

*The Cradle to Cradle concept takes into account the lifecycle of all the components and materials used in products, and not just the lifecycle of the products themselves.*

# CRADLE TO CRADLE: AN ENVIRONMENTAL EVOLUTION

BY ANGELA NAHIKIAN

Although a relatively new approach, Cradle to Cradle thinking has already made a significant impact on the way products are being designed and developed. Cradle to Cradle design philosophy, and the more recent product certifications, are not only receiving acclaim on a national level, they are making their way into the international community and becoming part of the vernacular for sustainable design.

The concept of Cradle to Cradle was ignited by McDonough Braungart Design Chemistry (MBDC), a sustainable product and process design consultancy in Charlottesville, Va. MBDC introduced the Cradle to Cradle model to combine all of the aspects of sustainability into one holistic process. The goal of the Cradle to Cradle process travels in a full circle, starting off with the creation of products that are safe for both human and environmental health, and ending with the easy recovery and reuse of the materials in the products.

Steelcase's involvement in Cradle to Cradle thinking began in 1993, before it was an official protocol or certification. Designtex, a Steelcase textile company, worked with William McDonough, one of the originators of the Cradle to Cradle process, in the development of Climatex Lifecycle — the industry's first entirely compostable fabric.

Steeped in the foundation of Cradle to Cradle design and product certification is the analysis of component materials, down to the molecular level, against 19 human and environmental health criteria. In addition to materials assessment, Cradle to Cradle measures four other sustainability criteria including energy use, water stewardship, recyclability, and the manufacturer's record on social responsibility.

There is sometimes confusion regarding the difference between Leadership in Energy and Environmental Design (LEED) and Cradle to Cradle. Cradle to Cradle is not a replacement for LEED; it is a complement to the environmental standards that LEED has set. LEED emphasizes the broader building process and the building

itself, while Cradle to Cradle addresses the material characteristics of products that compose the building or occupy it. Buildings utilize a healthy percentage of energy, electricity and raw materials, and produce a significant amount of greenhouse gas emissions and waste. And, Cradle to Cradle can play an important role in dramatically reducing the environmental footprint of commercial interiors.

## GROWING GREEN

The growth of sustainable product design and Cradle to Cradle can be attributed to several critical factors. For starters, companies, designers and consumers have become more educated about the world we live in and understand that each decision we make — whether it be choosing paper or plastic bags at the supermarket, selecting fish or beef at a favorite restaurant, or riding a bike to work instead of driving — has a significant, cumulative impact on the environmental health of our planet. Awareness begets action and according to a recent *Wall Street Journal* article, "going green is the new black in 2007."<sup>1</sup>

Many designers, who create the products we use in our everyday lives, are taking the task of developing sustainable products seriously. They see this as part of their social contract and understand the importance of introducing products into the environment that will give back, not take away. Architects and designers responsible for specifying and driving demand for sustainable products play a large role in educating consumers and providing them with the tools to reduce their environmental impact.

Traditional education institutions are also taking it upon themselves to increase awareness of sustainability by making it part of their core design curriculum. They recognize its importance and the need to build expertise through education.

PRODUCT PROFILES: IF YOU KNOW OF A SUSTAINABLE PRODUCT WITH A UNIQUE STORY TO TELL, PLEASE E-MAIL [HUCALM@BNPMEDIA.COM](mailto:HUCALM@BNPMEDIA.COM)





While many manufacturers, such as Steelcase — which has worked with Cradle to Cradle concepts for nearly 15 years — are taking the initiative to create Cradle to Cradle products and incorporate environmental sustainability into their business models, there is external pressure as well. Consumers are becoming more educated on issues of sustainability and are beginning to enforce stricter environmental guidelines when it comes time to purchase products. Nearly 85 percent of Steelcase's client proposal requests have an environmental component today compared to just 40 percent two years ago.

Beyond LEED-based incentives such as rebates on property and sales tax for green buildings, legislation is driving the growth in sustainable product design. Similar to the WEEE and RoHS directives introduced in Europe in 2003 that set collection, recycling and recovery targets for all types of electrical goods, many state and local governments are working to minimize waste by creating new environmental requirements for products. Furthermore, proactive legislation is being created in order to minimize waste. At the global level, StEP was founded in 2004 in order to address the harmful effects that discarded electric and electronic devices have on the

environment. Task forces within StEP analyze existing approaches and policies for electronic waste and used electronic products and make recommendations for new policy measures to move closer to solving the e-waste problem.

#### CLEARING THE AIR

Cradle to Cradle philosophy is so critical because of the positive effects it can have on people as well as the environment. From a health perspective, it can reduce exposure to toxins, improve air and water quality and conserve precious resources necessary for our survival. From a corporate perspective, choosing Cradle to Cradle products and eliminating harmful chemicals from business and manufacturing processes provides a cleaner, less toxic environment for employees. It also reduces office worker absenteeism due to sickness or bad performance. In fact, the Center for American Progress found that green buildings reduce worker absenteeism by 15 percent<sup>2</sup>, which increases employee productivity overall.

Sustainable design is also increasingly impacting bottom-line results by winning new business and growing profitability. According to a 2006 survey on developing green buildings, 53 percent of

respondents said that their firms had secured new business as a result of their sustainability position — a 13 percent increase from 2004.

Sustainable business processes have also become a primary selling point for the attraction and retention of employees. Employers that don't follow environmentally friendly business practices run the risk of losing out on top talent. Caring about sustainability speaks to the value of a company — how it appreciates its employees and customers and what it wants its brand to stand for.

Cradle to Cradle goes beyond the creation of sustainable products to the creation of sustainable business processes and a sustainable future.+

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<sup>1</sup> "Pound by Pound, Dollar for Dollar, The Complicated Equation for Going Green" *Wall Street Journal*, April 20, 2007.

<sup>2</sup> "It's so Easy Building Green" Center for American Progress, November 3, 2005.