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MANAGEMENT INFORMATION SYSTEMS

MANAGING THE DIGITAL FIRM

SEVENTEENTH EDITION

GLOBAL EDITION

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Chapter 11: Managing Knowledge and Artificial Intelligence

Artificial Intelligence Beats Radiologists in Reading Mammograms

Do You Know Who Is Using Your Face?

Will AI Kill Jobs?

Are Self-Driving Cars Ready for the Road?

Chapter 12: Enhancing Decision Making

Eastspring: Targeted Enterprise System Building

Predictive Maintenance in the Oil and Gas Industry

GIS Help Land O'Lakes Manage Assets Strategically

Should an Algorithm Make Our Decisions?

Chapter 13: Building Information Systems

Vinci Energies Builds a New Mobile Employee Time Sheet App

Business Process Redesign at DP World

McAfee Turns to Automated Software Testing

Pick n Pay's Cloud Migration to Enhance Business Intelligence

Chapter 14: Making the Business Case for Information Systems and Managing Projects

Al-Asasyah Implements a Modern ERP Solution

Sauder Woodworking Gets ERP Implementation Right

Arup Moves Project Management to the Cloud

Pennsylvania's Unemployment Compensation Modernization System: Unfinished Business

Chapter 15: Managing Global Systems

The Bel Group: Laughing All the Way to Success

Rethinking Global Supply Chains

Digital Nationalism

Souq.com: Amazon's Entry into the Middle East

New to This Edition

Management Information Systems, 17th Global Edition has been thoroughly updated to cover the latest industry and technology changes that impact the course.

MyLab MIS

The goal of *Management Information Systems* is to provide students and instructors with an authoritative, up-to-date, interactive, and engaging introduction to the MIS field. MyLab MIS for *Management Information Systems* is an extension of this goal in an interactive digital environment.

MyLab is the teaching and learning platform that empowers you to reach *every* student. By combining trusted author content with digital tools and a flexible platform, MyLab personalizes the learning experience and improves results for each student.

MyLab MIS features videos, animations, interactive quizzes to foster student comprehension of concepts, theories, and issues. The MyLab MIS environment reflects the new learning styles of students, which are more social, interactive, and usable on digital devices such as smartphones and tablets.

What's Included

- **Pearson eText** Enhances learning both in and out of the classroom. Students can highlight, take notes, and review key vocabulary all in one place, even when offline. Seamlessly integrated interactivities and Conceptual Animations bring concepts to life via MyLab or the app.
- New Conceptual Animations Have author Ken Laudon walk students through three of the most important concepts in each chapter (45 total) using a contemporary animation platform. Available not only in the Pearson eText that lives in MyLab MIS but can also be purchased as a standalone eText.
- New Video Cases Collections of video cases (two or more per chapter) and 6 additional instructional videos cover key concepts and experiences in the MIS world. The video cases illustrate how real-world corporations and managers are using information technology and systems. Each case is paired with a brief quiz. Video cases are listed at the beginning of each chapter.
- MIS Decision Simulations Foster critical decision making skills with these interactive exercises that allow students to play the role of a manager and make business decisions.
- Chapter Warm Ups, Chapter Quizzes These objective-based quizzes evaluate comprehension.
- **Discussion Questions** Threaded discussion topics taken from the end of chapter encourage critical thinking.
- Excel & Access Grader Projects Live in the application auto-graded Grader projects provided inside MyLab MIS to support classes covering Office tools. In addition, Hands-On MIS Projects from the book are also available.

- **Running Case** on Dirt Bikes USA provides additional hands-on projects for each chapter.
- **Dynamic Study Modules** help students study chapter topics and the language of MIS on their own by continuously assessing their knowledge application and performance in real time. These are available as graded assignments prior to class, and are accessible on smartphones, tablets, and computers.
- Learning CatalyticsTM is a student response tool that helps you generate class discussion, customize your lecture, and promote peer-to-peer learning based on real-time analytics. Learning Catalytics uses students' devices to engage them in more interactive tasks.
- Learning Tracks: 38 Learning Tracks in MyLab MIS provide additional coverage of selected topics. (See pages 28 29 for list of Learning Tracks available.)

ENHANCED STAND-ALONE PEARSON ETEXT

Management Information Systems is also available as a stand-alone eText, which extends the learning experience, anytime and anywhere: The mobile app lets students use their eText whenever they have a moment in their day, on Android and iPhone mobile phones and tablets. Offline access ensures students never miss a chance to learn. The eText engages students with compelling media: Videos and animations written and produced by the authors bring key concepts to life, helping students place what they are reading into context. Other features include highlights that allow educators to share information directly with students within their eText, and analytics that let educators gain insight into how students use their eText, and plan more effective instruction.

Both the MyLab MIS and eText platforms provide an affordable, simple-to-use mobile-optimized reading experience that lets instructors and students extend learning beyond class time.

New and Updated Topics

The 17th Global Edition features all new or updated opening, closing, and Interactive Session cases. The text, figures, tables, and cases have been updated through July 2020 with the latest sources from industry and MIS research. New topics and coverage include:

- Updated and expanded coverage of artificial intelligence (AI): Chapter 11 has been rewritten to include new expanded coverage of machine learning, "deep learning," natural language systems, computer vision systems, and robotics, reflecting the surging interest in business uses of AI and "intelligent" techniques.
- Making the business case for systems: Chapter 14 has been rewritten to provide expanded coverage of techniques and decision-making criteria for developing a business case for the acquisition and deployment of information systems and related technologies. The chapter shows how to evaluate and select systems projects and technologies that will deliver the greatest value to the firm.
- System impacts of the coronavirus pandemic: Up-to-date coverage of the impact of the coronavirus pandemic on business uses of information systems. Three Interactive Sessions and two chapter-ending case studies cover topics such as working remotely, supply chain disruptions, and rethinking global supply chains.

- **Big Data and the Internet of Things:** In-depth coverage of big data, big data analytics, and the Internet of Things (IoT) in Chapters 1, 6, 7, and 12. Includes big data analytics, analyzing IoT data streams, Hadoop, in-memory computing, nonrelational databases, data lakes, and analytic platforms.
- Cloud Computing: Updated and expanded coverage of cloud computing in Chapter 5 (IT infrastructure) with more detail on types of cloud services, private and public clouds, hybrid clouds, managing cloud services, and a new Interactive Session on using cloud services. Cloud computing is also covered in Chapter 6 (databases in the cloud), Chapter 8 (cloud security), Chapter 9 (cloud-based CRM and ERP), Chapter 10 (e-commerce), and Chapter 13 (cloud-based systems development).
 - Digital resiliency
 - Expanded coverage on privacy and intellectual property laws and regulations in the EU and other countries
 - Low-code and no-code development and automated testing
 - Software for the web: Javascript, Java, HTML, and HTML5
 - Data governance
 - · Dark web

The Laudon text, MyLab MIS, and eText provide the most up-to-date and comprehensive overview of information systems used by business firms today. After reading this book, we expect students will be able to participate in, and even lead, management discussions of information systems for their firms and understand how to use information technology in their jobs to achieve bottomline business results. Regardless of whether students are accounting, finance, management, operations management, marketing, or information systems majors, the knowledge and information in this book will be valuable throughout their business careers.

Solving Teaching and Learning Challenges

MyLab MIS is the teaching and learning platform that empowers you to reach every student. By combining trusted authors' content with digital tools and a flexible platform, MyLab MIS personalizes the learning experience and improves results for each student. And with MIS Decision-Making Sims and autograded Excel and Access Projects, students understand how MIS concepts will help them succeed in their future careers.

MyLab MIS and Pearson eText offer unique digital interactive features that hold student attention spans longer and make learning more effective, including 45 conceptual animations that walk students through key concepts in each chapter, a collection of online video cases, and interactive quizzes. All of this is available anytime, anywhere, on any digital device. The result is a comprehensive learning environment that will heighten student engagement and learning in the MIS course.

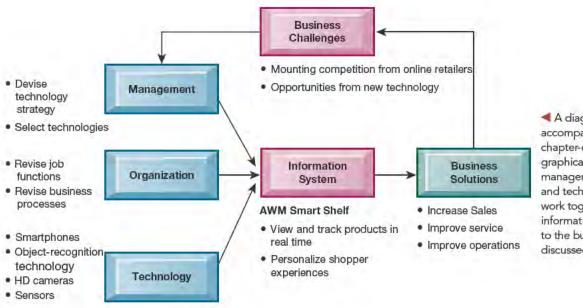
The Laudon learning package is more current, real-world, and authoritative than competitors. Laudon *Management Information Systems* 17th Global Edition, MyLab MIS, and Pearson eText help students understand MIS concepts and issues through extensive use of real-world company examples, a wide variety of text and video cases based on real-world organizations, and numerous line art illustrations, interactive animations, and hands-on software projects.

The Laudons are known for their outstanding real-world case studies, which describe how well-known business firms are using IT to solve problems and achieve objectives. Students are often asked to analyze the business problem and propose alternative solutions. The Laudons also provide hands-on MIS software and management decision-making problems in each chapter that are based on real-world companies and business scenarios.

The Laudon text and learning package now has a very strong career focus, which incentivizes students to learn by showing exactly how each chapter will help them prepare for future jobs. In addition to Career Opportunities, MyLab MIS features Career Resources, including how to incorporate MIS knowledge into resumes, cover letters, and job interviews.

The Core Text

The Core text provides an overview of fundamental MIS concepts using an integrated framework for describing and analyzing information systems. This framework shows information systems composed of management, organization, and technology elements and is reinforced in student projects and case studies. The Core text consists of 15 chapters with hands-on projects covering the most essential topics in MIS. An important part of the Core text is the Video Case Study and Instructional Video Package: video case studies (two to three per chapter) plus 6 instructional videos that illustrate business uses of information systems, explain new technologies, and explore concepts. Videos are keyed to the topics of each chapter.



A diagram accompanying each chapter-opening case graphically illustrates how management, organization, and technology elements work together to create an information system solution to the business challenges discussed in the case.

Chapter Organization

Each chapter contains the following elements:

- A Chapter Outline based on Learning Objectives
- Lists of all the Case Studies and Video Cases for each chapter
- A chapter-opening case describing a real-world organization to establish the theme and importance of the chapter

- A diagram analyzing the opening case in terms of the management, organization, and technology model used throughout the text
- Two Interactive Sessions with Case Study Questions
- A Career Opportunities section showing students how to use the text for job hunting and career preparation
- A Review Summary keyed to the Student Learning Objectives
- A list of Key Terms that students can use to review concepts
- Review questions for students to test their comprehension of chapter material
- Discussion questions raised by the broader themes of the chapter
- A series of Hands-on MIS Projects consisting of two Management Decision Problems, a hands-on application software project, and a project to develop Internet skills
- A Collaboration and Teamwork Project to develop teamwork and presentation skills with options for using open source collaboration tools
- A chapter-ending case study for students to apply chapter concepts
- Chapter references

Student Learning-Focused

Student Learning Objectives are organized around a set of study questions to focus student attention. Each chapter concludes with a Review Summary and Review Questions organized around these study questions, and each major chapter section is based on a Learning Objective.

Key Features

We have enhanced the text to make it more interactive, leading edge, and appealing to both students and instructors. The features and learning tools are described in the following sections.

Business-Driven with Real-World Business Cases and Examples

The text helps students see the direct connection between information systems and business performance. It describes the main business objectives driving the use of information systems and technologies in corporations all over the world: operational excellence, new products and services, customer and supplier intimacy, improved decision making, competitive advantage, and survival. In-text examples and case studies show students how specific companies use information systems to achieve these objectives. We use current (2020) examples from business and public organizations throughout the text to illustrate the important concepts in each chapter. Most of the case studies describe companies or organizations that are familiar to students, such as Facebook, Google, Amazon, PayPal, the Bel Group, and Deliveroo.

Hands-On Text Activities

Real-world business scenarios and data to learn firsthand what MIS is all about. These projects heighten student involvement in this exciting subject.

• Interactive Sessions. Two short cases in each chapter have been redesigned as Interactive Sessions that can be used to stimulate student interest and active learning. Each case concludes with case study questions. The case study questions provide topics for discussion or written assignments.

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INTERACTIVE SESSION TECHNOLOGY

New Cloud Database Tools Help Vodafone Fiji Make Better Decisions

Vodafone Fiji Limited is a 100 percent locally owned wireless telecommunications services provider, with more than 760,000 subscribers on its network, 260 employees, and revenue of U.S. \$185 million. Vodafone Fiji works closely with the Vodafone Group, a British multinational telecommunications conglomerate, which predominantly services Asia, Africa, Europe, and Oceania, and other operating companies to deliver cutting-edge technology to the people of Fiji. It has 85 percent of that country's market share in telecommunications services.

Prepaid customers account for 96 percent of Fiji's mobile communications market. (Less than 25 percent of U.S. mobile customers use prepaid services.) Prepaid customers are not bound by mobile service contracts, and thus are always looking for better ways to save. Consequently, Vodafone Fiji has to come up with better deals for its customers to persuade them to continue with its services. Unfortunately Vodafone Fiji's systems were not able to deliver the information for the task.

The company lacked the computing power, storage, and data management tools to analyze data quickly to make informed decisions about which deals to offer to which customers and the right times to do so. The data were stored on premises in multiple databases. Making matters worse, Amalgamated Telecom Holdings (Vodafone Fiji's major shareholder) had recently acquired several other telecommunications companies serving nearby markets in Samoa, American Samoa, Vanuatu, Cook Islands, and Kiribati. The data to be managed and mined for insights increased threefold. All those businesses had

Data Warehouse provides an easy-to-use, fully autonomous database that scales elastically as workloads increase, delivers fast query performance, and requires no database administration. Vodafone Fiji would be able to extract, move, and transform data from disparate sources in the cloud, where it could be analyzed much more rapidly.

By automating many of the routine tasks required to manage Oracle databases, Oracle Autonomous Database can free up database administrators (DBAs) to do higher-level and more strategic work. The warehouse system handles a great deal of tedious technical work on its own. Vodafone Fiji would not need to hire people with specialized database management skills, which would be challenging in a small job market such as Fiji's. An on-premises data warehouse would have taken the company two months to implement, whereas it set up Oracle Autonomous Data Warehouse Cloud within 30 minutes and reporting functionality within one week. Vodafone Fiji pays only for computing resources consumed.

Oracle Analytics Cloud is a cloud-based platform that can take data in almost any form or size from almost any source (desktop, enterprise, data center), with capabilities for collecting, consolidating and transforming data, and creating transactional and analytical reports and dashboards. Oracle Analytics Cloud provides self-service capabilities for users to perform what-if modeling and analysis. Users are empowered to visualize and discover data including working with Big Data

Vodafone Fiji can n w easily obtain insights from

■ Each chapter contains two Interactive Sessions on Management, Organizations, or Technology using realworld companies to illustrate chapter concepts and issues.

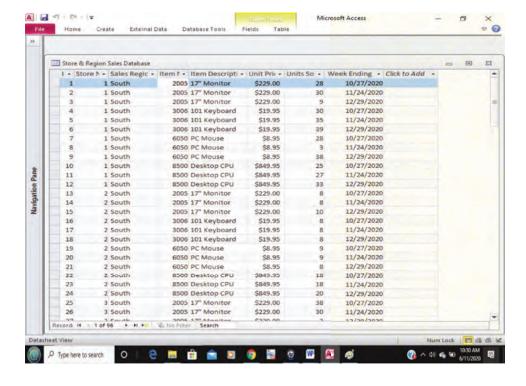
 Define the problem faced by Vodafone Fiji. What management, organization, and technology factors contributed to the problem?

CASE STUDY QUESTIONS

- Evaluate Oracle Autonomous Data Warehouse and Oracle Analytics Cloud as a solution for Vodafone Fiji.
- 3. How did the new Oracle tools change decision making at Vodafone Fiji?
- Was using cloud services advantageous for Vodafone Fiji? Explain your answer.
- Hands-On MIS Projects Every chapter concludes with a Hands-On MIS Projects section containing three types of projects: two Management Decision Problems; a hands-on application software exercise using Microsoft Excel, Access, or web page and blog creation tools; and a project that develops Internet business skills. Files for these projects are available in MyLab As mentioned, the Dirt Bikes USA running case in MyLab MIS provides additional hands-on projects for each chapter.
- Collaboration and Teamwork Projects. Each chapter features a collaborative project that encourages students working in teams to use Google Drive, Google Docs, or other open source collaboration tools. The first team project in Chapter 1 asks students to build a collaborative Google site.

■ Case Study Questions encourage students to apply chapter concepts to real-world companies in class discussions, student presentations, or writing assignments.

Students practice using software in real-world settings for achieving operational excellence and enhancing decision making.



Each chapter features a project to develop Internet skills for accessing information, conducting research, and performing online calculations and analysis.

Improving Decision Making: Using Web Tools to Configure and Price an Automobile

Software skills: Internet-based software Business skills: Researching product information and pricing

3-11 In this exercise, you will use software at car websites to find product information about a car of your choice and use that information to make an important purchase decision. You will also evaluate two of these sites as selling tools.

Developing Career Skills

For students to succeed in a rapidly changing job market, they should be aware of their career options and how to go about developing a variety of skills. With MyLab MIS and Management Information Systems 17th Global Edition, we focus on these skills in the following ways.

Career Opportunities and Resources

Every student who reads this text wants to know: How will this book help my career? The Career Opportunities feature shows how to use this text, MyLab MIS, and eText as tools for job-hunting and career-building. Job interviewers will typically ask about why you want the job, along with your ability to communicate, multitask, work in a team, show leadership, solve problems, and meet goals. These are general skills and behaviors you'll need to succeed in any job, and you should be prepared to provide examples from your course work and job experiences that demonstrate these skills. But there are also business knowledge and professional skills that employers will ask you about. Career Opportunities will show you how to use what you have learned in this text to demonstrate these skills.

The Career Opportunities section, identified by this icon * is the last major section of each chapter under the heading "How will MIS help my career?". There you will find a description of an entry-level job for a recent college graduate based on a real-world job description from major online job sites related to the topics covered in that chapter. The name of the company offering the job and its location have been changed. Each chapter's job posting describes the required educational background and specific job skills, and suggests some of the business-related questions that might arise during the job interview. The authors provide tips for answering the questions and preparing for the interview. Career Opportunities also show where students can find out more information about the technical and business knowledge required for the job in this text and on the web and social media.

Below are the job descriptions used in this edition based on postings from both large and small businesses. A few of these jobs call for an MIS major, others for MIS course work, but many postings are not that specific. Some require some previous internship or job experience, but many are entry-level positions suitable for new college graduates, and some of these positions provide onthe-job training. However, all require knowledge of business information systems and applications and the ability to work in a digital environment.

CHAPTER	CAREER OPPORTUNITY JOB DESCRIPTION
Information Systems in Global Business Today	Financial Client Support and Sales Assistant
Global E-business and Collaboration	Entry Level Sales Support Specialist
Information Systems, Organizations, and Strategy	Entry Level Business Development Representative
4. Ethical and Social Issues in Information Systems	Junior Privacy Analyst
5. IT Infrastructure and Emerging Technologies	Entry Level IT Consultant
6. Foundations of Business Intelligence: Databases and Information Management	Entry Level Data Analyst
7. Telecommunications, the Internet, and Wireless Technology	Automotive Digital Advisor
8. Securing Information Systems	Entry Level Identity Access and Management Support Specialist
9. Achieving Operational Excellence and Customer Intimacy: Enterprise Applications	Manufacturing Management Trainee
10. E-commerce: Digital Markets, Digital Goods	Junior E-Commerce Data Analyst
11. Managing Knowledge and Artificial Intelligence	Al Technology Sales Assistant
12. Enhancing Decision Making	Entry Level Data Analyst
13. Building Information Systems	Entry Level Junior Business Systems Analyst
14. Making the Business Case for Information Systems and Managing Projects	IT Project Management Assistant
15. Managing Global Systems	Global Data Services Sales and Marketing Trainee

Students can use Career Opportunities to shape their resumes and career plans as well as to prepare for interviews. For instructors, Career Opportunities are potential projects for student research and in-class discussion.

In MyLab MIS we have provided additional Career Resources, including job hunting guides and instructions on how to build a Digital Portfolio demonstrating the business knowledge, application software proficiency, and Internet skills acquired from using the text. The portfolio can be included in a resume or job application or used as a learning assessment tool for instructors.

Instructor Teaching Resources

SUPPLEMENTS AVAILABLE TO INSTRUCTORS AT WWW. PEARSONGLOBALEDITIONS.COM	FEATURES OF THE SUPPLEMENT
Instructor's Manual	 Chapter-by-chapter summaries Examples and activities not in the main book Teaching outlines Teaching tips Solutions to all questions and problems in the book
Test Bank authored by Professor Kenneth Laudon, New York University	The authors have worked closely with skilled test item writers to ensure that higher-level cognitive skills are tested. Test bank multiple-choice questions include questions on content but also include many questions that require analysis, synthesis, and evaluation skills.
	AACSB Assessment Guidelines
	As a part of its accreditation activities, the AACSB has developed an Assurance of Learning Program designed to ensure that schools do in fact teach students what they promise. Schools are required to state a clear mission, develop a coherent business program, identify student learning objectives, and then prove that students do in fact achieve the objectives. We have attempted in this book to support AACSB efforts to encourage assessment-based education. The end papers of this edition identify student learning objectives and anticipated outcomes for our Hands-On MIS projects. The authors will provide custom advice on how to use this text in colleges with different missions and assessment needs. Please email the authors or contact your local Pearson representative for contact information.
Computerized TestGen	TestGen allows instructors to:
	 Customize, save, and generate classroom tests Edit, add, or delete questions from the Test Item Files Analyze test results Organize a database of tests and student results
PowerPoints authored by Professor Kenneth Laudon, New York University	The authors have prepared a comprehensive collection of 50 PowerPoint slides for each chapter to be used in your lectures. Many of these slides are the same as used by Ken Laudon in his MIS classes and executive education presentations. Each of the slides is annotated with teaching suggestions for asking students questions, developing in-class lists that illustrate key concepts, and recommending other firms as examples in addition to those provided in the text. The annotations are like an Instructor's Manual built into the slides and make it easier to teach the course effectively. PowerPoints meet accessibility standards for students with disabilities. Features include but are not limited to: Keyboard and Screen Reader access Alternative text for images High color contrast between background and foreground colors

Learning Tracks

There are 38 Learning Tracks in MyLab MIS available to instructors and students. This supplementary content takes students deeper into MIS topics, concepts, and debates and reviews basic technology concepts in hardware, software, database design, and other areas.

CHAPTER	LEARNING TRACKS
Chapter 1: Information Systems in Global	How Much Does IT Matter?
Business Today	Information Systems and Your Career
	The Mobile Digital Platform
Chapter 2: Global E-business and	Systems from a Functional Perspective
Collaboration	IT Enables Collaboration and Teamwork
	Challenges of Using Business Information Systems
	Organizing the Information Systems Function
Chapter 3: Information Systems, Organizations, and Strategy	The Changing Business Environment for IT
Chapter 4: Ethical and Social Issues in Information Systems	Developing a Corporate Code of Ethics for IT
Chapter 5: IT Infrastructure and Emerging	How Computer Hardware and Software Work
Technologies	Service Level Agreements
	The Open Source Software Initiative
	Cloud Computing
Chapter 6: Foundations of Business Intelligence: Databases and Information	Database Design, Normalization, and Entity-Relationship Diagramming
Management	Introduction to SQL
	Hierarchical and Network Data Models
Chapter 7: Telecommunications, the	Wireless Applications for Customer Relationship Management, Supply Chain
Internet, and Wireless -Technology	Management, and Healthcare
Chapter 8: Securing Information Systems	The Booming Job Market in IT Security
	The Sarbanes-Oxley Act
	Computer Forensics
	General and Application Controls for Information Systems
	Management Challenges of Security and Control
	Software Vulnerability and Reliability
Chapter 9: Achieving Operational Excellence and Customer Intimacy: Enterprise Applications	Best-Practice Business Processes in CRM Software
Chapter 10: E-commerce: Digital Markets,	E-commerce Challenges: The Story of Online Groceries
Digital Goods	Build an E-commerce Business Plan
	Hot New Careers in E-Commerce
	E-commerce Payment Systems
Chapter 11: Managing -Knowledge and	Challenges of Knowledge Management Systems
Artificial Intelligence	Case-Based Reasoning
	Fuzzy Logic
Chapter 12: Enhancing Decision Making	Building and Using Pivot Tables
Chapter 13: Building Information Systems	Unified Modeling Language
	Primer on Business Process Design and Documentation
	Primer on Business Process Management
Chapter 14: Making the Business Case for Information Systems and Managing Projects	Capital Budgeting Methods for Information Systems Investments
, , , , , , , , , , , , , , , , , , , ,	Enterprise Analysis (Business Systems Planning) and Critical Success
	Factors

Video Cases and Instructional Videos

Instructors can download step-by-step instructions for accessing the video cases from the Instructor Resources Center.

CHAPTER	VIDEO
Chapter 1: Information Systems in Global	Business in the Cloud: Facebook, Google, and eBay Data Centers
Business Today	UPS Global Operations with the DIAD and Worldport
	Instructional Video: Tour IBM's Raleigh Data Center
Chapter 2: Global E-business and	VisionX Grows with SAP Business One
Collaboration	CEMEX: Becoming a Social Business
Chapter 3: Information Systems,	GE Becomes a Digital Firm: The Emerging Industrial Internet
Organizations, and Strategy	National Basketball Association: Competing on Global Delivery with Akamai OS Streaming
Chapter 4: Ethical and Social Issues in	What Net Neutrality Means for You
Information Systems	Facebook and Google Privacy: What Privacy?
	United States vs. Terrorism: Data Mining for Terrorists and Innocents
	Instructional Video: Viktor Mayer-Schönberger on the Right to Be Forgotten
Chapter 5: IT Infrastructure and Emerging Technologies	Rockwell Automation Fuels the Oil and Gas Industry with the Internet of Things (IoT)
	ESPN.com: The Future of Sports Coverage in the Cloud
	Netflix: Building a Business in the Cloud
Chapter 6: Foundations of Business	Brooks Brothers Closes In on Omnichannel Retail
Intelligence: Databases and Information Management	Maruti Suzuki Business Intelligence and Enterprise Databases
Chapter 7: Telecommunications, the Internet,	Telepresence Moves out of the Boardroom and into the Field
and Wireless Technology	Virtual Collaboration with IBM Sametime
Chapter 8: Securing Information Systems	Stuxnet and Cyberwarfare
	Cyberespionage: The Chinese Threat
	Instructional Video: Sony PlayStation Hacked; Data Stolen from 77 Million Users
	Instructional Video: Meet the Hackers: Anonymous Statement on Hacking Sony
Chapter 9: Achieving Operational Excellence and Customer Intimacy: Enterprise Applications	Maersk Develops a Global Shipping Management System
Chapter 10: E-commerce: Digital Markets,	Walmart Takes On Amazon: A Battle of IT and Management Systems
Digital Goods	Groupon: Deals Galore
	Etsy: A Marketplace and Community
Chapter 11: Managing Knowledge and	How IBM's Watson Became a Jeopardy Champion
Artificial Intelligence	Alfresco: Open Source Document Management and Collaboration
Chapter 12: Enhancing Decision Making	PSEG Leverages Big Data and Business Analytics Using GE's Predix Platform
	FreshDirect Uses Business Intelligence to Manage Its Online Grocery
	Business Intelligence Helps the Cincinnati Zoo Work Smarter
Chapter 13: Building Information Systems	IBM: Business Process Management in a SaaS Environment
	IBM Helps the City of Madrid with Real-Time BPM Software
	Instructional Video: BPM Business Process Management Customer Story
	Instructional Video: Workflow Management Visualized