

The Business Case for Corporate Responsibility

Justin Keeble, Rick Eagar and Claudia Auf der Maur

Never before has there been such pressure on companies to address their social and environmental responsibilities and such a wealth of opportunity to be derived from doing so. Companies are beginning to realise that effective management of their corporate responsibilities offers a means by which they can manage and influence the attitudes and perceptions of their stakeholders. Done properly, it builds long-term trust and enables the benefits of positive relationships to deliver business advantage. Keeble, Eagar and Auf der Maur explore the topic.

Introduction

Our society is facing a unique set of global challenges. For example:

- 78 percent of the world's population remain poor¹ and many are unable to meet their most basic needs;
- 28 percent of the world's children under five years old are severely or moderately undernourished²;
- Air pollution is estimated to cause 5 percent of the world's deaths each year³;
- In the 1990s approximately 2 percent of the world's forests were lost⁴;
- It is estimated that about 10 percent of all known plant species are under threat of extinction as a result of human activities⁴.

The moral case for action by society at large to deal with these problems is hard to deny. But, irrespective of any moral imperatives, there is a growing realisation that inequities cause instability, and this is a major threat to business growth. With today's communication networks, local issues can become global in a matter of minutes. The views of stakeholders, and their expectations of corporate behaviour, are shaped by what they see happening in the world around them.

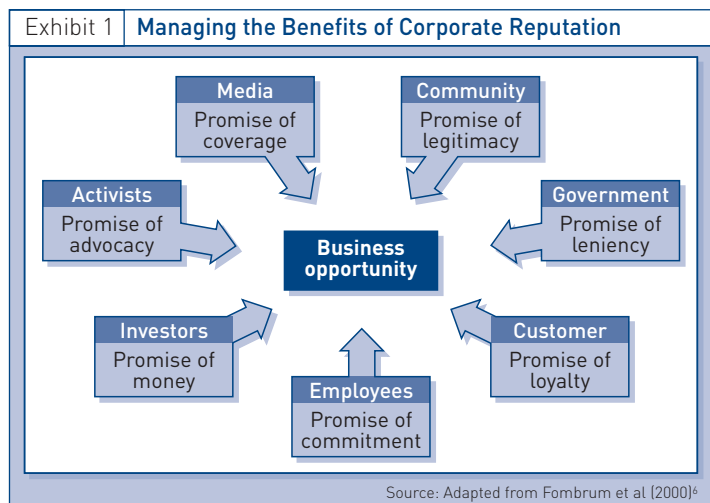
Companies that embrace corporate responsibility (CR) recognise that their social and environmental impact has to be managed in just the same way as their economic or commercial performance. But getting started and putting CR principles into practice can be difficult, and many companies struggle to justify the management of social and environmental affairs in terms of tangible business benefit.

CR should be seen as a journey rather than a destination and, as society's expectations of business are becoming more demanding, the sooner companies start out the better. In recent years much has been written about the subject of CR and the business imperatives behind it. There are six commonly recognised benefits that can be gained from an effective business-led approach to CR:

- Reputation management
- Risk management
- Employee satisfaction
- Innovation and learning
- Access to capital
- Financial performance.

Reputation Management

The success of every business depends on its relationship with its stakeholders, not least its customers. Enhancing the relationship a company has with its stakeholders increases the potential support that each group has for the company and its strategic objectives (Exhibit 1). It is through this relationship that a company creates value.



Customers are voting with their wallets when it comes to CR. In 1998, 28 percent of the British public believed that when buying a company's product it was very important that the company showed a high degree of social responsibility; by 2002 this had risen to 44 percent⁷. 86 percent of consumers have a more positive image of a company that is seen to be doing something to make the world a better place⁸, and a company's responsibilities to society and its environmental and labour practices are all seen by the public across 20 countries as more important than its economic contribution⁹.

48 percent of the global public have little or no trust in large companies.

Unfortunately, distrust among stakeholders - particularly consumers - of the adequacy with which companies are addressing their corporate responsibilities is rising. Recent evidence suggests that business leaders are one of the professional groups least trusted to tell the truth. 62 percent of British adults do not trust business leaders¹⁰ and 48 percent of the global public have little or no trust in large companies¹¹. This is alarming since a company's reputation is one of its most valuable assets, topping the intangible asset list of most chief executive officers¹². For example, it is estimated that 96 percent of Coca-Cola's value comprises intangibles, reputation, knowledge and brand. For Kellogg's this equals 97 percent and for American Express 84 percent¹³.

An increasingly common response by companies to the concerns of their stakeholders is to publish information on their social and environmental performance. 87 percent of the British public say they would expect to see a copy of any social or partnership report if they were a shareholder, while 44 percent say they would not expect to see one as a customer, but that seeing one would improve their perception of the organisation¹⁴. More than half the top 250 companies now produce reports on environmental, social or ethical performance, demonstrating that non-financial disclosure to external stakeholders has become mainstream¹⁵.

Case study 1: Friends Provident

The Quaker origins of the financial products and service provider Friends Provident have placed ethics at the heart

of its business for 170 years and provide the basis for the company's longstanding commitment to social responsibility. In order to maintain this strong reputation the company has developed a Statement of Business Principles in conjunction with its key stakeholders which sets out its core values and responsibilities. To demonstrate that it is fulfilling these commitments Friends Provident reports on its social and environmental performance through a dedicated Corporate Social Responsibility Centre.

Many corporations are broadening their definition of risk to encompass wider and longer-term risks that incorporate social and environmental issues.

Ashley Taylor, Manager for CR and Governance at Friends Provident, understands the impact this has on business: "The public put great emphasis on integrity, so name and reputation are critical to selling business. Therefore CR, which impacts on name and reputation, is an important differentiator. This is especially true when you are selling long-term intangible products such as pensions and life assurance. People cannot 'test' or 'try' these products. Instead they must trust the seller to deliver."

Risk Management

CR provides a means by which companies can better understand and manage risk. Many corporations are broadening their definition of risk to encompass wider and longer-term risks that incorporate social and environmental issues. In addition, they are engaging with a wider external audience to understand different needs and expectations and take action where appropriate. There is growing pressure for companies to understand and act on a widening range of risks across their business. Over the last few years, a number of guidelines and initiatives have been launched to encourage businesses to manage risks across their business. As exhibit 2 shows, in the United Kingdom it is particularly the requirement to prepare an Operating and Financial Review (OFR) that will have a significant impact on the way companies report on the social and environmental risks to their business.

Exhibit 2 Some Examples of UK Guidelines to Encourage Improved Risk Management			
Guidance	Year	Sponsor	Detail
Operating and Financial Review	2003	Department of Trade and Industry	Principles and guidance on how directors of companies over a certain size should report on issues that are material to shareholder interests, including the company's impact on the environment and wider community.
ABI disclosure guidelines on Socially Responsible Investment (SRI)	2002	Association of British Insurers	Guidelines on disclosures on environmental, social and ethical matters in company annual reports, including whether or not the company's board has effective systems for managing significant risks.
Internal Control: Guidance for Directors on the Combined Code of Corporate Governance (Turnbull)	2001	Department of Trade and Industry	Provides guidance on the implementation of the Internal Control Requirements of the Combined Code on Corporate Governance. It requires companies to identify, evaluate and manage their significant risks and to assess the effectiveness of their internal control systems. It includes direct reference to risks related to health and safety, environmental and reputational issues.

86 percent of institutional investors across Europe believe that social and environmental risk management will have a significantly positive impact on a company's long-term market value.

86 percent of institutional investors across Europe believe that social and environmental risk management will have a significantly positive impact on a company's long-term market value¹⁶. Despite this, many companies are failing to incorporate risks or opportunities associated with sustainability into their internal risk-assessment processes or business strategies. This is surprising as CR offers more effective risk management, helping companies to reduce avoidable losses, identify emerging issues and use positions of leadership as a means to gain competitive advantage by influencing new regulations to strengthen competitive advantage.

Employee Satisfaction

Businesses are run by people for people. As Simon Zadek, CEO of AccountAbility, a professional institute advancing corporate accountability standards for sustainable development, has commented, "they are no more or less than a human intervention for making things out of other things and getting them into use"¹⁷. A business is depend-

Three in five people want to work for a company whose values are consistent with their own.

ent on its employees in its operations, on its relationships with other stakeholders and on the delivery and creation of value. It is not possible to separate employees from a business; they are the business. Understanding and aligning their values with those of the business is critical for business success. In the UK, the average employee is at work almost two-thirds of all the days in a year. Employment is a significant part of people's lives. Just as people develop and pursue things important to them outside the workplace, they expect to be able to flourish as individuals within the workplace. People want to work for a responsible organisation¹⁸. Recent evidence suggests that three in five people want to work for a company whose values are consistent with their own¹⁹ and they will stay with the organisation whilst this consistency remains. The challenge is that companies are not seen to respond to these demands as employees' expectations rise¹⁹. In 1999 the British health-care organisation BUPA launched "Taking Care of Lives in our Hands", which integrated values through the business. This initiative helped to boost employee satisfaction (up by 20 percent) and the organisation's business turnover (up by 32 percent)¹⁹.

Case study 2: Hilti

Hilti is a Liechtenstein-based producer of construction tools for professionals, with approximately 15,000 employees and a turnover of €2 bn. Each year the company invests several million Swiss francs in cultural training to improve and adapt existing management systems.

The company has developed an appraisal system that ensures that the personal goals of the management and employees are aligned with those of the company. The company attaches "coach-boards" to the walls of its factories with the team leaders' personal goals written on them for all to see. They also display "cockpit-charts" illustrating the teams' delivery speed during the previous four weeks. This ensures that the personal goals of leaders and teams are public knowledge and permanently monitored.

In 2003, Hilti won the Carl Bertelsmann Award, which focused on "Corporate Culture and Management as Factors of Success". Hilti was best in class in the four crite-

ria for winning the prize: social responsibility, profound value system, participative management style, and ability to adapt and integrate.

CEO Michael Hilti explains: “We strive to have employees who share our corporate values – as we think that corporate culture does not stop at the factory gates.”²⁰

Innovation and Learning

Recent evidence suggests that companies embracing CR stimulate creativity and learning. 80 percent of European business leaders believe that responsible business practice allows companies to stimulate creativity and learn about the marketplace.

In 1983, a Royal Dutch/Shell survey found that one third of the firms in the Fortune 500 in 1970, only 13 years before, had vanished. Shell estimated that the average lifetime of the largest industrial enterprises is less than 40 years, roughly half the lifetime of a human being²¹. Peter Senge, founder of the Centre for Organisational Learning at the Massachusetts Institute of Technology’s Sloan School of Management, asserts that, although the death of these firms may be attributed to economic change and redistribution of resources, high corporate mortality is a symptom of deeper problems, which afflict all companies and which most organisations fail to learn how to handle.

Recent evidence suggests that companies embracing CR stimulate creativity and learning. 80 percent of European business leaders believe that responsible business practice allows companies to stimulate creativity and learn about the marketplace¹⁸. Furthermore, over four in five of both employees and CEOs believe that responsible organisations are more creative¹⁸ than others.

The long-term survival of organisations also depends on their ability to understand and act on societal and technological change. Joseph Schumpeter, one of the greatest economists of the 20th century, coined the term “creative destruction” to describe the dynamic pattern where innovative upstarts unseat established firms²². During periods of dramatic change, incumbent firms fail to build the capabilities needed to secure a position in the new competitive landscape²³.

Looking at what Schumpeter said, it becomes clear that we might just be experiencing another societal change in terms of what the public expects from companies. We

need to innovate and the benefits of innovation should not be constrained by the boundaries of an organisation. Already, many organisations are co-innovating with business partners to identify new approaches that deliver business benefits whilst tackling a social or environmental issue. For example, Nike has programmes in place with six of its material suppliers to collect 100 percent of their scrap and recycle it into the next round of products, reducing production costs and waste²⁴.

Case study 3: The Beacon Press

The Beacon Press's commitment to environmental innovation has made it one of the UK's leading printing companies. It has shown that new quality standards can be achieved through environmental best practice. The company was among the first to convert to waterless printing and the investment has already paid off, as the extra capital expenditure incurred to purchase the waterless technology has already been offset by reductions in operating costs. Since 1995 the company has reduced its water and gas consumption by over 50 percent. It recycles 84 percent of its waste and only uses electricity from renewable sources.

Beacon Press's leadership in environmental performance has made it a preferred supplier to other companies waking up to greening their supply chain, and it now has one in 10 of the FTSE350 companies as customers. The company won the Business in the Community's Environment Award for Excellence in 2002 and the Queen's Award for Sustainable Development in 2003.

Access to Capital

CR is a key factor in helping companies to access capital, because:

- Investors are increasingly considering a company's social and environmental performance. Over half of analysts and two thirds of investors now believe a company that emphasises its performance in this area is attractive to investors²⁵;

Today, the investment community is more likely to regard CR as a sign of the quality of management of a company.

- Private equity investors are developing tools to identify social and environmental risks in potential investments and are using CR as a vehicle to leverage finance;
- Banks are developing more effective means to understand social and environmental risks when lending, underwriting or financing projects and are introducing social and environmental management systems into decision-making, particularly to manage their own reputations;
- Public-sector lenders are developing increasingly sophisticated measures to reduce their exposure to risk, particularly in developing countries. Almost all major public-sector multilateral financial institutions are introducing environmental criteria in their loans or investment projects in the developing world²⁶;
- General and life insurers are integrating social and environmental factors into their premium calculations.

The message is clear. If you want access to cash, CR is key, and this trend will only accelerate in the future.

Traditionally, investors have been portrayed as having little interest in the non-financial aspects of business management. Today, the investment community is more likely to regard CR as a sign of the quality of management of a company and, as evidence of the link between good corporate citizenship and good financial performance mounts, few investors can afford to ignore this aspect of business behaviour.

An increasing number of investment funds are now managed according to the principles of socially responsible investment (SRI), with portfolio managers either screening out businesses that do not meet high environmental or social standards or using their influence to improve the ethical performance of these companies. 33 percent of institutional investors across Europe claim to offer SRI products, with a further 15 percent planning to¹⁶. In the US, there were \$2.34 trillion of SRI funds under manage-

ment in 2001²⁷, approximately one in every eight dollars under professional investment. In Europe, €12.2 billion has been invested in the SRI retail market and €336 billion in the SRI institutional market²⁸.

These issues are not limited to the SRI community. 33 percent of mainstream analysts now say environmental factors are important in their evaluation of companies, compared with only 20 percent in 1994. The figures for social issues have increased by an even wider margin, from 12 percent to 34 percent²⁵.

Although the original reason for companies to adopt SRI may have been individual investors voicing concern over where their money was being invested, there is evidence that companies that are managing their corporate responsibilities offer better long-term returns for investors than those that are not. A recent review of the Dow Jones Sustainability Indexes (DJSI) suggests that, between 2002 and 2003, the DJSI outperformed the mainstream market. During this period, the DJSI World (in USD) increased by 23.1 percent while the Dow Jones World Index (in USD) went up by 22.7 percent and the MSCI World (in USD) rose by 21.2 percent²⁹.

Between 2002 and 2003, the Dow Jones Sustainability Index outperformed the mainstream market.

Financial Performance

In *Built to Last*, Collins and Porras compared 18 companies that had been operating successfully for at least 50 years with 18 of their direct peers, all of which had been well known and relatively successful at certain points in their history. Collins and Porras found that a key characteristic in distinguishing the so-called “visionary” companies from their peers was having a core purpose beyond making money. Being clear about this purpose helped “visionary” companies to achieve far better long-term financial performance than their peers. One dollar invested in 1926 in a fund comprised of “visionary” companies would have grown to \$6,356 by 1990, compared with \$955 for a dollar invested in the comparison group³⁰.

Recent research supports Collins and Porras’ findings. The Institute of Business Ethics in London published a study of FTSE 250 companies showing that those with an ethical

Nearly 70 percent of CEOs say that CR is “vital” to profitability.

code in place for over five years outperformed the average on economic and market value-added. For 79 percent of fund managers and analysts surveyed in 2003, the management of social and environmental risks has a positive impact on a company’s market value in the long term³².

78 percent of senior business leaders across Europe believe that only by fully integrating responsible business practice will companies be more competitive¹⁸ and nearly 70 percent of CEOs say that CR is “vital” to profitability. Even in the current economic climate, it will remain a high priority for 60 percent of CEOs globally²⁸.

CR can also lead to direct improvements on the bottom line. Anticipating and lobbying over impending legislation can reduce future costs of compliance, understanding how your company uses materials and manages energy and waste can reduce operational costs and integrating environmental specifications into new assets can reduce life-cycle costs and improve efficiency.

Case study 4: Novo Nordisk Eco-efficiency in design and construction

In the pharmaceutical industry time-to-market is a critical factor. As a result, Novo Nordisk of Denmark needed to develop a fast-track approach to the design and construction of its production facilities. This involved the use of pre-assembled modules, which are not necessarily the most resource-efficient. A new procedure was introduced in 2002 to ensure environmentally sound project design in construction, extension and conversion of production plants. The procedure was tested on a new plant in Denmark, resulting in energy and water-saving measures in the design of up to 45 percent. The extra cost was less than 1 percent of the total investment, with a payback of just over a year, and the programme reduced operating costs by \$1 million, making it an attractive return on investment.

Reaping the Benefits

So how are companies going about integrating CR into their operations in order to reap these benefits?

Predictably there is no single approach that fits the needs of all companies with diverse risk profiles and business opportunities. However, in our work across different sectors we see three key dimensions that all companies need to consider: Stakeholder Relations, Systems and Culture.

Exhibit 3 Three Key Dimensions of CR		
<p>Stakeholder Relations</p> <ul style="list-style-type: none"> ■ One message, many routes ■ Well-defined processes for two-way engagement ■ Proactive influencing ■ Cooperative and partnering relationships 	<p>Systems</p> <ul style="list-style-type: none"> ■ Robust internal controls, including human factors ■ Integrate CR into innovation processes ■ Manage risks taking into account public perception ■ Exploit CR strengths in improving access to capital and enhancing shareholder preference 	<p>Culture</p> <ul style="list-style-type: none"> ■ Inspiring set of values, shared by employees ■ Use social and environmental drivers to stimulate learning and innovation ■ Openness, integrity and respect ■ Focus on innovation ■ Values-driven not incentive-driven

Source: Arthur D Little analysis

Stakeholder relations: Most companies understand the importance of managing relations with their key stakeholders such as shareholders, customers, employees, the local community, government, the media and the general public. But companies that have been successful in this area have done more than simply issuing regular press releases, responding to enquiries and holding the occasional open day. Instead they have developed well defined processes which ensure two-way communication with stakeholders - listening as well as telling. They create open forums, if necessary using independent facilitation; they obtain high-level involvement from senior public figures; they engage and partner with outside groups where possible; they listen, but also seek proactively to influence public debate; they follow up actions and maintain a regular dialogue; and they never tire of repeating the same consistent messages.

Systems: A common trap is that companies focus too much on stakeholder relations without any substantive

changes to the way they operate. By so doing they become hostages to fortune - any CR failing can suddenly become a crisis as people compare the perceived reality with the lofty statements issued by corporate communications. Clearly, robust internal controls are a pre-requisite. But, in addition, companies need to ensure that the human dimensions of risk are properly considered, both in terms of the impact of errors and violations on systemic failures, and in terms of the public perception of the acceptability of particular risks. Companies are also only just beginning to explore the potential business opportunities opened up by integrating the CR agenda into their innovation processes: for example by developing new technologies to provide better product traceability for consumers, or creating new channels to market for infrastructure products and services for developing communities.

Culture: No company will succeed in reaping the benefits from CR unless there is a clear shared vision to do so and an organisational culture that aligns with the principles that CR espouses. In this respect, CR is no different to innovation, customer focus, quality and other company priorities. Incentives may help, but the primary driver for progress must be the shared values of the organisation. There must be a culture of openness and mutual respect and a focus on innovation, using social and environmental drivers to stimulate learning.

Insights for the Executive

Companies that embrace CR can open doors to new markets, new opportunities and new relationships, set the scene for long-term profitability and increase the competitiveness of the communities in which they operate. Conversely, companies that fail to manage their responsibilities to society as a whole risk losing their so-called “Licence to Operate” – the unwritten authority to do business that is granted by a company’s stakeholders at large.

Companies can start to realise the benefits of CR by paying attention to the three key dimensions of Stakeholder Relations, Systems and Culture:

Stakeholder Relations

- Do you have effective processes in place to understand the needs and expectations of your stakeholders and to enhance their support?

Systems

- Do you have established processes to identify, evaluate and manage significant social and environmental risks and the effectiveness of your internal control systems?
- Are you using social and environmental drivers to develop new products and services, enter new markets and construct new business models?
- Are you exploiting your strengths in corporate responsibility to improve access to capital, including shareholder preference?
- Are you using environmental and social drivers to reduce costs and improve competitiveness?

Culture

- Are the values of your company consistent with those of your employees?
- Are you using these drivers to stimulate learning and innovation within your organisation?

Business is the primary source of investment in productive capacity and the main employer in most societies, and therefore has a key role to play in tackling global challenges. The good news is that this is not just a burden; it is also an opportunity for innovation, growth, stability and profitability.

References

⁰¹ Milanovic, B. and Yitzhaki, S. (2001) *Decomposing World Income Distribution: Does the World have a Middle Class?* Washington, D.C: World Bank.

⁰² UNICEF (2001).

⁰³ Worldwatch Institute (2002) *State of the World 2002*, World Watch Institute, cited in BT (2003) *Just Values: Beyond the Business Case*, BT's 6th Occasional Paper.

⁰⁴ World Conservation Monitoring Centre (1999).

⁰⁵ For example, Halliday, C., Schmidheiny, S., & Watts, P.(2002) *Walking the Talk: The Business Case for Sustainable Development*. Greenleaf Publishing and Berrett-Koehler & WBCSD (2002) *The Business Case for Sustainable Development: Making a difference toward the Johannesburg Summit 2002 and beyond*. WBCSD, Geneva.

⁰⁶ Fombrun, C., Gardberg, N. & Barnett, M. (2000) "Opportunity Platforms and Safety Nets: Corporate Citizenship and Reputational Risk", *Business and Society Review*, 105:1, 85-106.

⁰⁷ Annual CSR study, MORI, 1998/2002.

⁰⁸ *Business in the Community, The Ultimate Win Win Win* (1999) supported by Research International.

⁰⁹ *Global CSR Monitor (20 countries)*, Environics, 2001.

¹⁰ MORI Trust Monitor, 2003.

¹¹ *Voice of the People (47,000 adults across 47 countries)*, 2002.

¹² MacMillan and Joshi (1997) *Sustainable competitive advantage and firm performance: The role of intangible resources*. *Corporate Reputation review*, Summer/Fall 1997. Vol 1. No.1, Henry Stewart Publications.

¹³ Interbrand (2000) cited in www.csreurope.org.

¹⁴ MORI (2001) *Annual CSR Study*.

¹⁵ *Financial Times*, 9 September 2003 *Corporate Social Responsibility.

¹⁶ Taylor Nelson (2001) *The European Survey on SRI and the Financial Community* (conducted among 302 financial analysts and fund managers across Europe).

¹⁷ Zadek, S. (2001) "The Civil Corporation: The New Economy of Corporate Citizenship" Earthscan.

¹⁸ BITC (2003) *Responsibility: Driving innovation, Inspiring employees*. FastForward Research 2003, *Business in the Community*.

¹⁹ Environics' Global Campus Monitor (2003) conducted among 1,200 undergraduates across the 20 largest economies in the world.

²⁰ Hilti case study developed through interview with Hilti Management (2004).

²¹ de Geus, A. (1988) "Planning as Learning" Harvard Business Review (March-April 1988): 70-47, cited in Senge, P. (1990) *The Fifth Discipline: The Art & Practice of The Learning Organisation*, Century Business, London.

²² Schumpeter, J. (1934) *The Theory of Economic Development*, Harvard University Press.

²³ Hart, S. & Milstein, M.B. (2000) *Global Sustainability and the Creative Destruction of Industries*, Sloan Management Review.

²⁴ Senge, P.M. & Carstedt, G. (2001) *Innovating our Way to the Next Industrial Revolution*. MIT Sloan Management Review. Vol. 42. No.2.

²⁵ *Business in the Community (2001) Investing in the Future*, City attitudes to environmental and social issues, *Business in the Environment*.

²⁶ UNEP (2002) *Finance and Insurance: Industry as Partner for Sustainable Development*, United Nations Environment Programme Finance Initiatives.

²⁷ www.sustainability-index.com.

²⁸ SiRi Group, Avanzi SRI research (2003) & Eurosif (2003) cited in CSR Europe, Deloitte & Euronext (2003) *Investing in Responsible Business: The 2003 survey of European fund managers, financial analysts and investor relations officers*, CSR Europe & Deloitte.

²⁹ SAM Indexes GmbH (2003) *Results of DJSI Review 2003*, see www.sustainability-indexes.com.

³⁰ Collins, C. & Porras, J.I. (2000) *Built to Last: successful habits of visionary companies*. 3rd Edition, Random House, London.

³¹ www.ibe.org.uk/DBEPsumm.htm.

Background to this article

This paper is an adapted version of a report written in partnership with Business in the Community and supersedes Arthur D. Little's paper on the Business Case for Corporate Citizenship, which was published for the World Economic Forum's Global Corporate Citizenship Initiative (GCCI) in 2002. The paper was published to accompany the CEO Statement on Corporate Citizenship "Global Corporate Citizenship: The Leadership Challenge for CEOs and Boards", developed by the GCCI in cooperation with the Prince of Wales International Business Leaders Forum and launched at the World Economic Forum's Annual Meeting in January 2002.
www.weforum.org/corporatecitizenship

Justin Keeble

... is a Manager in Arthur D. Little based in Cambridge UK, specialising in corporate responsibility and social and environmental management as drivers for innovation in business. He holds a Masters degree in Land and Water Resource Management and a Bachelor degree in Environmental Geography.

Rick Eagar

... is a Director of Arthur D. Little based in Cambridge UK, specialising in public sector policy and programme studies, risk management and project management. He holds a degree in Mechanical Engineering and is a Chartered Engineer.

Claudia Auf der Maur

... is a Manager of Arthur D. Little based in Zurich, specialising in organisational design and knowledge management and leading the Swiss corporate responsibility efforts. She holds a Masters degree in Geomatics Engineering.