

Tomorrow's Company Briefing on...

Interface: Mission Zero

August 2009

This briefing summarises the steps taken by Interface, a global carpet manufacturing company, who aim not only to eliminate its negative environmental impact by 2020, but to ultimately have a positive impact on the planet. This project, 'Mission Zero' is amongst the most ambitious of its kind. Ray Anderson, chairman of Interface and ex-Chief Executive, set Interface on this path to becoming fully sustainable and since his 'epiphany' in 1994, Interface have led the way in sustainable business, achieving superb environmental results and expanding their business as a consequence.

This briefing document is written drawing on internal Interface briefing documents and materials made available through the Tomorrow's Company membership relationship with Interface. We are sharing this information with a wider audience for interest and inspiration, given the leading work Interface is doing in the area of sustainability.

Introduction

Interface was founded in 1973 to produce the first free-lay carpet tiles in America, and is now the world's largest producer of commercial floor coverings, manufacturing and selling 40 percent of all commercial carpet tiles used in the world. It markets its modular carpets under the brands InterfaceFLOR, FLOR, and Bentley Prince Street and since 1994 has become a world leader in successful, sustainable business. In growing, Interface has diversified and globalized its businesses, with sales in 110 countries and manufacturing facilities on four continents. The company has shown that striving for sustainability in every dimension of production-people, processes, product, place and profits-is not only *compatible* with a thriving business, but has led to real, tangible benefits to their bottom line. They now have a goal to have no impact whatsoever on the natural environment as a result of their processes by 2020: what they call Mission Zero.

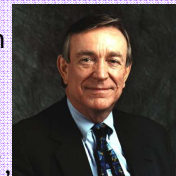
A move towards sustainability-1994 onwards

In August 1994, Chairman and CEO of Interface, Ray Anderson, was asked by a research division task force to give a keynote address about the company's environmental vision. His words describe the situation best:

"Frankly, I didn't have an [environmental] vision. I sweated for three weeks over what to say to that group. Then, through what seemed like pure serendipity, somebody sent me a book, Paul Hawken's *The Ecology of Commerce*. I read it, and it changed my life. It was an epiphany. I had a powerful sense of urgency to do something. I agreed with his central thesis... business is the largest, wealthiest, most pervasive institution on Earth,

Profile: Ray Anderson

- Founder and Chairman of Interface, Inc
- Inspired by Paul Hawken's, 'The Ecology of Commerce', in 1994 Ray put sustainability at the forefront of the Interface business plan
- 1996-Named Ernst & Young Entrepreneur of the Year for SE USA
- 1997-Named co-chairman of the President's Council on Sustainable Development
- 2001-First CEO to receive the prestigious George and Cynthia Mitchell International Prize for Sustainable Development
- Named one of *TIME* magazine's Heroes of the Environment in 2007
- His book, 'Mid-Course Correction' describes his and Interface's transformation to environmental responsibility and he regularly speaks on this subject, promoting sustainable business practices.



and responsible for most of the damage. It must take the lead in directing the Earth away from collapse, and toward sustainability.”¹

Interface: Key achievements since the 1996 baseline

- 67% absolute reduction in the volume of waste sent to landfill since 1996 (78% per unit of production)
- Water intake in manufacturing is down 72% since 1996 per unit of production
- Total energy use down by 44% since 1996 per unit of production
- Absolute reduction of Interface GHG emissions by 34% since 1996
- Absolute net change in GHG emissions is down 71% from Baseline
- 28% of global energy comes from renewable sources
- 24% of total raw materials are recycled or bio-based materials
- Cumulative avoided waste costs totalling \$405 million since 1994
- In Europe all factories operate on 100% renewable electricity
- 99.7% of the products sold in Europe are manufactured in Europe

As a result, Anderson decided that his mission should be making Interface the first name in industrial ecology worldwide. Interface began to think of their business through a lens shaped by the principles of *The Natural Step*, which asks how nature would design an industrial system.

Interface already had a mechanism in place for feedback from workers on its processes and how they could be improved; QUEST (Quality Utilizing Employee Suggestions and Teamwork) was initiated earlier in 1994. Ray Anderson set the focus of QUEST to eliminate waste, which was defined as anything that goes into a product that doesn't come out as value to the customer. A three-year goal of 50 percent waste cost reduction was set and bonuses reflected a unit's waste reduction performance.

EcoSense was then set up to carry out sustainability initiatives, and to examine all manufacturing processes, analysing the impact of each step on product quality, process efficiency and the environment. In February 1996 Interface merged QUEST and EcoSense. Teams have been formed with an assigned scope of investigation and implementation and these meet every six months to discuss their findings and recommendations. Workshops are organised for directors and managers to train them in environmentally sustainable business practices.

Mission Zero

'Mission Zero' details Interface's plans to achieve a goal of eliminating any negative impact the company may have on the environment by 2020. To achieve this, Interface are redesigning their processes and products, pioneering new technologies, and making efforts to reduce or eliminate waste and harmful emissions while increasing the use of renewable materials and sources of energy. Indeed, Interface say that they want to be restorative; ultimately not just having zero impact, but restoring the environment by returning more than it takes. The first step in this process is becoming fully sustainable.

Interface takes its definition of 'sustainability' from 'Our Common Future', a report by the World Commission on Environment and Development: 'to ensure that meeting the needs of the present does not compromise the ability of future generations to meet their own needs'². However, Interface applies this concept to every aspect of its operations, considering the impact of its products over their whole life cycle, from the sourcing of raw materials, to their ultimate disposal at the end of their lifespan.

“For a business such as Interface, sustainability is a process, a journey we have often likened to climbing a mountain higher than Mount Everest. Our climb up “Mount Sustainability” is a way that we guide our business decisions on a daily basis.”

¹ <http://www.thenaturalstep.org/en/usa/interface-atlanta-georgia-usa/>

² <http://www.interfaceglobal.com/Sustainability/What-is-Sustainability-.aspx>

Ray Anderson has likened the journey to a fully sustainable Interface as being like climbing “a mountain higher than Everest”³ - difficult, but with a careful and attentive plan, not impossible. As Interface began to plan their climb, they identified Seven Fronts on ‘Mount Sustainability’ that must be conquered.

Front 1: Eliminate all Waste

The first front of Mission Zero is an elimination of all waste, but this requires an elimination of the *concept* of waste, not just incrementally reducing it. To this end, Interface takes a very broad definition of ‘waste’ to include everything that is ‘over-engineered’ or non-essential to the product. For example, if a product is heavier than necessary, this is considered wasteful, both of resources in making the product but in transporting it too. Further, the processes by which products are manufactured should minimise the time and resources taken to do so.

Significant progress has already been made in reducing Interface’s waste, and they estimate that improvements as a result of QUEST have saved the company \$405 million in cumulative avoided waste cost from 1995 to 2008⁴. Interface has achieved a 78% reduction in landfill waste per unit since 1996 and a 72% reduction in water use.

The Six Sigma business management strategy is used to reduce waste where possible with the Six Sigma Management team at the Scherpenzeel plant drastically reducing ‘window waste’ (the off-cuts around a floor tile) by 80% by implementing new technology. Similarly, the Six Sigma team at the Shelf plant has saved around \$130,000 a year by ensuring quality control of inputs to the manufacturing process.

Interface do not just consider the manufacturing process, however, and their new ‘Random Design’ carpet tiles have reduced installation waste from 3-4% to 1-2% as installers no longer have to worry about matching up patterns. Interface’s Cool Green machine automatically recycles waste carpet from the manufacturing process by grinding it down and melting it with other materials to create carpet backer; this will soon eliminate all landfill waste from the Bitumen backing line in the Shelf plant.

Front 2: Benign Emissions

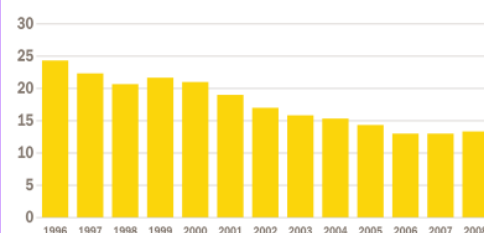
The second challenge of Mission Zero is to eliminate all emissions that have negative or toxic effects on natural systems. Due to the vast array of chemicals used in most industrial processes, this is particularly challenging for a carpet manufacturer. Interface is committed to eliminating greenhouse gas emissions from fossil fuels by improving energy efficiency and using renewable sources where possible.

Interface have already made significant progress in its goal of benign emissions, and in the last two decades a number of chemicals with suspected detrimental health and environmental effects have

The Seven Fronts of Sustainability

- 1. Eliminate Waste**
Eliminate all forms of waste in every area of business
- 2. Benign Emissions**
Eliminate toxic substances from vehicles, products and facilities
- 3. Renewable Energy**
Substituting non-renewable sources with renewable ones
- 4. Closing the Loop**
Redesigning products and processes so all materials can be returned to production or the environment
- 5. Resource-efficient Transportation**
Transport all people and products efficiently
- 6. Sensitising Stakeholders**
Creating a culture and community of stakeholders that understands the principles of sustainability
- 7. Redesign Commerce**
Focus on the delivery of service and value instead of material

Total energy use from Interface factories globally (megajoules per m²)



³ <http://www.interfaceglobal.com/getdoc/224de860-bf76-4d2f-973c-80af60a4add/7-Fronts-of-Sustainability.aspx>

⁴ <http://www.interfaceglobal.com/Sustainability/Progress-to-Zero.aspx>

been phased out of production, with plans to phase out all others by 2020. The damaging effects of brominated flame retardants, phthalate plasticisers and damaging chemicals used in the dyeing process have all been neutralised, whilst plans to replace all materials that emit Volatile Organic Compounds (VOCs), which contribute to poor air quality, are currently being implemented.

Interface have adopted a policy to reduce its emissions of Greenhouse Gases (GHGs) by reducing their reliance on fossil fuels, firstly by increasing their energy efficiency and secondly by increasing their use of renewable energy (see Front 3). By recycling materials in the production process, Interface has also reduced their reliance on virgin oil based resources which have emissions embedded by the energy intensive extraction and refinement process. Further, Interface has found alternatives to almost all chlorofluorocarbons (CFCs), which deplete the O-zone layer and have been linked to increases in cancer, with the only exemption being a very small amount of fluoroacrylate in the anti-soiling process. To further minimise this impact, Interface introduced a new anti-soiling compound in 2007 that requires 27% less chemical whilst providing the same anti-soiling protection.

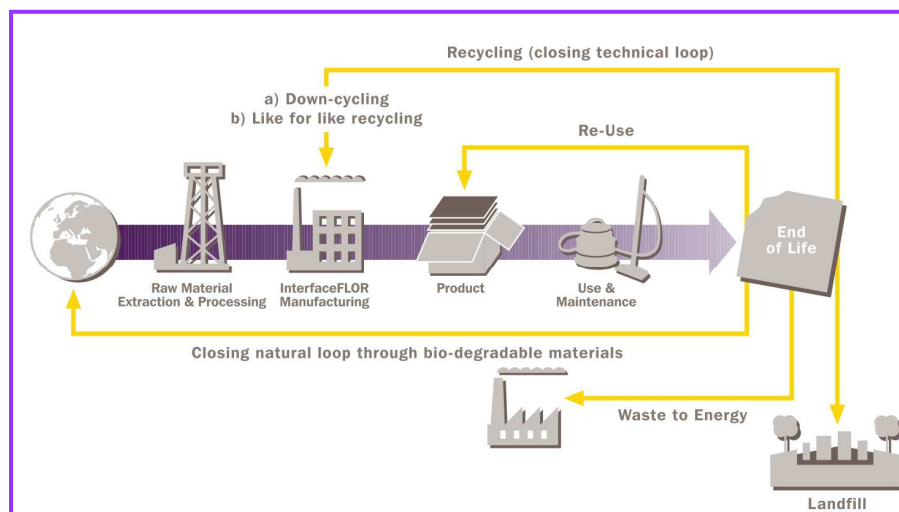
Front 3: Renewable Energy

In an attempt to eliminate all GHG emissions by 2020, Interface has originally focussed on reducing its energy use by improving the efficiency of their operations; once achieved, Interface will then aim to use renewable sources for all its energy needs by 2020. To this end, Interface are currently purchasing renewable energy from the grid and investing in onsite renewables. At the global level, 89% of electricity used and 28% of total energy consumption comes from renewable sources. Since 1996, there has been a 71% reduction in net greenhouse gas emissions, 34% of which has been achieved by efficiency initiatives, and 37% from company owned greenhouse gas emissions reduction projects.

Interface has a commitment to cutting the carbon emissions associated with their products throughout their whole life cycle, including their transport and disposal. In the manufacturing and sales process Interface have increased sales of their less carbon intensive products, such as FlatWorks, which contains 30-50% less oil, and its European plants now use 100% renewable energy. Investment is also made in more energy efficient equipment, such as fluorescent tube lighting and EcoCooling systems. The Scherpenzeel factory has solar panels installed upon its roof that generate 7,000kWh per year and uses mirrors in 'sun trackers' to increase natural light and decrease the use of electric lighting by 75%.

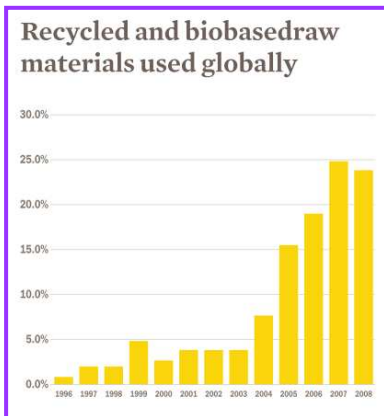
Interface considers carbon offsets as the very last stage in their climate change strategy after Avoid, Reduce, and Replace. As only 10% of their products' carbon footprint is as a direct result of their operations (whilst 70% is related to the extraction, transportation and use of raw materials), Interface do not make corporate carbon neutrality claims as they see this as misleading. However, through their Cool Carpet programme for carbon offsetting, Interface work with Climate Care, their offset partner, on a number of projects around the world. Cool Carpet allows customers to offset the emissions associated with their purchase, with Cool to CO₂mmute offering employees to offset travel to work and Trees for Travel used for business travel offsets.

Front 4: Closing the Loop



Front 4 of Mission Zero aims to redesign processes and products so that all resources can be recovered and reused. This involves the closing of what Interface call the natural loop, by returning materials to the Earth, and the technical loop, by

returning materials back into the product. Ultimately, Interface would like to eliminate all wasted energy and waste to landfill, as demonstrated by the diagram.



Closing the loop does not just apply to the direct impact of the Interface factories, but to the carpet that it is replacing and Interface's own products at the end of its life cycle. New technology has enabled Interface to feed their factories with materials from used carpet tiles; accordingly, when Interface replaces a customer's carpets, they offer ReEntry, a service to collect the old carpet either for redistribution to schools and charities or for reuse and recycling. 24% of Interface products are now made from recycled or bio-based⁵ content. Interface is also working hard to manufacture products that are easily separable and therefore easy to recycle.

Front 5: Resource-Efficient Transportation

One of the most challenging aspects of Mission Zero is to make the transportation of goods and people associated with Interface's products more sustainable. To achieve this is particularly difficult as transport systems still heavily rely upon fossil fuels yet are integral to Interface's product. Overall Interface estimate that the transport of people, products and resources from place to place account for roughly 8% of the total environmental impact of a carpet during its lifecycle.

To reduce the distance travelled by their products, Interface locate their factories in the regions they supply, and source raw materials from as close to their factory as possible. Interface work with their suppliers and those that deliver their products to make transportation of goods and materials as sustainable as possible. Inevitable emissions from business travel and distribution are offset, and employees are offered the opportunity to do likewise.

In these actions, Interface has achieved significant progress in making their travel more sustainable. Around 99.7% of products sold in Europe are manufactured in Europe and the transportation of many of these products has been switched to lower emission modes of transport. For example, in Italy, 70% of shipments have been transferred from road to rail and in Holland Interface have cut emissions by 80% and costs by 15% by switching part of the transportation process from road to barge. Over 5000 metric tonnes of CO₂ have been offset, whilst over 87,000 trees have been planted in the Trees for Travel and Cool to CO₂mmute programmes. Deliveries are now grouped with other products to ensure delivery vehicles are not half full and employees are encouraged to car pool.

Front 6: Sensitising Stakeholders

In sensitising stakeholders, Interface seeks to 'create and sustain a community around [Interface] that understands the functioning of natural systems and our impact on them'⁶. Interface recognises that it cannot achieve Mission Zero without sensitising its employees, customers, community, industry and suppliers. This approach includes public tours of factories, educating and training employees and working with suppliers to make the whole process of production sustainable, from start to finish.

Fast Forward to 2020 is the company's training scheme, with three different levels offered to all employees, whilst the QUEST scheme encourages innovative ways of reducing Interface's environmental impact, with monetary incentives offered for achieving waste reduction goals. Interface has a strict Supply Chain policy which it uses to ensure the environmental commitment of new and existing suppliers; they aim to visit each supplier once a year to ensure improvements are being made. Customers are given information as to the environmental impact of the products

⁵ The term 'biobased product' is one that is composed, in whole or in significant part, of biological products or renewable domestic agricultural materials.

⁶ 'Our progress towards Mission Zero', InterfaceFLOR EMEA

available to them, which has led to large increases in sales of Interface's most sustainable products.

Front 7: Redesign Commerce

In an effort to lead the way in sustainable business, Interface has tried to show that successful commerce can be based upon the delivery of service and value rather than just material products; they encourage external organisations to do similarly and to provide incentives that will lead to this model of commerce becoming the norm. Interface is always evaluating its purchasing practices, its manufacturing processes and the business models that it uses to provide services. Interface considers the environmental impacts of its products at every stage of the production process.

Interface has made a number of innovations to its products that have made them inherently more sustainable, not just in the manufacturing process, but in their design and their concept. For example TacTiles act like stickers and eliminate the need for adhesives in the installation process, reducing the adhesive carbon footprint by 80% and making the tiles easier to remove at the end of their life cycle. Further, Random Design products reduce waste in the installation process as patterns do not have to be adhered to. These examples show that in order to take full advantage of sustainability possibilities, it can be necessary to actually redesign your products and services, and challenge how you *think* about what it is that you deliver.

Conclusion

Interface's Mission Zero is amongst the most ambitious projects of its kind and, if successful, Interface will indeed become the world's first fully sustainable manufacturing company. Interface's aim of making its products fully sustainable over the entire course of their life cycle and in every aspect of their delivery to the client is without precedent in manufacturing, and has raised the bar for corporate environmentalism. As a result, in 2007's Globescan Survey, 3000 independent experts voted Interface as the company most committed to sustainable development in the world⁷. Further, Interface has shown that having sustainable practices ingrained in every area of your business is not only fully compatible with a thriving business, but has helped Interface to become the world's leading producer of modular carpet. In looking to tomorrow and taking a holistic approach, Interface's Mission Zero demands a change in how we think about business, as an integral part of the natural environment in which we all survive. Sustainable business processes reduce costs, increase customer and employee satisfaction, create a positive brand image, increase profitability and ultimately help businesses to expand, thrive and succeed.

Further Information

- Interface Sustainability: <http://www.interfaceglobal.com/Sustainability.aspx>

Interface as a force for good

In recognising that its long term success depends upon, and therefore must contribute to, the health of the economy, the environment and society, Interface is a force for good company; Interface recognises the importance of the triple context.

The triple context emerges from the 'triple bottom line': the expansion of the traditional reporting framework to include ecological and social performance in addition to purely financial performance. In its mission to become truly sustainable, Interface recognises the importance of three separate but inter-dependent systems- the environmental, socio-political and economical systems. Mission Zero will ensure that Interface's impact on the environment is a positive one and by sensitising and inspiring its employees, partners, suppliers, customers, investors and communities, it hopes to also have a positive impact on the socio-political system. (See 'Tomorrow's Company Briefing on... Interface: Inspiring People')

Interface has become both more profitable and more resilient by improving the relationships that determine the health of its business 'environment', and its natural environment. They have shown what it is to become a Force for Good company.

⁷ http://www.interfaceflor.eu/Internet/web.nsf/webpages/interfaceflorStory_EN.html

- www.missionzero.org
- The InterfaceFLOR Story:
http://www.interfaceflor.eu/Internet/web.nsf/webpages/interfaceflorStory_EN.html
- ‘Sustainable Futures’, a report by InterfaceFLOR and The Work Foundation:
http://209.85.229.132/search?q=cache:6u_jjJn3X3gJ:www.interfaceflor.eu/Internet/other/files.nsf/Lookup/Exec_Summary_EN/%24file/Exec_Summary_EN.pdf+sustainable+futures+the+work+foundation&cd=1&hl=en&ct=clnk&gl=uk&client=firefox-a
- Ray Anderson: <http://www.interfaceglobal.com/getdoc/618a4adb-479e-4bce-a209-a9a0b7195e69/Ray-Anderson.aspx>
- The History of Interface: <http://www.interfaceglobal.com/Company/History.aspx>
- Progress Towards Zero: Key Achievements
<http://www.interfaceglobal.com/Sustainability/Progress-to-Zero.aspx>
- InterfaceFLOR reports Green Growth: The Triple Bottom Line
http://www.interfaceflor.eu/Internet/web.nsf/webpages/571520079_EN.html

About Tomorrow's Company Briefing Documents

This document was written in August 2009, by Rossa O'Keefe-O'Donovan.

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