

Integral Environmental Sustainability: **Achieving an Integral Vision of Business Success** **with Zero Environmental Impact**

By Dr. Ron Cacioppe
and
David McDermott



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INTRODUCTION: A VISION FOR INTEGRAL SUSTAINABILITY

“As long as human beings are regarded as “bad,” zero (waste) is a good goal. But to be less bad is to accept things as they are, to believe that poorly designed, dishonourable, destructive systems are the best humans can do. This is the ultimate failure of the “be less bad” approach: a failure of the imagination. From our perspective, this is a depressing vision of our species’ role in the world.

What about an entirely different model? What would it take to be 100 percent good?”

(McDonough & Braungart, 2002, p.67)

Is it possible to work in an organisation that is commercially successful, yet its operations, products and services are in total harmony with the natural environment and contribute to the welfare of the community and nation? Can we work in buildings that require no energy from fossil fuel sources and even provide energy for the national grid? Can we make products from materials that do no harm to people or the environment and actually enhance human and environmental well-being? Integral Sustainability is not only an ideal for which all organisations can strive but it is an approach that makes business as well as personal sense.

Sustainability has become a major topic today because the negative social and environmental effects of industrial processes can no longer be ignored. Scientific data shows that we are currently exterminating *one hundred species a day* and destroying the world’s tropical rainforests at the rate of one football field *per second*.

Many industrial organisations are taking some steps to reduce their environmental impact but are still doing it in a fragmented and partial way. Recycling initiatives, reducing energy and water consumption, purchasing energy efficient cars and sustainability officers and committees are good partial steps but they do not result in a major rethink of the way organisations relate to society and the environment. Organisations are still predominately employing business models and production processes which stem directly from an Industrial Revolution mindset that uses scientific technology to extract minerals and fossil fuels from the earth with little regard for environmental impact. McDonough & Braungart (2002) state that today’s manufacturing processes are dominated by the Industrial Revolution mindset which they describe as: “If brute force doesn’t work, you’re not using enough of it” (McDonough & Braungart, 2002, p.86).

Central to our current environmental problems is our fractured world view, a world view that separates mankind and nature, body and mind, matter and spirit, and technology and culture. In short, we have inadvertently separated ourselves from the delicate and intricate web of relationships that constitute life on Earth. Industrial activity affects the entire world community. The ecosystems of the earth are highly complex structures that operate in an interdependent community of food chains and social, economic and environmental systems. Sustainability efforts made by companies help restore and preserve these natural environmental cycles that are essential to envisioning a positive future for mankind.

This article describes an Integral approach to sustainability and describes four unique organisations that have taken bold steps toward a more complete environmental and social sustainability vision, referred to as Integral Sustainability. It describes a comprehensive Integral “All Quadrants, All Levels” roadmap applicable to all organisations which aims to help managers embed sustainability into all their operations. The examples presented demonstrate that organisational sustainability is not about doing something for the sake of “being good” but rather is an intelligent way to run any organisation and leads to commercial, environmental, staff and social benefits.

INTEGRAL SUSTAINABILITY: A MAP OF EVERYTHING!

The word 'sustainability' is used in many different ways. For many, sustainability refers to preserving the natural environment for future generations while many business leaders consider sustainability to mean securing financial success over a long term – or 'making more money for a longer period of time'.

The dictionary definition of 'sustain' may help to reduce confusion. The Oxford Dictionary defines the word '*sustain*' as: *to keep in existence; maintain, to supply with necessities or nourishment; provide for, to prove or corroborate; confirm, to affirm the validity of, to keep up competently*. All of these definitions relate to maintaining, confirming or nourishing the existence of something.

The World Commission on Environment and Development provides a well-known definition of sustainability or sustainable development as:

"forms of progress that meet the needs of the present without compromising the ability of future generations to meet their needs."

("What is Sustainable Development", n.d.)

Another definition of sustainability is:

"meeting the needs of current and future generations through an integration of environmental protection, social advancement, and economic prosperity."

(Government of Western Australia 2003, p.24)

Although the above definitions refer to the triple bottom line of environmental and social factors along with economic prosperity, they do not provide any map of how to do it. Integral Sustainability, while incorporating the conventional approaches to sustainability, goes further in providing a blue print and comprehensive road map of how to get 'there' from 'here' and also a vision of what 'there' looks and feels like based on a new and integrated understanding of reality and the evolution of life.

Integral Sustainability is based on Integral Theory developed by American philosopher Ken Wilber and is described as AQAL, '*All Quadrants and All Levels*'. All Quadrants describes four quadrants of reality defined by the relationship between the individual and the collective whole, the internal and external world and can be used to guide strategic and operational actions in private, public and not-for-profit organisations (Esbjörn-Hargens & Brown, 2004). The Integral approach is the realisation and description of the unfolding of Spirit over time. It describes the evolution of the universe from matter to life to Consciousness, the universal 'Ground of Being'. For a more comprehensive description of the other aspects of this theory, see the recommended booklist at the end of this article including Wilber (1995, 2000, 2006).

While this perspective may seem expansive or unrealistic, this evolution has been described not only by Integral Theory but by a number of well known and respected philosophers, social psychologists, mystics and sages from ancient to modern times. Hegel, Sri Aurobindo, Teilhard de Chardin, Andrew Cohen and Clare Graves have described this evolution of consciousness in some detail and have supported their theories with solid research and historical evidence.

Integral Sustainability provides a description and model of the stages and steps of environmental, social, and economic actions to meet all the needs of current and future generations of all forms of life. 'All needs' refers to not just the economic and social needs but to physical, emotional, mental, social and spiritual needs, so Integral actions are more comprehensive and integrated than the current perspective of sustainability.

The four Integral quadrants in Figure 1 below capture important elements of an organisation and represent the four quadrants of **organisational** reality described by Cacioppe (2007). For environmental and social sustainability initiatives to be successful they must become embedded in each quadrant and

supported by actions in each of the other quadrants. For example, an organisation might introduce energy saving devices but if individuals or teams do not value the use of these devices they will not be used effectively. If staff want better quality air-conditioning, natural lighting and indoor plants but management prioritises cost-savings and profits over reducing environmental impact, then these initiatives will not go forward. Furthermore, environmental performance needs to become part of the strategic objectives and organisational systems if it is to become part of organisational operations.

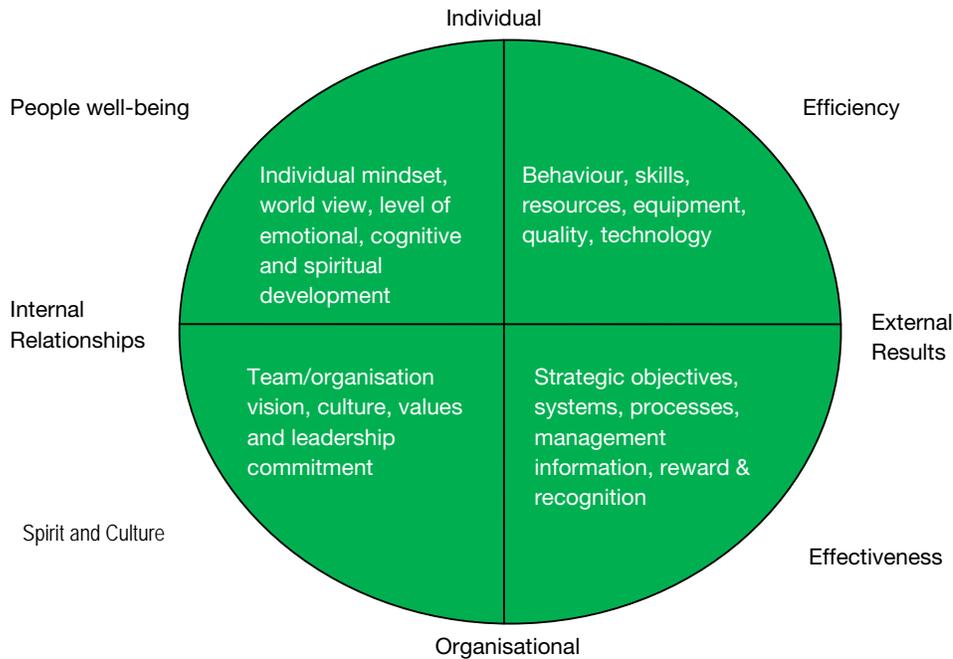


Figure 1 Four quadrants of Organisational Reality

If any of the quadrants are neglected, some aspects will be missing, which eventually leads individuals, teams and organisations to become fragmented. Common examples of aspects being neglected occur where leaders have technical but not interpersonal skills, when section leaders operate in silos, and when financial performance takes priority over human and environmental factors.

This representation of the Integral four quadrants is slightly different from the traditional Wilber approach. It aligns well with the thinking of public and private managers and the research on leadership and management. It provides a very practical and relevant perspective for CEO's and operating managers.

A second component of Integral Theory involves Levels of Development. In terms of sustainability, this can be understood using two different dimensions. The first involves moving through stages of integrated actions and the other is an expansion from an individual perspective to a whole world view. Figure 2 describes Integral Stages of Environmental Action which indicate the extent to which environmental actions are embedded into the deeper fabric of the organisation.

The Integral stages represent the degree or depth to which environmental actions are ingrained into the attitudes, behaviours, culture, systems and strategy. Level 6 is the highest stage with Level 1 indicating the lowest. Environmental actions range from merely complying with legal requirements to carrying out fairly simple recycling and energy saving activities to becoming an integral part of the entire organisation's way of operating. At the highest level, the organisation sees zero natural environmental impact as vital in its strategy and actions, and leaders have a mindset that identifies with the 'all of life' perspective.



Figure 2 Stages of Environmental Action

The second element in Integral levels defines the world view of the leaders and the staff. The world view is the extent to which leaders see themselves as identifying with a specific realm of life. These world views expand from the level of the individual to an 'all of life' perspective. Figure 3 shows that the "all of life" world view includes yet transcends the other smaller views of nation, community, etc.

If the leaders and staff are limited to the team level then their values and actions will work to protect and enhance the entity of the team. Such leaders will not support activities that improve the organisation if they lead to the short term detriment of the team. The world view is the foundation of truly effective environmental action and occurs in the upper-left hand quadrant in Figure 1. For leaders and staff to reach Integral Sustainability they will have to see the world from the 'All life' level, as it is only there that they genuinely see their actions are directly linked to current and future generations.

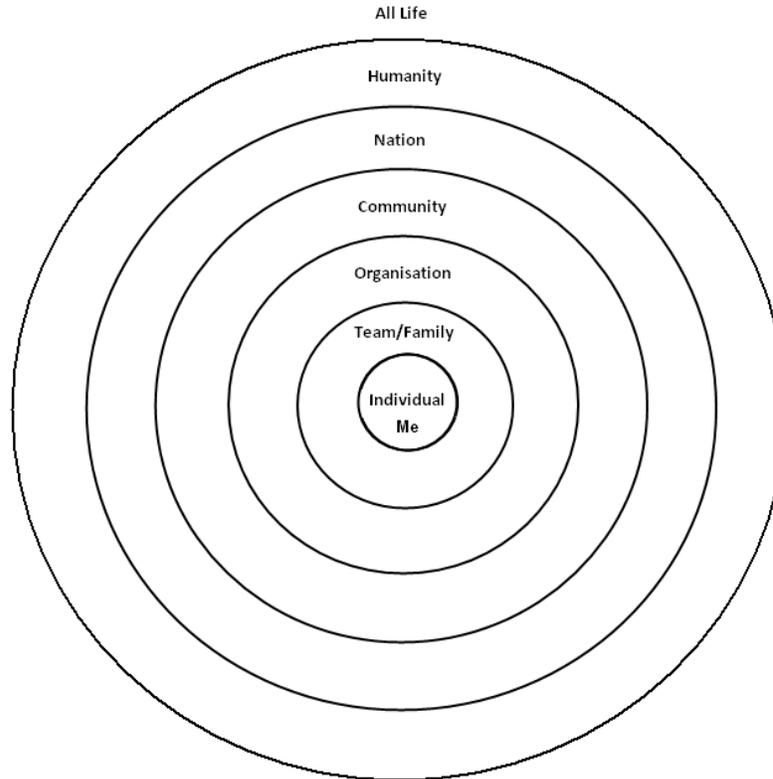


Figure 3 World Views

Avastone (2007) conducted a Corporate Sustainability Study which investigated ten prominent US corporations with the goal of examining how the organisations of today are addressing the need to operate on sustainability principles. The study used an Integral framework of five stages or ‘gears’ in combination with the four quadrant model to represent environmental and social sustainability performance for each organisation. The organisations included in the Avastone study had all made efforts to embed sustainability into their operations and processes with various levels of success. A major finding of the study described individual and organisational mindsets as being essential to progressing sustainability, where mindsets are “interior patterns of mind or frames of reference from which individuals see sustainability and its importance” (McEwen & Schmidt, 2007, p.6). This study confirmed that the world view was one of the most important factors in achieving genuine sustainability.

“What has been missed until now in the sustainability field is a depth of understanding about mindsets, their development, and their capacity for vertical expansion.”

(McEwen & Schmidt, 2007, p.6)

Leadership Mindset, the Prime Factor in Integral Sustainability

Another finding of the Avastone research showed that leadership is a significant contributor to sustainability and that there is a direct relationship between the leadership mindset and successful embedding of sustainability in organisations (McEwen & Schmidt, 2007). The research highlighted the importance of the mindset of the leader being aligned with the sustainability objectives of the organisation. If the leader’s mindset is not at the ‘all life’ level then high level sustainability goals will not be achieved. Of the ten organisations surveyed in the Avastone study, the leader’s mindset was the major barrier or factor in sustainability success.

To achieve the highest level of Integral Sustainability the awareness of the leader needs to expand to the widest view of 'all life' in order to integrate the organisation's strategy and culture into actions that encompass all aspects of its operation. A radical shift in mindset occurred for Ray Anderson, ex-CEO of InterfaceFLOR, when he realised that his company had no environmental vision. In reading Paul Hawken's *The Ecology of Commerce*, Ray came across the phrase 'the death of birth' which referred to the extinction of species that was occurring due to industrialisation. He said: "It was the point of a spear into my chest, and it became an epiphanal experience, a total change of mind-set and a change of paradigm" (Barkan, 2004;72). Anderson's experience shifted his world view to the level of awareness relating to "all life" and brought about a realisation that his company's actions were directly connected to current and future life. This led to Interface's commitment to having zero negative environmental impact.

"Then, through what seemed to be pure serendipity, someone sent me a book: Paul Hawken's 'The Ecology of Commerce'. I read it, and it changed my life. It hit me right between the eyes. It was an epiphany. I wasn't halfway through it before I had the vision I was looking for ... for my company, and a powerful sense of urgency to do something to begin to correct the mistakes of the first industrial revolution. Hawken's message was a spear in my chest that is still there."

Ray Anderson, Chairman of InterfaceFLOR. (Anderson, 1998)

The Cradle to Cradle Zero Waste Philosophy

Integral Sustainability draws on the pioneering work of Californian environmental architect William McDonough and industrial chemist Michael Braungart who developed the highly successful "Cradle to Cradle" model of sustainable business operation that focuses on a "zero waste" philosophy. In their book *Cradle to Cradle: Remaking The Way We Make Things*, McDonough and Braungart (2002) present a bold "no waste" approach to organisational operation.

The majority of the enormous amount of waste being produced by the organisations of today goes directly to landfill or eventually ends up in landfill after being recycled a number of times. The Cradle to Cradle model provides an innovative approach with industrial processes operating as "closed loop" cycles where all waste products are reused in other industrial processes (McDonough & Braungart, 2002). The distinction between *reusability* as opposed to *recyclability* is very important. Although a product may be recycled many times, ultimately it will end up in landfill. A product that is designed to be *reusable* goes a step beyond mere recyclability in that it is always able to be reused in one form or another or ends up returning to the earth as a natural compost nutrient. It never ends up in landfill.

The real key to the reusability approach is that it goes beyond mere efficiency and focuses on effectiveness. The Cradle to Cradle pioneers state that "our concept of eco-effectiveness means working on the right things – on the right products and services and systems – instead of making the wrong things less bad" (McDonough & Braungart, 2002, p.76). The key is to be effective rather than just efficient, where being effective means eliminating all negative impact.

"And effective, rather than efficient, is what we want. Think about efficiency versus effectiveness in another way. You don't listen to Mozart and think, How many notes does it take? He could have hit the piano with a two-by-four and got them all at once. Very efficient, but would we love it? ... If I left here and went north to Canada and found myself going 120 miles an hour toward Mexico, it is not going to help me to slow down to 20. I'm going the wrong way. We need a change in direction."

William McDonough ("Industrial Revolution, Take Two", n.d.)

McDonough and Braungart have successfully embedded sustainable processes and thinking into some of the world's largest corporations such as Ford, Nike and Herman Miller. By challenging previously

unquestioned beliefs about ways of operating and presenting alternative options that were both financially viable and environmentally beneficial, significant strategic changes were implemented throughout these companies. The environmental, social and economic benefits have been extensive and profound.

PRACTICAL MAPS AND TOOLS FOR INTEGRAL SUSTAINABILITY

The combination of the Integral framework and Cradle to Cradle philosophy provides a basis for developing an innovative sustainability strategy that addresses organisational culture, strategy, systems, physical processes, technology and the human experience of the natural and social environment. The strategy includes use of a number of Integral Sustainability steps and tools including a survey, an environmental audit and in-house workshops. These tools focus on key areas such as environmental policy, recycling, energy and water usage, management and sustainability strategy. Figure 4 shows a diagram of how these link together.

The alignment of staff and organisational values and actions is an essential component of the Integral Sustainability strategy. This alignment is important to ensure staff are on board with the sustainability objectives of the organisation as a basis for the effective and deep implementation of sustainability into operational structures.

A comprehensive Integral survey is a starting point to provide a basic picture of an organisation's sustainability practices. The Integral Sustainability survey asks if the organisation has conducted energy and water audits and implemented a variety of energy and water saving practices. It includes questions on transportation and air travel, recycling practices, leadership commitment to sustainability, strategic thinking in regard to the environment, recognition and reward for environmental and social actions, and encouragement of employee practices at home. The survey includes many other dimensions that assess the extent to which sustainable environmental and social practices have become part of the fabric of the organisation. A six star-rating system is used as a measure of Integral Sustainability performance for an organisation.

A comprehensive environmental energy, water and waste audit is an important component of the Integral Sustainability strategy in order to capture technical data and information relevant to calculating the environmental impact of an organisation. This includes analysis of manufacturing processes, products and service, energy and water consumption, waste management systems and an investigation to determine the potential for use of renewable energy sources such as solar and wind energy.

In-house educational workshops are also a key part of the strategy and are designed to build an understanding among staff of environmental issues and generate actions that improve sustainability performance. Employees are encouraged to take relevant practices into their personal life. Awareness and meditative exercises are taught during this workshop that help to shift mindsets as well as reconnect people to their environment. This is especially important for leaders of the organisation.

The workshop also involves the construction of action plans and the formation of an environmental sustainability improvement team within the organisation. This phase involves allocating actions and delegating responsibilities with a time-based focus. One organisation compiled an encyclopaedia of every green product and service available so that any staff member or manager could refer to it when making any organisational or personal purchasing decision.

The process also includes the facilitation of how environmental objectives can be built into the strategic plan of the organisation. One engineering organisation's leadership development program included a project which examined how the organisation could improve its environmental behaviour and gain a competitive advantage. This project was presented to the senior executive and had a significant effect in reshaping the management team's strategy and actions in regard to the environment.

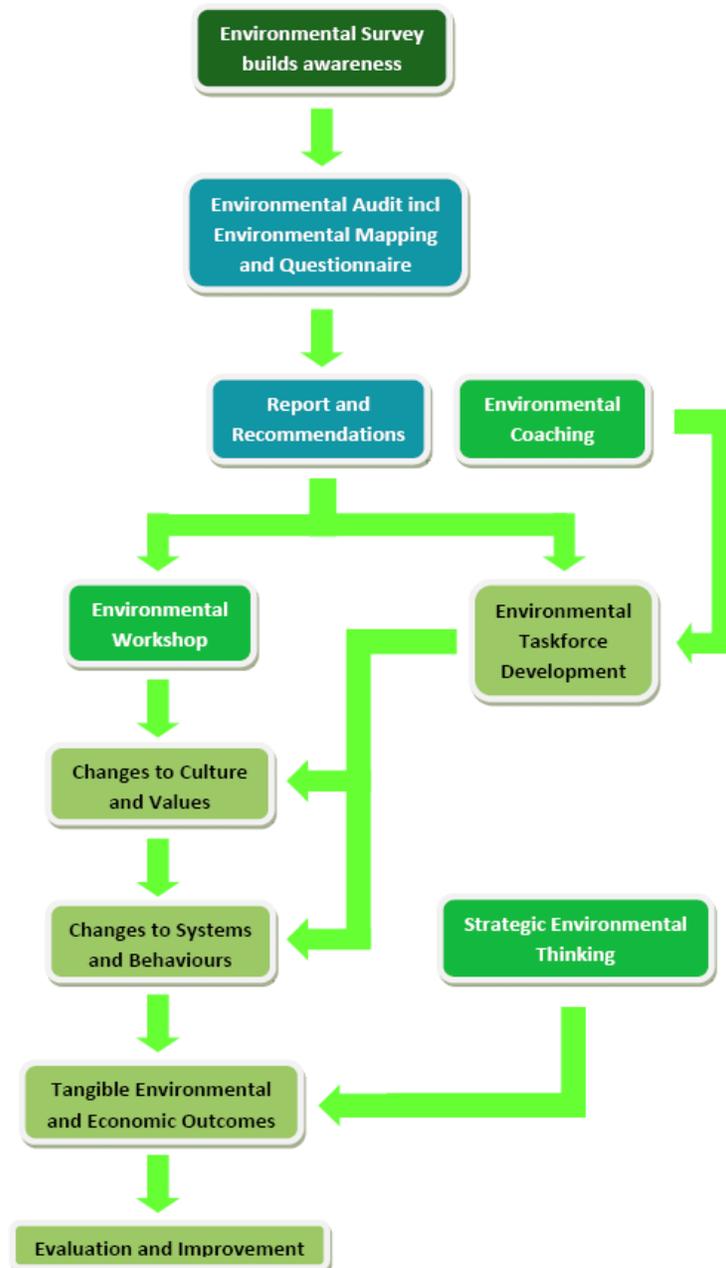


Figure 4 Integral Sustainability Steps and Tools

ORGANISATIONS WORKING TOWARD INTEGRAL SUSTAINABILITY

The number of organisations which have begun to take substantial steps toward reducing their impact on the environment is rapidly growing. Organisations such as Patagonia (Chouinard, 2005) are changing their products, buildings, corporate strategy and values to demonstrate their total commitment to being a company which models excellent environmental behaviour. The following four examples represent organisations that have taken significant steps toward achieving high levels of Integral Sustainability.

Bendigo Bank

The Bendigo Bank in Australia is an example of a modern organisation that is committed to a sustainable approach. The bank has a business strategy of working for the benefit of its customers and their communities. Bendigo's motivation is that "you can only run a sustainable business in a sustainable community" ("Building Better Communities", n.d.). The bank sees that if they can help the community prosper and be an essential part of the community fabric then they are more likely to be supported and able to build a sustainable business. Bendigo has been able to build a number of successful business models by encouraging community members to purchase services from companies that are committed to retaining some of their earnings in the community.

Bendigo is also demonstrating Integral Sustainability through community-building endeavours that meet community needs such as underwriting a program called Lead On which helps communities engage better with their young people ("Building Better Communities", n.d.). The bank is motivated to support the program "because it provides youngsters with valuable exposure to the workings of community, and because it broadens the skills and participation communities can bring to issues" ("Building Better Communities", n.d.). The charitable arm of Bendigo Bank was launched in 2005 as the Community Enterprise Foundation, with an aim to create a pool of money for building stronger Australian communities through funding programs for families, youth, health, education, the environment, and the arts to name a few.

Bendigo provides "Green" home loans and personal loans at a reduced interest rate for customers who implement environmental sustainability initiatives in their homes such as installing solar hot-water heaters, double-glazed windows or water storage tanks ("Generation Green", n.d.). The Bendigo Bank website also includes a comprehensive online sustainability guide for helping homeowners reduce their greenhouse gas emissions. In April 2008 the bank ran a successful "Ban the Bulb" project for communities in the Yarra Valley, offering local residents the chance to have free energy-efficient light bulbs installed in their home, with the installation also free of charge ("Generation Green", n.d.). The project was implemented in 4,500 homes throughout eight communities and involved the replacement of 63,000 globes, contributing to a saving of 63,000 tonnes of greenhouse gas emissions and a cost saving of \$11,000,000 in energy bills over the next 15 years ("Ban the Bulb", 2008).

The bank is building a new head office in Bendigo with a strong focus on environmental sustainability. The building design includes sustainability features such as "one of the first large-scale applications of under-floor air conditioning in Australia, an innovative external screening design to the large west-facing facade, and blackwater recycling" (Sustainability Victoria, 2006).

The Bendigo Bank is undertaking a study which aims to measure the decrease in staff sickness as well as the increase in productivity and staff well-being due to the sustainable design of the new building (Sustainability Victoria, 2006). The study involves surveying staff that currently work in five existing Bendigo-based offices. Staff feedback is obtained on key areas such as lighting, heating, cooling and noise levels. The results of the survey show that some of the current Bendigo-based facilities are satisfactory in terms of sustainability performance, however others are unsatisfactory (Sustainability Victoria, 2006). In terms of staff well-being, testimonials from Bendigo Bank staff demonstrate a positive attitude towards personal development activities such as physical exercise ("Our Staff", n.d.).

The Bendigo approach is an example of higher levels of Integral Sustainability. The bank demonstrates a broad awareness of the needs of local communities and an ability to foster sustainable growth in these communities. Their community-building philosophy addresses all areas of the triple-bottom line of economic, social and environmental impact. In terms of environmental sustainability, the Bendigo Bank aims to reduce negative environmental impact rather than achieving a "zero waste" situation which is currently the most common organisational approach.

Google

Google is a company that has clear sustainability objectives and has made substantial progress towards becoming a sustainable organisation. Google provides significant financial support for renewable energy research with a particular focus on solar and wind energy (“Powering a clean energy revolution”, n.d.). The head office in Mountain View, California maximises the use of natural light and energy efficient lighting, and includes one of the largest corporate solar panel installations in the US (“Powering a clean energy revolution”, n.d.). Google places great importance on maintaining a high level of efficiency among the large data centres that store the extensive network of the company’s computer systems.

Google is in the process of performing extensive energy audits in order to optimise its organisational systems. The company provides funding for global carbon offset projects to account for the portion of their carbon footprint that is currently unable to be eliminated by any other means. Google acknowledges that carbon offsetting does not create a fundamental change to infrastructure however they participate in offsetting as a temporary method of providing a measurable reduction in emissions (“Powering a clean energy revolution”, n.d.).

Google places priority on uplifting staff and community well-being, with all Google engineers being encouraged to spend 20% of their time in pursuing projects they are passionate about (“Google Jobs”, n.d.). The “Gmail” service offered by the company was one of the highly successful outcomes of this initiative. These projects also involve engaging with voluntary work within the community.

Google publicly reports its sustainability performance and currently shows a tendency towards reducing negative environmental impact rather than achieving “zero waste.” However Google has the potential to eliminate negative environmental impact completely as the company continues to fund renewable energy research and adopts renewable forms of energy to power its facilities.

In terms of motive, Google has a clear focus on improving environmental sustainability and developing individuals within the organisation. The encouragement for staff to spend a significant amount of salaried time in pursuing projects they are passionate about is evidence of this. The company gives great importance to the well-being of their staff with the active support they show for causes such as the promotion of women in the IT sector (“Google Jobs”, n.d.). Further benefits include workplace massages, an onsite gym and free meals. On a larger scale, the financial support Google provides in the area of renewable energy research is directly contributing to a reduction in climate change.

Ford Motor Company

The Ford Motor Company has made significant steps toward Integral Sustainability. In 1999, Ford made a revolutionary decision to transform their aging Rouge River manufacturing plant into an environmentally friendly operation. With the plant in an out-of-date condition, most manufacturers would have left it to rot and moved on, however Ford chose to take responsibility for revitalising the plant to operate on sustainability principles.

“With the project well underway, it might be hard to appreciate the importance of that decision. But it was the bold first step that preceded all others. No investment in industrial restoration happens without it.”

(“Restoring the Industrial Landscape”, n.d.)

The key sustainability initiative implemented at the Ford plant was the installation of a “green roof”, which involved deliberately creating a roof of soil and vegetation that served as a natural storm water management system. The green roof initiative is strong evidence of the company’s increasing commitment to environmental sustainability. Ford is now focusing on taking the next step towards “no waste” or complete eco-effectiveness by using sustainable materials that are 100% recycled in their

manufacturing processes (“Our Values”, n.d.). The company has a strong culture of sustainable operation and focuses resources on improving the communities in which it operates.

Ford publicly reports its environmental sustainability performance. Much of the company’s current environmental policy tends towards reducing negative environmental impact, however Ford has announced a goal of achieving zero negative impact. The current focus is on achieving “no waste” within the company’s manufacturing processes and devoting resources to developing a renewable fuel supply. Ford hopes that by 2030 they will be “investing in a range of technologies, including hydrogen internal combustion and fuel cell vehicles, so we will be ready to introduce the options that prove most viable. We also expect the use of renewable fuels to grow” (“Sustainability Report 2007/8”, n.d.).

Ford has a deeply instilled commitment to environmental sustainability and community-building which is expressed across the company’s values and extensive global activity (“Our Values”, n.d.). The focus on sustainability also promotes development of individuals within the organisation. An example of this is the “Fostering Dialogue” program during which Ford volunteer mentors facilitate dialogue sessions with public school students to discuss and reinforce the importance of education (“Our Values”, n.d.).

Ford employees volunteer to support an extensive variety of community projects and programs. The company has an active Ford Volunteer Corps (FVC) through which Ford employees are encouraged to take two workdays per year volunteering with an approved non-profit organisation. “In 2007, more than 34,000 salaried Ford employees donated some 86,000 volunteer hours on a wide variety of projects, from building homes for Habitat for Humanity to painting orphanages, organising medical and dental clinics, raising funds for charities and mentoring young people” (“Our Values”, n.d.). The company also provides significant financial aid to areas of need in the world, thus contributing to an uplift in global communities.

William McDonough worked with Ford to build the green roof on the company’s Rouge River Plant, and hopes this initial step will flow on into Ford’s manufacturing processes.

“It is our hope that Ford will lead the way to effective cradle-to-cradle manufacturing by developing profitable closed-loop systems in which cars are assembled from safe, healthy materials and disassembled at the end of their useful lives. In such a system, each part of every car is either returned to the soil or recovered and reused in the assembly of new cars, generating extraordinary productivity and consistent employment in the transportation industry. In other words, just as Henry Ford was the father of the assembly line, we hope Bill Ford will become the father of the re-assembly line.

As Ford nears its centennial celebration, that sounds like a very apt way to honor the heritage of the Rouge River complex and close a century-long historical loop. Why not encourage and celebrate both restorative facilities and restorative manufacturing? Though the engineers in the Rouge Room might be a little sceptical, we think they might come around. After all, they’re putting a flowering living roof on a factory that builds F10 trucks. Could cradle-to-cradle manufacturing be far behind?”

(“Restoring the Industrial Landscape”, n.d.)

InterfaceFLOR

At InterfaceFLOR, one of the world’s largest carpet manufacturers, Ray Anderson, Chairman and ex-CEO, has set an extraordinary vision for the company entitled “Mission Zero: our promise to eliminate any negative impact our company may have on the environment by 2020” (“Interface’s Commitments”, n.d.). This ambitious goal epitomises Interface as an organisation which places a strong focus on environmental sustainability throughout all aspects of its operation.

The company is taking big steps towards eliminating all forms of waste in every area of the business and operating its facilities from renewable energy sources. Anderson actually sees that “fossil-fuel

derived energy is waste, to be eliminated” (J. Davies, personal communication, October 9th, 2008). Furthermore, an important part of Mission Zero involves the development of a new business model that aims to champion “sustainability-based commerce” (“Interface’s Commitments”, n.d.).

Interface publicly reports its sustainability performance and is a good example of a company which tries to achieve an eco-effective operation rather than just eco-efficient. Mission Zero involves the use of industrial cycles that imitate closed-loop natural cycles. This has required a redesign of Interface’s processes and products, where recovered and organic-based materials are used as inputs to the company’s manufacturing processes (“Interface’s Commitments”, n.d.).

The goals for Mission Zero include creating a culture that “integrates sustainability principles and improves people’s lives and livelihoods” (“Interface’s Commitments”, n.d.). Interface is contributing to the welfare of society by working towards becoming a “no-waste” organisation, and through extensive support of worthy environmental and community initiatives such as their funding of reforestation programs.

Jay Davies, a WA-based researcher from the Integral Institute, recently interviewed Ray Anderson and other Interface managers in Atlanta, Georgia and toured one of the factory floors. The purpose of the visit and interviews was to learn about how the company is working to achieve the Mission Zero objectives and how the Interface leadership has worked to inspire all employees to get on board with the vision for completely eliminating negative environmental impact. During the course of the interviews, the following key points emerged:

- All employees are highly supportive of Mission Zero, and they not only live and breathe this mission at work, but also adopt environmentally sustainable lifestyles in their home and family life.
- Profit and sustainability are measured equally at Interface and have the same level of priority. If profit targets are achieved but sustainability targets are not achieved for the month, then employees do not receive their monthly bonus.
- A methane plant has been constructed in liaison with the local community to fire the boilers for one of the Interface factories, thus reducing harmful greenhouse emissions from the methane that would otherwise have entered the atmosphere and reducing the consumption for fossil-fuel based power.
- When Interface attends a conference they ensure their presence enhances the local community. For example at a conference in Hawaii the company requested that the towels not be rewashed every day in order to save water. Additionally, rather than play golf or other leisure activities on the first day of the conference, Interface employees volunteer in the community to ensure they leave a positive impact wherever they go.
- Interface employs former prisoners as factory workers with the aim to provide work for this sector of society who would otherwise find it very difficult to obtain work.
- The company has purchased a “Cool Blue” technology which separates the face fibre and backing of nearly any carpet type and uses the recycled backing to produce new backing. The Cool Blue technology enables them to separate nylon fibres which have been difficult to include in the separating and recycling process before this new technology was implemented.
- Interface initially focused on sending out a message that it is necessary to become environmentally sustainable in order to combat climate change and reduce global warming, however this has shifted now to a message of making sustainability a participatory process together with their customers. Interface wants every activity they have a hand in to be environmentally sustainable, and asks their customers the question “How can we do that together?”

- One of the key challenges the company faces is achieving its target of zero negative environmental impact by 2020. In 1994, 100% of Interface’s product was petroleum based, and today in 2008 this figure has been reduced to 60%. The biggest challenge is how to get rid of that last 60%.
- The company is now focusing on the social side of sustainability and not just environmental. Some of the initiatives listed above are in the area of social sustainability, with another example being the DASH program (Dependable Affordable Sustainable Housing) established by Interface to provide affordable sustainable housing for struggling home buyers.
- Ray Anderson sets an example with his own green lifestyle, which included exchanging his Jaguar for a hybrid car, building a home that is ‘off the grid’ due to the fact that it is powered purely by renewable energy sources, and using dead-standing spruce trees as construction materials for his home which meant that no trees had to be cut down.

(J. Davies, personal communication, October 9th, 2008)

The Integral Sustainable Vision

The examples of the sustainability activity taking place within the four companies described above serve to show that Integral Sustainability is achievable and worth the effort required. Figures 5 and 6 below show a comparison of the four study organisations based on their sustainability efforts. Figure 5 shows ratings for each organisation in four key areas defined as economic, community, environmental, and people well-being. Figure 6 provides an overall Integral Sustainability rating that represents the total sustainability performance of the organisation. This overall rating takes into account each of the four key areas. A star rating system is used to provide an assessment of performance, with 6 stars representing the highest rating that can be achieved. Sustainability performance was based on a review of company literature since actual data was not available.

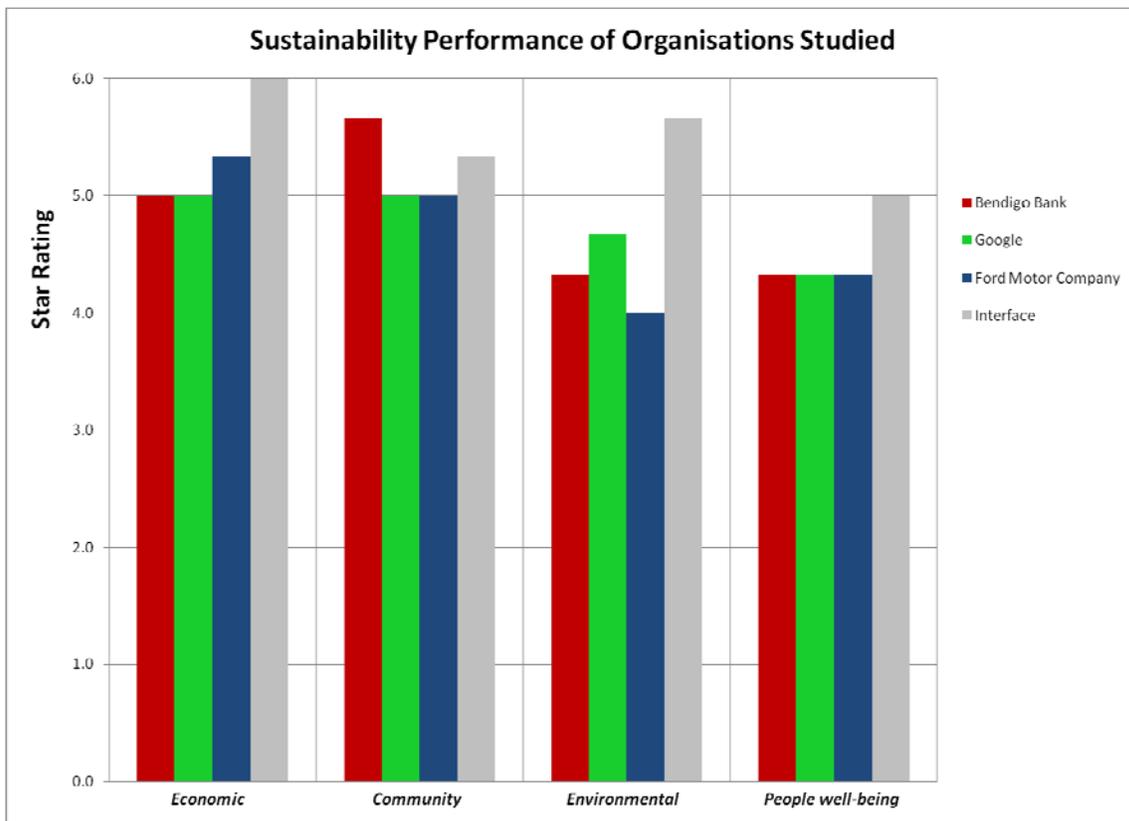


Figure 5: Comparison of Key Areas

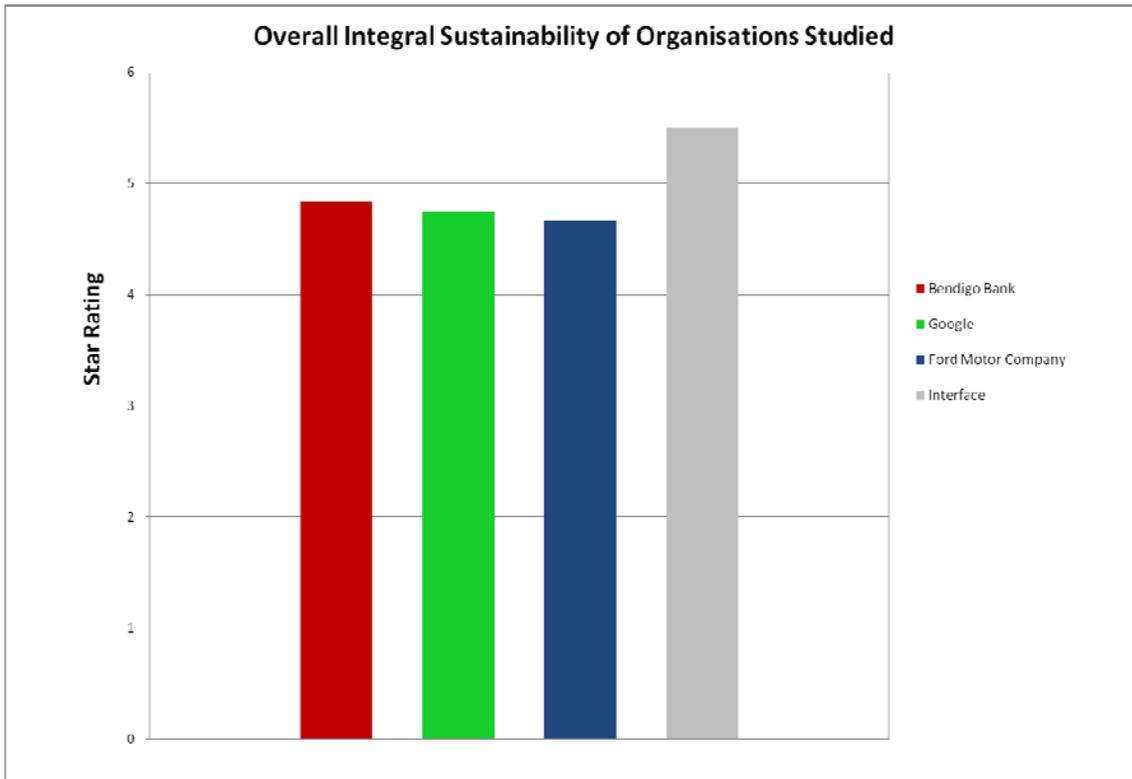


Figure 6: Overall Comparison

A series of questions were asked for each of these key areas to determine the level of sustainability performance in each area.

- **Economic** assesses the financial priority that the organisation is placing on improving environmental sustainability.
- **Community** addresses the organisation’s work within the local community, and also includes public reporting of environmental sustainability performance.
- **Environment** determines the core philosophy of the organisation towards environmental sustainability and the extent to which there is a clear commitment to completely eliminating negative environmental impact. This aspect also assesses the use of environmentally friendly products in the organisation’s industrial processes.
- **People well-being** takes into account the extent to which the development of individuals within the organisation is encouraged and supported and the extent to which staff are encouraged to adopt healthy lifestyle practices and inspired to implement sustainability principles into their own home and personal life.

As the above figures show, Interface achieved the highest overall level of Integral Sustainability performance. What would a 6 star Integral organisation look like? A hypothetical ideal organisation is described below, incorporating the best aspects of the examples discussed to represent what the highest level of Integral Sustainability might look like.

In the Integral ideal organisation, staff walk into a building with a 6 Greenstar rating for environmental performance that runs entirely from renewable energy sources such as solar and wind, and produces enough energy of its own to feed back into the national power grid, reducing the demand for fossil-fuel

energy sources. All buildings are flooded with daylight, and open windows maximise natural airflow. Numerous indoor plants enhance the beauty of the workplace environment.

Office furniture and fit-out are sourced from reusable materials that are not destined for landfill at the end of their lifecycle. Having fulfilled their purpose, these materials continue in different forms as part of “no waste” industrial cycles or simply return naturally to the earth. Organic office waste is fed to a thriving worm farm and vegetable patch on the organisation’s premises maintained by a rotating roster of employees who are keen to be involved in sustainability activities.

The Integral ideal organisation publicly reports its sustainability performance and engages extensively in community service to meet the needs of the communities in which it functions. This includes offering financial support to worthy causes locally and globally, and donating a portion of employee time to voluntary service to enhance the well-being of the community.

The leaders of the organisation encourage staff to engage regularly with personal development activities such as development and training programs, and adopt green lifestyle practices such as physical exercise and yoga. The organisation provides a range of healthy organically grown food for staff. Most staff use public transport and car pools to get to work or ride their bikes in, making use of the bike racks and showers within the building. Employees who do not require a car space are rewarded with a bonus payment to their regular salary. The best energy efficient company cars are available for staff to use for offsite activities that are not easily accessible by public transport.

The Integral ideal organisation has achieved zero waste and has developed strategic and business plans that reflect an on-going commitment to having no negative environmental impact. The mission statement, vision and values demonstrate a strong focus on having a positive environmental and social impact, and a commitment to developing individuals within the organisation. Performance indicators of success include a balance of economic, environmental, social and spiritual development, and staff receive a bonus when they achieve all of these.

Clients, partners and suppliers are encouraged and supported to adopt green commercial practices and set goals for achieving zero waste. The organisation has a positive culture with processes, surveys and reviews in place to ensure its vision and values are understood and practiced by all.

Honest dialogue and self-awareness are evident in the way teams work together to achieve outstanding results. The positive well-being of staff in the Integral ideal organisation is evidenced by the laughter that is a common feature of the workplace. When staff come to work for this organisation, they stay because their work is stimulating and worthwhile. They have a feeling of being part of a family with members who care for each other and are actively contributing to the well-being of humanity and life.

THE CASE FOR INTEGRAL ORGANISATIONAL SUSTAINABILITY

How much does it cost to become a sustainable organisation and is it really profitable to do so? Many managers believe that the move towards sustainability costs more, however there is evidence that the implementation of sustainability initiatives not only saves costs but can increase an organisation’s profitability. When sustainability initiatives are implemented in an organisation the workplace becomes more enjoyable. If an employee is happier at work they will be more productive and reduce the number of sick days they take. A reduction in sick days means less money is spent on paying absent employees.

A common cause of employee sickness is “sick building syndrome” which can often affect staff without their being aware of it. The US Environmental Protection Agency (EPA) describes the syndrome as follows:

“The term “sick building syndrome” (SBS) is used to describe situations in which building occupants experience acute health and comfort effects that appear to be linked to time

spent in a building, but no specific illness or cause can be identified. The complaints may be localized in a particular room or zone, or may be widespread throughout the building.”

(“Indoor Air Quality (IAQ)”, n.d.)

The EPA identifies that workers in a “sick building” experience uncomfortable symptoms such as headaches, irritation of the eye, nose or throat, dizziness and nausea, and difficulty concentrating, to name a few. The EPA states that the cause of these symptoms is unknown and the majority of them disappear when the occupants leave the building. Some contributing factors include inadequate ventilation, chemical contaminants from indoor and outdoor sources, and biological contaminants (“Indoor Air Quality (IAQ)”, n.d.). The elimination of these negative elements is one of the major benefits of building green.

Organisations that build environmentally friendly premises improve the well-being of their staff and achieve savings over the lifetime of the operation of their green facilities. A study undertaken in California to show the financial benefits of building green reported that:

“The benefits of building green include cost savings from reduced energy, water, and waste; lower operations and maintenance costs; and enhanced occupant productivity and health. An analysis of these areas indicates that total financial benefits of green buildings are over ten times the average initial investment required to design and construct a green building. Energy savings alone exceed the average increased cost associated with building green. Additionally, the relatively large impact of productivity and health gains reflects the fact that the direct and indirect cost of employees is far larger than the cost of construction or energy. Consequently, even small changes in productivity and health translate into large financial benefits.”

(Kats, cited in Madew, 2006, p.9)

Herman Miller, the US office-furniture manufacturer, designed a factory floor using Cradle to Cradle principles to “give workers the feeling that they’d spent the day outdoors” (McDonough & Braungart, 2002, p.75). When a number of younger workers chose to leave for a higher salary at a normal competitors factory, they returned within a few weeks saying that they couldn’t work “in the dark”. The factory has recorded “dramatic productivity gains” following the new design and “retention rates have been impressive” (McDonough & Braungart, 2002, pp.75-76).

The green roof at the Ford Rouge River plant cost approximately \$15 million and was a significant saving on the \$50 million that was expected to have been spent on a more conventional storm water management solution. The beauty of the natural environment was an added benefit. Other benefits of the green roof included providing extra insulation, protecting the roof membrane from wear and thermal shock, creation of a habitat for native birds, contributing to mediating the urban heat island effect and capturing of harmful particulates (“Restoring the Industrial Landscape”, n.d.). The green roof idea has been replicated at other sites.

A further example of the cost savings and benefits that accrue to organisations which adopt sustainable practices is demonstrated by the case at Rohner, a Swiss textile mill that manufactures fabric. The Cradle to Cradle team worked with Rohner to eliminate all toxic materials from their manufacturing process with the effect that the mill became a far safer and more enjoyable place to work. The water effluent which previously required close monitoring to comply with environmental regulations was now cleaner than the water influent going into the mill. The paperwork involved in complying with regulations was no longer necessary and workers no longer needed to wear the safety gear they previously had to use when handling workplace toxins.

“The mill’s products became so successful that it faced a new problem: financial success, just the kind of problem businesses want to have.”

(McDonough & Braungart, 2002, p.109)

At Interface, the shift towards sustainability has given the company a competitive advantage that other manufacturers are not able to obtain without incorporating environmentally sustainable principles into their manufacturing processes. As an example, Interface reuses all off-cut and excess materials in other manufacturing processes so that no waste goes to landfill. The reuse of excess materials means Interface requires less raw material than is required by other manufacturers to produce the same amount of carpet (J. Davies, personal communication, October 9th, 2008). A significant advantage is also gained due to the time and cost saving of not having to dispose of any waste product.

In the case of Herman Miller, Ford and Rohner, these organisations transformed the systems through which their income was derived. Herman Miller created a green factory floor which had the effect of dramatically improving staff productivity and retention rates. Ford's green roof saved significant costs and more importantly, was the company's first step on the journey towards implementing the Cradle to Cradle approach into the core of their manufacturing processes. Rohner eliminated all toxic materials from its manufacturing processes which lead to positive outcomes. Interface saved costs by reusing materials that would otherwise have gone to landfill, thus reducing the demand for raw materials.

The Avastone study mentioned earlier described the move towards becoming a truly sustainable organisation as a "progression from *saving money* to *making money* to *transforming money*" (McEwen & Schmidt, 2007, p.19). This approach compliments the Cradle to Cradle philosophy of eco-effectiveness over eco-efficiency where *saving money* relates to focusing only on efficiency, *making money* incorporates elements of both efficiency and effectiveness, and *transforming money* represents the ideal of effectiveness where organisational structures are designed or redesigned to "*transform* the systems through which money flows" (McEwen & Schmidt, 2007, p.19).

Integral Sustainability revolutionises the economics of business from the "plundering" approach to a perspective that involves only having a positive impact in every aspect of an organisation's operation. While the term 'sustainability' features on websites of many major corporations it is not often given the same importance in the budget. Although the benefits of embracing a high level of Integral Sustainability are significant, many organisations have a long way to go before environmental action is one of its top strategic priorities. While organisations may have some staff members responsible for sustainability, they often do not have strong support from senior management. While environmental and social actions are nice initiatives, the real business of the organisation is too often seen to be separate from these activities. Companies such as Patagonia are so convinced of the importance of the need for positive environmental action they commit **1% of their revenue** each year to support environmental groups and have started a 1% "Member for the Planet" alliance group of businesses (Chouinard, 2005).

A common misconception about sustainability is that it is "anti-growth". On the contrary, Integral Sustainability encourages growth. There is no need to restrict the expansion of an organisation which operates on a "no waste" system, and has a positive impact on the environment and society. As William McDonough explains, regulation is only required when an organisation's operations have a negative impact. With a zero waste situation, the regulatory environment becomes unnecessary, and the only impact organisations have is a positive one.

"How many environmentalists do you know who say growth is good?," McDonough asks. "We celebrate growth. Abundance is something we want. Our idea is to make production so clean there's nothing left to regulate." This, he notes, is extremely appealing to people of all political persuasions, from those who love the environment to those who want commerce free of regulation.

(*"Industrial Revolution, Take Two"*, n.d.)

Intuitively, people know that it is not right to continue industrial processes that have a negative impact on the environment. A restrictive regulatory framework is only required to combat the negative environmental effects of the over consumption of natural resources. It is vital to show a higher level of

respect for nature and life by transforming current industrial processes to eliminate negative impacts on the environment and society.

CONCLUSION: NEXT STEPS TOWARD INTEGRAL SUSTAINABILITY

This article has outlined a vision for Integral Sustainability which combines Integral Theory with “zero waste” Cradle to Cradle thinking. It has emphasised the importance of environmental sustainability in conjunction with an organisation making a positive social contribution. The concept of sustainability has been extended to include the motive of an organisation, the development of individuals within the organisation and the well-being of all stakeholders.

The examples given of the Bendigo Bank, Google, Ford and Interface demonstrate that investing in sustainability is not an additional burden on an organisation’s costs but can increase its profitability, or can at least save costs.

These four organisations were described and compared on an Integral Sustainability scale. While demonstrating considerable progress in one or more of the six key areas of economic, community, environmental, motive, development and well-being, each organisation needed to improve significantly in at least one of the areas to reach the highest ‘Integral’ level.

A step-by-step strategy to implement and embed Integral Sustainability into the organisational strategy, systems, operation and culture has been outlined. This strategy includes conducting a comprehensive Integral survey, energy, water and waste audits, formation of a sustainability committee and conducting educational workshops which lead to tangible steps to minimize environmental impact and make a social contribution.

For an organisation to achieve Integral Sustainability, the following are needed:

- Organisations need to establish where they are now with comprehensive audits and surveys, not only in areas of energy, water and waste, but of their environmental culture, strategy, leadership mindset, and systems which are needed to support worthwhile actions.
- Development of a sustainability plan that includes actions in the four Integral quadrants and moves upward through the Integral levels.
- Integral leaders that take an “all of life” perspective and commit to implementing a “zero waste” philosophy. This does not need to occur immediately but should be an ultimate goal with a realistic timeline (eg. The Interface example of achieving Mission Zero by 2020).
- Allocate adequate funding and staff resources over time to achieve “zero waste” in a way that is financially feasible.
- Incorporating environmental and social sustainability into the strategy and values of the organisation.
- Going beyond just an environmental focus and developing a plan that makes a social contribution to the communities in which the organisation operates.
- Provide opportunities for leaders and staff to enlarge their world view including learning meditation, experience of the natural environment, educational workshops, etc.
- Development of a culture that encourages and recognises environmental and social sustainability.

Leaders of organisations who want to take the next steps toward becoming truly sustainable will have to be courageous and take a stand that does not conform to current ways of doing things. This requires leaders to replace current Industrial Revolution thinking and behaviours with a “no waste” philosophy

and to expand their world view to include current and future generations of life while still achieving the objectives of their stakeholders.

Integral Sustainability sets a goal which states, “We’re going to work to achieve no waste and make a social contribution in the most cost effective way”. This requires passion, commitment and an entrepreneurial spirit to challenge old mindsets and adopt a new way of working, first by the leaders of the organisation and then by everyone who works in, supplies or buys from it. If the organisation is lead properly it will produce sufficient economic returns and at the same time act in harmony with society and the natural environment.

In a sense this is all not about the corporation. It’s about us as human beings...our role on earth, our temporal span, our life span, what are we to do with ourselves, how we come together with other people to govern ourselves...to live in harmony with other creatures on the earth, to live in harmony with the earth itself, to live in harmony with the future generations...including the children of the men and women who work in corporations? It’s really about us.”

Richard Grossman (Bakan, The Corporation, 2004: 167)

“Some men see things as they are and say why. I dream things that never were and say why not.”

(“Edward M. Kennedy: Address at the Public Memorial Service for Robert F. Kennedy,” n.d.)

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