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3. Economics & Governance

4. Technology & Innovation

5. Behavior & Education

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The Natural Advantage of Nations (Vol. I): Business Opportunities, Innovation and Governance in the 21st Century

The development of this book and its online companion was made possible through access to research, peer review and funding from over 20 organisations, companies and government departments, together with the mentoring from over 75 experts and leaders in the field. TNEP is very grateful for this support and proud to welcome you to the Online Companion for *The Natural Advantage of Nations*.



Foundation Partners in the research, development and review of the book.

Section 2: Natural Advantage a Business Imperative

Chapter 6: Natural Advantage and the Firm

- 1 [The changing nature of competition](#)
- 2 [Achieving competitive advantage through strategic positioning](#)
- 3 [What will be the major driver of innovation in the 21st century?](#)
 - 3.1 [Moving early to exploit structural change](#)
- 4 [Why integrate sustainable development into corporate strategy?](#)
 - 4.1 [Downsizing: a strategy that no longer cuts it](#)
- 5 [The shifting nature of competition in emerging economies](#)
- 6 [Additional drivers for sustainable development](#)
 - 6.1 [Achieving radical resource productivity](#)
 - 6.2 [New opportunities for product differentiation](#)
- 7 [Increasing profitability and minimizing risk \(Porter's 5 Forces Model\)](#)
 - 7.1 [Threats of new entrants](#)
 - 7.2 [Threat of substitute products or services](#)
 - 7.3 [Bargaining power of buyers](#)
 - 7.4 [Power of suppliers](#)
- 8 [References List from the Book](#)

Sample of Resources to Support Chapter 6

- [The Changing Nature of Competition](#)
- [Online Overviews of the Latest in Business Theory to Augment Previous Classics](#)
- [Why integrate sustainable development into corporate strategy?](#)
- [The Business Case for Sustainable Development](#)
- [Innovating Our Way to the Next Industrial Revolution](#)
- [The Shifting Nature of Competition in Emerging Economies](#)

In Section 1 we argued that no one part of society can address the scale of the sustainability challenge on its own. In a world where business, government and civil society all have significant roles to play, we need to find the best ways to move forward together. This section will focus on the role business can play in this process. This section cannot emphasize enough the importance in business of seizing new opportunities, encouraging creativity and the ability to work effectively in teams to achieve innovation. Running a business requires skill and frequently demands long hours and significant personal sacrifice. If there was an easy way always to stay ahead of the competition, we would all be millionaires. But there isn't. Successful business people seek to remain up to date with the shifting market for their products and services and will come to see that sustainability provides numerous opportunities for unleashing creativity and innovation.

Whilst this chapter, and the online databases it references, is designed to assist

any business to do its homework faster, improve its strategic position, and unleash the creativity of its staff, this is not enough. Genuinely innovative and highly competitive businesses are always on the look out for new opportunities and ways to improve business. The frameworks and guides that follow will, we believe, help but at the end of the day someone has to have good ideas and be willing to take risks. In the end, success comes down to the determination and united purpose of those people involved. Is the risk worth the effort? Many companies, such as Close the Loop® and Interface, believe it is.

The Changing Nature of Competition

Key Reference: Porter, M. (1998) *Competitive Advantage : Creating and Sustaining Superior Performance*, New York : Free Press.

Among other concepts, this is the work that introduced the notion of the 'value chain': a concept that helped launch a thousand reengineering initiatives, some of which actually create! While more recent models associated with business networks and ecosystem metaphors have significantly progressed beyond Porter's basic value chain concept, the original is still well worth understanding.

[View Website](#)

Key Reference: Porter, M. (1998) *Competitive Strategy* Techniques for Analyzing Industries and Competitors, New York : Free Press.

This is Porter's original and classic work on business strategy, and the bible of the positioning school of strategy. The models are still valid and highly relevant; they just need to be augmented with additional new economy strategic concepts.

[View Website](#) | [Porter's Bio and Selected Works](#) | [Critique of the critique of Porter](#)

Online Overviews of the Latest in Business Theory to Augment Previous Classics

Many Worlds

Many Worlds is an up to date knowledge network for business thought leaders. The team at Many Worlds work hard to bring you relevant and high quality material. Their scope of topical management areas includes business strategy, innovation, leadership, organizational culture, advanced decision making and strategic marketing. The service of this site is free and is advertising free. They receive no monies from either the authors or companies.

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The Manager

This website performs a similar function to Many Worlds and contains a document related to Porters work entitled 'Beyond Porter'.

[View Document](#)

Quick MBA

Quick MBA is an online overview of key knowledge relevant to business administration. Their goal is to help business managers find the business knowledge they need, when they need it. It also provides an instructive aid to students.

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Why integrate sustainable development into corporate strategy? The Business Case for Sustainable Development

Key Reference: Professor Michael Porter, Harvard Business School , from the preface to *Tomorrow's Markets: Global Trends and Their Implications for Business* (2002):

"What is the relationship between corporate strategy and societal issues such as the environment, poverty, health, population, and international development? Business leaders have a tendency to see 'social' concerns as having little relevance to competing. Instead, these fall under the headings of corporate citizenship or corporate philanthropy, or are left to managers to address as matters of individual conscience. It is becoming more and more apparent, however, that treating broader social issues and corporate strategy as separate

and distinct has long been unwise, never more so than today. Seeing strategy narrowly leads to missed opportunities and bad competitive choices. It can also cause managers to overlook potential competitive advantages."

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A Capital Idea: Realising Value from Environmental and Social Performance

Financial success for business is increasingly linked to good environmental and social performance. Companies are subject to the ever-rising expectations of stakeholders, including customers, employees, the community, non-government organisations, and lenders, insurers and investors.

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Corporate Sustainability: An Investor Perspective, The Mays Report

This Australian report was conducted with ABN-AMRO Morgans, AMP Henderson Global Investors, BT Financial Group, Insurance Australia Group, Investa Property Group, Securities and Derivatives Industry Association, Securities Institute, and Sustainable Asset Management.

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Equator Principles

The International Finance Corporation (IFC) convened a meeting of banks in London in October, 2002, to discuss environmental and social issues in project finance. At that meeting, the banks present decided to try to develop a banking industry framework for addressing environmental and social risks in project financing. This led to the drafting of the Equator Principles.

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Natural Capitalism: Creating the Next Industrial Revolution

The next industrial revolution, like the previous ones, will be a response to changing patterns of scarcity. It will create upheaval, but more importantly, it will create opportunities. Natural capitalism is a new business model that enables companies to fully realize these opportunities.

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Innovating Our Way to the Next Industrial Revolution

Key Reference: Senge., P.M. and Carstedt, G. (2001) 'Management of Technology and Innovation', *MIT Sloan Management Review*, reprint 4222; winter, vol. 42, no. 2, pp. 24-38

Senge and Carstedt argue that the 'New Economy' looks much like another wave of the industrial economy, rather than a genuinely post-industrial one, and is not sustainable. They urge a new corporate environmentalism driven not by regulation, but by innovation in technologies, products, processes, and business models. Eco-efficiency is insufficient to create a post-industrial economy. Senge and Carstedt explain that industrial-age systems follow a linear flow of extract, produce, sell, use, and discard: the 'take-make-waste' approach to economic growth. A systemic approach would reduce all sources of waste: from production, use and disposal. Command-and-control management worked for industrial-age organizations, but sustainability requires a different approach.

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The Benefits of Lean Thinking

Lean production analysis and lean thinking methodologies demonstrate that a closed-loop economy is highly economic in many industries. Leaders in this area James Womack, from the Japan Program at MIT, and Professor Daniel Jones, the Head of the Lean Enterprise Research Centre at the Cardiff Business School, propose that closed loop production which encourages recycling and waste minimisation is a far better way to cut total manufacturing costs, across whole supply chains for many industries. In this way, major economic/environmental win-win goals can be achieved. What is exciting is that they have shown that significant economic gains are obtainable, through lean production, that will offset the short-term costs of adopting new environmentally motivated technologies and continue to supply savings into the future. Womak and Jones have published several 'how to' manuals on this topic.

[View Website](#)

The Shifting Nature of Competition in Emerging Economies

Developing Value: The Business Case for Sustainability in Emerging Markets

Developing Value is the first large-scale study analysing the business case for sustainability in emerging markets: the opportunity for businesses to achieve benefits such as higher sales, reduced costs and lower risks from better corporate governance, improved environmental practices, and investments in social and economic development. It pinpoints the many opportunities available to diverse businesses in Africa, Asia, Central and Eastern Europe, the Middle East and Latin America.

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Community Banking in Developing Countries

Micro enterprise development has become recognized by many international agencies, particularly the World Bank and United Nations, as being the most effective form of sustainable poverty alleviation, as simply giving people handouts is not a hand-up and it doesn't sustain. The most famous example is Bangladesh 's Grameen Banking for the Poor.

[View Website](#)



References from the Book

1. Anderson , R. (1998) *Mid-Course Correction: Toward a Sustainable Enterprise : the Interface Model*, Peregrinzilla Press, Atlanta, GA.
2. Fairbanks, M. and Lindsay, S. (1997) *Plowing the Sea: Nurturing the Hidden Sources of Growth in the Developing World*, Harvard Business School Press, Boston, Chs 1-7 (with a Foreword by Michael E. Porter).
3. Porter, M. (1995) CIO, magazine interview, 1 October (cio.com).
4. Ibid.
5. Foster, R. and Kaplan, S. (2001) *Creative Destruction: Why Companies that are Built to Last Under-Perform the Market and How to Transform Them*, Doubleday , New York.
6. Porter, M. (1990) *The Competitive Advantage of Nations*, The Free Press, New York (reprinted in 1998).
7. The 'CSIRO Solutions for Greenhouse' website provides an extensive overview of how to cost effectively reduce greenhouse emissions.
8. CSIRO, Australia 's leading science and engineering research body, provides up to date news on their latest innovations, and exciting business opportunities online including a free sustainability monthly electronic newsletter, edited by Elizabeth Heij.
9. UNEP's Industry Best Practice Database highlights industry as a partner for sustainable development in a series of reports developed by UNEP in conjunction with various industry organizations. The reports gauge the progress across 22 private sectors towards sustainable development.
10. Speech by George Yeo, Minister for Trade and Industry, at the Singapore-Stanford Partnership (SSP) MOU Signing on 25 February 2003 .
11. *Building the Future*, Australian Financial Review, 10 December 2001 .
12. Rocky Mountain Institute: *Green Development Services CD-ROM of European green buildings*, World Green Building Council.
13. Wilson , A., Uncapher, J., McManigal, L., Lovins, L. H., Cureton, M. and Browning, W. (1998) *Green Development: Integrating Ecology and Real Estate*, Rocky Mountain Institute/John Wiley & Sons, p18.
14. *EcoGeneration: Magazine of the Australian EcoGeneration Association*, Issue 12, June/July 2002, p12.
15. Gipe, P. (2002) 'Soaring to New Heights: The World Wind Energy Market', *Renewable Energy World*, July-August.

16. Sinclair Knight Merz (2001) Portland Wind Energy Project Environmental Effects Statement and Planning Assessment Report: Summary Document, Sinclair Knight Merz, p17.
17. McDonough, W. and Braungart, M. (2002) *Cradle to Cradle: Remaking the Way We Make Things*, North Point Press, San Francisco. Point out that the word 'eco-efficiency' was first used by the WBCSD in their 1992 publication 'Changing Course'. It seeks to encapsulate the idea of using fewer resources and creating less waste and pollution whilst providing the same or better services. According to the WBCSD, eco-efficiency entails the following: a reduction in the material intensity of goods or services; a reduction in the energy intensity of goods or services; reduced dispersion of toxic materials; improved recyclability; maximum use of renewable resources; increased durability of products; and greater service intensity of goods and services.
18. Amory Lovins interview, 'Natural Capitalism' as broadcast on Radio National's Background Briefing.
19. Cascio, W. (1993) Downsizing What do we know, What have we learned? Academy of Management Executive 7; AMA (American Management Association) (1996) Survey: Corporate Downsizing, Job Elimination and Job Creation, AMA, Washington, DC; Dorfman, J. (1991) 'Stocks of Companies Announcing Layoffs Fire up Investors, but Prices Often Wilt', The Wall St Journal, 10 December; Littler, G., Wiesner, R. and Vermeulen, L. (1997) The Effects of Downsizing Cross-Cultural Data from Three Countries, Academy of Management Meeting, Boston MA.
20. Collins, J. and Porras, J. (1994) *Built to Last: Successful Habits of Visionary Companies*, Century, London.
21. Gundling, E. (2000) *The 3M Way to Innovation, Balancing People & Profit*, Kodansha International Ltd, Japan.
22. Sonnenfeld, J.A (2004) 'A Return to the Power of Ideas', MIT Sloan Management Review, Winter, vol 45, no 2, pp30-33.
23. Braithwaite, J. and Drahos, P. (2000) *Global Business Regulation*, Cambridge University Press, Cambridge.
24. Ibid.
25. Fairbanks, M. and Lindsay, S. (1997) *Plowing the Sea: Nurturing the Hidden Sources of Growth in the Developing World*, Harvard Business School Press, Boston, Chs 1-7 (with a Foreword by Michael E. Porter).
26. For an overview of further case studies and reports on these issues we recommend the following sources: Smith, D. (2000) Asian Development Bank Sustainable Development in Asia Report, Asia Development Bank, Manila; UNDP (2001) Human Development Report: Making New Technologies Work For Human Development, UNDP, New York; UNDP (2003) Human Development Report: The Millennium Development Goals. A Compact Among Nations to End Human Poverty, UNDP, New York.
27. Smith, D. (2000) Asian Development Bank Sustainable Development in Asia Report, Asia Development Bank, Manila.
28. Deni Greene Consulting Services (2001) *A Capital Idea: Realising Value from Environmental and Social Performance*, prepared with Standards Australia and Ethical Investment Services for the Australian Department of Environment and Heritage.
29. Annan, K. (1998) 'UN Secretary-General Press Release', SG/SM/6638, 14 July (www.un.org/News/Press/docs/1998/19980714.sgsm6638.html).
30. Rainforest Action Network (2000) *Democrats to Citigroup: Show Us the Money! - Citigroup Receives Award from DNC: America 's #1 Bank is #1 in Democracy Buy-Out*, Press Release, 17 August.
31. Corporate Governance is the system by which companies are directed and controlled. The goal is to improve the structures and processes of companies to improve their performance and make them more accountable to shareholders and other stakeholders. It covers issues such as the nature and structure of the boards, financial reporting, issues of transparency, conflicts of interest and separation of powers.

32. Chapter by leading sustainability consultant Molly Harris Olsen in Dunphy, D., Benveniste, J., Griffiths, A. and Sutton, P. (eds) (2000) *Sustainability: The Corporate Challenge of the 21st Century*, Allen & Unwin, Sydney.
33. Taken from a transcript from Hunter Lovins' presentation to the Sopris Foundation, 13 July 2002 Aspen, Colorado.
34. For further reading on organizational change see Dunphy, D., Griffiths, A. and Benn, S. (2002) *Organizational Change for Corporate Sustainability*, Routledge, Hove, East Sussex; Dunphy, D., Benveniste, J., Griffiths, A. and Sutton, P. (eds) (2000) *Sustainability: The Corporate Challenge of the 21st Century*, Allen & Unwin, Sydney.
35. Arora, S. and Cason, T. (1995) 'An Experiment in Voluntary Environmental Regulation: Participation in EPA's 33/50 Program', *Journal of Environmental Economics & Management*, vol 28, no 3, pp271-286; Arora, S. and Cason, T. (1996) 'Why do Firms Volunteer to Exceed Environmental Regulations? Understanding Participation in EPA's 33/50 Program', *Land Economics* November, pp413-432.
36. DeCanio, S. and Watkins, W. (1998) 'Investment in Energy Efficiency: Do the Characteristics of Firms Matter?', *Review of Economics and Statistics* February, pp95-107.
37. Recent estimates indicate that in 1996 the Australian chemical industry had a turnover of AU\$35 billion, and employed approximately 80,000 people, Environment Australia, *National Profile of Chemicals Management Infrastructure in Australia*, 1998.
38. Anastas, P. and Williamson, T. (1994) *Green Chemistry, Designing Chemistry For the Environment*, American Chemical Series, 208th National Meeting of the American Chemical Society, Washington, DC .
39. Anastas, P., Heine, L., Williamson, T. and Bartlett, L. (2000) *Green Engineering*, American Chemical Society, November.
40. Anastas, P. and Williamson, T. (1998) *Green Chemistry, Frontiers in Design Chemical Synthesis and Processes*, Oxford University Press, Oxford.
41. Quoted from the Foreword to Anastas, P. and Williamson, T. (1998) *Green Chemistry, Frontiers in Design Chemical Synthesis and Processes*, Oxford University Press, Oxford.
42. Hawken, P., Lovins, A. and Lovins, L. H. (1999) *Natural Capitalism: Creating the Next Industrial Revolution*, Earthscan, London, Ch 6.
43. von Weizsäcker, E., Lovins, A. and Lovins, L. H. (1997) *Factor Four: Doubling Wealth, Halving Resource Use*, Earthscan, London.
44. Hawken, P., Lovins, A. and Lovins, L. H. (1999) *Natural Capitalism: Creating the Next Industrial Revolution*, Earthscan, London, p 117.
45. Australian Greenhouse Office Motor Solutions Online: comprehensive information and guidance, as well as practical information and tools, to help you make the right choices about electric motors. Achieving best practice will improve motor system reliability, minimize energy costs, maximize profits and, ultimately, reduce greenhouse gas emissions.
46. Porter, M. and van der Linde, C. (1995a) 'Green and Competitive: Ending the Stalemate', *Harvard Business Review*, September-October, pp121-134.
47. Foss, M., Gonzales, E. and Noyen, H. (1999) 'Ford Motor Company', in Hastings, M. (ed) *Corporate Incentives and Environmental Decision Making*, Houston Advanced Research Center, Houston, TX, pp35-52.
48. McDonough, W. and Braungart, M. (1998) 'The Next Industrial Revolution', *The Atlantic Monthly*, vol 282, no 4, pp82-92.
49. Ibid.
50. Benyus, J. (1997) *Biomimicry: Innovations Inspired by Nature*, William Morrow, New York.

51. The WFEO is a non-governmental organization (NGO) and was established with the support of UNESCO in 1968. The WFEO currently represents an estimated 15 million engineers. ComTech is the WFEO Standing Committee on Technology. Its purpose is the sharing, transferring and assessment of technology.
52. von Weizsäcker, E., Lovins, A. and Lovins, L. H. (1997) Factor Four: Doubling Wealth, Halving Resource Use, Earthscan, London.
53. DeCanio, S. (1998) 'The Efficiency Paradox: Bureaucratic and Organizational Barriers to Profitable Energy-Saving Investments', Energy Policy, vol 26, no 5, pp441-454.
54. Feldman, S., Soyka, P. and Ameer, P. (1997) 'Does Improving a Firm's Environmental Management System and Environmental Performance Result in a Higher Stock Price?', ICF Kaiser International, The Journal of Investing, Winter, pp87-97.
55. Drozdiak, W. (2000) 'Firms Become "Green" Advocates Global Warming Talks Near End', Washington Post.
56. Lovins, L. H. and Link, W. (2002) Insurmountable Opportunities?: Steps and Barriers to Implementing Sustainable Development, Comments to the UN Regional Roundtable for Europe and North America, Vail, Colorado.
57. Ibid.
58. NZBCSD (New Zealand Business Council for Sustainable Development) (2002) Industry Guide to Zero Waste, NZBCSD, August.
59. Dumaresq, D. and Greene, R. (2001) Soil Structure, Fungi, Fauna & Phosphorus in Sustainable Cropping Systems, Rural Industries Research and Development Corporation (RIRDC).
60. Womack, J. and Jones, D. (1996) Lean Thinking: Banish Waste and Create Wealth in Your Corporation, Touchstone & Design, New York.
61. Jones, D. (2003) 'Supply Chains of the Future', presentation to the Efficient Consumer Response (ECR) Conference, Berlin, Germany.
62. Ibid.

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