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Corporate sustainability

INTEGRATING HUMAN AND ECOLOGICAL SUSTAINABILITY APPROACHES

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It is apparent that current patterns of industrial development are not conducive to the creation of sustainable communities and economies (Senge and Carstedt 2001). The critical situation in which we find ourselves has been brought about by multiple causes. One important contributing factor is the rise of the corporation and the political and economic systems that have supported its evolution into a dominant organisational form. The powerful dynamism of the modern organisation has transformed both nature and society. The central question to be answered in this century is whether the current model of the corporation needs to be modified to contribute to the continuing health of the planet, the survival of humans and other species, the development of a just and humane society and the creation of work that brings dignity and self-fulfilment to those undertaking it (Elkington 1997, 2001; Dunphy *et al.* 2003). In other words, what do sustainable corporations look like and how do we go about building them?

In this chapter, it is argued that building corporate sustainability can lead to sustained long-term performance (Aragon-Correa and Sharma 2003; Russo and Fouts 1997; Sharma and Vredenburg 1998). However, we argue that it requires the integration of two alternate approaches to viewing sustainability—human and ecological (Dunphy *et al.* 2000).

By ecological sustainability we are referring to redesigning organisations to contribute to sustainable economic development and the protection and renewal of the biosphere. Issues relating to ecological sustainability draw on the disciplines of strategic and environmental management (Hart 1997; Starik and Rands 1995; Roome 1992; Hunt and Auster 1990). By human sustainability we are referring to building human capability and skills for sustainable high-level organisational

performance, and for community and societal well-being (Dunphy *et al.* 2000). Issues relating to human sustainability draw on research undertaken in the areas of strategic human resource management and change management (Dunphy and Griffiths 1998; Wright and Snell 1998; Lepak and Snell 1999; Huselid 1995).

This chapter outlines a comprehensive sustainability phase model that emerged from a review of the literature on the development of both ecological and human sustainability (Dunphy *et al.* 2003). The framework outlines the developmental phases through which corporations progress toward both human and ecological sustainability. As a tool, the phase model allows meaningful comparisons between organisations, helping to assess current commitment to, and practice of, human and ecological sustainability, and assisting managers in capitalising on the benefits of moving towards more sustainable practices in both areas. Furthermore, it is argued that corporate sustainability is built on the integration of these two alternative approaches to viewing sustainability. Using evidence from case studies, it is suggested that the development of proactive corporate sustainability approaches requires significant investments in the human capital of organisations.

Human and ecological sustainability traditions

There has been a recent surge in work undertaken in both human and ecological sustainability traditions which demonstrates the importance of the development of specific capabilities that enhance an organisation's competitive performance (Egri and Herman 2000; Ramus and Steger 2000; Russo and Fouts 1997; Sharma and Vredenburg 1998; MacDuffie 1995; Huselid 1995). This work has been extended to identify contingent relationships between capabilities and competitiveness, with one suggested avenue of research being the need to examine the impact of human resource capabilities on the development of proactive environmental management practices (Aragon-Correa and Sharma 2003; Wright and Snell 1998).

Various authors have described the historical processes by which corporations have moved towards supporting ecological sustainability (Hunt and Auster 1990; Hoffman 1997; Roome 1992). These studies have identified a range of capabilities and characteristics of ecologically sustainable organisations (ESOs). Leading from the strategic choice literature and based on 'best practice' case studies, models such as Hunt and Auster's (1990) 'five-stage environmental development continuum', Arthur D. Little's (1989) 'state-of-the-art model', Post and Altman's (1992) 'corporate greening model' and Roome's (1992) 'strategic options model' have developed a classification that allows for a systematic comparison between organisations in terms of how sustainable their strategies are and the type of contributions they are making towards sustainability. The underlying assumption of these models suggests that companies have a choice of environmental strategy which classifies them along a continuum according to their degree of proactivity in environmental management (Henriques and Sadorsky 1999; Schaefer and Harvey 1998). Table 8.1 outlines some of the key terms of the major phase models and aligns them with the categories developed later in this chapter.

Roome (1992)	Hunt and Auster (1990)	Dunphy, Griffiths and Benn (2003)	Human sustainability elements added by Dunphy <i>et al.</i> (2003)
		Rejection	<ul style="list-style-type: none"> • Employees a resource to be exploited • Training costs kept to minimum • Organisation does not take responsibility for health/welfare of employees • Does not engage its community or stakeholders
Non-compliance	Beginner	Non-responsive-ness	<ul style="list-style-type: none"> • Financial and technological factors dominate business strategies • Labour viewed as a cost to be minimised • Industrial relations strategies focus on developing a compliant workforce • Broader issues of community involvement ignored
Compliance	Firefighter	Compliance	<ul style="list-style-type: none"> • Firm viewed by senior managers as decent employer • Emphasis on compliance with legal standards • HR training strategies and organisation development instigated but not integrated • Community concerns are addressed due to negative publicity, litigation or impact on company bottom line
Compliance plus	Concerned citizen	Efficiency	<ul style="list-style-type: none"> • Systematic attempt to integrate HR functions to reduce cost/increase efficiency • Focus on training or team development for value adding—i.e. waste reduction, TQM • Community projects undertaken where cost benefit can be demonstrated
Commercial and environmental excellence	Pragmatist	Strategic proactivity	<ul style="list-style-type: none"> • Workforce skills mix and diversity vital to corporate culture • Intellectual and social capital are used as part of corporate strategy • Corporate competencies developed • Flexible workplace cultures developed • Corporation contributes to community betterment • Actively seeks to engage stakeholders
Leading-edge	Proactivist	Sustaining	<ul style="list-style-type: none"> • Organisation accepts responsibility for developing and upgrading its own human capital and that of its community • Promotes strong work-life balance • Strong ethical/values corporate position • Pursues general human welfare and engages with stakeholders • Seeks to promote change with other industry-society participants

TQM = total quality management

TABLE 8.1 Phase model characteristics

Source: Adapted from Henriques and Sadosky 1999

Although the specific names given to the phases in each model differ, they generally share the same characteristics typifying each phase (Post and Altman 1992). Furthermore, the most common environmental management strategy model type utilises stages along a type of continuum or progression (e.g. Hunt and Auster 1990; Arthur D. Little 1989; Roome 1992) rather than distinct categories in which firms can be strictly classified (Hass 1996). There is a great deal of overlap in models such as these, despite differences in the names given to various phases and the different number of phases. Clearly, any generalised phase model is a high level of abstraction from the diversity of corporate life (Kolk and Mauser 2002). Nevertheless, ideal type models of this kind have a long history in the social sciences—without such frameworks it is difficult to compare and contrast individuals, organisations and communities.

Human sustainability perspectives

Studies of historical stages/phases underlying the moves towards human sustainability are rare. However, an increasing body of literature in the management field has emerged over the past 30 years compiling evidence of the importance of people or 'human factors' in transforming and changing organisations (Dunphy and Griffiths 1998). The focus of this research in the management area was to generate organisational structures that contributed to human satisfaction, growth and development while also contributing to the profitability and productivity of enterprises. Management research developed capabilities and knowledge relevant to the effective conduct of the micro and macro elements of organisational change (Mirvis 1988). While early change agents focused on interventions at an individual and/or group level, the focus moved subsequently to the management of large-scale corporate restructuring and to forging links between change management practices and corporate strategy. So, over 30 years, the change movement generated a wealth of information on how to redesign and renew organisational architectures from the individual level to the total corporation (Beer *et al.* 1990).

For instance, the human sustainability traditions have established that, where individual jobs are redesigned to enhance an individual's autonomy in decision-making and are linked to the organisation's central purpose (through skills training, human development and culture change workshops), they would result in greater organisational commitment and employee satisfaction (Kleiner 1995; Mirvis 1988, 1990). Substantial research has shown that, while these initiatives frequently succeeded in enhancing individual skills, if they were not complemented with organisational systems and architectures that rewarded people for using these skills the initiatives would fail to generate sustainable positive outcomes for either individuals or the corporation (Emery 1974; MacDuffie 1995; Huselid 1995; Dunphy and Griffiths 1998).

At the level of the work group or business unit, the human sustainability traditions focused on designing architectures that would both benefit individuals and improve productivity and profitability for the organisation. Team-based organisa-

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tions were implemented, in which smaller business units were created and, in turn, broken down into semi-autonomous work teams (Walton 1985). These were teams made up of skilled individuals who could take responsibility for planning, scheduling, quality and customer service in the production of goods and services. Such organisational architectures proved to be more effective than their mechanistic counterparts in producing high levels of performance, as well as significantly raising employee work satisfaction. However, they also required significant modification of hierarchical management structures (Lawler 1992).

How these new practices were implemented—through incremental or transformational changes—was a point of debate. Some authors, such as Lawler (1992), argued that levels of participation and involvement were crucial to securing the development of high-performance organisations. Typically this could be achieved through incremental strategies. Others, such as Dunphy and Stace (1990), Stace and Dunphy (2001) and Weick and Quinn (1999), have demonstrated that transformational changes can also provide a means by which organisations achieve sustainable corporate objectives. Despite these differences, the human sustainability tradition has demonstrated the importance of human competencies and capital to sustained competitive performance.

Human resources and environmental management

Our interest in phase models is not to develop historical understanding but rather to better understand the paths corporations must travel to reach a full commitment to corporate sustainability that covers both human and ecological issues (Dunphy *et al.* 2003).

We argue that the organisational move to ecological sustainability is supported by, and reliant on, 'human sustainability'—development by the organisation of the human capabilities and skills that enable more consistent compliance, the implementation of eco-efficiency measures and forward planning for strategic sustainability. The relationship between the two aspects of sustainability should be recognised as symbiotic rather than artificially divided.

Our approach builds on recent empirical studies that suggest a relationship among human resource policies, practices and the successful implementation of corporate environmental initiatives (Daily and Huang 2001; Dunphy *et al.* 2000; Dunphy *et al.* 2003; Egri and Herman 2000; Ramus and Steger 2000; Wilkinson *et al.* 2001). In particular these studies have found that human resource management—through practices such as values-based management, devolution of authority and skills development has assisted the pursuit of corporate sustainability innovations. For instance, Daily and Huang (2001) found that successful implementation of environmental management system (EMS) programmes in manufacturing organisations was assisted when factors such as training, empowerment, teamwork and rewards were addressed. These results were also backed up by other empirical studies (Ramus and Steger 2000) showing that employees who perceived they were receiving strong supervisory and organisational support and commitment were

more likely to implement strategies to address environmental issues in their organisations. The study also demonstrated that 'supervisory support behaviours encouraging environmental innovation, competence building, communication, rewards and recognition and management of goals and responsibilities had a statistically significant impact on employee willingness to promote eco-initiatives' (Ramus and Steger 2000: 623).

Similarly, a study by Egri and Herman (2000) found that non-profit environmental organisations and organisations that had products and services that were environmentally focused had leaders who demonstrated values orientations that reflected a more ecocentric approach. Furthermore, their study found that those businesses with an environmental focus were more likely to be characterised by flat structures, informal arrangements and structures that facilitated empowerment (Egri and Herman 2000: 599). This translates into an important finding—that building human capabilities can enhance the ecological sustainability orientations of organisations.

In line with these earlier studies, it is argued in this chapter that, as corporations move to adopt different sustainability stances, this in turn creates the need to upgrade the human capability requirements of the organisation. In other words, corporations that adopt a low level of compliance or a reactive stance to sustainability appear to require significant investments in human capabilities and organisational systems which can then enable them to develop more proactive stances on sustainability issues. These corporations need to build their human sustainability approaches in order to develop and capitalise on their ecological capabilities.

Scandic Hotels represents an interesting case that highlights the contributions that investments in human capital can have on achieving eco-efficiencies (Nattrass and Altomare 1999). Scandic Hotels introduced The Natural Step (TNS) programme in implementing sustainability practices. This programme was used to instigate a new values approach throughout the organisation and involved all employees and managers being exposed to workshops and the ideas behind TNS. The first efficiency impacts at Scandic were felt almost immediately. Employees identified many 'low-hanging fruit', ripe for picking. For instance, overall soap and shampoo use was reduced by 25 tonnes and waste by 8.5 tonnes annually. This was achieved by the introduction of recyclable soap and shampoo containers and the use of refillable containers (Nattrass and Altomare 1999: 80).

Second, Scandic moved towards efficiency gains through the adoption of value-adding activities. In order to generate value-adding outputs, the company had to first build the capability of its employees. Anticipated efficiency gains were shared with employees by investing in their skills. Emphasis was placed on developing and training employees (enhancing human capital) to identify value-adding opportunities (Dunphy *et al.* 2003). Employees developed and used a range of metrics such as environmental barometers (quarterly benchmarking reports) and an environmental index.

In its first year, average energy consumption in the hotel chain's Nordic hotels was reduced by 7%, water consumption by 4% and unsorted waste by 15%. This resulted in estimated financial benefits of US\$800,000 (Nattrass and Altomare 1999: 92). Through investment in such value-adding activities, Scandic built on its

cost approach to deliver further efficiency improvements in resource utilisation (Dunphy *et al.* 2003).

Finally, at Scandic, innovation has become another means of gaining further sustainable efficiencies. Renewing and refurbishing are major investment activities in hotels. One major innovation Scandic has developed is the 97% recyclable 'eco-room'. Rooms are designed and built for disassembly and all components that cannot be re-used or recycled are sold. According to Nattrass and Altomare (1999: 97): 'Approximately 2,000 rooms are being refurbished each year with an estimated decrease per year of plastics by 90 tonnes, metals by 15 tonnes and mercury by 50%.'

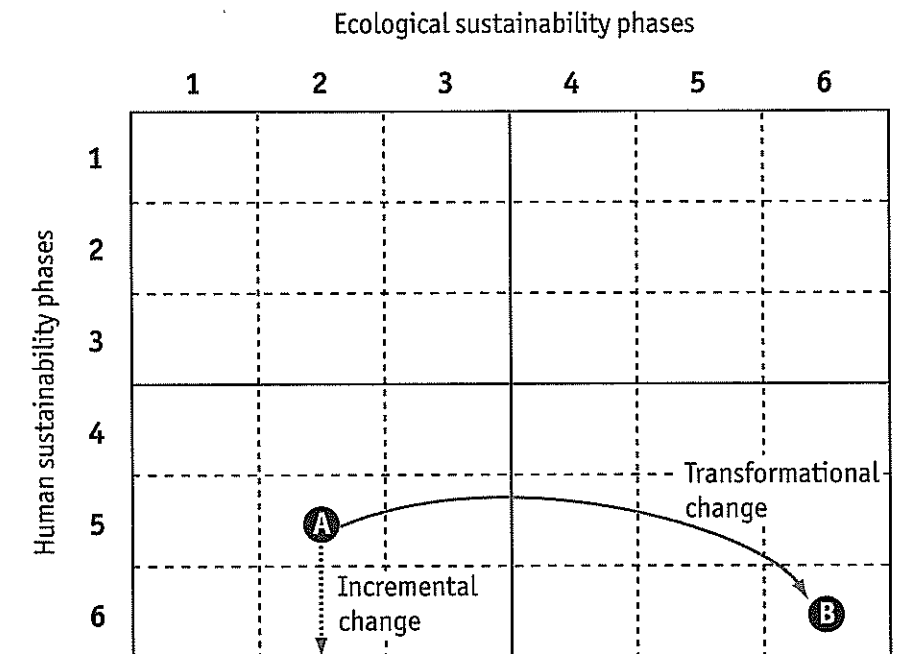
The Scandic case reinforces two important messages contained in this chapter. First, the move to capture sustainability benefits often starts with an emphasis on meeting compliance and cutting costs. However, to achieve sustainable longer-term gains, the appropriate human systems and cultural values must be built to support value-adding and innovation. Second, corporation efficiency gains need to be shared with employees and a broader set of stakeholders, as well as used to build internal competencies and the reputational capital of the firm (Dunphy *et al.* 2003). In the next section of this chapter, we present the sustainability phase model and outline some of the key ecological and sustainability capabilities associated with each of the phases. The unified approach, combining ecological and human sustainability, is designed to bring about a change in the interpretation of corporate sustainability and to support the activities of change agents in bringing about sustainability in a systematic way.

Corporate sustainability phase model

In this section, we outline the major characteristics of the corporate sustainability phase model. The six phases, ranging from rejection through sustaining, represent a set of ideal types which can be used to help organisations define where they are currently as regards human and ecological sustainability and chart their progress towards a more sustainable position (see Fig. 8.1). At each step of the way, new human capabilities or characteristics of the organisation enable further progression of ecological sustainability. We do not assume that a firm necessarily progresses through the phases step by step on an 'improving' trajectory. On the contrary, an organisation may leapfrog phases or regress by abandoning previously established sustainability practices. Significant shifts are often triggered by changes such as the appointment of a new chief executive, stakeholder pressure, new legislation, economic fluctuations or by the loss of committed enthusiasts.

The characteristics of the phases are outlined below:

1. **Rejection.** Involves an attitude on the part of the organisation's managers that all resources—employees, community infrastructure and the ecological environment—are there to be exploited by the firm for immediate economic gain. The firm disregards any negative impacts of its activities. These firms externalise costs to others. On the human side, employees and subcontractors are exploited. Employees, in particular, are regarded sim-



Phases:

1. Rejection
2. Non-responsiveness
3. Compliance
4. Efficiency
5. Strategic proactivity
6. Sustaining

FIGURE 8.1 Sustainability phase model

ply as industrial 'cannon fodder'—there is no commitment to developing them, and health and safety measures are ignored or paid 'lip service'. Community concerns are rejected outright. There is a strong belief that the firm exists simply to maximise profit and any other claims by the community are dismissed as illegitimate. The firm disregards the destructive environmental impacts of its activities and actively opposes any attempts by governments and 'green' activists to place constraints on its activities. The environment is regarded as a free 'good' to be exploited. For instance, Exxon and Mobil are two of several companies, along with several trade associations, that organised against the Kyoto Protocol through the Global Climate Coalition, an organisation formed to co-ordinate business response to the climate change debate (Benn *et al.* 2003).

2. **Non-responsiveness.** Usually results from lack of awareness or ignorance rather than from active opposition to a corporate ethic wider than finan-

cial gain. The firm concentrates on 'business as usual' and ignores issues of sustainability. The firm's human resource strategies, if they exist, are focused mainly on creating and maintaining a compliant workforce. Community issues are ignored where possible and the environmental consequences of the firm's activities are taken for granted and, if negative, disregarded. Environmental risks, costs, opportunities and imperatives are seen as irrelevant. Industrial relations is a major issue with the emphasis on cost of labour. Financial and technological factors exclude broader social concerns and the training agenda focuses on technical and supervisory training.

Increasingly, governments and disaffected communities are imposing tough penalties for non-compliance. Corporations that do not address social and environmental requirements face fines, workers' compensation cases, criminal convictions, payment of clean-up costs and consumer boycotts. The potential for damage liability can make non-compliance a significant business risk, as provided in the examples below.

In the US, the total corporate liability costs for asbestos-related diseases has been estimated at US\$30 billion, far more than the product ever earned its manufacturers. In a recent court decision in South Africa, more than 300 workers in an asbestos mine were awarded damages. Claims by the multinational company involved that it could not be held accountable for the actions of subsidiary companies were discounted. A major concern of the workers' lawyers was that, if larger settlements were won, there appeared a strong likelihood that the company would be bankrupted.¹

In another incident, Esso was found guilty of 11 breaches of the Occupational Health and Safety Act after an explosion and fire at its Australian plant at Longford caused the death of two people and injured many others. Esso was fined US\$1 million and is currently facing an additional class action seeking damages of US\$650 million (Gregory and Shaw 2001).

3. **Compliance.** Focuses on reducing the risk of sanctions for failing to meet minimum standards as an employer or producer. Changes are primarily reactive to growing legal requirements and community expectations for more sustainable practices. Here, corporate strategies relating to human sustainability focus on policies of legal compliance plus benevolent paternalism with the expectation of employee loyalty in return. The firm is primarily reactive to growing legal requirements and community expectations for more sustainable practices. A recent shift has seen the development of co-regulatory practices. Human resources functions such as industrial relations, training and total quality management (TQM) are instituted but with little integration between them. Only ecological issues that are seen as likely to attract litigation or strong community action are addressed. Firms or industry associations in this phase may take a non-committal position on politicised sustainability issues.

¹ www.abc.net.au/news, accessed 19 February 2002.

4. **Efficiency.** Reflects the growing awareness on the part of managers in the corporation that there are real advantages to be gained by proactively instituting sustainability practices. In particular, these practices are directed toward reducing costs and increasing operational efficiency. Some organisations capitalise on these cost savings and reinvest them in their employees to achieve sustainable longer-term gains by building the appropriate cultures and human systems that support value-adding and innovation. For example, Scandic, referred to earlier in this chapter, has had considerable success at reducing and eliminating waste and using these cost savings to build its employee skill base (Natrass and Altomare 1999). The new innovation focus has led to huge cost savings, reduced ecological impacts and enhanced the reputation of the corporation.

In particular, human resource and environmental policies and practices are used to reduce costs and increase efficiency. Investment in training may involve expense but results in compensating added value through increased quality of products and/or services. Technical and supervisory training is augmented with interpersonal skills training. Teamwork is encouraged for value-adding as well as cost-saving purposes and external stakeholder relations are developed for business benefits. ISO 14000 systems (the international EMS standard) are integrated with TQM and occupational health and safety management systems or other systematic approaches, with the aim of achieving eco-efficiencies. In the name of waste minimisation, sales of by-products are encouraged as are co-operative relationships with other members of the supply chain.

The case of Placer Dome, a gold mining company, highlights the potential conflict between narrow and broader views of human sustainability. In the 1990s, Placer Dome's human resource policies and strategies had a strong focus on employee development, training, safety and on valuing employee contributions to the company's sustainability efforts. A range of human sustainability initiatives was aimed at developing the capabilities of both employees and local communities affected by mining operations. However, a dramatic decline in the gold price caused a setback in the pursuit of sustainability. The company's decision to 'downsize' led to a substantial reduction in one area of its core capabilities. For instance, at the Marcopper mine site a retrenched employee had to be rehired to undertake negotiations with key stakeholders when it was realised that he was the only one in the company that had developed a strong and trusting relationship with the community stakeholders. This example is an instance of a managerial decision (downsizing), made in the name of efficiency, which can threaten the corporate capabilities required for future competitive advantages (Dunphy *et al.* 2003: 153).

5. **Strategic proactivity.** Appears when sustainability is used to seize emerging opportunities by, for example, improving competitive advantage by positioning the firm as a leader in sustainable business practices. BP has adopted such a strategic approach to sustainability. As one of the world's largest extractive resource-based companies and energy producers, BP has strategically repositioned itself to be seen as moving 'beyond petroleum'.

It has incorporated these goals into its corporate strategies. While BP is in the early stages of the sustainability journey, the company is being positioned as an industry leader (Dunphy *et al.* 2003: 167-68). Proactive environmental strategies are seen as a source of competitive advantage at this stage, with the firm's strategic elite viewing sustainability as providing a potential competitive advantage. The commitment to sustainability is strongly embedded in the quest for maximising longer-term corporate profitability, i.e. it is motivated by intelligent corporate self-interest.

Future corporate performance is seen not simply as a matter of reducing costs and increasing efficiencies but as adding value and maximising speed, flexibility, innovation and responsiveness. Consequently, managers and change agents try to position the organisation as a leader in sustainable business practices—with advanced human resource strategies that help make the organisation an 'employer of choice', with 'corporate citizenship' initiatives that build stakeholder support and with innovative, quality products that are environmentally safe and healthy. Reflecting a growing awareness of the business possibilities associated with sustainable development, the environment industry now encompasses a wide range of products.

Similarly the organisation attempts to develop differentiated stakeholder strategies. This involves designing and implementing various strategies that reflect the needs and interests of different stakeholders (Hirsh and Sheldrake 2001). To achieve this, stakeholder representatives need to be actively involved.

For instance BHP's Carrington silver lead and zinc mine in Queensland has used third-party auditing by the North Queensland Conservation Council as a means of independently monitoring and reporting on the company's sustainable operation of this site. While the council found that BHP performed better than its own targets and legislative requirements, it recommended that the mining operations look further into developing a product life-cycle analysis and seek greater community involvement in risk assessment and revision of mining operations. Third-party scrutiny can be used to push organisations further towards the attainment of strategic sustainability and this can also prove to be of strategic advantage to the firm (BCA 2001).

6. **Sustaining corporation.** Reflects an internalisation of sustainability and actively promotes the emergence of a society that supports the ecological viability of the planet and its species. It contributes to just, equitable and democratic social practices and human fulfilment. There are few organisations that embody this ideal. To date, those most cited include Ben & Jerry's, Patagonia and Interface. And even these have not always been able to maintain the advances they have made. Nevertheless, evidence is emerging of innovative companies implementing sustainability practices in a range of operations. In the process, these companies bring stakeholders into the organisation, build reputational capital, build the capability of the workforce and contribute to ecological and community regeneration. These organisations are building corporate sustainability. The organisa-

tion still pursues the traditional business objective of providing an excellent return to investors, but voluntarily goes beyond this by actively promoting ecological sustainability values and practices in the industry and society generally. Its fundamental commitment is to facilitate the emergence of a society that supports the ecological viability of the planet and its species and contributes to just, equitable social practices and human fulfilment.

The Rabobank group, a large Dutch co-operative bank, is one organisation that has, for many years, demonstrated a collaborative commitment to human and ecological sustainability. The bank was founded as a co-operative in 1888 and has expanded to rank 32nd globally. Rabobank's stated aim is to pursue the goals of 'profit, people and the planet'. Rabobank acts to ensure that it heals the natural environment with care and that its activities support sustainable development. In addition, it is strongly involved in several national and international business forums that exchange information and best practice and which engage in public advocacy for sustainability. In 1999 it launched the RG Sustainable Equity Fund which invests in companies chosen for their ethical approach to social and environmental issues. In the first 11 months 'the fund achieved a return of 59% compared to 45% for its benchmark the Morgan Stanley Capital Index' (Schrama 2001: 77-91). Rabobank regards sustainability as central to its business activities (Benn *et al.* 2003).

Change for sustainability: incremental and transformational paths

A key issue facing organisations is the implementation of sustainability initiatives. Many organisations prefer to make changes slowly, systematically building on their achievements, while others want to make widespread rapid and quite radical alterations to the way they do business. We have categorised these as 'incremental' and 'transformational' approaches to sustainability.

The corporate sustainability phase model around which this chapter is constructed provides a way of estimating and describing the gap between these two approaches, as well as indicating how to move forward (see Fig. 8.1). For instance, the human sustainability orientations of organisations are identified along the horizontal rows while the ecological sustainability orientations are identified along the vertical columns. Organisations may be at different stages in each of these areas. It is possible for the same organisation to have a highly strategic approach to human sustainability (phase 5) but to be lagging in terms of compliance in the ecological area (phase 2): for example, a mining company that has first-rate human resource policies but which has environmentally destructive operations. The differences between current and envisioned future positions in the matrix define the gap to be bridged. Point A in Figure 8.1, for example, could represent a bank that

has systematically built its human resource strategies over a ten-year period in order to attract and retain some of the best talent in the industry. The bank has also been concerned about its contribution to the community and has used its community relations to support its progressive 'concerned and caring' image. This places it in phase 5 (strategic proactivity [HS5]) in the area of human sustainability. It has given little thought, however, to its environmental impact. It uses huge amounts of paper, most of which is not separated for recycling. It constantly updates its computers and peripheral equipment, but commits them by truckloads to landfill. It is discussing developments in the ethical investment fund area, but has not yet launched such a fund or developed an alliance with another financial institution that has. This places it, for ecological sustainability, in phase 2 (non-responsiveness [ES2]). Now, it aspires to be a leader in the introduction of sustainable practices. Clearly it only needs, at the most, incremental change in the human sustainability area, but its transformational change programme needs to centre on ecological sustainability where it has a lot of ground to make up before it reaches its ideal. This transformational change is represented by point B on Figure 8.1.

According to the phase model of corporate sustainability outlined above, the organisations most in need of change are those in the rejection and non-responsive phases. Because expenditure on personal and professional development is kept to a minimum and community concerns are rejected completely, firms in the rejection phase remain ignorant of the benefits of progressing along the sustainability spectrum. In the non-responsive organisation, financial factors so dominate corporate decision-making that often both the human resource and environment factors are taken for granted, usually with the exception of industrial relations issues. Management policy-making of the non-responsive organisation focuses on ensuring that the workforce is easily moulded to the corporate will in order to derive maximum financial return. For organisations such as this, to move to compliance and beyond requires some cultural modification. But, in most instances, this is not the transformational change of the dramatic paradigm shift. This is gradual, planned, continuous and ongoing incremental change. It is often based on TQM, on team building and on the development of new capabilities and values. A risk-free, ongoing position of compliance is not just a matter of changing policies and values—it is assisted by enlisting the commitment of employees and building practical procedures that everyone in the organisation can understand. For instance, Scandic Hotels and Interface transformed their operations incrementally by adopting corporate-wide programmes such as TNS. These programmes became vehicles by which employee capabilities were developed to address sustainability issues. In both cases, the organisations used these initiatives to extend their respective approaches to sustainability to include more strategic issues (Dunphy *et al.* 2003; Nattrass and Altomare 1999). Typically, incremental changes of this sort involve organisations only moving through or from one phase to another (as outlined in Fig. 8.1).

For other organisations, change along the sustainability phase model will be transformational, requiring a redefinition of the company's core business area, its key manufacturing processes or, perhaps, its human resource policies and community relationships. For example, for the organisation to move from the rejection phase to compliance is a transformative change requiring a major shift in values and

a reinventing of the corporate image and culture according to a powerful conception of future need. Generally, the transformational changes would involve organisations leaping through two or more phases as outlined in Figure 8.1.

Transformational change is deep change. It can involve risk and requires new ways of thinking, perhaps surrendering control, often irreversible and discontinuous with the past (Dunphy *et al.* 2003). A key challenge for management is to enable the organisation to make an imaginative leap that is both proactive and flexible. This form of change requires the development of transformational capabilities that support strategic repositioning. These capabilities can enable the organisation to shift to new products and processes that are less environmentally destructive, and are able to give the firm long-lasting high performance. Arguably, this is the sort of organisational change made by Shell in the mid-1990s when it faced international criticism for the proposed sinking of the Brent Spar oil platform and for its apparent support of a repressive political regime in Nigeria. As a result, it made the fundamental decision to integrate social and environmental principles into its business principles. As with other companies faced with the necessity of making such changes, it would have been riskier for Shell *not* to have made this change. While still a fossil fuel firm, Shell has guaranteed to divert a portion of profits to research alternative energy. Shell has moved to a more strategic position on the phase model of sustainability (Dunphy *et al.* 2003).

Lovins *et al.* (1999) have argued that, if firms persist with the win-win business logic of natural capitalism, they can gain long-term competitive advantage. For many organisations, building this perspective into an organisation requires reinvention of organisational norms and the development of innovative capacity. Other organisations may take the transformational path of dematerialisation, where the service flow is maintained or increased, while reducing physical resource input (Sutton 2003). A firm that has made such a strategic transformation will have the capability and learning capacity to recognise and develop the skills and organisational culture necessary to innovate in line with the new business standards set by ecological modernisation (Hoffman 1997; Mol and Sonnenfeld 2000).

Hewlett-Packard's environmental strategies and solutions programme, for instance, showed that sustainability can offer companies a strategic competitive advantage (Preston 2001). The firm based the programme on the premise that the planet is a closed system which will eventually face limits, placing the firm in a new social and economic situation. In other words, the firm strategically scoped the challenges of a new business environment, developing strategies that would transform potential environmental liabilities such as climate change, resource exhaustion and the energy crisis into competitive advantage (Preston 2001: 29).

Transformative change at Fuji Xerox

The highly successful Fuji Xerox Eco-Manufacturing Centre at Zetland in Sydney serves as a case study to demonstrate that a very positive relationship between human and ecological sustainability can generate transformative change (Benn *et al.* 2003). The concept of 'eco-manufacturing' involves detailed analysis of why things fail and produces remanufactured products with improvements intended to eliminate future failures. Remanufacturing goes beyond efficiency measures to the

more strategic aim of supplying local operators with high-quality locally reprocessed parts. The firm has positioned itself as a market leader in this technology. The transformational aspect of the change is that the firm now has the potential to transfer remanufacturing skills developed with printers and photocopiers to other industry sectors.

Eco-manufacturing takes used components and tests, re-engineers and reassembles them into 'new' products while ensuring that the production process and the final products have no adverse environmental effects. To produce a quality re-engineered product, and to meet the new and higher environmental safety standards required of an eco-manufacturing process, means going beyond mere replication. It requires complex technological challenges to be addressed. For example, the materials of the components may have changed during their first use due to heat, vibration or some other physical effect of the operational processes within the equipment.

Fuji Xerox managers describe the work of the Eco-Manufacturing Centre as re-engineering and redesigning a product or product component and developing it to as good as, or even better than, new. This process involves scientifically examining the causes of failure while looking for opportunities to extend the life of the product and improve its performance more generally. These processes also have environmental benefits by reducing demand for raw materials, energy and waste to landfill. Another major benefit to the business is the acquisition of data about problems that develop in its products over time. That data was previously lost as used defective products were simply sent straight to landfill. Part of the new remanufacturing/re-engineering process involves analysing the defects in the components that have been returned. This analysis provides information that can be used to improve component design and thereby leads to better remanufactured products. There are therefore multiple benefits from remanufacturing including: decreased costs due to recycling over the year 2001-02 were approximately AUS\$22.5 million; improved design for increased reliability and enhanced performance; and savings from import substitution and new export earnings.

Not only are parts renewed or recycled, but the technical processes involved in achieving this have been developed to eliminate environmentally damaging emissions, pollution and waste. For example:

- All solvents have been eliminated from the cleaning of parts and components.
- Frozen carbon dioxide (dry ice) is used under high pressure to clean components, a process that creates no liquid wastes or pollutants.
- Environmentally 'neutral' bicarbonate of soda is used under high pressure to remove the old coating from the fuser rollers used in photocopiers. The spent bicarbonate of soda is then re-used as an industrial water softener.
- A carbon by-product of waste toner (57,000 kg a year.) is extracted and can be used as a combustion agent in steel making.
- Reduction in energy use through the implementation of a range of initiatives and monthly tracking to evaluate improvement.

- All unusable metal parts are sent to Sims Metal to be recycled.
- In collaboration with Collex Waste Management, carrying out ongoing research and development into ways of reducing all packaging waste through re-use of a range of packaging materials, including plastics.

The Eco-Manufacturing Centre has clearly reached beyond the efficiency phase in these measures. Cultural and human resource factors at the Zetland plant have enabled this strategic perspective. A key success factor has been a small group of skilled, innovative and committed managers willing to listen to staff, customers and other stakeholders. Staff are assigned to teams, each team being responsible for quality, engineering and production capacity around products or product groups, for example, print cartridges or lasers. The product-based team structure promotes multi-skilling, enhances communication around problem identification and problem-solving, builds deep expertise and accumulates experience, and ensures that improved quality is constantly built into the work process. Managers at Fuji Xerox see this structure as the leading cause of the high level of innovation in the plant. It has also led to a close working relationship between the engineers and the production workers, with joint ownership of production targets and product quality.

The plant is systematically building the human capabilities of its staff. Staff members are offered a range of developmental opportunities and most have had training in various aspects of 'people management'. Employees are also well remunerated. Staff turnover has been low over the last eight years, a period of growth for the company. In 2000, 37 staff were employed on contract work and, of these, 28 stayed on to become permanent employees. Clearly, Fuji Xerox is seen as an employer of choice. The shift towards a more enabling and committed culture at Fuji Xerox Eco-Manufacturing Centre has been significant.

The organisational changes at Fuji Xerox illustrate the links between an organisational culture of innovation and one designed to deliver sustainability. Practices geared to enhance human sustainability and social capital within the organisation (such as empowerment, teamwork and continuous learning), underpin the capacity to innovate and escape from rigid models of operation and production.

Arguably, implementing practices that support human sustainability create an organisational culture that also facilitates product differentiation (Orssatto 2000). A number of companies have been successful in employing a strategy of environmental product differentiation. While Reinhardt (1999) argues that the success factors of such a strategy include consumers who are prepared to pay more and a product sufficiently differentiated for long enough for a profit to be made, Reinhardt also acknowledges that the benefits must be able to be communicated readily. Communication systems are a feature of the human sustainability of the organisation.

In other words, innovation, business concept redesign and human sustainability can be readily linked in a dynamic relationship aimed at delivering long-term business advantage. Importantly, such qualities enable the corporation to be more responsive to the external drivers of change. That is, it can readily translate social and moral issues into market issues and can exploit the potentially huge market that ecological sustainability, in particular, represents. But, more than that, such an organisation can more critically reflect on the possibilities of new relationships

among nature, society and technology that will mark a new, more sustainable age (Hajer 1995).

Conclusion

In this chapter, we have argued that the development of a more proactive position on corporate sustainability issues requires significant investments in human capabilities—the human sustainability approaches of organisations. Our research indicates that firms that progress toward ecological sustainability are also investing in the development of human capital. For instance, the sustainability initiatives pursued at Scandic Hotels and Fuji Xerox were dependent on the development of the internal human capital of these organisations. Because their employees are viewed as a long-term investment, the companies have been prepared to put resources into their environmental training and into the time allocated for environmental projects. Some of the key internal human sustainability elements are:

- Adopt a strategic perspective to workplace development
- Build the corporate knowledge and skill base (intellectual and social capital) of employees—develop human potential
- Foster productive diversity in the workplace (health and safety, gender equity, participative decision-making, work-life balance)
- Develop the capability for continuing corporate reshaping and renewal, including visionary change leadership
- Create communities of practice to diffuse knowledge and skills
- Provide relevant expertise in the best way to organise work for high performance and satisfaction
- Represent employees' concerns to management, while simultaneously giving employees an increased role in organisational decision-making

Furthermore, these cases illustrated that the development of these internal human sustainability orientations complemented the development of external human sustainability approaches. For instance, the attainment of ongoing eco-efficiencies in both organisations was reliant on the development of good stakeholder relations. In some cases, this meant the ability to influence supply chain relationships to drive further environmental improvements in dematerialisation of products and services. In other cases it meant opening up the organisation to third-party scrutiny and evaluation. Some of the key external human sustainability elements are:

- Reinterpret strategy around a wider range of stakeholders and develop co-operative strategies with them (responsiveness)
- Add rather than subtract value for all relevant stakeholders

- Build a culture of workplace learning and commitment to a 'generative society' through a declared and enacted value base
- Initiate and sustain an ongoing dialogue with stakeholders to define key elements of social responsibility—set priorities (accountability)
- Define social goals, develop action plans to reach these goals, monitor and disclose performance against key performance indicators (transparency)
- Seek genuine feedback on performance from stakeholders—welcome and learn from criticism
- Win, by responsible informed action, the support of all stakeholders for the organisation's continued existence and growth

A corporate sustainability phase model was also developed in this chapter that demonstrated the links between human and ecological sustainability issues as organisations adopted different sustainability stances. The phase model represents an ideal model type and an organisation would only seek to approximate it. The model comes with a set of indicators that allow managers and others to chart where the organisation is on the path, assess what actions are needed to capitalise, in a business sense, on the current phase and to plan the next logical move forward (for example, in anticipating increased compliance standards or identifying strategic opportunities). A particular strength of the model is the balance it provides in emphasising both the human and ecological bases of a comprehensive approach to sustainability.

Finally, some key issues involved in moving organisations between different sustainability phases were outlined, whether through the adoption of incremental or transformation change approaches. We have argued that the implementation of change for sustainability will become an increasingly important issue facing organisations now and in the future. Further research needs to be undertaken. Some of the key issues for the future include:

- How effective are different types of change strategies at creating and maintaining a sustainability focus within organisations? For instance, what are the limits of technical versus values-driven change approaches in achieving sustainability outcomes for organisations?
- What are the specific types of human capabilities in each of the phases that lead to the development of proactive environmental management practices? And what are the specific human capabilities required for shifting organisations between phases?
- How do organisations, once they have achieved strategic sustainability, maintain their sustainability orientation?
- How do large-scale organisations transform corporate cultures to embrace proactive corporate sustainability approaches?
- What is the role of external stakeholders in driving or assisting corporations to achieve sustainability outcomes?

- How do organisations shift between incremental and transformational change approaches?
- What role do senior managers play in pursuing either transformational or incremental change approaches?

The phase model presented in this chapter is not without its limitations. First, the ideal types were developed from an examination of a diverse range of case studies. More detailed empirical investigation is required to further test and refine the model, and the characteristics of each of the phases of corporate sustainability. Second, the model does not directly link external drivers/motivators for sustainability to decisions made by senior managers to pursue proactive corporate environmental approaches. Despite these limitations, the phase model presented in this chapter does allow managers to assess the sustainability orientation of their organisation/business unit and devise strategies to move towards a desired sustainability stance. The model presents a comprehensive case for integrating human and ecological sustainability approaches and is an initial platform to further develop an understanding of the change processes involved in shifting organisations to corporate sustainability.

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