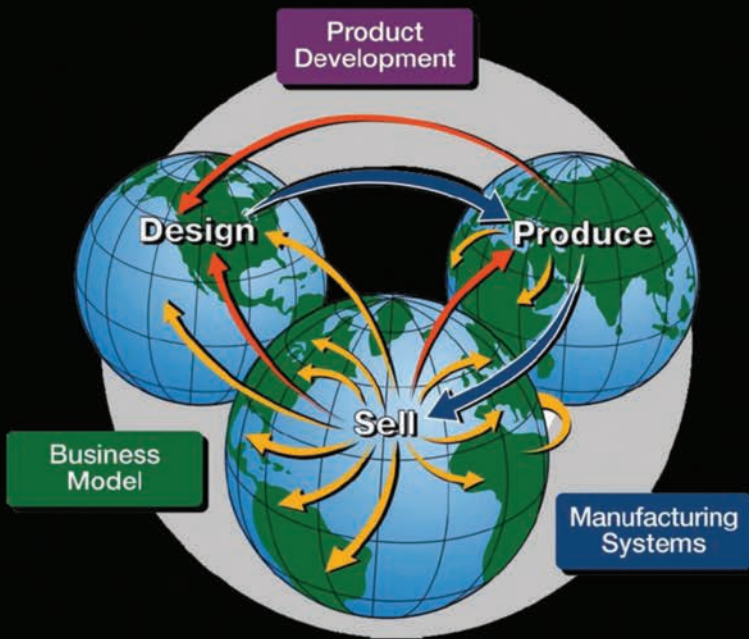


# The Global Manufacturing Revolution

PRODUCT-PROCESS-BUSINESS INTEGRATION AND  
RECONFIGURABLE SYSTEMS



Yoram Koren

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## THE CONCRETE TOOLS MANUFACTURING ENTERPRISES NEED TO THRIVE IN TODAY'S GLOBAL ENVIRONMENT

For a manufacturing enterprise to succeed in this current volatile economic environment, a revolution is needed in restructuring its three main components: product design, manufacturing, and business model. *The Global Manufacturing Revolution* is the first book to focus on these issues. Based on the author's long-standing course work at the University of Michigan, this unique volume proposes new technologies and new business strategies that can increase an enterprise's speed of responsiveness to volatile markets, as well as enhance the integration of its own engineering and business.

Introduced here are innovations to the entire manufacturing culture:

- An original approach to the analysis of manufacturing paradigms
- Suggested methods for developing creativity in product design
- A quantitative analysis of manufacturing system configurations
- A new manufacturing "reconfigurable" paradigm, in which the speed of responsiveness is the prime business goal
- An original approach to using information technology for workforce empowerment

The book also offers analysis and original models of previous manufacturing paradigms' technical and business dimensions—including mass production and mass customization—in order to fully explain the current revolution in global manufacturing enterprises. In addition, 200 original illustrations and pictures help to clarify the topics.

Globalization is creating both opportunities and challenges for companies that manufacture durable goods. The tools, theories, and case studies in this volume will be invaluable to engineers pursuing leadership careers in the manufacturing industry, as well as to leaders of global enterprises and business students who are motivated to lead manufacturing enterprises and ensure their growth.

**YORAM KOREN** is a member of the National Academy of Engineering and the Paul G. Goebel Professor of Engineering in the Department of Mechanical Engineering at the University of Michigan, as well as the Director of the NSF Engineering Research Center for Reconfigurable Manufacturing Systems. He has won many awards, including, most recently, the Stephen S. Attwood Award from the University of Michigan College of Engineering, 2008, and the Gold Medal from the Society of Manufacturing Engineers, 2007.

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