

## this month's topic Management

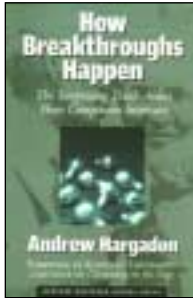
### How Breakthroughs Happen

**Andrew Hargadon**  
Harvard Business School Press,  
Boston, MA

254 pp., \$29.95, 2003

In this fascinating study of innovation, the author, an engineer and social scientist, argues that romantic notions about innovation as invention are actually undermining the ability to pursue breakthrough innovations. Based on 10 years of study in the origins of historic inventions and modern innovations from the lightbulb to the transistor to the Reebok Pump athletic shoe, this book goes beyond the simple recognition that revolutionary innovations do not result from flashes of brilliance. In fact, innovation is about creatively recombining ideas, people and objects from past technologies in ways that spark new technological revolutions.

This process of "technology brokering" is so powerful, explains the author, because it exploits the networked nature — the social side — of the innovation process. Moving between historical accounts of lab and factory floors, where past technological revolutions originated, and field studies of similar processes in today's organizations, the author shows how technology brokers create an enduring capacity for breakthrough innovations. Technology brokers simultaneously bridge gaps in existing networks that separate distant industries to see how established ideas can be applied in new ways and places.



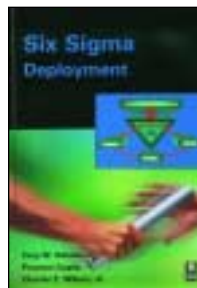
### Six Sigma Deployment

**Cary W. Adams, Praveen Gupta and  
Charles E. Wilson, Jr.**  
Butterworth-Heinemann, Burlington, MA  
290 pp., \$39.99, 2003

This book is a hands-on, comprehensive guide that provides a practical approach to implementing a Six Sigma program consisting of a strategic alignment of vision, values and systems, development of internal resources, and realization of opportunities for improvement in profitability.

Six Sigma methodologies are more than a process of quality improvement or project-improvement tools. When implemented, Six Sigma is a part of the business strategy that must be planned, executed, monitored and steered toward success. The focus of the authors is to disseminate relevant information so that readers are able to attain their desired business results in today's environment.

Quality managers, executives, engineering profession-



als, and consultants are shown how to apply the strategic plan of the organization through Six Sigma so that all functions, departments, teams and individuals are contributing to the achievement of that strategic plan.

In addition, the authors include information on: the use of Six Sigma with the various quality standards that are being implemented today; the implementation of Six Sigma in supply chain management streams; and the analysis of different methods used by various companies — the strengths and weaknesses of each, results achieved, and finally, lessons learned.

### Maverick Management: Strategies for Success

**Al Giacco**  
Associated University Presses, Cranbury, NJ  
290 pp., \$29.95, 2003



This is the memoir of Al Giacco, the former chairman and CEO of Hercules. Giacco is a maverick who succeeded because he was willing to take risks using innovative approaches in identifying what needed to be done, and never quitting until it was done. A problem-solving chemical engineer, he ignited the creative forces at Hercules to launch it to success in the aerospace industry. The book covers a

number of innovations in advanced management technology, including the development of the corporate computer network at a time when many business leaders questioned the use of computers as a management tool.

After a brief look at Giacco's family background and education, the book focuses on his career at Hercules. He started at the Radford Arsenal during World War II, where he began his work with explosives that led to his lifelong interest in chemical propulsion and where he first demonstrated his talent for innovative approaches to technical, management and marketing problems.

Giacco was a key figure in establishing Hercules as a major player in the aerospace industry during the 1950s and 60s. As CEO, his success in the face of many difficulties brought him much recognition. Much attention is given to his experience as chairman, including his use of the joint venture to develop other successful companies, such as Himont.

The book also describes his leadership in the movement to lower taxes in order to attract new jobs in Delaware. It also explains his role in developing the Financial Center Development Act. Giacco concludes the book with an analysis on Hercules' troubles since his departure. He speculates on the causes of these problems and forecasts the company's future.