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Nota di contenuto	""Front Matter""; ""Acknowledgments""; ""Preface""; ""Contents""; ""Tables, Figures, and Boxes""; ""Executive Summary""; ""1 The 2020 Vision""; ""2 Grand Challenges for Manufacturing""; ""3 Priority Technologies and Supporting Research""; ""4 Preparing for 2020""; ""References""; ""APPENDIX A Summary of Workshop on Visionary Manufacturing Challenges""; ""APPENDIX B Delphi Survey: Methodology and Results""; ""APPENDIX C Delphi Survey Questionnaires""; ""APPENDIX D Biographical Sketches of Committee Members""
Sommario/riassunto	Manufacturing will unquestionably be a very different enterprise in 2020 from what it is today. This book presents an exciting picture of

the profitable and productive potential of manufacturing two decades hence. This book takes an international view of future manufacturing that considers the leaps and bounds of technological innovation and the blurring of the lines between the manufacturing and service industries. The authors identify ten strategic technology areas as the most important for research and development and they recommend ways to address crosscutting questions. Representing a variety of industries, the authors identify six "grand challenges" that must be overcome for their vision to be realized, including the human/technology interface, environmental concerns, and miniaturization. A host of issues are discussed that will push and pull at manufacturing over the next 20 years: the changing workforce, the changing consumer, the rise of bio- and nanotechnology, the prospects for waste-free processing, simulation and modeling as design tools, shifts in global competition, and much more. The information and analyses in this book will be vitally important to everyone concerned about the future of manufacturing: policymakers, executives, design and engineering professionals, researchers, faculty, and students.
