

## **CHAPTER 21**

### **DOING WELL BY DOING GOOD**

#### **Interface's Vision of Becoming the First Industrial Company in the World to Attain Environmental Sustainability**

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##### **ABSTRACT**

One of the most challenging transformations a company can undertake is towards sustainability. The raw materials used in production are often not recyclable, technologies to close the loop are often not available, and most importantly, legislation and market economics are not strong enough reasons to completely overhaul the way the company designs, manufactures and distributes its products. Consequently, there seldom is a pressing need to undertake such a transformation. Interface Inc. is one company that initiated such a transformation ten years ago, and has made significant progress towards its goal of being not only sustainable, but restorative. In this chapter, we trace its journey, analyze its transformation in the context of Kotter's eight steps on leading change, and discuss key challenges and learnings of interest to top-level managers who wish to lead such a transformation in their own organization.

##### **INTRODUCTION**

If you want to get an audience to pay attention, say something they do not expect to hear. Ray Anderson, chairman of the board of Interface, the world's largest producer of commercial floor coverings, does this a lot. Ever since his self-described "epiphany" about the futility of our current take-make-waste industrial process, he has brought a message of warning and hope to audiences around the world. In 1986, during one of his first public speeches on the topic, he told a national convention of 500 interior designers in Boston, "Someday, people like me may be put in jail" (Anderson, 1998, p.8). Anyone dozing off at that point would have woken up. And that's Anderson's goal: to wake up anyone who will listen to the fact that we simply can not continue to take from the earth, pollute our air and waterways, and dump our waste into giant holes in the ground.

Ironically, says Anderson, by current environmental standards, he and Interface, a publicly traded company with annual sales of roughly \$1 billion, are guilty of nothing. “No one is accusing me,” Anderson said in this now landmark speech, “I stand convicted by me, myself, alone, and not by anyone else, as a plunderer of the earth” (Anderson, 1998, p.5). This gets to the heart of Anderson’s argument: that politicians and lawmakers are far behind in structuring policy that recognizes the real cost of goods. This includes the kinds of line items not typically found on an accounting spreadsheet, for example, the cost of military operations to safeguard oil in the Middle East or the costs of industrial spills. Until companies like his do something, says Anderson, no one else will take the lead. Politicians will gladly jump in front of a parade, he observes, but someone has to get the parade started. So why not Interface?

## THE INTERFACE STORY

### The Awakening

To understand where Interface is headed, it’s important to understand its past. Ray Anderson, a hard-working young manager with 17 years work experience and a degree in industrial engineering from Georgia Tech, founded Compact Carpets, Inc., the predecessor of Interface, in 1973. Anderson had worked in the flooring industry most of his career and left a secure job to partner with a British firm that manufactured carpet tiles, the square pieces of carpet now routinely found in hospitals, schools, and offices. This was a fairly new concept in the U.S. at the time, and Anderson saw an opportunity to build his own company around the idea. Fast forward to 1994. The company, by this time known as Interface, had 29 manufacturing sites, annual sales of \$725 million and a hold on roughly 40 percent of the world’s carpet tile market. By all accounts Interface was the great American success story and Anderson a role model for any aspiring entrepreneur. It’s hard to imagine that a day would come when Anderson might sit back and completely rethink the company he had spent 20 years building. But that day did come, and was precipitated by the words of entrepreneur and environmentalist Paul Hawken, author of *The Ecology of Commerce*. The book was given to Anderson in 1994 as he prepared for a speech to a new task force launched by Interface Research Corporation, Interface’s research arm, to address questions posed by more and more customers about Interface’s environmental record. Until then, admits Anderson, his only real message to company managers was “comply, comply, comply.” He was therefore stunned to read Hawken’s cry for help on the part of silent Earth. Among the many abuses our planet is sustaining in our lifetime, Hawken outlined:

- The depletion of the Ogallala aquifer, the great underground body of fresh water under the American Midwest, and the implications of that, namely famine in the U.S.
- The worldwide loss of 25 billion tons of topsoil every year (equivalent to all the wheat fields in Australia disappearing, and a hungry world population increasing by 90 million a year).
- The usurpation of a disproportionate share of Net Primary Production, the usable product of photosynthesis, by the human species – one species among millions of species taking nearly half for itself – and pushing the ecosystem toward overshoot and collapse for thousands, maybe millions, of species.
- An alarming increase in the rate of species extinction, now between 1,000 and 10,000 times the average rate since the mass extinction of the dinosaurs 65 million years ago.
- The cutting of vast areas of natural forests in Brazil, a critical lobe of Earth’s lungs, to clear land to raise soybeans to feed cows in Germany to produce surplus butter and cheese that pile up in warehouses.
- Illness from pesticide poisoning numbering in the millions each year, with uncounted deaths resulting.

Anderson says, bluntly, “I read it, and it changed my life” (Anderson, 1998, p.39). Hawken’s central point is in three parts: 1) The living systems and life support systems of Earth – the biosphere – is in decline; it is a crisis, 2) The biggest culprit in this decline is the industrial system – the take-make-waste system, fossil-fuel driven – of which we are each a part, and 3) The only institution on Earth that is large enough, powerful enough, pervasive enough, wealthy enough and influential enough to lead humankind out of this crisis is the same one that is doing the greatest damage, the institution of business and industry (Anderson, 2004a). He says he wasn’t halfway through the book before he had the vision he was looking for, not only for the speech, but for his company. “Hawken’s message was a spear in my chest that is still there,” said Anderson (Anderson, 1998, p.39).

In that speech, Anderson offered the task force a vision: Interface, the first name in industrial ecology, worldwide, through substance, not words. Then he offered a mission: to convert Interface into a restorative enterprise, first to reach sustainability, then to become restorative, putting back more than it takes and doing good to Earth, not just no harm – by helping or influencing others to reach toward sustainability. Finally, he offered a strategy: Reduce, reuse, reclaim, recycle (Interface later added redesign), adopt best practices, advance and share

them. The Interface journey toward sustainability, and a massive enterprise transformation, was just beginning.

### **The Journey**

Anderson had laid out a roadmap toward sustainability in his 1994 speech to Interface's research group. But getting 7,000 employees worldwide, plus customers and suppliers to begin climbing "Mount Sustainability" was no small challenge. First and foremost is that the carpet industry is a highly polluting industry, heavy in its usage of petrochemicals. But it is not so much *what* they make that is the problem, but *how* they make it. As explained in Interface's 1997 Sustainability Report:

"Our current system of industrialism developed in a different world from the one we live in today: fewer people, less material well-being, plentiful natural resources. What emerged was a highly productive, take-make-waste industrial system that assumed indefinite supplies of resources and infinite sinks in which to place our industrial wastes. Industry moves, mines, extracts, shovels, burns, wastes, pumps and disposes of four million pounds of material in order to provide one average, middle-class American family their needs for a year. In order to reduce the amount of material we take and the waste we create, we first need to analyze all of our material flow—everything that comes in and goes out. Only then can we begin to address the task at hand."

Analyzing its material flow, as well as the material flow of its suppliers, is at the heart of Interface's transformation. In presenting what has taken place over the past 10 years at Interface, we borrow from John P. Kotter, professor of leadership at Harvard Business School, who in 1995 penned "Leading Change: Why Transformation Efforts Fail" (Kotter, 1995). In it he addresses the process of leading change. He says that only leadership can blast through the many sources of corporate inertia. Only leadership can motivate the actions needed to alter behavior in any significant way. Only leadership can get change to stick, by anchoring it in the very culture of the organization.

According to Kotter, the first four steps are required to break through the hardened status quo:

1. Establish a sense of urgency
2. Create the guiding coalition

3. Develop a vision and strategy
4. Communicate the change vision

The next three steps introduce new practices:

5. Empower a broad base of people to take action
6. Generate short-term wins
7. Consolidate gains and produce even more change

The final stage grounds the changes in the corporate culture, and helps make them stick:

8. Institutionalize new approaches in the culture

### Establish a Sense of Urgency

We hear bad news about the environment every day. So how does a business leader establish a sense of urgency amidst the noise swirling around an already hot topic? Anderson first used the range of his own emotions – anger, fear, sadness, disgust, guilt, and even hope – to couch his messages. Throughout his book, *Mid-Course Correction*, and in his speeches, he speaks candidly and quite emotionally about his personal reaction to lifting the veil off of our current industrial processes.

- In the dedication to his book, he thanks “those who have shaped my new-found attitude toward Earth, its fragile ecology, and my haunting role in its devastation.”
- During his speech to the Boston interior designers, he cites the 1.2 billion pounds of material extracted from the earth so the company could produce \$800 million worth of products. He goes on to say that the number “made me want to throw up.”
- When reading Hawken’s warnings about species extinction, Anderson is struck by Hawken’s phrase, “The Death of Birth,” a phrase that Anderson admits “brought tears to my eyes the first time I read it.”

Beyond sharing his own feelings about this crusade, Anderson creates a sense of urgency by personalizing the fight. For example, rather than spouting emotionless

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facts and figures, Anderson brings his argument to any everyday level. A typical example is his 2004 speech to the Western Governors' Association North American Energy Summit (Anderson, 2004a). He talks about the need to save the biosphere that supports all of life on Earth. He then asks rhetorically, "How does one lose a biosphere?" He proceeds to paint a picture we can all relate to:

- One silted or polluted stream at a time
- One collapsing fish stock at a time
- One dying coral reef at a time
- One eroded ton of topsoil at a time
- One developed wetland at a time
- One butchered tree at a time
- One songbird at a time
- One lost habitat at a time
- One-tenth of a degree of global warming at a time
- One choking or leaching landfill at a time
- One belching smokestack or tailpipe at a time
- One depleted or polluted aquifer at a time

His audience does not need to be scientists to understand the world he is describing. Choking, belching, butchered, eroded, dying, polluted: these are powerful words that speak to ordinary people. Later on in this chapter we will talk further about Anderson's style of communication and his effectiveness at bringing so many people on board with him through his "Power of One" message. For now, we can see how his style works to ensure the first step in creating lasting change: establishing a sense of urgency.

### Create the Guiding Coalition

Early on, after reading Hawken's book, Anderson went on to devour similar books. Many of these authors, activists, and scientists went on to become friends of Anderson and later joined Interface's journey to sustainability as part of its "Eco Dream Team," a collection of experts Anderson invited to help remake Interface into a leader in sustainability. One or two meetings a year were organized to update the Dream Team on the progress Interface was making. The team would help Interface stay focused while bringing in the latest thinking in their particular area of expertise. Recently Interface engages them more on a one on one basis with particular projects they are working on.

In addition, Interface charged its R&D arm, Interface Research Corporation (IRC), with providing the intelligence for the myriad efforts toward sustainability. IRC, led by Dr. Michael Bertolucci, is now at the disposal of every Interface business unit, to create product and process solutions. IRC helps businesses examine every step of their manufacturing processes, from procurement to outbound logistics, even *inbound* logistics to feed recycling processes, analyzing and understanding the impact of each step on product quality, process efficiency, and the environment. Bertolucci is also part of Interface's eight-person management team, ensuring that sustainability issues are a constant presence at the highest levels of the company. In addition, Bertolucci chairs the Sustainability Council (made up of representatives from different business units across the globe), which is charged with "backcasting" from its 2020 goal of "zero footprint," and charting the progress made.

### Create a Vision

After establishing a sense of urgency and creating the guiding coalition (including R&D support), Anderson set out to create a vision for the company – one that would make sense to employees, suppliers, and customers. The first vision, mentioned earlier in the chapter, was expanded to offer more specifics. It now reads:

"To be the first company that, by its deeds, shows the entire industrial world what sustainability is in all its dimensions: People, process, product, place and profits — by 2020 — and in doing so we will become restorative through the power of influence."

Of course a vision is only as good as the road map for getting there. Early in the journey, Anderson and his advisors laid out an ambitious plan for climbing Mount Sustainability – the seven faces of "Mount Sustainability."

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1. Eliminate Waste – not just incrementally reducing waste but eliminating completely the concept of waste.
2. Benign Emissions – focusing on eliminating molecular waste emitted to natural systems that have negative or toxic effects.
3. Renewable Energy – reducing the energy demands of Interface processes while replacing non-renewable sources with sustainable ones.
4. Closing the Loop – redesigning Interface processes and products into cyclical material flows.
5. Resource Efficient Transportation – exploring methods to reduce the transportation molecules (products and people) in favor of moving information. This includes plant location, logistics, information technology, video conferencing, e-mail, and telecommuting.
6. Sensitivity Hookup – creating a community within and around Interface (customers, suppliers, communities) that understands the functioning of natural systems and the firm’s impact on them.
7. Redesign Commerce – focusing on the delivery of service and value instead of the delivery of material. Engaging external organizations to create policies and market incentives that encourage sustainable practices.

Interface developed this roadmap in part through its work with The Natural Step, an international non-profit advisory and research organization working to accelerate global sustainability. Founded in 1989 under the leadership of Dr. Karl-Henrik Robèrt of Sweden, The Natural Step offers a frame of reference to define the system conditions of ecological sustainability. Anderson did not simply want to “go green,” taking the superficial steps that many companies take to reduce and reuse. Rather he wanted to make a major shift in how the company worked – from linear industrial processes to cyclical ones. The Natural Step offered the rationale for making such a radical step, and defined the goal, zero footprint.

### Communicate the Vision

Interface’s enterprise transformation story, interestingly, owes its success to “a story.” Anderson understood early on that the mammoth task he was proposing could not be forced on employees. Rather, he sought to make the task something everyone would embrace. How did he accomplish this? By telling a story. In speech after speech, Anderson crystallized a story most of us know, but rarely

reflect on. “We are living on spaceship Earth,” he would say. “We have only one spaceship. It’s in trouble. We’re in this together and need each other.” Subtext: This is all there is. Once we lose this planet, there’s no going someplace else. When we talk about throwing something “away”, there is no *away*. Earth is finite, and so are her resources. Screenwriting coach Robert McKee, who consults to CEOs, believes that stories, not PowerPoint slides, are the way to engage listeners and encourage change. In a *Harvard Business Review* interview, McKee explains (McKee & Fryer, 2003):

“Essentially, a story expresses how and why life changes. It begins with a situation in which life is relatively in balance. You come to work day after day, week after week, and everything’s fine. But then there’s an event – in screenwriting, we call it the ‘inciting event’ – that throws life out of balance. You get a new job, or the boss dies of a heart attack, or a big customer threatens to leave. The story goes on to describe how, in an effort to restore balance, the protagonist’s subjective expectations crash into an uncooperative objective reality. A good storyteller describes what it’s like to deal with these opposing forces, calling on the protagonist to dig deeper, work with scarce resources, make difficult decisions, take action despite risks, and ultimately discover the truth.”

In Anderson’s story the “inciting event” is an abrupt awareness of Earth’s decline and our role in it. The opposing forces to restoring balance: ignorance, tax and trade laws that don’t reflect the real costs of goods, companies that take-make-waste, companies like Interface *if* it chooses to do nothing. His case is made: if we will not be part of the solution, we will remain part of the problem. Anderson anticipates the next logical question: “But how can we be part of the solution?” In response he presents yet another story: The “Power of One,” one person can make a difference. In this story, Anderson talks about the seven steps to climbing Mount Sustainability mentioned earlier. “It is daunting,” he explains. “It’s a mountain to climb that is higher than Everest.”

He reinforces that the company can do well by doing good, again by telling a story. He explains that the Chinese symbol for crisis is a combination of two characters: danger and opportunity. The danger is clear, and the list is limitless – the loss of the rainforests, disappearing wetlands, global warming, toxic landfills. “You want a business case for sustainability,” he asks in his book. “How about, for starters: survival?” Balancing out danger is the vision for opportunity that Anderson communicates. In his book and in speeches, Anderson reinforces that the company can do well by doing good in three ways: First, by earning customers’ goodwill, and their predisposition to work with Interface; second, by achieving resource efficiency; and third, by setting an example that other companies cannot ignore. Says Anderson: “If we do well enough through creating goodwill and

becoming resource-efficient, to the point that we are kicking tail in the marketplace, then that is the example other companies will see and want to emulate. Maybe they will become converts *and*, hopefully, customers, too.”

### Empower Others to Act on the Vision

In their quest toward sustainability, Anderson and his team introduced a process that all employees could rally around: QUEST™ (Quality Utilizing Employee Suggestions and Teamwork), a process developed by Interface. QUEST teams are active in every plant and division worldwide, helping to localize sustainability solutions. QUEST focuses mainly on waste, the “low hanging fruit” that is easier to realize than some of the other steps in the process. QUEST succeeds on a number of levels. First, “employee” is in the title, clearly communicating that employees are encouraged, expected, and empowered to be part of the waste-reduction solution. Second, QUEST is a broad mandate that can be applied at the local level, allowing employees the world over – who know their site best – to seek out opportunities to reduce waste.

In a recent interview, Anderson explained one of the many benefits of QUEST: creating standards across all sites for measuring waste.

“When you look at a manufacturing operation, you know there is going to be a certain amount of off-quality, so you build in cost allowances for these, and you have a standard cost system that allows so much expected waste and so much off-quality and so forth. Interface has manufacturing operations all over the world, and everyone had a different idea of what was standard. You couldn’t compare one operation with another without getting into the question of, ‘How did you establish your standard?’ So one day we said, ‘Let’s just measure everybody against perfection. Let’s take all the waste out of the cost, and see what our cost would be if we had no waste and no off-quality. If we did it right the first time, every time.’ We found that 10 percent of the sales dollar was going to waste, most of it allowable under the standard cost systems. During the nine years we’ve been measuring it, the elimination of waste – the savings – represents 28 percent of our operating income, and we still have 60% of it yet to go. We’ve already captured about 40%. It gets close to doubling your profit if you can eliminate waste.” (Anderson, 2004c)

Supporting QUEST is a set of suggestions for how to go about waste reduction. Practices Leading Toward Sustainability (PLETSUS) offers very specific, highly detailed directives that can be localized to the circumstances of a specific

manufacturing location or plant. PLETSUS offers directives around: people (customers, employees, suppliers, community, and management), product (design, packaging, manufacturing, marketing and purchasing), and place (facility, maintenance, landscape, and transportation).

Suggestions range from the obvious:

- Make copies on request; otherwise, route material
- Maximize use of bulletin boards
- Eliminate cover sheets on faxes

To the creative:

- Start an employee vegetable garden
- Plant a butterfly garden near an area that employees use often
- Mulch lawn clippings

To the less obvious:

- Use excess plant heat to heat offices
- Have a “dumpster diving” activity to understand the makeup of your waste stream
- Create internal “green taxes” to highlight the most profitable enterprise from total cost perspective

To the downright courageous:

- Create an atmosphere that encourages employees to question the status quo and take risks
- Provide honest information about the known environmental impacts of your company and product
- Invite customers to audit and critique your efforts

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A message of “the sky is falling, we need to do something,” simply doesn’t work if employees are not empowered to do something about the problem. In offering solutions such as QUEST and PLETSUS, and applying a very strict measuring system, employees were, and continue to be, empowered to act.

### Generate Short-term Wins

QUEST’s success in generating quick wins, plus Interface’s system for measuring environmental progress – EcoSense™, a program managed by Interface Research – allowed Interface’s efforts to push forward quickly. But as Anderson explained, it took some 50 speeches and two long years before the effort really gained traction (Anderson, 2004c). Early wins, generated through QUEST, were key to keeping the energy moving. Between 1994 and 1997, when net income totaled about \$84 million during the same period, Interface saved \$50 million in reduced materials costs, reduced energy costs, and reduced waste: hard cash that went toward paying for the rest of the “revolution.” These savings were communicated to the entire company through their first-ever Sustainability Report, published in 1997. The report shows the ever-present face of Mount Sustainability, and QUEST savings working their way up the mountain. The report then revisits all seven fronts, with each page containing a problem statement and the Interface solution, along with specific results attained by different Interface business units. By communicating real and tangible results, the report instills a bit of competition between the various business units, and continues to encourage long-term employees, while inculcating new hires to the culture of sustainability.

The Sustainability Report shows how progress occurred across all business units and was attained through creativity and innovation. This is a sampling from the report:

#### No. 1: Eliminate Waste

- *Recycling Internal Waste*
  - Guilford of Maine has an extensive recycling program, diverting from landfills 1,028 tons of waste fiber as well as over 300 tons of other materials in 1996.
  - Interface Europe has created teams to find ways to reuse or recycle 25 types of waste streams.
- *Product Change*
  - Interface Flooring Systems converted to a metric tile sizing system that reduced trim waste (20,000 square yards) and energy consumption (enough to power 140 homes).

- Interface Flooring Systems in the U.S. and Canada have reduced the standard tile backing weight by up to 15%, saving both materials and energy, and improving quality.
- *Process Change*
  - Interface Architectural Resources and Interface Flooring Systems Canada installed more efficient water chillers, reducing water use by over 65% and 40%, respectively.
  - Re:Source Americas offers seminars to train their carpet installers on practices to minimize waste.

## No.2: Benign Emissions

- *Benign Air Emissions*
  - Bentley Mills replaced their flat goods dryer with a low NOx, high-efficiency dryer, reducing NOx emissions by approximately 50%.
- *Benign Water Effluent*
  - Prince Street reduced chemicals by 40% and water consumption by 800,000 gallons per month through dye-bath water reuse.
  - Guilford of Maine built a state-of-the-art waste treatment plant to reduce water effluent by at least 50 million gallons annually.
- *Toxics Elimination*
  - Interface Europe has reduced or completely eliminated dyestuffs containing heavy metals.
  - Bentley Mills' backing facility has eliminated all four of their hazardous waste sources through substitution of cleaning agents.

## No. 3: Renewable Energy

- *Reducing Demand by Increasing Efficiency*
  - Interface Europe/Asia-Pacific achieved enormous energy savings through smart engineering design in the layout of the new facility in Shanghai. By reducing friction using large pipes and small motors, instead of small

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pipes and large motors, and laying out pipes before setting up equipment, they cut the necessary pumping power from 95 to 7 horsepower.

- Bentley Mills and Interface Europe installed high-efficiency dryers, reducing gas consumption by 25% and 30%, respectively.
- *Renewable Energy Supply*
  - Interface Flooring Systems Canada has reduced its dependence on nonrenewable fossil fuel/unit of production by 74% since 1996. It is the first customer of wind-generated, certified “Green Power” from Ontario Hydro.

### No. 4: Closing the Loop

- *In the Technosphere*
  - Interface Research is working extensively with the flooring companies to create technologies for recycling post-consumer carpet, re-extruding post-industrial PVC backing, and developing new, low-energy processes for PVC-free backing systems.
- *In the Ecosphere*
  - Interface’s ultimate vision is to create completely benign and renewable products that do not depend on nonrenewable petrochemicals, and to minimize its footprint on the Earth due to its facilities’ locations.

### No.5: Resource Efficient Transportation

- *People*
  - Interface joined the “Trees for Travel” program, which plants one tree for every 1,500 miles traveled by an Interface employee.
- *Product*
  - Interface is actively increasing the efficiency of product transportation by shipping via transcontinental rail, by locating manufacturing facilities closer to global customers, and by reducing packaging (and therefore, product weight) and material requirements.

- *Information*

- Interface is maximizing the efficiency of communication and learning through use of new information technologies. A global network of shared software, electronic messaging, and Internet access is being installed as all Interface Internet sites are updated and expanded.

No. 6: Sensitivity Hook-up

- *Employees*

- Interface Flooring Systems Canada encourages employees to take environmental conservation attitudes home by implementing a Home Energy Savings Plan and subsidizes energy conservation audits and retrofits.

- *Customers and Suppliers*

- Interface sponsors a number of events to develop strong relationships with customers and suppliers that combine concepts of “Play to Win” and sustainability. “Power of One” events focus on the environment and the power of individual action multiplied by many.

- *Community*

- Interface Research Corporation administers the Interface Environmental Foundation that funds small grants to local teachers for the education of K through 12 students in areas of environmental sustainability.

No. 7: Redesign Commerce

- *Service*

- Interface established the Evergreen™ Lease, a shift from selling a product to selling a service.

- *Business Methods*

- Environmental Management Systems are critical to the ongoing management of global operations. Interface has set a goal for each facility to become registered to a globally recognized environmental management

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system, such as ISO14001 (International Standards Organization) or BS7750 (British Standards).

- *Organizations*
  - Interface and its subsidiaries are involved in a large number of external organizations promoting social or environmental sustainability issues. The common thread in these organizations is their mission to re-invent how business conducts its affairs. Interface is drawn toward these organizations to influence their vision of sustainability and to learn best practices from others.

These results crystallize the idea of the Power of One; that every gesture matters, even one that may at first appear to be insignificant. Anderson points out, for example, that Interface realized a 1 oz per sq yard (4%) reduction in face weight across the entire product line. This may not seem like a lot, and you certainly can't miss it in the carpet, says Anderson, but the energy saved in upstream processes due to not using the nylon is enough to run the entire modular flooring factory in Lagrange, GA for two years. "This finding produced an amazing recognition of the upstream impact of our actions," says Anderson.

### Consolidate Gains and Produce Even More Change

All of the advances outlined above took place in the first four years of Interface's transformation (1994 – 1998). From there, Interface was able to consolidate gains and use the momentum to produce even more change. Eventually, QUEST and EcoSense merged to form teams with representatives from all businesses worldwide, each team with an assigned scope of investigation and implementation. The teams have created some 400 sustainability initiatives throughout the company, initiatives that reduce costs and Interface's footprint on the Earth. To date, QUEST savings are \$262M cumulative in ten years.

With the "low-hanging fruit" addressed, Interface set out to address some of the harder issues. One effort involves completely redesigning how we think of commerce. This effort gets back to one of Paul Hawken's original observations – that our current economic system does not allow markets to recognize the true cost of what they produce. A major goal of Interface, thus, is to work toward shifting taxation away from economic and social benefits – such as labor, income and investment – to detriments, including pollution, waste, and the detriment of primary resources. Interface has joined many sustainable development organizations in order to compare progress, learn from others, and influence the debate. These organizations include the President's Council on Sustainable Development (U.S.), the World Business Council for Sustainable Development,

the U.S. Green Building Council, Business for Social Responsibility, World Resources Institute, the PEW Center on Global Climate Change, and the Wildlife Habitat Council.

The Evergreen™ Lease, mentioned earlier, is one of the developments to have come out of this goal of redesigning business. The idea was to create a shift from thinking of products as *things* to thinking of products as a means to deliver a *service* to a customer. Instead of buying carpet, Interface needed to convince customers to lease it, much like one would lease a car. Interface would therefore own and maintain the carpet throughout the life of the carpet, including taking over the responsibility for the “end of life” process, which ideally would lead to Interface “closing the loop.” Later in the chapter we will talk about some of the challenges Interface encountered when trying to develop the Evergreen concept.

### Institutionalize New Approaches in the Culture

In his book, Ray Anderson talks about wanting to give employees “a higher cause,” referring to Maslow’s hierarchy of needs. “When compensation is sufficient and growth opportunity is satisfied,” he says, “people want to work for a company that makes a difference, that serves a higher cause” (Anderson, 1998, p.97). According to Interface’s online sustainability report, which has replaced the paper version, the sustainability effort has had a major impact on employees:

“We have created a global corporation made up of companies that were formerly independent, and in some cases competitors. We’ve created a common goal and language – an immediate bond between employees from distant locations. Our employees have a common sense of purpose, broader than selling a particular product. We’ve bred what we term ‘ferocious cooperation.’”

Sustainability training is a major part of Interface’s efforts to institutionalize its sustainability efforts. The company wants every associate to understand what sustainability is and what it means to Interface, as well as how they can contribute to the realization of the vision. An ongoing learning initiative called Sustainability Learning began in November 2000 when representatives of each of Interface’s key business units met with a representative of The Natural Step to develop content for the classes and redefine the Train the Trainer process. The classes use interactive exercises and easily understood metaphors to provide a basic definition of sustainability and explain the scientific concepts behind The Natural Step and how it relates to Interface’s vision. The Train the Trainer process involves preparing internal associates to lead classes in their department and/or location.

Beginning in 2001, the company moved toward online training through a program called Learn2.com. The theory is that online training gives associates

access to a variety of courses when and where it is most convenient for them, assuring that more associates have the opportunity for more training than ever before. Some of the courses available are Listening to Lead, Being a Team Player, Problem Solving and many others. Interface found that delivering training through the web expands the breadth of learning initiatives at 10% of the cost of traditional training methods. No travel or logistical expenses are incurred – thus reducing air pollution – and because associates are not required to be away from their jobs, productivity is not affected.

Another important process for cultivating a culture of sustainability is Interface's EcoSense Points System, which educates associates about sustainability and helps them discover things they can do to work sustainably. Essentially, it provides associates with a road map to sustainability and furnishes the necessary metrics for Interface to determine how sustainable it is. Interface awards EcoSense Points for those who successfully complete activities that fall within specific categories (Environmental Management Systems, Quality Management Systems, Sustainability Training, Sensitivity Hookup, Employee Safety and Education, Resource Efficient Transportation, Ecometrics, Purchasing, and Eco-efficiency). For example, associates who participate as mentors in a school with which an Interface company is partnered are awarded points under Sensitivity Hookup. The Interface facilities that are ISO 14001 certified receive points under Environmental Management Systems. EcoSense Points for each facility are forecasted each year based on the cumulative state of environmental and quality programs to date.

In addition, the related EcoSense Bonus Supplement Program is incorporated into a bonus system that gives employees financial incentives for progress on sustainability goals. For example, Interface Flooring Systems has tied hourly employees' bonuses to the annual goals set by the QUEST and EcoSense task forces. In some businesses, factory floor associates are awarded salary bonuses based on percentage QUEST savings.

## **KEY LEARNINGS/OPPORTUNITIES**

We have traced the Interface journey. We've seen how Ray Anderson and the leadership team guided Interface up "Mount Sustainability." Now we examine how these key learnings can be applied to other enterprises starting their own transformations towards creating a sustainable company.

### **Creating a Sense of Urgency**

Regardless of the industry, neither market forces nor legislation are currently enough to compel companies to significantly overhaul the way they use natural resources, or review their waste stream and impact on the environment. Yet one of the key elements of leading change is getting employees to buy in to the urgent need to go from point A to point B. Most significant enterprise transformations are

undertaken in the face of major distress, such as loss of market share, threat of competitor entry, threat of bankruptcy, etc. In the absence of a compelling profit- or even survival-based argument, getting a large organization to move towards becoming a sustainable enterprise is a major challenge. The sense of urgency needs to come from a shared understanding that it's our long-term survival that's at stake. The power of words in personalizing the fight, the power of images that evoke visions of a dying planet cannot be underestimated, and this is how Ray Anderson successfully communicated the urgency of the need.

There is a strong emotional component to the call for sustainability that has the power of rallying people around this goal. But if the rallying cry is "Let's save the Earth," it is possible to run into defeatism (what can one employee, one division, one company do?), cynicism (this is a passing fad, is it our job to save the earth?) or alarm (this is going to be a black hole where our profits go). Interface coped with these responses in ways that can be adopted by other companies. First, they emphasized that every step, each action by each employee, each division helps (the power of one); the mountain can be climbed only one step at a time. QUEST was instrumental in ensuring the participation of all employees in identifying ways to reduce the environmental impact of Interface. Second, they stayed on message year after year in a consistent way, with a clearly articulated roadmap. Third, they made sure that initial savings were visible to all, fuelling internal and external buy in. Fourth, they encouraged design and R&D to innovate with sustainability in mind. By underlining the power of influence, they gave all employees a vision bigger than the company's internal processes. As Anderson said in a recent interview, "Saving the Earth is too big. We said: 'Let's just lead the industrial world. Let's do more than be sustainable, be restorative. Do more than doing no harm. Do good.' How do you do that? It's not only through what we do, but through the power of influence" (Anderson, 2004b).

### **Value Creation – Doing Well by Doing Good**

There are several ways in which sustainability initiatives can create value for the firm.

- Reducing internal waste
- Encouraging, even stimulating, innovation
- Closing the loop so that the value of any innovation (product design, easier recycling or disassembly) can be reaped by the company
- Creating customer good will and capitalizing on productivity gains and customer goodwill to grow in the market

The specific industry or product will influence the relative value of each of these approaches. We discuss the specific challenges relating to each of these items below.

### Reducing internal waste

Interface defines waste as anything that does not add value to its customers. This includes the traditional definition of waste such as scrap and byproducts of the production process, but also non-traditional aspects like a misdirected shipment, a defective product, and an incorrect invoice. Reducing waste can be the low-hanging fruit for most companies, and an excellent way of ensuring the participation and buy-in of a large employee base early on in a sustainability initiative.

Interface set the complete elimination of waste as a goal, and developed a process called QUEST (Quality Utilizing Employee Suggestions and Teamwork) to attain it. QUEST is a process to elicit and implement employee suggestions in identifying, measuring and eliminating waste. It is reminiscent of the Quality Circles of the Total Quality Management (TQM) movement, but with zero-waste as the ultimate goal, which parallels the zero-defect concept of TQM. Is zero waste a goal that can contribute to "doing well by doing good"? For answers, we turn to our knowledge of TQM, a now well-studied, well-understood concept.

The zero-defect concept of the TQM movement was initially met by skepticism, based on arguments such as in Juran and Gryna (1980), who considered inspection versus failure costs to conclude that the most profitable approach is to allow a positive defect rate. The authors based their analysis on the concept of achieving quality by inspecting the output of an existing process. In contrast, Deming (1982) argued that defective items are a result of material and process problems, and that quality should be built into the process. According to this view, quality and cost are inversely related, so the optimal quality level is to have zero defects. In time, the second view prevailed, and TQM became a widespread practice. Due to its emphasis on employee suggestions, many TQM initiatives have resulted in product and process innovations that improve productivity, paying amply for themselves in the process and moving the firm to a new capability frontier. Hendricks and Singhal (1997) hypothesized that effective TQM implementations will improve profitability. They compared the operating performance of a sample of 463 quality award winning firms to a control sample over a 10-year period and concluded that (i) the mean change in the operating income was 107% higher, and (ii) changes in the ratios of operating income to assets, sales and employees was 20% higher in the test sample compared to the control sample.

Corbett and Klassen (2004) argue that the same skepticism that surrounded TQM in its early days surrounds sustainability initiatives today, namely that they are seen as too costly, so that the most profitable level of environmental impact

(from the firm's perspective) is positive. They argue that this view ignores the capability shift and productivity jump that can come out of sustainability initiatives due to process and product innovations, and predict that as the urgency of reducing the environmental footprint of industry grows, more and more firms will undertake serious sustainability initiatives that take them to a new capability (and profitability) frontier.

QUEST, as applied at Interface, is a good example of an employee-centered process that ends up not only paying for itself, but also generating hard cash that can fuel other sustainability initiatives. It is not the only thing a firm can do, but it is a concrete way of getting started. And it is universally applicable.

### Encouraging and Stimulating Innovation

According to Hargadon and Sutton (2000), the best innovators are “knowledge brokers” who use old ideas as raw materials to generate new ideas. These companies systematically bring ideas together from different contexts, put existing technologies to use for new applications, and borrow knowledge from one industry to innovate in another. According to the authors, the four practices of good knowledge brokers are (i) capturing new ideas, (ii) keeping ideas alive, (iii) imagining new uses for old ideas and (iv) putting promising concepts to the test.

Participating in industry forums, benchmarking across industries, collecting related products and writings, and observing users are some of the ways in which companies can capture ideas (Hargadon & Sutton, 2000). Initially, books on both sides of the sustainability debate, and later, the “Eco Dream Team” consisting of experts on various facets of sustainability, provided Interface access to the knowledge base on the topic. Interface continues to engage these experts on a project-by-project basis. It also works with a number of NGOs. Employee participation at all levels ensures that a large number of people of different backgrounds are called on to contribute ideas. As outlined earlier, this practice has resulted in a diverse set of sustainability initiatives across Interface companies.

Interface has succeeded in encouraging not only its employees, but also its suppliers and business partners to stimulate innovation by capturing existing ideas. When lead designer David Oakey of David Oakey Designs read about biomimicry for example, it changed his whole way of approaching the design process. Explains Anderson: “He sent his designers into the forest and said: ‘Go and see how nature designs floor coverings. And don’t come back with leaf designs. That’s not what I’m looking for. Come back with nature’s design principles. How does nature do it?’ It dawned on them, when you look on the forest floor you don’t see anything alike. No two sticks, no two stones, no two leaves, no two anything alike. Nature’s passion is diversity. Nature’s design principle is chaos. So they came back into the studio and they designed a carpet tile where the face design is such that no two tiles are alike. Because you can’t see where the design starts or ends, there is very little waste when laying the carpet. It has quickly become a best-selling product.”

Keeping ideas alive, especially when they are not embedded in tangible objects, and propagating them throughout the corporation is a big challenge according to Hargadon and Sutton (2000). They propose spreading information about who knows what as a powerful way of keeping ideas alive. Some steps Interface took towards this goal were to charge Interface Research Corporation with providing sustainability-related intelligence to every Interface business unit, to institute a Sustainability Council made up of representatives from different business units across the globe, to publish a Sustainability Report, and to launch the Sustainability Learning initiative.

Imagining new uses for old ideas is particularly relevant in a sustainability initiative. According to Dr. Bertolucci, “It’s not that the technologies are not taught in school, it’s how you put them together with sustainability in mind that’s not taught. It would be very easy for example to put together a machine that would cut carpet tile from a length of broadloom and do it very fast, but to do the same job with the objective of leaving zero waste is a lot more complicated. It requires a completely different concept of the design of the cutting operation than you would normally do.” According to Dr. Bertolucci, the fundamentals of how R&D thinks need to be different in a company that tries to be sustainable and competitive than in one that just tries to be competitive. This can be achieved by setting the right targets and metrics. The technologists then make the transformation themselves as they look towards the goals: They start using existing technologies differently, or adopting different technologies and ideas in an ongoing learning process. Says Dr. Bertolucci, “When we started, we weren’t really sure where the answers might be. For example, we’ve recently discovered that biomimicry has a lot of areas where the answers lie, which we didn’t know early on.”

Putting promising concepts to the test is a crucial step in innovation. Externally, Interface is willing to act as a test bed for demonstration projects of new technologies. For example, Interface is tapping methane gas from a landfill and installing a solar array. According to Thomke (2001), rapid experimentation, and failing early and often, are key to breakthrough innovation. Incremental learning in this manner is one of the characteristics of Interface’s internal R&D strategy. Says Dr. Bertolucci, “I would like people to understand that the goals can be quite lofty. For example, eliminating dependence on nonrenewable fossil fuels. That’s a very scary goal. People think it’s just not possible; it scares them to death. What people should understand is that you can approach bodacious goals one step at a time. You can start first by reducing your demand to the absolute minimum, and then look at the nature of the challenge, starting to offset it step by step. And as you do it, it becomes easier and easier.”

### Closing the Loop

To close the loop, Interface developed the Evergreen Services Agreement (ESA) concept whereby they would offer operating leases to their customers and retain

ownership of the carpet. Interface would install the carpet and reclaim it at the end of its life. For a monthly service fee, Interface would also maintain the carpet (deep professional cleaning) and selectively replace carpet tiles, guaranteeing the function and appearance of the carpet for the term of the lease. Reclaimed carpet would be reprocessed so as to divert it from landfills, where it would otherwise sit for 20,000 years (Oliva & Quinn, 2003).

Leasing is currently widespread in the U.S. when it comes to equipment. Of the \$668 billion spent by business on productive assets in 2003, \$208 billion, or 31 percent, was acquired by American businesses through leasing. In 2004, projected leasing volume is estimated at \$218 billion (ELA, 2004). The most frequent reason given is the need for equipment flexibility related to either changes in the business or protection against technological obsolescence. In response, many manufacturers offer leasing programs, and provide a wide range of services related to equipment. This allows a company to focus on its core business as opposed to managing equipment. To give but a few examples, Xerox was one of the first to offer copier leases (which included maintenance) instead of ownership. General Electric has moved from selling products (e.g. aircraft engines) to providing leases that include financing and maintenance services. Leasing is a \$10 billion business for GE today. Caterpillar also has changed its strategy to “selling miles and use” rather than selling machines (Gutowski, et al., 2001).

In addition to the conventional convenience and financial advantages of leasing, there have been recent claims that leasing is beneficial for the environment. The practice of leasing products, rather than selling them, is viewed by many as a strategy for increasing resource productivity, particularly by preventing waste generation and moving to a pattern of closed-loop materials use (Fishbein, et al., 2000). This school of thought argues that by maintaining ownership of the product, the manufacturer can successfully put in place a product recovery strategy consisting of reuse, remanufacturing, and recycling. Most argue that the greatest environmental benefits arise from closing the material loop through reuse and the “dematerialization” of products (and the economy), i.e., reducing material flows in production and consumption, while creating products and services that provide customers with the same level of performance (Robert, et al., 2002; Mont, 2003). In addition, higher efficiencies through better maintenance are seen as advantageous.

These are the arguments that led Interface to propose leasing as an environmentally friendly option. Despite the financial advantages of an operating lease, however, it never took off. The basic reason is the lack of technologies to recover the materials in used carpet. The current U.S. tax regulations for operating leases require that the lease term be at most 75% of the product’s expected lifetime. Unfortunately, there is little residual value in the product at that point because it can neither be sold on the secondary market nor can the material yet be reclaimed in a cost-effective way, regardless of the quality of the maintenance. Yet U.S. tax regulations stipulate that the cost of the lease cannot exceed 90% of the value of the product. Thus, Interface essentially needs to price the lease at a

discount. In addition, service is a small fraction of the total cost of ownership of the product for the buyer, and basic custodial services are cheap, so margins on servicing are low. Interface proposed deep cleaning services that are more expensive than the basic custodial services that most firms would choose. This is of value to Interface, since it extends the life of the product and reduces the need for replacement tiles, but not to the customer since carpet tiles are quite durable so that basic custodial services are mostly sufficient, and extending the life of the product has no value to the customer. Finally, the reverse logistics of collecting used carpet are complex and costly. This is a problem that needs to be addressed at an industry-wide level, through an industrial consortium for example, which has not happened to date.

Nevertheless, Interface took steps to improve the viability of leasing in the long run by developing a way of reclaiming the PVC backing of modular carpet tiles and using it in new products, a technology that has been commercialized. They have diverted 60M pounds of used carpets<sup>1</sup> from landfills since they began the effort. The technology to reclaim the face of the carpet does not yet exist, so it goes into energy, the step before landfilling in terms of environmentally desirable options.

The bottom line is that there must be a net economic benefit from closing the loop for leasing to take off. This benefit can then be shared between the lessor and the lessee, generating a win-win scenario. Benefits from closing the loop can come from (i) the manufacturer having easier access to existing second-hand markets; (ii) the manufacturer having the technology to recover used products in a profitable way; or (iii) the manufacturer increasing the residual value of the product in cost-effective ways through the servicing agreement. Once a critical mass of leases is reached in the market, return flows would be larger and more stable, and the reverse logistics challenges could be handled by the manufacturer or outsourced to a third party logistics provider. In addition, the manufacturer would have a strong incentive to invest in innovation to further increase recovery efficiency by redesigning products and processes.

In the case of carpet, these three conditions are not satisfied. Nevertheless closing the loop remains a sound environmental concept and Interface continues to pursue the necessary technologies. In addition, this concept has the potential to already generate value in other industries where recovery possibilities are more developed.

### Creating Customer Goodwill

If a firm can go beyond mere green-washing and show a sustained commitment to the environment, this will easily translate into customer good will. It's difficult to

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<sup>1</sup> The industry discards 4.7 billion pounds of carpet annually, of which 96% ends up in landfills (Oliva & Quinn, 2003).

know just how much business Interface has won because of its sustainability efforts, says Anderson. “There is no question that we’ve gained market share across all our businesses. Sometimes the sustainability initiative is one of many factors. Sometimes it’s the main factor. Sometimes it’s the factor that breaks the tie in our favor.” In 2001, the commercial market in the floor covering industry experienced one of its worst slumps in forty years, with commercial flooring sales down more than 15% compared to the year prior (O’Neill, 2002, 2003). In this environment, Anderson believes that customer goodwill generated by the sustainability initiative has been their salvation. He offers an example of how goodwill can work:

“One day, our Japanese sales manager called us, and said, ‘We’re about to get the order for the headquarters building of Daiwa House, a housing company in Japan that manufactures prefabricated houses.’ Because Ms. Honda had heard me speak a year ago she went back and convinced the CEO that they had to have Interface carpet tile, that it was the only company in the world they could deal with. It was a huge order, well over \$1M.”

Whether customer goodwill can be converted into increased sales depends on the sensitivity of customers to environmental issues and to the level at which the products are priced relative to competitors. The Cone/Roper Cause Related Marketing Trends Report notes that if price and quality are equal, more than three quarters of consumers are likely to switch to environmentally friendly brands (Arellano, 1999). Clearly, if sufficient productivity gains are obtained as a result of sustainability initiatives, pricing can be very competitive. Coupled with increased customer goodwill, this is a win-win situation for growing market share.

An important point here, says Anderson, is that value is perceived as a quality/price ratio from the customer’s point of view. “Quality is a very qualitative thing,” he says. “Green is becoming a qualitative aspect of quality. And people value it.” Thus customers will pay more if they value green more. But is green a sustainable trend? From a purely anecdotal perspective, Anderson believes it is. He points to the fact that in 1995 he spoke to a conference sponsored by the U.S. Green Building Council. “There were 135 people in the audience. Last year, there were 9,000 people. In addition, the LEED certification system<sup>2</sup> has been developed and applications for LEED certification are growing exponentially. And it’s an amazing phenomenon. People are not saying, ‘It costs more, let’s not do it’; they just do it. It’s the value proposition. It’s more valuable to them, even if it only

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<sup>2</sup> “The LEED (Leadership in Energy and Environmental Design) Green Building Rating System® is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. Members of the U.S. Green Building Council representing all segments of the building industry developed LEED and continue to contribute to its evolution.” ([http://www.usgbc.org/LEED/LEED\\_main.asp](http://www.usgbc.org/LEED/LEED_main.asp))

means sleeping better at night. That's part of the value equation. It's a bit like aesthetics. It's not cut and dried, like it's a pound of meat. It's so subjective, and there is so much included in this value equation."

The Interface "sustainability story," now more than 10 years in the making, has much to teach other companies wishing to take the same path. We conclude with Ray Anderson's personal insights into the process and his hopes for the future.

## **A CONVERSATION WITH RAY ANDERSON**

### **How is the sustainability transformation different than other enterprise transformations, like restructuring the business?**

Restructuring, downsizing, shutting down factories – this is very conventional, companies do it all the time. We've done it recently ourselves because of a 40% decline in the commercial segment – we went from 8,500 people to 5,000. These types of activities have a "We've got to do this *now*" quality, while sustainability is more of a "We've got to do this to survive for 20 years, 30 years" approach. It requires a much longer view. And maybe a sense of legacy, too. "What's this company going to be when it grows up? What does this company really stand for?" I don't expect any CEO thinks he or she will stand before his or her maker one day and talk about shareholder value. But the higher purpose has a huge beneficial effect, it gives a company a reason for being, it gives people working for the company something to work for, it has a galvanizing effect. If you go to any Interface factory, you'll find an amazing attitude. They know they're there for something other than just making a living.

### **Do you think that sustainability is ingrained in the company culture? Do you believe the company would continue in the same path if you decided to retire?**

I believe it's in the DNA of Interface now. My confirmation of that first occurred in 2001. We brought our top 125 managers from around the world for a three-day vision-mission-strategy exercise. Unsolicited, they were almost unanimous in saying, "This is the core value of Interface." And today, I tell you, it is an inextricable part of the brand. So if it's in the DNA and inextricably linked with the brand, it's probably safe for the foreseeable future. And the reason is, the advantage is obvious and manifest. Our QUEST teams will tell you to look at our savings; our sales people will tell you that we're winning business because of it. It is a better way to make a bigger profit and it is a new paradigm for business, "Doing well by doing good."

**Do you find competitors jumping on board with sustainability initiatives in response?**

Everybody is doing something now. We've moved an industry. Every competitor has his green effort. But I don't think there is anybody who has the broad frontal approach we've taken, who has shown the overall footprint reduction we've shown, which carries into every product we make. What you see from competitors is a green product here, and a green product there.

*Floor Focus* magazine does a survey of interior designers that goes back several years. The environment did not even appear in earlier versions, now it does. You see more and more companies appearing on the radar screen; it shows that other people are trying. So, maybe Interface is head-and-shoulders above everybody, but here is the thing: If you move the entire carpet industry worldwide, you've moved a \$21-22B industry in a \$40 trillion economy; it's a drop in the bucket. But if you attract other industries to the model, and I would dare say that Interface, a \$1B company, is having a greater impact in terms of influence than the rest of the carpet industry together, this is the transformation we really want to see – the transformation of many industries.

**Your vision is “Doing Well by Doing Good.” Has Interface done well or has the sustainability initiative come at a cost?**

It's been our salvation, through the market shrinking by approximately 40% over the last six years. We have survived. I attribute that largely to the sustainability initiative. You picture revenues in any organization declining that much, that's a recipe for going out of business. Financials, on the face of it, have been miserable. We've had a huge restructuring to deal with the shrinking marketplace; we have gone from 8,500 people to 5,000 people. Profitability is just now coming back. But there has not been one thought of turning back on this initiative. It has been too valuable to us in the marketplace. The proof is that we've survived, and there is no doubt that we've gained market share across all our businesses, though we cannot quantify it exactly because many competitors are private or subsidiaries of large companies. The resource efficiency is there and that undergirds the credibility, which translates into goodwill. Our costs are down, not up. Our products are the best they've ever been. Our people are motivated.

Customer goodwill has been an amazing fact for us. We don't know how much business we've won because of the sustainability commitment. But the goodwill is palpable. You just know it; it's there. You can capitalize on it. You ask the accountant, “Can we afford photovoltaics?” He says “No way.” You ask marketing people, “Can you sell solar made carpet?” And they say, “Bring it on.” So you ignore the accountant, you go and make the investment, and your top line benefits in ways that you never imagined from customer goodwill, and from the appeal of “solar made.” Our Bentley facility is generating enough photovoltaic

electricity to tuft about a million square yards a year of solar made carpet. The goodwill from that? It's big. It sells.

**What was the hardest part of Interface's transformation, from the perspective of preventing your vision from being realized within the company?**

People and technology. There is always the human element, keeping everybody moving, getting everybody on board. You never get everybody on board, but you need critical mass. It took years, literally. And then you come to the part of doing it and the technologies are very, very difficult; they don't yet exist in many cases, particularly technologies to close the loop. Renewable energy is expensive, so you need to justify it on the basis of market acceptance.

**What counsel would you give a CEO or manager leading a major enterprise transformation, specifically on sustainability?**

You have to deal with inertia – it's a fact of life. The way to overcome it is to get on message and stay on message, year after year after year. We've been on the message for 10 years now.

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