

# List of Changes



## Operations and Supply Chain Management

**16th Edition**

**Jacobs, Chase**

ISBN: 9781260238907 / 1260238903 / © 2021

*available in*

**Mc  
Graw  
Hill** **connect**®

The revisions to the sixteenth edition are a reflection of how the field is changing and an intent to make the material relevant to students. Each chapter is organized around a short set of learning objectives. These learning objectives define the major sections of each chapter. A complete set of Discussion Questions together with Objective Questions, which include concepts and problems, are included.

SEE LIST OF CHANGES ATTACHED.

**SupportAtEveryStep.com:** Your place for above and beyond in-person and self-service support.

McGraw-Hill Connect® is a course management and adaptive learning solution that enhances your unique voice and teaching style. As your partner, we're committed to helping you achieve your course goals and unlock student potential. That's why we've made meaningful updates to this edition.

## New In Connect:

**Smartbook® 2.0** – Our adaptive reading experience has been made more personal, accessible, productive, and mobile.

**Interactive Data Problems** – Data problems that allow students to visualize and interact with data in different ways. Students use this tool to manipulate data and answer a variety of accompanying problems that test multiple levels of understanding.

**Guided Examples** – Narrated and animated step-by-step video walkthroughs using a different version of the assigned problem. They offer immediate feedback and focus on the areas where students need the most guidance on problems they're working in Connect.

**Application-Based Activities: Practice Operations** – A 3D, interactive, game-based simulation for students to manage operations of a clothing manufacturing and distribution company that provides real-world decision making and operations management skills.

**Operations Management Videos** – Assignable concept videos and on-location videos available in all OM titles.

**Operations Management in the News** – A blog and newsletter created by OM faculty for OM faculty, containing up-to-date news articles and video, followed by critical thinking questions for use in class providing relevancy and student interest.



Application-Based Activities



Learning that Fits  
[mheducation.link/smartbook2](https://mheducation.link/smartbook2)

## Additional Value When You Upgrade

- **NEW!** Free mobile access to SmartBook 2.0 assignments and the digital textbook with the ReadAnywhere app.
- **NEW!** Remoting proctoring and browser-locking capabilities allowing for more control over the integrity of online assessments.
- **NEW!** Ability to create enhanced assignments personalized to each student's needs.
- Accessibility and student data security enhancements.
- More advanced student and class reporting capabilities.
- 99.99% platform uptime

Visit [mheducation.com/connect](https://mheducation.com/connect) for details.



# Changes to Jacobs: Operations and Supply Chain Management, 16e

## Chapter 1: Introduction

- New material was added to categorize service businesses into four main types. New examples from Apple Computer and IBM were added. The section on careers in OSCM was streamlined. The OSCM concepts timeline now includes the Internet of Things (which has become a major topic in the old ERP chapter). The section “How Does Wall Street Evaluate Efficiency?” has been removed from the chapter and is now an Analytic Exercise at the end of the chapter. This material can now be optionally assigned as an exercise.

## Chapter 2: Strategy

- The opening vignette now features Alphabet’s (Google’s) operations strategy. The material on sustainability was moved to learning objective 5 (the last one in the chapter). This change was suggested by book adopters. The chapter now starts with defining operations and supply chain strategy. BMW is now a featured example in “The Notion of Trade-Offs” section. The Tao of Timbuk2 case is updated to reflect what the company is currently doing (outsourcing some items to China).

## Chapter 3: Design of Products and Services

- An OSCM at Work box entitled Samsung Electronics—“Inspire the World, Create the Future” was added. The IKEA case was shortened and updated to reflect what the company is doing with mugs now. A new exercise entitled “Case: Comparison of Competing Products” was added to replace the Dental Spa case. The new case is designed to show the student how to identify product attributes that are important to customers interested in purchasing a product. The new case can be used as an in-class exercise or as an assignment.

## Chapter 4: Projects

- The chapter was reorganized by moving network planning models after earned value management concepts. This places more management (big picture) topics early in the chapter and the analytics later, a change suggested by book adopters. The Analytics Exercise: “Product Design Project” was updated to bring it more in line with current practice.

## Chapter 5: Strategic Capacity Management

- The opening vignette now features Tesla and Model 3 manufacturing. Example 5.1: “Determining Capacity Requirements” was totally rewritten to make it easier to understand. The Shouldice Hospital case was updated based on what is currently happening with the Canadian company.

## Chapter 5S: Investment Analysis

- This is a supplement that can be optionally assigned. Because many product, project, and capacity decisions require a financial analysis the supplement was placed here so students have a quick reference to the basic concepts such as fixed and variable costs, payback calculations, and present value analysis.

## Chapter 6: Learning Curves

- The opening vignette now features Tesla and the learning curve experienced by the company during the initial production of their Model S, X, and 3 cars. Rather than using the learning curve tables, students are now directed to a new app that can be run from a cell phone for doing these calculations. The app is free and can be accessed through the author’s website.

## Chapter 7: Manufacturing Processes

- Example 7.1: “Break-Even Analysis” was changed to make it easier to understand.



# Changes to Jacobs: Operations and Supply Chain Management, 16e

---

## **Chapter 7S: Manufacturing Technology**

- This is a supplement that describes the technologies used in manufacturing. Terminology such as numerically controlled machines, robots, and manufacturing cells are described. This can be optionally assigned depending on the emphasis in the course.

## **Chapter 8: Facility Layout**

- The opening vignette now features the Amazon Go cashier-less grocery store. The Analytics Exercise: “Designing a Manufacturing Process” was updated to better reflect current industry thought.

## **Chapter 9: Services**

- The opening vignette now features Amazon. A new section (and key term) was added that describes Web platform businesses. These are the new virtual services that operate completely from the Internet. The distinction between “pure” and “hybrid” business is made in the description. The case Pizza USA was updated.

## **Chapter 9S: Health Care**

- This is a supplement that describes how this industry works from an operations and supply chain view. Technology, inventory management, and performance measures are topics covered in the supplement.

## **Chapter 10: Waiting Line Analysis and Simulation**

- The notation used in the queuing models was simplified to make it less confusing. Rather than using equations and tables, students are now directed to a new app that can be run from a cell phone for doing these waiting line calculations. The app is free and can be accessed through the author’s website.

## **Chapter 11: Process Design and Analysis**

- The Las Vegas S machine example has been updated to reflect the current state of automation. A new case entitled “Runners Edge” replaces the casino money-handling case. The new case centers on the analysis of a call center process.

## **Chapter 11S: Operations Consulting**

- This supplement describes management consulting companies and the operations and supply chain consulting practices run by these companies. The economics of how levels of employees are used and the types of projects undertaken are described. The tools used by the companies are also described. The idea of the supplement is to relate what these companies do to the material in the book.

## **Chapter 12: Six Sigma Quality**

- The opening vignette now features Disney. The description of the Malcolm Baldrige National Quality Award was updated. The explanation of the goal of having 3.4 defects out of a million units was simplified. The case “Tesla’s Quality Challenge” was updated based on what the company is now doing with the Model 3 and Model Y.

## **Chapter 13: Statistical Quality Control**

- The notation and terminology that relates to the “sample” standard deviation was made consistent throughout the chapter.

# Changes to Jacobs: Operations and Supply Chain Management, 16e

## Chapter 14: Lean Supply Chains

- The opening vignette describes the “Toyota—New Global Architecture” that standardizes the size and position of key components in their cars. This streamlines car design and manufacturing. A new learning objective was added: Explain lean design principles. The value stream mapping exhibits were updated to clarify terminology. The key term *heijunka* (smoothing or leveling) was added.

## Chapter 15: Logistics, Distribution, and Transportation

- The opening vignette is now about Fedex and the hidden speed arrow in its logo. The definition of the key term *logistics* was updated to reflect current thought. The material on trading blocs was updated to reflect current happenings.

## Chapter 16: Global Sourcing and Procurement

- The section “Supply Chain Uncertainty Framework” was changed to make it easier to understand. Example 16.2: “Inventory Turnover Calculation” was updated based on current Apple Computer data.

## Chapter 17: The Internet of Things and ERP

- This chapter was updated to capture current computing trends and technology. The opening vignette discusses wireless and “cloud” computing. The key term *Internet of Things* was added to the material. A description of the term and how it relates to new types of data was included in the chapter. This is all related to ERP systems, which are still the backbone of OSCM planning and control. The cash-to-cash cycle time calculations were removed from this chapter. These calculations are now included in the Analytical Exercise in Chapter 1.

## Chapter 18: Forecasting

- Some notation changes were made to clarify equations. The material covering the calculation of season factors using least squares regression decomposition was removed from the chapter based on input from reviewers. The calculation of seasonal indexes using other methods is still included in the chapter.

## Chapter 19: Sales and Operations Planning

- Only some minor edits were made.

## Chapter 19S: Linear Programming Using the Excel Solver

- This supplement was placed here so that it can be conveniently used with the Sales and Operations Planning chapter. The material on graphical linear programming was removed from the supplement.

## Chapter 20: Inventory Management

- The opening vignette now features Amazon. The definition of *inventory* was changed to be easier to understand. Some minor edits were made to some notations for more consistency.

## Chapter 21: Material Requirements Planning

- The opening vignette was updated to feature the iPhone X.

## Chapter 22: Workcenter Scheduling

- Only minor changes to supplement references were made to this chapter.

## Chapter 22S: Theory of Constraints

- This streamlined supplement now complements the material in Chapter 22.

## Affordability & Outcomes

### Affordability & Outcomes

- Flexibility! More choice. You decide.
- Multiple options at multiple price points!
- Content options: McGraw-Hill, custom, Open Learning Solutions.
- Format Options: Print, McGraw-Hill eBook, Courseware, bundles.
- Delivery Options: Inclusive Access, rental, purchase.
- 950 Inclusive Access institutional partnerships in 2019.

Visit [mheducation.link/realvalue](https://mheducation.link/realvalue) for details.



### Support At Every Step

Find all the resources you need for a successful semester in one spot: [supportateverystep.com](https://supportateverystep.com).

Faculty support is critical to the success of implementing and using digital courseware. That's why we teamed up with faculty to create a website dedicated to providing above-and-beyond support. From initial training to implementing new tools to digging into the data, we're here to help.

Let us know how we can partner with you at every step.