportunities for the innovative application of information systems in business and government—but only if you know how to look for them.

Once found, those opportunities become your opportunities when you—as a skilled, creative, non-routine problem solver—apply emerging technology to facilitate your organization's strategy. This is true whether your job is in marketing, operations, sales, accounting, finance, entrepreneurship, or another discipline.

Using technology in innovative ways enabled superstars like Steve Jobs, Bill Gates, Larry Ellison, Mark Zuckerberg, Larry Page, Sergey Brin, and Jeff Bezos to earn billions and revolutionize commerce. You may not be such a superstar, but you can exceed beyond your expectations by applying the knowledge you learn in this class.

Congratulations on deciding to study business. Use this course to help you obtain and then thrive in an interesting and rewarding career. Learn more than just the MIS terminology—understand the ways information systems are transforming business and the many, many ways you can participate in that transformation.

In this endeavor, we wish you, a future business professional, the very best success!

David Kroenke & Randy Boyle



The Guides

Each chapter includes three unique **guides** that focus on current issues in information systems. In each chapter, one of the guides focuses on an ethical issue in business, and the second focuses on security. The third guide addresses the application of the chapter's contents to some other dimension

of business. The content of each guide is designed to stimulate thought, discussion, and active participation in order to help *you* develop your problem-solving skills and become a better business professional.

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Learning Aids for Students

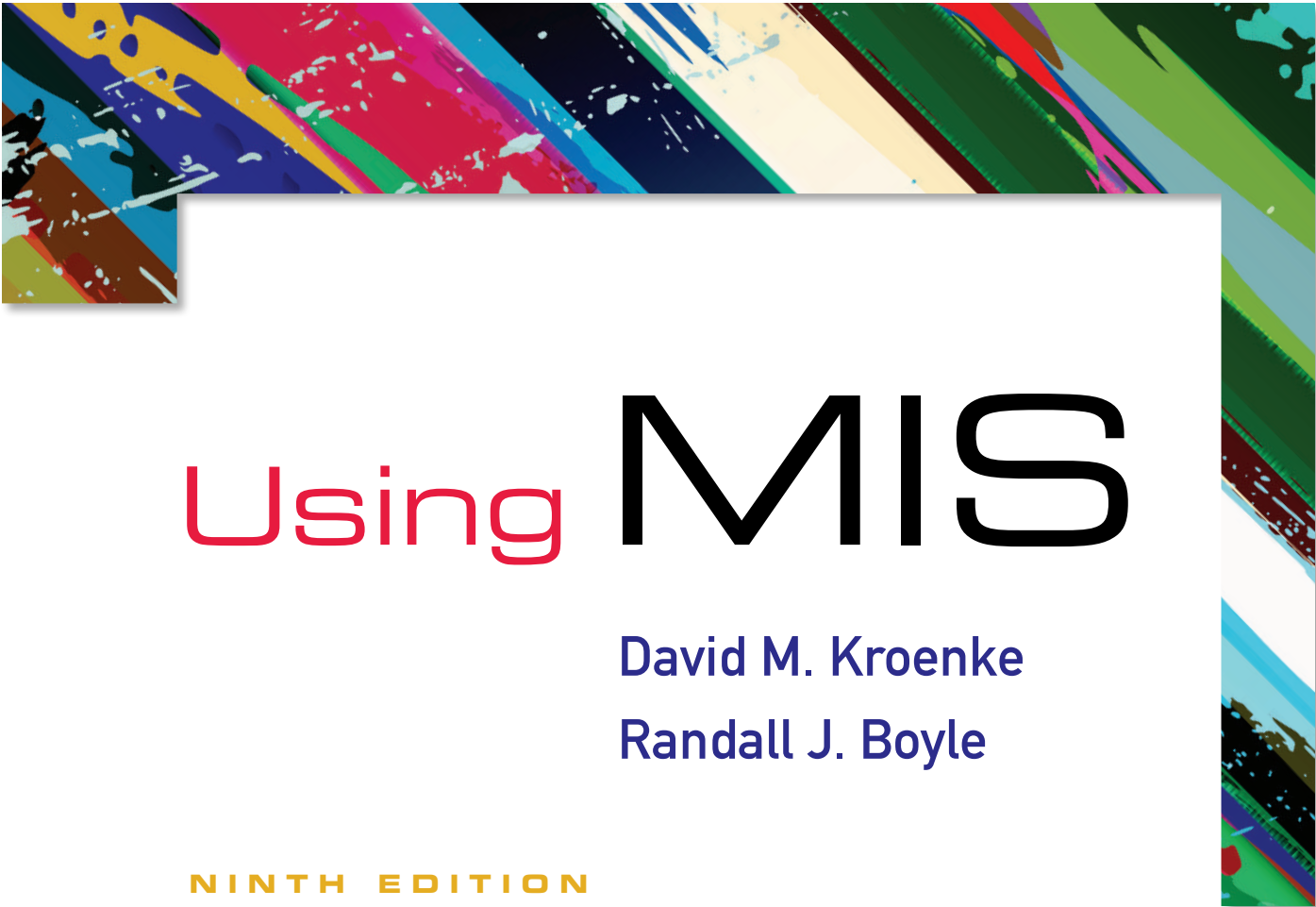
We have structured this book so you can maximize the benefit from the time you spend reading it. As shown in the following table, each chapter includes various learning aids to help you succeed in this course.

Resource	Description	Benefit	Example
Guides	Each chapter includes three guides that focus on current issues in information systems. One addresses ethics, one addresses security, and the third addresses other business topics.	Stimulate thought and discussion. Address ethics and security once per chapter. Help develop your problem-solving skills.	Chapter 5, Ethics Guide: Querying Inequality? Chapter 8, Security Guide: Digital Is Forever Chapter 9, Guide: Data Mining in the Real World
Chapter Introduction Business Example	Each chapter begins with a description of a business situation that motivates the need for the chapter's contents. We focus on two different businesses over the course of the text: Falcon Security, a provider of aerial surveillance and inspection services, and PRIDE, a cloud-based, healthcare startup opportunity.	Understand the relevance of the chapter's content by applying it to a business situation.	Chapter 9, opening vignette: Business Intelligence Systems and PRIDE
Query-Based Chapter Format	Each chapter starts with a list of questions, and each major heading is a question. The Active Review contains tasks for you to perform in order to demonstrate your ability to answer the questions.	Use the questions to manage your time, guide your study, and review for exams.	Chapter 1, Q1-4: How Can You Use the Five Component Model? Chapter 6, Q6-4: How Do Organizations Use the Cloud?
So What?	Each chapter of this text includes an exercise called "So What?" This feature challenges the students to apply the knowledge they've gained from the chapter to themselves, often in a personal way. The goal is to drive home the relevancy of the chapter's contents to their future professional lives. It presents a current issue in IS that is relevant to the chapter content and asks you to consider why that issue matters to you as a future business professional.	Understand how the material in the chapter applies to everyday situations.	Chapter 2, So What? Augmented Collaboration



Resource	Description	Benefit	Example
2026?	Each chapter concludes with a discussion of how the concepts, technology, and systems described in that chapter might change by 2026.	Learn to anticipate changes in technology and recognize how those changes may affect the future business environment.	Chapter 7, 2026? discusses the future of ERP applications
Active Review	This review provides a set of activities for you to perform in order to demonstrate your ability to answer the primary questions addressed by the chapter.	After reading the chapter, use the Active Review to check your comprehension. Use for class and exam preparation.	Chapter 9, Active Review
Using Your Knowledge	These exercises ask you to take your new knowledge one step further by applying it to a practice problem.	Test your critical-thinking skills.	Chapter 4, Using Your Knowledge
Collaboration Exercises	These exercises and cases ask you to collaborate with a group of fellow students, using collaboration tools introduced in Chapter 2.	Practice working with colleagues toward a stated goal.	Collaboration Exercise 3 discusses how to tailor a high-end resort's information system to fit its competitive strategy
Case Studies	Each chapter includes a case study at the end.	Apply newly acquired knowledge to real-world situations.	Case Study 6, Cloud Solutions that Test for Consumer Risk and Financial Stability
Application Exercises	These exercises ask you to solve situations using spreadsheet (Excel) or database (Access) applications.	Develop your computer skills.	AE10-1 builds on your knowledge from Chapter 10 by asking you to score the websites you visit using WOT
International Dimension	This module at the end of the text discusses international aspects of MIS. It includes the importance of international IS, the localization of system components, the roles of functional and cross-functional systems, international applications, supply chain management, and challenges of international systems development.	Understand the international implications and applications of the chapters' content.	International Dimension QID-3, How Do Inter-enterprise IS Facilitate Global Supply Chain Management?

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David M. Kroenke
Randall J. Boyle

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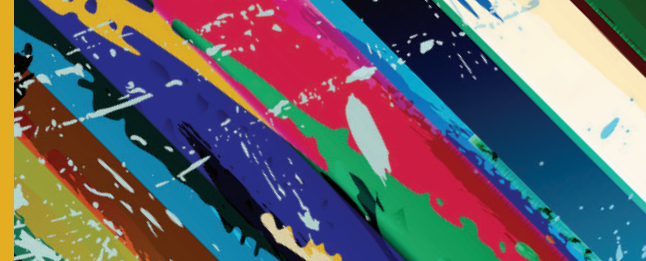
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To C.J., Carter, and Charlotte
—David Kroenke

To Courtney, Noah, Fiona, and Layla
—Randy Boyle

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Describes how this course teaches four key skills for business professionals. Defines *MIS*, *information systems*, and *information*.

Describes characteristics, criteria for success, and the primary purposes of collaboration.

Discusses components of collaboration IS and describes collaboration for communication and content sharing. Illustrates use of Google Drive, SharePoint, and other collaboration tools.

Describes reasons why organizations create and use information systems: to gain competitive advantage, to solve problems, and to support decisions.

Describes the manager's essentials of hardware and software technology. Discusses open source, Web applications, mobile systems, and BYOD policies.

Explores database fundamentals, applications, modeling, and design. Discusses the entity-relationship model. Explains the role of Access and enterprise DBMS products. Defines *BigData* and describes nonrelational and NoSQL databases.

Explains why the cloud is the future. Describes basic network technology that underlies the cloud, how the cloud works, and how organizations, including Falcon Security, can use the cloud. Explains SOA and summarizes fundamental Web services standards.

Discusses workgroup, enterprise, and inter-enterprise IS. Describes problems of information silos and cross-organizational solutions. Presents CRM, ERP, and EAI. Discusses ERP vendors and implementation challenges.

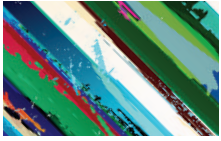
Describes components of social media IS (SMIS) and explains how SMIS can contribute to organizational strategy. Discusses the theory of social capital and how revenue can be generated using social media. Explains the ways organizations can use ESN and manage the risks of SMIS.

Describes business intelligence and knowledge management, including reporting systems, data mining, and social media-based knowledge management systems.

Describes organizational response to information security: security threats, policy, and safeguards.

Describes the role, structure, and function of the IS department; the role of the CIO and CTO; outsourcing; and related topics.

Discusses the need for BPM and the BPM process. Introduces BPMN. Differentiates between processes and information systems. Presents SDLC stages. Describes agile technologies and scrum and discusses their advantages over the SDLC.



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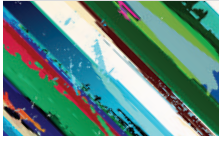
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PREFACE

In Chapter 1, we claim that MIS is the most important class in the business curriculum. That's a bold statement, and every year we ask whether it remains true. Is there any discipline having a greater impact on contemporary business and government than IS? We continue to doubt there is. Every year brings important new technology to organizations, and many of these organizations respond by creating innovative applications that increase productivity and otherwise help them accomplish their strategies.

Over the past year, we've seen the largest IPO in history (\$25 billion) come from e-commerce giant Alibaba. Amazon revealed that it's using an army of Kiva robots to increase productivity in its fulfillment centers by 50 percent. And we've seen an unprecedented flurry of IoT smart devices aimed at personal, home, and automobile automation services hit the market. It seems like every industry is running full tilt toward the smart door. Technology is fundamentally changing the way organizations operate. It's forcing them to be more productive, innovative, and adaptable.

Even innovations that we've known about for several years took big leaps forward this year. MakerBot made huge strides in 3D printing by introducing new composite filaments that can print materials that look just like wood, metal, and stone—not just plastics. Mercedes-Benz was the hit of CES 2015 when it debuted its new driverless F 015 car with saloon-style doors, complete touch-screen interface, and front-room seating. And Google announced it was deploying 25 of its driverless cars around Mountain View, California, starting in summer 2015.

Large-scale data breaches were a major problem again this year. eBay, Home Depot, JP Morgan Chase, and Anthem all suffered enormous data losses. Sony Pictures lost more than 100 TB of confidential corporate data, and Apple lost hundreds of explicit celebrity photos to hackers. And these are just a fraction of the total number of organizations affected this year.

In addition, normal revisions were needed to address emergent technologies such as cloud-based services, mobile devices, innovative IS-based business models like that at zulily, changes in organizations' use of social media, and so on.

More sophisticated and demanding users push organizations into a rapidly changing future—one that requires continual adjustments in business planning. To participate, our graduates need to know how to apply emerging technologies to better achieve their organizations' strategies. Knowledge of MIS is critical. And this pace continues to remind us of Carrie Fisher's statement "The problem with instantaneous gratification is that it's just not fast enough."

Why This Ninth Edition?

The changes in this ninth edition, Global Edition, are listed in Table 1. Substantial changes were made in Chapter 1 to strengthen the argument that MIS is the most important course in the business curriculum. The chapter now looks at the Digital Revolution and the exponential change happening to technology. It discusses how digital devices are changing due to increased processing power (Moore's Law), connectivity (Metcalfe's Law), network speed (Nielsen's Law), and storage capacity (Kryder's Law). It then gives examples of how new technology creates entirely new types of businesses and forces existing businesses to change the way they operate.

Chapter 1 also includes new salary data projections from the Bureau of Labor Statistics through 2022. These salary projections cover pay ranges for typical information systems jobs, general business occupations, and managerial-level positions.

TABLE 1: CHANGES IN THE NINTH EDITION

Chapter	Change
1	New Falcon Security Part 1 introduction
1	New Falcon Security chapter introduction
1	New So What? Feature: Biggest IPO Ever: Alibaba
1	Updated industry statistics throughout the chapter
1	New Q1-1 covering the Information Age, Digital Revolution, and power of exponential change
1	New discussion about the forces pushing digital change: Bell's Law, Moore's Law, Metcalfe's Law, Nielsen's Law, and Kryder's Law
1	New Q1-2 looking at the way changes in technology will affect student's future job security
1	New statistics about projected technology job growth from BLS
1	Combined discussion about MIS, IS, and IT
1	Updated 2026? discussion in Q1-7
2	New Falcon Security chapter introduction
2	New So What? Feature: Augmented Collaboration
2	New Security Guide: Evolving Security
2	Updated terms <i>Microsoft Lync</i> to <i>Skype for Business</i> , <i>Google Grid</i> to <i>Google Drive</i> , <i>Microsoft Web Apps</i> to <i>Microsoft Office Online</i> , <i>SkyDrive</i> to <i>OneDrive</i> , <i>Hotmail</i> to <i>Outlook.com</i>
2	Updated instructions and images for Google Drive
3	New Falcon Security chapter introduction
3	New So What? Feature: Driving Strategy
3	New Security Guide: Hacking Smart Things
3	New five forces, value chain, and business process examples using Falcon Security
3	Updated statistics in the chapter and Amazon case study
4	New Falcon Security chapter introduction
4	New So What? Feature: New from CES 2015
4	New Ethics Guide: Free Apps for Data
4	Updated industry statistics throughout
4	New discussion about augmented reality hardware
4	Updated developments in 3D printing, self-driving cars, and IoT
4	Updated terms <i>Internet Explorer</i> to <i>Edge</i> , <i>Windows 8</i> to <i>Windows 10</i>
5	New Falcon Security chapter introduction
5	New justification for learning database technology
5	Updated E-R notation for minimum cardinality to conform to contemporary usage
5	New Q5-7 about the possibility of Falcon Security maintaining video metadata in a database
5	New discussion of NewSQL and in-memory DBMS
5	New Collaboration Exercise
6	New Falcon Security chapter introduction
6	New So What? Feature: Net Neutrality Enabled
6	New Security Guide: From Anthem to Anathema

Chapter	Change
6	Added discussion of new net neutrality regulations
6	Added discussion about personal area networks (PANs) and Bluetooth
6	Updated statistics and AWS offerings
7	Updated ERP vendor rankings and comments
7	Added new technology as a fifth implementation challenge
7	Added discussion of the effect of mobility, security threats, and the Internet of Things on enterprise applications in a new 2026? discussion
8	New Ethics Guide: Synthetic Friends
8	New Security Guide: Digital Is Forever
8	New discussion about the use of social media in recruiting
8	Expanded discussion of social capital using a YouTube channels example
8	Expanded discussion of mobile ad spending
8	Updated social media statistics throughout the chapter
9	Included latest CEO surveys on the importance of BI
9	Replaced predictive policing example with reporting application in medicine
9	Updated parts analysis example to remove AllRoad Parts and keep the example anonymous
9	New So What? exercise about BI for securities trading
9	Updated Web trends, HD Insight description, and 2026? discussion
10	New So What? Feature: New from Black Hat 2014
10	New Security Guide: EMV to the Rescue
10	New discussion of notable APTs
10	Updated security statistics and figures throughout the chapter
10	New discussion of ransomware
10	New discussion of recent large-scale data breaches
11	New Security Guide: Selling Privacy
11	New Ethics Guide: Privacy Versus Productivity: The BYOD Dilemma
11	Updated IS jobs, descriptions, and salary data
12	New So What? Feature: Using This Knowledge for Your Number-One Priority
12	Revised 2026? discussion
Appl Ex	New exercise using open source software (LibreOffice)
Appl Ex	New exercise using software to compress and encrypt files (7-Zip)
International Dimension	New discussion of localization using IBM's Watson
International Dimension	Expanded discussion of EU's "right to be forgotten" law

Chapters 1 through 6 begin with a new discussion of Falcon Security, a privately owned company that provides surveillance and inspection services for companies using flying drones. Chapters 7–12 continue to be introduced by PRIDE Systems, a cloud-based virtual exercise competition and healthcare startup. In addition to motivating the chapter material, both case scenarios provide numerous opportunities for students to practice one of Chapter 1’s key skills: “Assess, evaluate, and apply emerging technology to business.”

This edition continues to have a focus on teaching ethics. Every Ethics Guide asks students to apply Immanuel Kant’s categorical imperative, Bentham and Mill’s utilitarianism, or both to the business situation described in the guide. We hope you find the ethical considerations richer and deeper with these exercises. The categorical imperative is introduced in the Ethics Guide in Chapter 1 (pages 56–57), and utilitarianism is introduced in the Ethics Guide in Chapter 2 (pages 92–93).

As shown in Table 1, additional changes were made to every chapter, including six new Security Guides, six new So What? Features, three new Ethics Guides, and updates to chapter cases. Additional figures, like the one showing mobile ad spending in Chapter 8, were added to make the text more accessible. Numerous changes were made throughout the chapters in an attempt to keep them up to date. MIS moves fast, and to keep the text current, we checked every fact, data point, sentence, and industry reference for obsolescence and replaced them as necessary.

To reiterate the preface of earlier editions, we believe it is exceedingly important to make these frequent adaptations because of the delays associated with a 2-year revision cycle. Text materials we develop in April of one year are published in January of the next year and are first used by students in September—a minimum 17-month delay.

For some areas of study, a year and a half may not seem long because little changes in that amount of time. But in MIS, entire companies can be founded and then sold for billions of dollars in just a few years. YouTube, for example, was founded in February 2005 and then sold in November 2006 to Google for \$1.65B (21 months). Facebook started in 2004 and currently (2015) has a market capitalization exceeding \$212B. MIS changes fast—very fast. We hope this new edition is the most up-to-date MIS textbook available.

Importance of MIS

As stated, we continue to believe we are teaching the single most important course in the business school. The rationale for this bold statement is presented in Chapter 1, starting on page 1. In brief, the argument relies on two observations.

First, processing power, interconnectivity of devices, storage capacity, and bandwidth are all increasing so rapidly that it’s fundamentally changing how we use digital devices. Businesses are increasingly finding—and, more importantly, increasingly *required* to find—innovative applications for information systems. The incorporation of Facebook and Twitter into marketing systems is an obvious example, but this example is only the tip of the iceberg. For at least the next 10 years, every business professional will, at the minimum, need to be able to assess the efficacy of proposed IS applications. To excel, business professionals will also need to define innovative IS applications.

Further, professionals who want to emerge from the middle ranks of management will, at some point, need to demonstrate the ability to manage projects that develop these innovative information systems. Such skills will not be optional. Businesses that fail to create systems that take advantage of changes in technology will fall prey to competition that can create such systems. So, too, will business professionals.

The second premise for the singular importance of the MIS class relies on the work of Robert Reich, former Secretary of Labor for the Clinton administration. In *The Work of Nations*,¹ Reich identifies four essential skills for knowledge workers in the 21st century:

- Abstract thinking
- Systems thinking

- Collaboration
- Experimentation

For reasons set out in Chapter 1, we believe the MIS course is the single best course in the business curriculum for learning these four key skills.

Today's Role for Professors

What is our role as MIS professors? Students don't need us for definitions; they have the Web for that. They don't need us for detailed notes; they have the PowerPoints. Consequently, when we attempt to give long and detailed lectures, student attendance falls. And this situation is even more dramatic for online courses.

We need to construct useful and interesting experiences for students to apply MIS knowledge to their goals and objectives. In this mode, we are more like track coaches than the chemistry professor of the past. And our classrooms are more like practice fields than lecture halls.²

Of course, the degree to which each of us moves to this new mode depends on our goals, our students, and our individual teaching styles. Nothing in the structure or content of this edition assumes that a particular topic will be presented in a nontraditional manner. But every chapter contains materials suitable for use with a coaching approach, if desired.

In addition to the chapter feature titled So What?, all chapters include a collaboration exercise that students can use for team projects inside and outside of class. As with earlier editions, each chapter contains three guides that describe practical implications of the chapter contents that can be used for small in-class exercises. Additionally, every chapter concludes with a case study that can be the basis for student activities. Finally, this edition contains 39 application exercises (see page 520).

Falcon Security and PRIDE Cases

Each part and each chapter opens with a scenario intended to get students involved emotionally, if possible. We want students to mentally place themselves in the situation and to realize that this situation—or something like it—could happen to them. Each scenario sets up the chapter's content and provides an obvious example of why the chapter is relevant to them. These scenarios help support the goals of student motivation and learning transfer.

Furthermore, both of these introductory cases involve the application of new technology to existing businesses. Our goal is to provide opportunities for students to see and understand how businesses are affected by new technology and how they need to adapt while, we hope, providing numerous avenues for you to explore such adaptation with your students.

In developing these scenarios, we endeavor to create business situations rich enough to realistically carry the discussions of information systems while at the same time simple enough that students with little business knowledge and even less business experience can understand. We also attempt to create scenarios that will be interesting to teach. This edition introduces the new Falcon Security case and continues the PRIDE Systems case from the eighth edition.

Falcon Security

The chapters in Parts 1 and 2 are introduced with dialogue from key players at Falcon Security, a privately owned company that provides surveillance and inspection services for companies using flying drones. We wanted to develop the case around an interesting business model that students would want to learn more about. Drones get a lot of attention in the press, but students may not know a lot about how they're used in business. Drones are getting cheaper and easier to fly and have a lot more functionality than they did just a few years ago. It's likely that students will see drones deployed widely during their careers.

Falcon Security is considering strengthening its competitive advantage by 3D printing its own drones. Buying fleets of drones is expensive, and the drones become outdated quickly. However, were the company to do so, it would be changing its fundamental business model, or at least adding to it. Making drones would require Falcon Security to hire new employees, develop new business processes, and potentially develop a new IS to support the custom-built drones. All of this is good fodder for Chapter 3 and for underlining the importance of the ways that IS needs to support evolving business strategy.

Ultimately, Falcon Security determines that it does not want to become a drone manufacturer. It could print some drone parts, but not enough to make it cost effective. The company would still have to buy a lot of expensive component parts to assemble an airworthy drone, something it's not sure it can do consistently. Falcon decides to focus on its core strength of providing integrated security services.

Students may object that, in studying Falcon Security, they devoted considerable time to an opportunity that ultimately didn't make business sense and was rejected. But this outcome is at least as informative as a successful outcome. The example uses knowledge of processes as well as application of business intelligence to avoid making a serious blunder and wasting substantial money. Falcon Security didn't have to open a factory and 3D-print a fleet of custom-built drones just to find out it would be a mistake. It could make a prototype, *analyze* the costs and benefits, and then avoid making the mistake in the first place. The very best way to solve a problem is not to have it!

PRIDE Systems

The Performance Recording, Integration, Delivery, and Evaluation (PRIDE) system was first developed for the sixth edition. In that version, it was an embryonic, entrepreneurial opportunity that used mobile devices, data-gathering exercise equipment, and the cloud to share integrated data among healthcare providers, heart surgery patients, health clubs, health insurance companies, and employers.

PRIDE is a real-world prototype developed for the owner of a health club who wanted to connect the workout data of his club members to their workout data at home and to their employers, insurance companies, and healthcare professionals. PRIDE is written in C#, and the code runs against an Azure database in the cloud. The PRIDE system uses the Windows Phone emulator that is part of Visual Studio. PRIDE was going to be ported to iOS and Android devices after demonstrating feasibility and after the club owner obtained financing.

As reflected in the PRIDE case, the developers realized it was unlikely to succeed because, as Zev says in Chapter 7, "Doctors don't care about exercise." Dr. Flores was too busy as a cardiac surgeon to make his startup a success. Therefore, he sold it to a successful businessman who changed the staff and the strategy and repurposed the software. All of this is described at the start of Chapter 7.

Use of the Categorical Imperative and Utilitarianism in Ethics Guides

Since the introduction of the Ethics Guides into the first edition of this text, we believe there has been a shift in students' attitudes about ethics. Students seem, at least many of them, to be more cynical and callous about ethical issues. As a result, in the seventh edition, we began to use Kant's categorical imperative and Bentham and Mill's utilitarianism to ask students, whose ethical standards are often immature, to adopt the categorical imperative and utilitarian perspectives rather than their own perspectives and, in some cases, in addition to their own perspectives. By doing so, the students are asked to "try on" those criteria, and we hope in the process they think more deeply about ethical principles than they do when we allow them simply to apply their personal biases.

The Ethics Guide in Chapter 1 introduces the categorical imperative, and the guide in Chapter 2 introduces utilitarianism. If you choose to use these perspectives, you will need to assign both of those guides.

2026?

Every chapter concludes with a question labeled “2026?” This section presents our guesses about how the subject of that chapter is likely to change between now and 2026. Clearly, if we had a crystal ball that would give good answers to that question, we wouldn’t be writing textbooks.

However, we make what we believe is a reasonable stab at an answer. You will probably have different ideas, and we hope students will have different ideas as well. The goal of these sections is to prompt students to think, wonder, assess, and project about future technology. These sections usually produce some of the most lively in-class discussions.

Why Might You Want Your Students to Use SharePoint?

The difficult part of teaching collaboration is knowing how to assess it. Collaboration assessment is not simply finding out which students did the bulk of the work. It also involves assessing feedback and iteration; that is, identifying who provided feedback, who benefited from the feedback, and how well the work product evolved over time.

Microsoft SharePoint is a tool that can help assess collaboration. It automatically maintains detailed records of all changes that have been made to a SharePoint site. It tracks document versions, along with the date, time, and version author. It also maintains records of user activity—who visited the site, how often, what site features they visited, what work they did, what contributions they made, and so forth. SharePoint makes it easy to determine which students were making sincere efforts to collaborate by giving and receiving critical feedback throughout the project assignment and which students were making a single contribution 5 minutes before midnight the day before the project was due.

Additionally, SharePoint has built-in facilities for team surveys, team wikis, and member blogs as well as document and list libraries. All of this capability is backed up by a rich and flexible security system. To be clear, we do not use SharePoint to run our classes; we use either Blackboard or Canvas for that purpose. However, we do require students to use SharePoint for their collaborative projects. A side benefit is that they can claim, rightfully, experience and knowledge of using SharePoint in their job interviews.

You might also want to use Office 365 because it includes Skype, hosted Exchange, 1TB online storage, and SharePoint Online as an add-on. Microsoft offers Office 365 to academic institutions as a whole or to students directly at reduced educational rates.

Why Are the Chapters Organized by Questions?

The chapters of *Using MIS* are organized by questions. According to Marilla Svinicki,³ a leading researcher on student learning at the University of Texas, we should not give reading assignments such as “Read pages 50 through 70.” The reason is that today’s students need help organizing their time. With such a reading assignment, they will fiddle with pages 50 through 70 while texting their friends, surfing the Internet, and listening to their iPods. After 30 or 45 minutes, they will conclude they have fiddled enough and will believe they have completed the assignment.

Instead, Svinicki states we should give students a list of questions and tell them their job is to answer those questions, treating pages 50 through 70 as a resource for that purpose. When students can answer the questions, they have finished the assignment.

Using that philosophy, every chapter in this text begins with a list of questions. Each major heading in the chapter is one of those questions, and the Active Review at the end of each chapter provides students a set of actions to take in order to demonstrate that they are able to answer the questions. Since learning this approach from Professor Svinicki, we have used it in our classes and have found that it works exceedingly well.

How Does This Book Differ from *Experiencing MIS* and from *Processes, Systems, and Information*?

In addition to *Using MIS*, we've written an MIS text titled *Experiencing MIS*. These two texts provide different perspectives for teaching this class. The principal difference between *Using MIS* and *Experiencing MIS* is that the latter is modular in design and has a more "in your face" attitude about MIS. Modularity definitely has a role and place, but not every class needs or appreciates the flexibility and brevity a modular text offers. A shorter, more custom version of *Experiencing MIS* is also available as *MIS Essentials*.

There is also a fourth MIS text titled *Processes, Systems, and Information: An Introduction to MIS* coauthored with Earl McKinney of Bowling Green State University. It represents a third approach to this class and is structured around business processes. It has a strong ERP emphasis and includes two chapters on SAP as well as two chapter tutorials for using the SAP Alliance Global Bikes simulation. Earl has taught SAP for many years and has extensive experience in teaching others how to use the Global Bikes simulation.

In *Using MIS*, we have endeavored to take advantage of continuity and to build the discussion and knowledge gradually through the chapter sequence, in many places taking advantage of knowledge from prior chapters.

The goal in writing these books is to offer professors a choice of approach. We are committed to each of these books and plan to revise them for some time. We sincerely hope that one of them will fit your style and objectives for teaching this increasingly important class.

Instructor Resources

At the Instructor Resource Center, www.pearsonglobaleditions.com/Kroenke, instructors can easily register to gain access to a variety of instructor resources available with this text in downloadable format. If assistance is needed, a dedicated technical support team is ready to help with the media supplements that accompany this text. Visit <https://support.pearson.com/getsupport/s/> for answers to frequently asked questions and toll-free user support phone numbers.

The following supplements are available with this text:

- Test Bank
- TestGen[®] Computerized Test Bank
- PowerPoint Presentation

AACSB Learning Standards Tags

What Is the AACSB?

The Association to Advance Collegiate Schools of Business (AACSB) is a nonprofit corporation of educational institutions, corporations, and other organizations devoted to the promotion and improvement of higher education in business administration and accounting. A collegiate institution offering degrees in business administration or accounting may volunteer for AACSB accreditation review. The AACSB makes initial accreditation decisions and conducts periodic reviews to promote continuous quality improvement in management education. Pearson Education is a proud member of the AACSB and is pleased to provide advice to help you apply AACSB Learning Standards.

What Are AACSB Learning Standards?

One of the criteria for AACSB accreditation is the quality of the curricula. Although no specific courses are required, the AACSB expects a curriculum to include learning experiences in such areas as:

- Communication Abilities
- Ethical Understanding and Reasoning Abilities
- Analytic Skills
- Use of Information Technology
- Dynamics of the Global Economy
- Multicultural and Diversity Understanding
- Reflective Thinking Skills

These seven categories are AACSB Learning Standards. Questions that test skills relevant to these standards are tagged with the appropriate standard. For example, a question testing the moral questions associated with externalities would receive the Ethical Understanding tag.

How Can I Use These Tags?

Tagged questions help you measure whether students are grasping the course content that aligns with AACSB guidelines. In addition, the tagged questions may help to identify potential applications of these skills. This, in turn, may suggest enrichment activities or other educational experiences to help students achieve these goals.

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