Case 3

Fuji Xerox Australia Eco manufacturing Centre\(^7\): A case study in strategic sustainability

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Introduction

Fuji Xerox is a leader in the development and application of sustainable operations. A key aspect of the company’s leadership is in its ground-breaking development of remanufacturing. Before 1993, broken or damaged parts from Fuji Xerox equipment were sent to landfill and replaced with imported parts. This meant that, for example, a AU$10,000 circuit board with only minor defects was considered waste. This system carried considerable financial and environmental costs. In Australia, it was decided to roll out a trial remanufacturing project that had begun in the US. The Fuji Xerox Australia Eco manufacturing Centre (the Centre) was established, with the mandate to develop technological capabilities to enable remanufacturing. The Centre now accounts for 80% of Fuji Xerox Australia’s spare parts requirements – these parts would otherwise have gone to landfill. The success of the Centre rests on both technological advances and a new, high performance workplace culture. In this case, we explore the challenges faced in developing strategic sustainability at Fuji Xerox.

\(^7\) The information in this case study was obtained from in-depth interviews with key respondents from the Eco Manufacturing Centre, including the General Manager and Communications Manager, along with direct observations in the plant, and informed by secondary sources such as the Fuji Xerox Sustainability Report 2010 and previous publications by the authors (Benn & Dunphy 2004; Dunphy et al. 2007).
Research methodology

The authors have studied the operation of the plant in detail and at first hand over a period of eight years. In that time they have interviewed both senior executives and supervisors and accessed published material and internal documents.

Background

“Remanufacturing was the beginning of the story – in order to foster support for the wider business plan for total product responsibility” (Dan Godamunne, General Manager Fuji Xerox Eco Manufacturing Centre).8

Fuji Xerox was established in 1962 as a joint venture between Fuji Photo Film Co Ltd of Japan and Rank Xerox Limited of the United Kingdom. Fuji Xerox Australia (FXA) is a wholly-owned subsidiary of Fuji Xerox Asia Pacific. Figure 3.1 summarises key statistics including the core values at FXA.

Figure 3.1 Fuji Xerox Australia key statistics

Source: Fuji Xerox Australia 2010.

Fuji Xerox produces a wide range of products designed to manage electronic or paper documents, referring to themselves as ‘The Document Company’. The company initially began renting its products to customers but later moved on to selling and leasing products with service contracts to repair or replace consumables. This ongoing relationship with each customer subsequently

8 Dexter Dunphy and Suzanne Benn, Interview with Dan Godamunne, General Manager Fuji Xerox Eco-Manufacturing Centre, 11 February, 2009.
facilitated remanufacturing, making it possible to retrieve used equipment and parts for the process.

The remanufacturing operation in Sydney began in 1993. It was led by a group of three employees, located at Mascot, who had backgrounds in marketing, engineering and service engineering for Fuji Xerox office equipment. Before 1993, broken or damaged parts from Fuji Xerox equipment would be replaced with new ones at the Mascot operation. Replacement parts were imported from the US, Japan or Europe.

The project devised by this small group of entrepreneurs was to turn the whole process around, so that worn and failed items, rather than being treated as waste, were redefined as potentially valuable resources for the new process of eco manufacturing. The project has been so successful that failed and exhausted items such as fuser rollers, originally imported into Australia from the Fuji Xerox Asia Pacific region and Japan, are now remanufactured in Australia and re-exported in ‘as new’ or better condition. The original remanufacturing team of three has grown to a staff of 100 and all, except administrative staff, are directly involved in the eco manufacturing process. Fuji Xerox has invested in the new plant now located at Zetland to the south of the Sydney Central Business District. The Eco Manufacturing Centre has developed into a relatively small but strategically important part of the Australian operations. According to the 2010 FXA Sustainability Report, over the ten years of its operations, the Eco Manufacturing Centre has achieved a AU$240 million return on a AU$22 million investment.

**Eco manufacturing as a business strategy**

Fuji Xerox’s environmental vision is “*Sustaining our environment through better technology*”. Worldwide, the company is committed to developing remanufacturing processes and, for newly designed models, ensuring all consumable parts can be remanufactured. The company has won several US environmental awards for their innovative approaches to ‘manufacturing for remanufacture’. In Australia, Fuji Xerox has received numerous awards; most recently FXA was selected as a finalist for the Leading in Sustainability—Setting the Standard for Large Organisations award at the 2010 Banksia Awards (Fuji Xerox Sustainability Report 2010). The aim is to develop fully sustainable products and business processes.

Eco manufacturing takes used components, tests them and then re-engineers andreassembles them into ‘new’ products while ensuring that the production process and the products do not have adverse environmental effects. However, to produce a re-engineered product as good as, or better than new, while meeting the new sustainability challenges, requires addressing some complex technological challenges. For example, the materials of the components may have changed during their first use. These changes occur due to heat, vibration or some other physical effect of the operational processes within the equipment. So remanufacturing cannot simply replicate the original production process. In
addition, in order to qualify as eco manufacturing the remanufacturing process may have to meet new and higher environmental safety standards.

Fuji Xerox managers describe the work of their Eco Manufacturing Centre as re-engineering and redesigning a product or product component and developing it to equal or better than new condition. Figure 3.2 outlines the basic process involved in remanufacturing. This process involves examining technical causes for failure while looking for opportunities to extend the life of the product and in general improve its performance. These processes also have environmental benefits by reducing the 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. Sending used products to landfill meant that these data were lost. Part of the 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 the production of ‘as new’ or better remanufactured products. Hence the business benefits from this approach to manufacturing include

- decreased costs due to recycling
- improved design for increased reliability and enhanced performance
- savings from import substitution and new export earnings.

**Figure 3.2** The remanufacturing and design cycle

*Source: Fuji Xerox 2000.*
Part of the challenge of creating an effective remanufacturing operation is that it demands expertise in a range of specialised engineering disciplines including optical systems, modulators and sensors, electrostatic and electromagnetic systems, electronics and material sciences. But recurrent faults often occur because of the interactions across these disciplinary boundaries. As a result, finding innovative solutions may require an integrated diagnosis and a holistic redesign solution. The challenge is to maintain depth of expertise in specialised areas while developing high levels of collaboration in creating innovative solutions to identified problems.

The eco manufacturing technical system

Eco manufacturing operations
Fuji Xerox’s Eco Manufacturing Centre conducts six production operations involving fuser rollers, laser optical systems, electronics, magnetic rollers, mechanical assemblies and xerographic module remanufacture. The operations involve:

- stripping the fuser roller, a vital component of any multifunctional device, and recoating it to exacting specifications that result in high quality prints and longer operational life. The patented process developed for this is so successful that remanufactured rollers are superior to the originals

- testing, repairing and realigning the laser optical system. This was not feasible until the technology was developed at the Centre. Remanufactured laser assemblies are produced for the local market and for export

- testing, repairing and upgrading the electronic circuitry to improve reliability

- testing and re-engineering the magnetic roller with the result that the life cycle of the roller has been extended by a factor of three

- conducting a ‘signature analysis’ to determine the stage the component has reached in its life cycle. This process identifies any design defects and leads to design improvements to overcome the faults, extend the life and improve the performance of the product

- cleaning, stripping down, checking and testing the xerographic modules before reassembling them as new products. The toner cartridges are not simply refilled, they are remanufactured. The Centre now remanufactures 175 major sub-assemblies/parts and produces over 15,000 units per month.

The innovative remanufacturing design techniques have been passed back into new product designs worldwide.
Component recovery

This new remanufacturing and re-engineering approach involved Fuji Xerox managers rethinking a significant part of their business strategy. In Australia, the firm is mainly a service provider and supports this service with its own leasing finance company. As a result of this approach to its business, it is in the firm’s interest to develop robust machines and to recover worn and damaged components from the firm’s customers for remanufacture. Establishing the Eco Manufacturing Plant at Zetland has enabled the firm to increasingly realise this objective.

A key facet of this approach to the business is an innovative technology system, Aurora, which tracks all consumables and recoverable spare parts. Developing Aurora extended the firm’s component recovery rate from 80 per cent to 98 per cent. Aurora creates further efficiencies by planning a delivery trip where new components are provided to the customer at the same time as the old are recovered, thus further cutting costs.

According to Fuji Xerox managers, an important contributor to the success of the remanufacturing operation is the Engineering and Development Group who are constantly investigating ways to reuse components and materials. The Group has developed programs in electronics, lasers, mechanical subsystems, fused rollers and xerographic modules and has shown that even rectifying small defects, that once would not have been identified, can yield major results. This work has resulted in a range of new technologies that increase the scope and effectiveness of the remanufacturing process. For example, the redesign of a 15 cent spring on a roller saved the Australian company AU$1 million per annum and the US company US$ 40 million.

Environmental commitment

Fuji Xerox's goal in this area of operation is: “Waste free products from waste free factories”. All processes in the factory aim to protect the environment. 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 printer/copiers. The spent bicarbonate of soda can be reused as an industrial water softener.
The carbon by-product of waste toner is extracted and can be used as a combustion agent in steel making.

- All unusable metal parts are sent to Sims Metal to be recycled.
- Reduction in energy use is achieved through the implementation of a range of initiatives and monthly tracking to evaluate improvement through these programs.

The company is also undertaking ongoing research and development into ways of reducing all packaging waste through reuse of a range of packaging materials, including plastics. The Centre is working with Veolia Waste Management to solve these problems.

The firm also recognises, however, that there are some ongoing negative environmental aspects of the industry. The circuit board has a comparatively high environmental impact; complex parts require intensive energy systems so the total life cycle is more costly and components also include lead and sulphur.

The eco manufacturing social system

Leadership for change

Fuji Xerox has always had some involvement in remanufacturing, although prior to 1993 any remanufacturing was of the whole machine. The United States Xerox Corporation initiated the idea of remanufacturing components, and Dan Godamunne, now General Manager and a highly skilled engineer, was part of the group working on the initial project. Over time confidence in the product has developed, savings have become evident and remanufacturing has become a core part of Xerox Corporation’s business worldwide. Worldwide Xerox has now established remanufacturing factories in nine locations in Europe, South America and the US. Fuji Xerox has four locations in Japan and the Asia Pacific region.

The previous sales model at the Fuji Xerox Australian operation was that machines were sold on leases for 3-5 years with a service contract. This was an expensive model because managing spare parts was difficult. Used parts were stripped and put on the new product assembly line. Dan Godamunne suggested eco manufacturing as a way of saving on the high cost of imports. According to one source, most managers in the firm at the time thought that the remanufacturing model could not even save two hundred dollars, but ‘the firm gave him the green light because of his credentials’. Supported by the Director of Manufacturing and Supply, a long-term employee with considerable environmental commitment and political expertise in the firm, Dan Godamunne now leads a highly successful technologically based initiative.

Human resource factors

A major issue in achieving high production targets in the new plant was to engage manufacturing and stores workers in creating a high performance operation. This
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was achieved through human resource initiatives, teamwork and financial reward systems. Morale is high, and staff turnover has generally been low over the last eight years, which has been a period of growth for the company.

The organisational structure is one of the main causes of the high level of innovation in the plant. It is simple, consisting of four tiers: General Manager, Operations Manager, Team Leader/Supervisor and general work force member. Staff are assigned to teams and consulted about approaches to work. The staff have given good feedback on this structure and process. Each relatively autonomous team is responsible for quality, engineering and production capacity around products or product groups, for example, xerographic modules or lasers. The product-based team structure promotes multi-skilling, enhances communication around problem identification and problem solving, builds deep expertise and cumulative experience and ensures that improved quality is constantly built into the work process. Within the limits of a manufacturing company, the company has introduced flexibility in its work practices. It allows staff to use sick leave to care for family members who are unwell and has flexible starting and finishing times around the core hours of 9.00am – 4.00pm.

The plant has also engaged in 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. There are opportunities to undertake relevant professional technical courses that are supported by the company in the form of time and money. Staff can also gain some training through the Fuji Xerox intranet training system which offers courses including various management skills training courses.

Fuji Xerox also offers training to its customers. This includes developing an understanding of the technology and of the company’s approach to business. Customers identify talented people in their own organisation who are then trained by Fuji Xerox to identify problems, install remanufactured components and ensure that damaged components are returned for remanufacturing.

Cultural change

The cultural shift at Fuji Xerox Eco Manufacturing Centre has been significant. The considerable industrial unrest at the Mascot plant has eased since the move to Zetland, and a very different work culture has evolved. The nature of the work at Zetland seems to have generated a sense of worthwhile purpose. The notion that second-hand products are of higher quality is at first hard to comprehend, but both customers and the service operators now demonstrate an improved level of confidence in the remanufactured product form.

The Australian operation is considered to be the example of ‘world best practice’ in the process and staff take considerable pride in this achievement. The Australian company has experienced significant growth and the quantity, quality and variety of parts being remanufactured is continually expanding. On average, sixty remanufacturing programs are developed each year. All members of
management agree that the process is now a core business function, fully embedded in the business and a focus for organisational identity.

Staff diversity was formerly considered a problem for the organisation. Cooperative leadership has redefined this issue and the company now benefits from the richness of its cultural mix. The company established teams in each of its key production areas such as electronics and lasers. Each team was responsible for engineering and program development. This structure led to a close working relationship between the engineers and the production workers and joint ownership of the production targets and product quality. Quality was developed ‘in-the-line by-the-line’. As the teams identified problems with a product, they assumed responsibility to fix these problems. Senior managers see this team structure as central to their success in managing their people. The team organisation has led to people feeling valued and responsible. As a result individuals strive to achieve and want the company to be successful.

The eco manufacturing process builds on the quality control systems already in place throughout the company, particularly the ISO 9001 (Quality Endorsed Company), ISO 14001 (Certified Environmental Management) accreditation and the systematic processes that accompany them. The Australian plant is both ISO 9001 and ISO 14001 accredited and has in place systems and procedures to ensure that all products leaving the site receive a full quality guarantee. The ISO 14001 Enviro Accreditation is integrated into the company’s Quality Management Systems and audits of ISO 9001 also include ISO 14001 Progress Audits.

Occupational health and safety (OH&S) is viewed as part of the quality process. The Director of Manufacturing and Supply in the Zetland and Mascot offices personally undertakes the site inspections for OH&S in order to demonstrate its importance to staff. Similarly, all quality processes including environmental standards have been given great importance in redefining the business. Management’s position is that commitment to this standard of environmental accreditation will keep remanufacturing as the core business function. The regular audits associated with the accreditation identify the company’s environmental impact and require steps to be taken to solve any identified problems.

**Influencing others**

The Eco Manufacturing Centre is now involved in a number of partnership arrangements for sustainability. For example it has actively involved the academic community in joint projects with several other companies to solve sustainability problems. The firm is highly influential in the wider community through these contacts and commits considerable resources to raising community awareness through demonstrating its environmental initiatives to study groups and educational tours. These activities are listed in the Fuji Xerox Sustainability Achievements (Fuji Xerox Sustainability Report 2010).

In a range of projects conducted over the last fifteen years, Fuji Xerox has also attempted to reduce negative impacts other corporations have on the environment. These projects include partnering with research institutions to
progress understanding of life cycle analysis as it can be applied in the industry, providing opportunities for schools and university teachers and lecturers to learn from study tours on site, collaborating with other industry groups and organisations through its membership of the Buy Recycled Business Alliance (BRBA) and a range of other projects.

Current initiatives are geared to the development of a 'gateway' sustainability code for all suppliers including specific environmental, social and governance requirements for high risk suppliers. Paper fact sheets have been developed to educate stakeholders on responsible paper sourcing. The company is working to develop the market for certified papers and in 2009–2010 suspended one supplier for not meeting Forest Stewardship Council Standards.

**Phases in the development of eco manufacturing**

*Phase 1 - Establishment and early achievements:* The Eco Manufacturing Centre was established by Fuji Xerox Australia in 2000 in the form of a dedicated parts-remanufacturing and recycling facility. Management at the Eco Manufacturing Centre, firstly under Graham Cavanagh-Downs and then under Dan Godamunne, focussed on developing technological capabilities to enable remanufacturing. In the view of these managers, the success of the Centre has rested upon both technological advances and the development of a new workforce culture. In the latter regard, multi-skilled technical experts with a broad understanding of remanufacturing have been drawn from culturally diverse backgrounds and encouraged to communicate with international stakeholders, both internal and external to the firm. The Centre quickly became well known for its high performance culture associated with high workforce commitment. Innovative processes and technologies with low environmental impact were installed and developed. Supply chain and waste management relationships were established to minimise emissions of all kinds and eliminate waste. Another strategic focus has been on developing client networks for integrated systems of supply and return of used parts for repair and redesign.

Figure 3.3 sets out the history of the Centre and the shift to extended producer responsibility at Fuji Xerox. According to Dan Godamunne, ‘Zetland was the first official remanufacturing plant in the Fuji Xerox world’.

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9 Dexter Dunphy and Suzanne Benn, Interview with Dan Godamunne, General Manager Fuji Xerox Eco-Manufacturing Centre, 11 February, 2009.
### Figure 3.3 Fuji Xerox achievements in extended producer responsibility

<table>
<thead>
<tr>
<th>Year</th>
<th>Achievement</th>
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<tbody>
<tr>
<td>1990</td>
<td>Fuji Xerox Company Limited starts recycling parts and consumables.</td>
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<tr>
<td>1993</td>
<td>Remanufacturing of used parts is devised and developed at Fuji Xerox Australia.</td>
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<tr>
<td>1998</td>
<td>Closed loop recycling technology is adopted by Fuji Xerox Company Limited.</td>
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<tr>
<td>2000</td>
<td>Fuji Xerox Australia opens a dedicated parts remanufacturing and recycling facility in Zetland, the Eco Manufacturing Centre, and wins a United Nations Global Environment Award.</td>
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<tr>
<td>2005</td>
<td>Fuji Xerox Australia commences shipping old equipment, parts and consumables to Thailand for 99% resource recovery, recycling or remanufacturing.</td>
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<tr>
<td>2006</td>
<td>The Eco Manufacturing Centre becomes a total waste management centre, accepting old equipment, parts and packaging from all Australian customers for remanufacturing and recycling at Zetland or for transfer to Thailand.</td>
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<tr>
<td>2007</td>
<td>The Eco Manufacturing Centre meets Fuji Xerox global manufacturing standards and expands remanufacture activity to include complex sub-assemblies for the parent.</td>
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<tr>
<td>2008</td>
<td>Fuji Xerox Company Limited opens an integrated recycling system for used equipment and cartridges collected across China. Its disassembling and recycling capacity will cover up to 15,000 machines and 500,000 cartridges per year.</td>
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*Source: Fuji Xerox Australia 2008, p. 27.*

**Phase 2 - Differentiation between recycling and remanufacturing:** Building on the success of the Zetland centre, Fuji Xerox opened an integrated recycling centre in Thailand in 2004 to provide end-of-life recycling for its operations in the Asia Pacific. The aim was to obtain 99% resource recovery. The outcome has been that the Australian plant has increased its capacity to deliver high value-added remanufacturing, while the different skills base in Thailand has resulted in the plant there focussing the majority of its efforts on low value-added recycling. The key management strategy is that appropriate skills, capabilities and technologies need to be allocated for the differentiated processes of remanufacturing and recycling. Recent achievements at Zetland include the remanufacturing, in 2008–2009, of 250,000 parts and sub-assemblies, including many types of mechanical assemblies, complex electronic boards, electrical and optical assemblies and fusing/feeder rollers, saving AU$6 million over the cost of purchasing Xerox supplied alternate parts. The Eco Manufacturing Centre’s achievements have resulted in it being placed in the United Nations Global 500 Roll of Honour for environmental achievement in 2000 (Fuji Xerox Australia n.d.), and it is set to become the Fuji Xerox Asia Pacific hub for the remanufacture of complex sub-assemblies. Targets are set each year for the establishment of new remanufacturing programs that enable the Centre to track its key performance
levels of complex sub-assembly remanufacture. The fact that the plant at Zetland is now seen as the global benchmark is prompting the shift into Phase 3.

**Phase 3 - Rolling out the new model:** The beginning of this phase was marked, early in 2009, by the appointment of a new Fuji Xerox President with a manufacturing background, Mr Tadahito Yamamoto. His aim is to drive the company beyond remanufacturing to full asset utilisation, which he believes is vital in a time of economic downturn. Everything the company has is viewed as an asset, including skilled people, hardware, location, software and intellectual property. The current challenge is total asset management. In addition, there is a need to incorporate in the company’s business model recognition of future costs and other associated issues of the emerging low carbon economy, such as shipping and transfer of material resources. The Fuji Xerox President is also concerned that launching new products is very costly, and consequently he wants to extend product life from two years to five years to reduce launch costs and the environmental impact of product turnover. If and when this takes place, the aim is to ensure that product upgrades can be made remotely.

**Sustainability challenges at Fuji Xerox**

The challenge of the innovation process is that many large multi-national companies regard R&D as the prerogative of their headquarters, where it is often centralised, rather than in subsidiary units that are in direct contact with various markets. The issue is one of localism versus globalism. This is an issue underpinning the challenges facing Zetland as it affirms its value in the global organisation. Nevertheless, the president has recognised the value of the Zetland Eco Manufacturing Centre best practice model developed in Australia and is backing its diffusion to other centres. There are interesting future challenges in achieving this. One key issue is how to accommodate cultural differences in the distribution and levels of skill in other countries where manufacturing occurs. Another is how to transfer the successful but complex process of implementing transformational culture change used to build employee commitment, engagement and multi-skilling.

A further sustainability challenge lies in the decision to move recycling offshore to Thailand. While such geographical differentiation admittedly adds to the products’ carbon footprint, the company argues that the strategy still allows for carbon reductions through reducing virgin resource input and encouraging design for disassembly. The long-term aim is to reduce recycling to the minimum – as Dan Godamunne puts it: “Is there a need to recycle when we can remanufacture?” Currently approximately 76% of items returned can be remanufactured, but the direction is to increase the percentage remanufactured through design for disassembly.

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10 Dexter Dunphy and Suzanne Benn, Interview with Dan Godamunne, General Manager Fuji Xerox Eco-Manufacturing Centre, 11 February, 2009.
Discussion

In its approach to remanufacturing and its people management, Fuji Xerox is attempting to become a sustainable corporation. This case study shows that the company is well advanced toward the goal of achieving sustainability, in both its policies and practices. In order to assess Fuji Xerox more comprehensively on a scale of sustainability, a developmental model, ‘Phases in the Development of Corporate Sustainability’, which integrates human and ecological sustainability, can be used (Dunphy, Griffiths & Benn 2007). The model identifies distinct attitudes and approaches that organisations take to achieving sustainability and ultimately a fully sustainable world.

These attitudes and approaches are represented as a series of steps. The steps are:

1. rejection
2. non-responsiveness
3. compliance
4. efficiency
5. strategic proactivity
6. the sustaining corporation.

The model makes a distinction between ‘human sustainability’ and ‘ecological sustainability’. Human sustainability is defined as ‘building human capability and skills for sustainable high level organisational performance and for community and societal wellbeing’. The ideal of ecological sustainability in a corporation is ‘redesigning organisations to contribute to sustainable economic development and the protection and renewal of the biosphere’.

Although Fuji Xerox initially engaged with the sustainability concept in order to save on immediate costs, when the steps towards sustainability are considered, Fuji Xerox emerges as a company operating mainly at level 5, with some activities placing it at level 6.

Human sustainability

Strategic human sustainability

Flexible, team-based work practices are characteristic of strategic corporate sustainability. The high level of staff retention at Zetland allows the organisation to develop and use its people (intellectual capital) individually and in teams in order to extend the range of products the company produces. The fact that each team is a relatively autonomous unit that is responsible for its own engineering, quality and production capability is also a strategic capacity. The processes of remanufacturing are well established within the firm and this approach to the business will continue even if key individuals leave. These are enlightened human resource practices and achievements that assist the company to pursue strategic sustainability successfully.
Ecological sustainability

Strategic ecological sustainability

Fuji Xerox’s long-term commitment to the environment is demonstrated in its identified goal of achieving waste free products from waste free factories. Some of the processes such as remanufacturing and re-engineering also give the company a competitive business advantage. As stated, currently about 76% of all parts used in Australia are remanufactured; the target is to remanufacture 100% of parts. The forwarding of waste products such as carbon and bicarbonate of soda from Fuji Xerox to other companies results in the conversion of what was formerly regarded as waste into useful commodities. Fuji Xerox also makes strategic use of the principles of industrial ecology through developing relationships with E-Sims/Sims Metal, who recycle waste metal, and Veolia who pride themselves on environmental waste management. These strategic partnerships advance both ecological and human sustainability.

Conclusion

Fuji Xerox Australia takes justifiable pride in its technological achievements in relation to re-engineering and remanufacturing. It is also proud of the financial contribution these approaches have made to the business and the benefits to society of its approach to the environment and corporate culture. The company recognises the contribution of its people and their importance in the company’s success. Fuji Xerox Australia has championed a culture which has fostered innovation and the growth of intellectual capital, demonstrating that, in this case, what is good for people and the environment is also good for business. Remanufactured products help protect the environment by reducing landfill and utilising valuable existing resources. Remanufacturing also conserves the energy and materials that would otherwise be used to make new products. The principles behind this work are applicable to a wide range of other products such as automotive systems, computers and electrical equipment, cameras and photographic equipment and household electrical goods. These principles need to be diffused across a wider range of industries to reap the potential benefits for the Australian economy, society and the environment.

References


