

ENVIRONMENTAL MANAGEMENT EXCELLENCE PROGRAM (EME)

1998 Conference Summary Report

"Implementing Profit-Driven Environmental Management"

Italian Community Center
Milwaukee, Wisconsin
April 2, 1998

Introduction

Keynote Address

Panel Discussion

Next Steps

Introduction

It is my pleasure to present to you a summary of the April 2, 1998, Environmental Management Excellence (EME) program featuring William McDonough. The Board of Directors of the Wisconsin Environmental Initiative (WEI) has made EME a priority initiative for our organization and we are excited to begin exploring the possibilities of profit-driven environmental management with business leaders of Wisconsin. This report summarizes our conference proceedings. It is my hope that you'll find it stimulating and that it motivates you to join us as we work together toward outcomes that will benefit the economy, environment and quality of life in our state.



WEI's unique approach to profit-driven environmental management emphasizes improved competitiveness in Wisconsin by integrating resource efficiency and environmental management practices into core business strategies. The EME program will continue throughout 1998 with four half-day educational sessions that will be conducted by business executives from national companies and leading institutions. This effort goes beyond standard regulatory initiatives or ISO 14000 - we are committed to advancing a new way of doing business and a new way of thinking.

Our first EME event was in October of 1997, when CEO's and senior executives from over two dozen Wisconsin companies met at the Wingspread facility in Racine to discuss how leading companies are using sustainable business practices to enhance their bottom line. A highlight of the conference was a presentation by Ray Anderson, CEO of Interface, a 1.2 billion dollar carpet manufacturer. Anderson described his very passionate and powerful commitment to make Interface the first sustainable corporation. One of his first steps was to create the QUEST program; an employee led effort that analyzed waste streams in an effort to close the loop. QUEST has saved Interface over \$50 million dollars. We also heard that

the publicly traded company has doubled revenues and tripled their stock price over the past five years--without increasing their overall environmental impact.

Over 100 people attended the opening of this year's EME session on April 2, 1998. We heard an exciting keynote address from architect William McDonough, one of the most influential practitioners of sustainable design. McDonough shared his philosophy and tangible success stories, providing compelling evidence that today's business leaders truly can enhance their bottom line by implementing environmentally sustainable design.

McDonough was joined by a panel of executives from leading Wisconsin companies including Dave Boyer from Placon, Tom Boldt from the Oscar J. Boldt Construction Company, Terry Charles from Weyerhaeuser Paper Company and Jim McBain from Case Corporation, for a thought-provoking discussion of the challenges and opportunities in moving toward profit-driven environmental management.

WEI is grateful for the leadership and financial support of the EME sponsors and panelists. Working in partnership with them, we will bring a transformative educational series to Wisconsin business that will provide the tools to truly "do well by doing good."

John Imes, Chair, Board of Directors, Wisconsin Environmental Initiative

A Summary of the Keynote Address by William McDonough

I have developed some principles that my partner and I use in our work:

Waste Equals Food. In nature, there is no such thing as waste, so the first thing we must do is eliminate the concept of waste. I am not saying we need to minimize waste; I am saying we need to eliminate the entire concept of waste.

Use Current Solar Income. Nature does not mine the past; it does not borrow from the future. It operates on current income. Most of us cannot pursue our professional lives working out of capital reserves. We have to work with current income, and so should our designs.

Respect Diversity. One size does not fit all. We are all different. Every place in the world is completely different; material flows, spiritual flows, character flows, cultural flows, energy flows all of these are different in different places. We should celebrate our differences instead of trying to make us all the same.

If Waste Equals Food, we move from linear systems to cyclical systems; from the systems of the First Industrial Revolution to the systems of the Next Industrial Revolution. If Waste Equals Food, we eliminate the concept of waste. If we eliminate the concept of waste, there is no such thing as waste, and everything becomes a product

We talk about recycling, but we do not really recycle today in the full sense of the word, we often do what I call downcycling - we reduce the quality of a material until its value is



practically nonexistent. In other words, we slow its journey to the landfill. For example, when a high quality plastic like PET is recycled it may be mixed with other plastics to produce a hybrid of much lower quality, which is then used to make park benches. The original elevated quality can never be retrieved. So what we call recycling is still working with a Cradle-to-Grave life cycle. How can you understand the concept of continuous life cycles when you see only one cycle in terms of Cradle-to-Grave?

We were asked to design a fabric for a unit of the Steelcase Corporation, the largest office furniture maker in the country. In this case we decided to create a fabric that would be an organic nutrient. Our client, Design Tex, arranged for us to work at a mill in Switzerland and when we arrived he told us our project had good timing because the trimmings of their bolts of cloth had just been declared hazardous waste by the Swiss government. You have hit the wall of the First Industrial Revolution when the edges of your product are declared hazardous waste but you can still sell what is in the middle. With eco-efficiency, people contend, My cadmium releases have been reduced and reduced, but if you look at their inflow and still see the cadmium, you realize their new worst emission may be the product itself.

Wouldn't it be nice, we told the factory's director, if the trimmings of your cloth became mulch for the local garden club? If it were an organic nutrient?

Our intelligence filters told us that if this fabric were going back to the soil safely, it had to be free of mutagens, carcinogens, heavy metals, persistent toxins, bio-accumulatives, and endocrine disrupters. Then we approached 60 chemical companies, and when we asked them to join us and put their products through this review, their response was amazing. They rejected our requests summarily. Finally, the chairman of Ciba Geigy agreed to let us in... our scientific colleagues looked at 8000 chemicals in the textile industry and eliminated 7,952. This left 38 chemicals. We created the entire fabric line with those 38 chemicals. Everything we needed dyes, auxiliaries, fixatives, etcetera came from those 38 chemicals. The fabric has won gold medals and design awards, and is a success in the marketplace. From our perspective, it has created a new standard and is causing a lot of people to rethink what they do.

And one other thing. After the fabric was in production at the factory in Switzerland, inspectors came to inspect the water coming out of the factory, and they thought their equipment was broken. They did not find the things they expected to find. So they went to the front of the factory and checked the inflow pipes. As they expected, the water going in was Swiss drinking water. Their equipment was fine. It turned out that during the manufacturing process the fabrics had zero effect on the water. When the water coming out of your factory is the same as the water going into your factory, and the water going into your factory is Swiss drinking water, that means you can cap the pipe. That means you would rather use your effluent than your influent. If you do not have anything bad coming out of your factory, there is nothing to regulate. There are no more regulations implicit in this complete redesign; in fact there are less! In this case there may be none at all. This is not eco-efficiency. This is redesign.

Regulatory structures cost a lot of money, and require the government to tax their commerce in order to get the money to set up a regulatory structure. Then, the same people the government just taxed have to spend money to set up an anti-regulatory structure to respond to the regulatory structure. Now, have we made anything yet? How are we doing on competition in world markets? What does it mean when environmental regulation all of a sudden prevents you from being in the marketplace and competing with Taiwan, Korea, and the Philippines, where their environmental regulations are not so stringent and they can make things more cheaply? What ends up happening is that commerce, which is looking for the quickest, cheapest thing, goes to Taiwan, goes to Korea, and buys chemicals and dyes because they are much less expensive than the locally produced ones. But because these cheap materials are not produced as carefully, what customers get from them is what we call Products Plus: you get the dye, plus, perhaps, PCB's, plus heavy metals, plus carcinogens, plus all of these other things you did not intend to buy but that come with the cheap product. Instead of going to someone who is working hard to be clean and good, commerce goes to companies that do not care about these things and have figured out how to compete purely on an economic basis. That is a tough economic situation.

The Dutch realized that if their industries could police themselves, the government would not have to regulate them, and they would not have to place those compliance cost burdens on their industries. They could compete in world markets. So they created the Green Plan, which asks Dutch commerce to figure out the quickest, most effective solution to environmental problems, and if commerce does not do that the government steps in to regulate. While all this was happening, the textile industry in Holland started to look around and ask, How do we do this? And suddenly, because of our redesign, here is Ciba Geigy with a package of 38 chemicals that will make any color safely. To guarantee quality, all you have to do is specify their whole package. But you must use their package exclusively, because in order to guarantee quality you cannot contaminate it with materials from some other suppliers who have not been reviewed. As a result of using this exclusive protocol, you do not need special storage rooms for hazardous waste. You do not need to file with regulatory agents for handling hazardous material. Your workers are not wearing protective equipment anymore because there is nothing to fear. Within the textile industry this little revolution starts: Wait a minute! I hear over there they are not exposing their workers to carcinogens. Why can't we do that? And the chairman of a major chemical company looks pretty smart for having taken the obvious next step in Total Quality Management

The Total Quality Management concept started a revolution in production systems and, in part, means zero defects. Just-in-time delivery means zero inventory. Zero accidents has always been a doable goal and now, with total redesign, we can have zero emissions and zero waste

Many of the early and influential ideas about current ecological architecture and design in the United States can be traced to philosopher, innovator and architect William McDonough. Internationally recognized for his architectural and industrial design contributions, McDonough is the Dean of the University of Virginia School of Architecture. In 1996, he received the Presidential Award for Sustainable Development, the nation's highest environmental award. He is the author of the Hannover Principles/Design for Sustainability, the official design guidelines for the World's Fair in the year 2000.

Profit-Driven Environmental Management Panel Discussion

- William McDonough
- Dave Boyer, President, Placon Corporation
- Tom Boldt, CEO, Oscar J. Boldt Construction Company
- Terry Charles, Utilities, Environment & Safety Manager, Weyerhaeuser Paper Company
- Jim McBain, Environment, Health & Safety Director, Case Corporation

How did your company begin moving toward profit-driven environmental management?

Dave Boyer

Five or ten years ago we started quite a revolution from the standpoint of becoming market-driven and I've come to think that that's one of the early revolutions any company may have to have in order to move toward being sustainable. We changed our mission quite a bit; we don't even say we make packaging anymore. It's not what we do... There are economic motivations for us to move toward sustainability and there are motivations that come from our hearts. We honestly believe that we should not be able to diminish the capacity of future generations to meet their needs to make a profit today. We just don't think it's the right thing to do.

Tom Boldt

Our journey in the sustainability arena as a company is very, very new. We've been involved with recycling on job sites and in seeking and striving to find ecologically friendly products

There are huge opportunities. It's estimated that 60% of the waste that goes to landfills comes from construction debris. This is an appalling set of circumstances. In new construction as well as renovation we should be finding ways to utilize these products in a more efficient way and to look at ways that can add value to these processes. Unfortunately, the intellectual filters that we currently have and the economics that we are currently working under don't really allow those types of concepts to be implemented.

Terry Charles

I started out in this business over 20 years ago in water treatment. One of the things I'd always try to do was eliminate the enormous amount of paper work, time and waste of time justifying the affluent going down the stream. I was always trying to figure out a way to reuse it so I wouldn't have to put it out the door in the first place...it's a different concept and a different way of looking at things and it actually is a better way of looking at things. Weyerhaeuser recognizes the need to change and that starts with strong leadership. The former CEO, Jack Creighton, set a strong vision for the company back in the early 90's to be the best forest products company in the world. Pretty clear, pretty aggressive. He stated to shareholders in the 1995 annual environmental report: We pledge to actively protect and enhance the environment through forestry excellence, pollution reduction and prevention, and increased conservation and recycling. Our ultimate goal is to operate sustainably without harm to the environment.

Jim McBain

In order for me to talk about or start moving in the direction of profit-driven environmental management, one of the first things I had to do was take ecologism, which can be a four-letter word in business, and move it from some specialized function that keeps somebody out of jail or the fines down to fully integrating it with the business.

What are the challenges to developing this approach?

Dave Boyer

We have to figure out what moving toward sustainable or restorative practices look like for us. The second struggle is resources. There's always a resource restriction. That means that in these early phases each project we work on has to somehow pay and provide the means for the next project. There's still a lot of other work we have to do on the commerce side of our business to keep our place and our niche, so the work on sustainability sometimes seems like it's always having to trade off with our other work. We try to be conscious of that but it means always picking very carefully where the points of high leverage are for us, not only to become more sustainable quicker but to provide the resources for the next work that we do, all along trying to change how we're thinking and getting smarter. The third struggle that I've discovered as the leader of this in our company is that there are so many other people to bring along you have to learn how to be a teacher and a learner we have to bring along our shareholders, our board members, the team members who work at our company, our customers, our suppliers. We're always trying to figure out who ought to be educated, who ought to be involved and who we need to be behind us as we make the kind of changes in the firm that often times are going to be questioned by some of the people that I just mentioned.

Tom Boldt

I think every business is in a hugely competitive arena; margins are dropping, the price reigns supreme and all the good things that one does for their employees or the things one does for the community or what they try to do for future generations, pale in comparison to the low price. When you're facing those types of challenges it's very, very difficult often times to find that particular niche - to have something that is new or different. If we can stretch and grow and try to make our environment, our lives and our relationships better, while understanding and appreciating our various talents, the challenges we face in moving toward sustainability can be fun and very, very rewarding. We are members of a consortium of companies and institutions that are working on new technologies for bleaching in the paper industry. The current technology is very environmentally unfriendly. These new technologies are very exciting. The opportunities are there but there's a five million dollar pilot plant that has to be built to find out whether the brain power of all the individuals involved using this technology really will produce something that can be used in the industry. This demonstrates some of the problems that are out there and that it does take time, it takes encouragement. In this particular case, unfortunately, it's regulations that are driving many of these things.

Jim McBain

We started working with sustainable practices and made some real headway. We're getting ahead of the curve by aligning ourselves with certain businesses and engineering groups but now we are essentially going worldwide and things are quite different in some of the

emerging economic countries our business gets extremely complicated as we try to run the same type of program around the world in places where they sometimes lack basic infrastructure.

How does environmental management affect marketing strategies and the bottom line?

Bill McDonough

For Ray Anderson for example (of Interface, a carpet manufacturer now doing business with a sustainable strategy), the change in strategy was hugely liberating. It was a very big leap of faith to say let's go for this thing and just see what happens. Well, what happened is his stock has tripled in value and his people are as wired as they get. So what's happening is that inventions are coming down the pipe, things are coming out so fast for them; their adaptations are so terrific

Dave Boyer

Our mission is to change the way our customers compete in the world in terms of helping them to find new niches And part of our mission is turning product ideas into real market advantage that's a service mission we did a lot of work on reducing our solid waste. Starting in the late 80's to early 90's, we reduced our solid waste going into landfills to less than 2% of what it was The next challenge for us was to understand how we could compete better and do the right thing by understanding what this framework of sustainability is. We began to build it into our company, we began to build it into our strategic plans. We have been working to make it very central. It fits into our vision, our values and in our strategies and goals.

Tom Boldt

One of the things that we are doing as a company is to provide value-added services to our various customerseach customer has a unique problem that they have to resolve and if we have the opportunity to be involved early on in the project we think that we can provide the greatest value to the customer

Terry Charles

Weyerhaeuser has deployed a strategy over the last few years that's really become a philosophy for usit's what we call minimum impact manufacturing. It's designed to manufacture quality products (which addresses the customer), with minimal environmental impact (which addresses our employees and communities), that provides a maximum return to our shareholders (which addresses our investors). This has been a strategy over the last few years that has rolled out into our company and out through our facilities. It's a holistic approach that uses sound science and sound economics to try to work upstream into the processes and deal with the issues and the materials we use before they become environmental problems at the end of the pipe. Our commitment to environmental excellence is our responsibility to our community, it contributes to our ability to satisfy our customers, respond to public expectations, protect our asset base and enhance our long-term financial health.

Jim McBain

You have to move in the direction of partnering with businesses and thinking about new opportunities and innovative potential if you want your sustainability message heard. Show what value you are going to add to the system while benefiting the environment show them that you are a service that can help them increase productivity, increase the products and service the ultimate customer.

Bill McDonough

I'd like to address something Tom said about the buildings and people looking for the lowest common denominator, bottom line stuff. The buildings we do, the Herman Miller building, was 10% more than a Butler building. That was a design goal, we put that in as part of the design protocol. So they could've had a metal shed and we would've added 10% to that budget. In a building that costs \$12 million it produced \$3 million of extra production. If you actually look at the dollars, you can see that the productivity is paying for the building pretty quickly and the people are happier there's a signal of the company towards its employees, their health and well-being, that is really profound. So there are other values that you're bringing to your customer than just the short-term, one-shot bottom line things; you actually can look at your bottom line even two or three years

We design around people instead of buildings. We've discovered that most people are more worried about the building than they are about people. They'll say You can't have windows that open because it'll cost more money - they might leak. Well, who do you care about? The building or the people? Basically what we've discovered in our buildings is ranges between 3 and 14% productivity increase. What this effectively translates into is that the productivity increase, in terms of the people, pays for the entire building. The cost of the building is chump change compared to the cost of people. When you work with intelligent corporations who actually monitor these kinds of things you find out that these arguments are incredibly compelling to them and allow them to compete, especially in (labor) markets like today where there's great demand the companies are finding that this is what allows them to create value to actually get people to come work for them.

What kinds of changes can businesses expect to make?

Terry Charles

We go through lots of changes. Some are more traumatic than others. My experience tells me that my role in the future will be changing to more of a champion for change and a change agent in the mill. I was a little concerned when Bill made the statement regarding eco-effectiveness versus eco-efficiency. I was hoping that all the time I spent with the management team in my mill wasn't for nothing, because it took years to make them understand how to do more with less and reduce waste My role is to try and figure out how to bridge that and orchestrate and generate enthusiasm

Bill McDonough

I'm not gainsaying eco-efficiency, I think eco-efficiency is really important but this is the way I look at it. When I left Charlottesville to come to this conference, I could've come north to Wisconsin, I could've gone south to Florida. If I found myself going a hundred miles an hour towards Florida and I'm supposed to be going to Wisconsin, it's not going to help me

to slow down to 20, I'm going to have to turn around. The eco-effectiveness idea is a natural evolution of the consciousness that eco-efficiency starts to breed

Audience Member

These aren't mutually exclusive operations. Particularly in manufacturing, you'll look at the capital investment to go to the next quantum leap forward but in the meantime you have to operate the mechanism that you have. So eco-efficiency is very important for the status quo. Things that you have in place are trying to minimize and make your bad less bad So I think that it's not one or the other or won't be for quite a long time; we have to have that weaning period to go from one to the next. The Environmental Manager's role is even more important because what that does is help to fund the next generation of effort. Every dollar you save on your production of a widget from the environmental cost accounting you can bring through now as a dollar that can be put into the R & D development for the new process for the new level. I think they work together.

Bill McDonough

Yes, especially if you think you're going the wrong direction a hundred miles an hour; you still have to slow down in order to turn around unless you're a Hollywood stunt driver you do need to slow down to turn around. But the exciting part is you're not losing your job, your job has actually just become something very exciting because what's happened is you just became a designer. That's the difference. Instead of just accepting the world the way it is and trying to be less bad, all the sudden you can start to posit creative changes

What kind of education has to happen to move forward?

Audience Member

Part of this seems to be such an educational gap. It's nice to see business people talk about ecology let's talk a little bit about the educational process that business and governments maybe need to go through, because I would put forth to you that businesses really don't see their world as having finite resources. If you can't see that and you can't see how interrelated all these things are, then its hard to take that leap could you comment on how much of what we do is going to have to be an educational process.

Bill McDonough

Now that I'm an educator at the University, there are three things I'd like to say about this. One is the fact that we've ended up having to park our kids in front of television sets while we drive around working for cars it has stultified creativity So one question would be, how do we get massive creativity cranked up? The other is that I think we have a fundamental problem with research. Research has been generated around the concept of finding the next set of problems to get more research what we haven't done is develop research around solutions rather than problems What I think will be interesting to watch in research as it transforms is to take your people and instead of starting to look for the next problem, start looking for the next solution and then look for the business opportunity inherent in taking that solution into the next zone For example, we developed a new kind of polyester we needed a product of service, wall covering fabric made with PET. PET is actually very good material, which is good news... We need to know that. That creates a whole creative flux that didn't exist in business because PET has been in question. I think what we've been able to

do now is articulate a way of dealing with PET that's ecologically intelligent. That is important news for the PET-related industries because now they can start on a positive agenda, articulating what the next tiers of PET will look like. That means that they can get into research projects that are all based on incredibly positive solutions that new PET will go out now worldwide on a very productive business level and the new technologies and the solutions that came out of that creative flux are being shared by all the companies that participated in the exercise... And so whole new opportunities show up because they actually took this creative leap into working with their people to develop an education program around the concept of get creative, find the solutions, see what opportunities exist. So from an education perspective, I think the most important thing for both the regulators and the commercial players is to find the examples of the things that are going on that are worth looking at and then finding those solutions and taking those solutions in and using them to educate.

That's what happened with the mill in Switzerland with the pipe being capped. The whole Dutch government came with their green plan and basically said how is Dutch industry going to compete in worldwide markets when we have to regulate them? our industries are going to have to figure out how to regulate themselves because we can not afford to tax them and then they have to tax themselves to anti-regulate. They're going to have to figure out how to deal with it themselves so they don't have the regulatory cost burdens. And when the industries first started to grumble, what they did was they basically pointed at the textile industries. They said look at that, the Swiss just did it & we wouldn't even have to regulate you if you did this. All of a sudden that kind of education becomes quite phenomenal.

Dave Boyer

I'd like to add an additional perspective to your question about learning. I just want to throw out the notion that when it comes to education and learning, one of the first things that everybody in this room needs to do is take the luxury of time to examine what it is that your unique purpose is, what legacy it is that you would like to leave... only each one of us can know what we need to learn next In my case at our company, the way we want to approach this education is to offer the space and the encouragement for people to do some examination go where that education path and that learning path takes them We have to change how we educate. Instead of the top down and pushing and assuming there's some standard education plan that everybody needs on this, I think we ought to encourage people to take some time to examine what their legacy is. The education is going to occur a lot more naturally with a great deal of synchronicity if we can approach it from that angle.

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The Next Steps

In cooperation with the Energy Center of Wisconsin, Godfrey & Kahn, S.C., Milwaukee School of Engineering, Promega, Rayovac, Wisconsin Department of Agriculture, Trade and Consumer Protection, Wisconsin Department of Natural Resources and Wisconsin Manufacturers and Commerce, WEI will present four EME forums on June 11 (Environmental Strategy: Using Environmental Management as a Business Lever), September 3 (Communicating the Business Value of Environmental Management), November 12 (Building an Environmental Education Program) and December 10, 1998 (Developing an Environmental Management Information System). The program is modeled after that of the Minnesota Environmental Initiative, now in its fourth successful year.

The EME program will foster improved competitiveness in Wisconsin business through the integration of resource efficiency and waste minimization into core business strategy and performance. Each half-day component of EME focuses on a different aspect of a comprehensive environmental management system and presents major innovations from the innovators themselves. Sessions are conducted by business executives from national companies and researchers from leading institutions. The on-going series format of EME provides an in-depth and comprehensive educational experience that helps turn theory into a competitive advantage reality.

We invite you to be a part of an innovative educational series that can have a positive impact on the health of our states' economy and environment by attending the EME series. For registration information call WEI at (608)280-0360.

We welcome your input. If you have suggestions for future programming or would like information on becoming a WEI member, contact WEI by phone: (608) 280-0360, email: info@wi-ei.org or write to: WEI, 16 N. Carroll St., Suite 840, Madison, WI 53703.