Preface

Our motivation in writing this text continues to be to provide a realistic, socio-technical view of project management. In the past, textbooks on project management focused almost exclusively on the tools and processes used to manage projects and not the human dimension. This baffled us since people not tools complete projects! While we firmly believe that mastering tools and processes is essential to successful project management, we also believe that the effectiveness of these tools and methods is shaped and determined by the prevailing culture of the organization and interpersonal dynamics of the people involved. Thus, we try to provide a holistic view that focuses on both of these dimensions and how they interact to determine the fate of projects.

The role of projects in organizations is receiving increasing attention. Projects are the major tool for implementing and achieving the strategic goals of the organization. In the face of intense, worldwide competition, many organizations have reorganized around a philosophy of innovation, renewal, and organizational learning to survive. This philosophy suggests an organization that is flexible and project driven. Project management has developed to the point where it is a professional discipline having its own body of knowledge and skills. Today it is nearly impossible to imagine anyone at any level in the organization who would not benefit from some degree of expertise in the process of managing projects.

Audience

This text is written for a wide audience. It covers concepts and skills that are used by managers to propose, plan, secure resources, budget, and lead project teams to successful completions of their projects. The text should prove useful to students and prospective project managers in helping them understand why organizations have developed a formal project management process to gain a competitive advantage. Readers will find the concepts and techniques discussed in enough detail to be immediately useful in new-project situations. Practicing project managers will find the text to be a valuable guide and reference when dealing with typical problems that arise in the course of a project. Managers will also find the text useful in understanding the role of projects in the missions of their organizations. Analysts will find the text useful in helping to explain the data needed for project implementation as well as the operations of inherited or purchased software. Members of the Project Management Institute will find the text is well structured to meet the needs of those wishing to prepare for PMP (Project Management Professional) or CAPM (Certified Associate in Project Management) certification exams. The text has in-depth coverage of the most critical topics found in PMI's Project Management Body of Knowledge (PMBOK). People at all levels in the organization assigned to work on projects will find the text useful not only in providing them with a rationale for the use of project management processes but also because of the insights they will gain on how to enhance their contributions to project success.

Our emphasis is not only on how the management process works, but more importantly, on *why* it works. The concepts, principles, and techniques are universally applicable. That is, the text does not specialize by industry type or project scope. Instead, the text is written for the individual who will be required to manage a variety of projects in a variety of different organizational settings. In the case of some small projects, a few of the steps of the techniques can be omitted, but the conceptual framework applies to all organizations in which projects are important to survival. The approach can be used in pure project organizations such as construction, research organizations, and engineering consultancy firms. At the same time, this approach will benefit organizations that carry out many small projects while the daily effort of delivering products or services continues.

Content

In this and other editions we continue to resist the forces that engender scope creep and focus only on essential tools and concepts that are being used in the real world. We have been guided by feedback from practitioners, teachers, and students. Some changes are minor and incremental, designed to clarify and reduce confusion. Other changes are significant. They represent new developments in the field or better ways of teaching project management principles. Below are major changes to the sixth edition.

- Computer exercises and MS Project examples have been updated to MS Project 2010, and 2013 including video tutorials to help students master the basics of MS Project.
- Terms and concepts have been updated to be consistent with the fifth edition of the *Project Management Body of Knowledge* (2013).
- The chapters on Agile Project Management and Careers in Project Management have been expanded.
- Chapter 6 utilizes a new example that clarifies the differences between free and total slack. Chapters 1, 2, 4, 5 and 14 have been updated.
- A description of the Activity on Arrow (AoA) method for calculating networks has been deleted from the text and is now available only in the Instructor's Manual.
- New student exercises and cases have been added to many chapters.
- The Blue Zuma computer exercise in Appendix 2 has been replaced by the new Red Zuma exercise.
- The Snapshot from Practice boxes feature a number of new examples of project management in action as well as new Research Highlights that continue to promote practical application of project management.
- The Instructor's Manual contains a listing of current YouTube videos that correspond to key concepts and Snapshots from Practice.

Overall the text addresses the major questions and issues the authors have encountered over their 60 combined years of teaching project management and consulting with practicing project managers in domestic and foreign environments. The following questions represent the issues and problems practicing project managers find consuming most of their effort: What is the strategic role of projects in contemporary organizations? How are projects prioritized? What organizational and

managerial styles will improve chances of project success? How do project managers orchestrate the complex network of relationships involving vendors, subcontractors, project team members, senior management, functional managers, and customers that affect project success? What factors contribute to the development of a high-performance project team? What project management system can be set up to gain some measure of control? How do managers prepare for a new international project in a foreign culture? How does one pursue a career in project management?

Project managers must deal with all these concerns to be effective. All of these issues and problems represent linkages to an integrative project management view. The chapter content of the text has been placed within an overall framework that integrates these topics in a holistic manner. Cases and snapshots are included from the experiences of practicing managers. The future for project managers appears to be promising. Careers will be determined by success in managing projects.

Student Learning Aids

The text website (www.mhhe.com/larsongray6e) includes study outlines, online quizzes, PowerPoint slides, videos, Microsoft Project Video Tutorials and web links. The trial version of Microsoft Project software is included on its own CD-ROM free with the text.

Acknowledgments

We would like to thank Lacey McNeely for updating the Test Bank and Online Quizzes; Charlie Cook for revising the PowerPoint slides; Oliver F. Lehmann for providing access to PMBOK study questions; and Pinyarat Sirisomboonsuk for accuracy checking the text and Instructor's Resource Manual content.

Next, it is important to note that the text includes contributions from numerous students, colleagues, friends, and managers gleaned from professional conversations. We want them to know we sincerely appreciate their counsel and suggestions. Almost every exercise, case, and example in the text is drawn from a real-world project. Special thanks to managers who graciously shared their current project as ideas for exercises, subjects for cases, and examples for the text. Shlomo Cohen, John A. Drexler, Jim Moran, John Sloan, Pat Taylor, and John Wold, whose work is printed, are gratefully acknowledged. Special gratitude is due Robert Breitbarth of Interact Management, who shared invaluable insights on prioritizing projects. University students and managers deserve special accolades for identifying problems with earlier drafts of the text and exercises.

We are indebted to the reviewers of past editions who shared our commitment to elevating the instruction of project management. The reviewers include Paul S. Allen, Rice University; Denis F. Cioffi, George Washington University; Joseph D. DeVoss, DeVry University; Edward J. Glantz, Pennsylvania State University; Michael Godfrey, University of Wisconsin–Oshkosh; Robert Key, University of Phoenix; Dennis Krumwiede, Idaho State University; Nicholas C. Petruzzi, University of Illinois–Urbana/Champaign; William R. Sherrard, San Diego State University; S. Narayan Bodapati, Southern Illinois University at Edwardsville; Warren J. Boe, University of Iowa; Burton Dean, San Jose State University; Kwasi

Amoako-Gyampah, University of North Carolina-Greensboro; Owen P. Hall, Pepperdine University; Bruce C. Hartman, University of Arizona; Richard Irving, York University; Robert T. Jones, DePaul University; Richard L. Luebbe, Miami University of Ohio; William Moylan, Lawrence Technological College of Business; Edward Pascal, University of Ottawa; James H. Patterson, Indiana University; Art Rogers, City University; Christy Strbiak, U.S. Air Force Academy; David A. Vaughan, City University; and Ronald W. Witzel, Keller Graduate School of Management. Nabil Bedewi, Georgetown University; Scott Bailey, Troy University; Michael Ensby, Clarkson University; Eldon Larsen, Marshall University; Steve Machon, DeVry University-Tinley Park; William Matthews, William Patterson University; Erin Sims, DeVry University-Pomona; Kenneth Solheim, DeVry University-Federal Way; and Oya Tukel, Cleveland State University. Gregory Anderson, Weber State University; Dana Bachman, Colorado Christian University; Alan Cannon, University of Texas, Arlington; Susan Cholette, San Francisco State; Michael Ensby, Clarkson University; Charles Franz, University of Missouri, Columbia; Raouf Ghattas, DeVry University; Robert Groff, Westwood College; Raffael Guidone, New York City College of Technology; George Kenyon, Lamar University; Elias Konwufine, Keiser University; Rafael Landaeta, Old Dominion University; Muhammad Obeidat, Southern Polytechnic State University; Linda Rose, Westwood College; Oya Tukel, Cleveland State University; and Mahmoud Watad, William Paterson University.

In the sixth edition we continue to commit to improving the text content and improving instruction of project management. We are grateful to those reviewers who provided helpful critiques and insights on the fifth edition, which helped us prepare this revision. The reviewers for the sixth edition include Victor Allen, Lawrence Technological University; Mark Angolia, East Carolina University; Alan Cannon, University of Texas at Arlington; Robert Cope, Southeastern Louisiana University; Kenneth DaRin, Clarkson University; Ron Darnell, Amberton University; Jay Goldberg, Marquette University; Mark Huber, University of Georgia; Marshall Issen, Clarkson University; Charles Lesko, East Carolina University; Lacey McNeely, Oregon State University; Donald Smith, Texas A&M University; Peter Sutanto, Prairie View A&M University; Jon Tomlinson, University of Northwestern Ohio. We thank you for your many thoughtful suggestions and for making our book better. Of course we accept responsibility for the final version of the text.

In addition, we would like to thank our colleagues in the College of Business at Oregon State University for their support and help in completing this project. In particular, we recognize Prem Mathew and Ping-Hung Hsieh for their helpful advice and suggestions. We also wish to thank the many students who helped us at different stages of this project, most notably Neil Young, Saajan Patel, Katherine Knox, Dat Nguyen, Lacey McNeely and David Dempsey. Mary Gray deserves special credit for editing and working under tight deadlines on earlier editions. Special thanks go to Pinyarat ("Minkster") Sirisomboonsuk for her help in preparing the last four editions.

Finally, we want to extend our thanks to all the people at McGraw-Hill/Higher Education for their efforts and support. First, we would like to thank Thomas Hayward and Wanda Zeman for providing editorial direction, guidance, and management of the book's development for the sixth edition. And we would also like to thank Jane Mohr, Heather Ervolino, Nichole Birkenholz, Arpana Kumari, and Janean Utley for managing the final production, design, supplement, and media phases of the sixth edition.