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2009

KNOLL

ENVIRONMENTAL,  
HEALTH

&

SAFETY

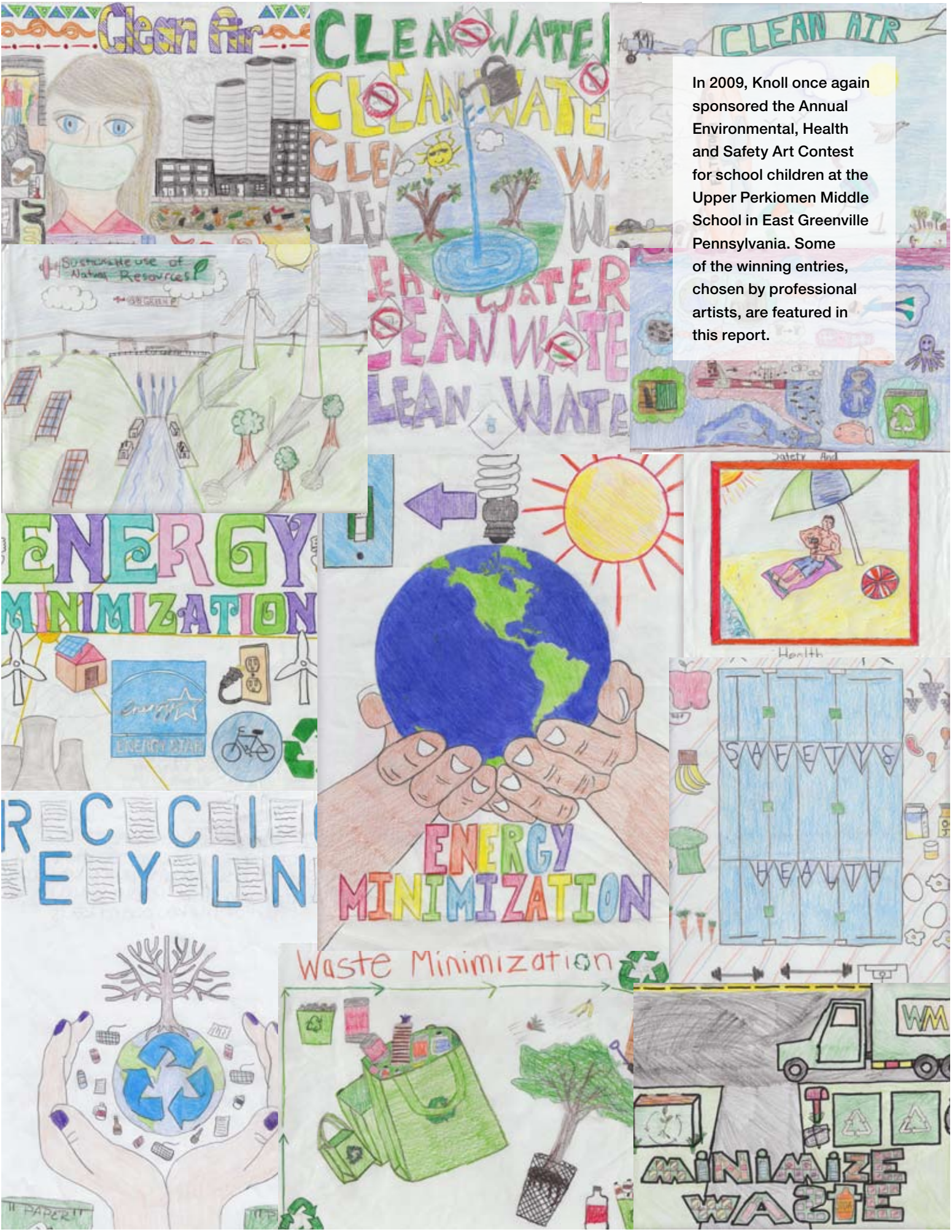
ANNUAL REPORT

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Knoll





In 2009, Knoll once again sponsored the Annual Environmental, Health and Safety Art Contest for school children at the Upper Perkiomen Middle School in East Greenville Pennsylvania. Some of the winning entries, chosen by professional artists, are featured in this report.



# CLIMATE CHANGE

## Clinton Global Initiative and Chicago Climate Exchange

### **Knoll announces the successful fulfillment of its Clinton Global Initiative commitment to reduce CO2 emissions—two years ahead of schedule.**

In 2006 Knoll became the first company in the contract furniture industry to join the Clinton Global Initiative (CGI), an international effort that brings together current and former heads of state, global CEOs, heads of foundations, major philanthropists, directors of non-governmental organizations, and prominent members of the media to devise and implement innovative solutions to some of the world's most pressing challenges. As a member of the Climate Change Working Group, Knoll made a Commitment to Action to reduce CO2 emissions at its facilities by 10% from the 1998-2001 baseline over three years and to invest at least \$1,000,000 in energy infrastructure and programs to support ongoing change. In February 2009 the company announced that it had reduced greenhouse gas emissions by 10.4% two years before the end-of-year 2010 deadline. The 8.8% reduction in

greenhouse gas emissions achieved in Phase 1 exceeded the 4% required reduction by 4.8%. The additional reduction in Phase II means that over the five-year period beginning in 2003, Knoll avoided 10.4% of expected greenhouse gas emissions compared to the baseline.

Through its participation in the Clinton Global Initiative, Knoll is a member of the Chicago Climate Exchange® (CCX) which provides methodology and auditing for the CGI. The CCX is the world's first and North America's only legally binding, rules-based trading system for greenhouse gas emissions and the world's only global system for emissions trading based on all six greenhouse gases. In 2006 Knoll signed a CCX contract in which it agreed to reduce its greenhouse gas emissions in a targeted two-phase program and to pay for energy offsets if it failed to meet its goals. Knoll used the CCX partnership to guide its climate change program, educate its sales force and associates in its manufacturing facilities, and set the standard its operations managers use to achieve the company's reduction of greenhouse gases.

*"Knoll, with its long history of environmental stewardship, continues to lead the contract furniture industry in reducing greenhouse gas emissions. Their accomplishments, under the strict and legally binding compliance standards of CCX, place them on the leading edge of companies using the exchange to manage their greenhouse gas emissions."*

— Richard L. Sandor, Chairman and CEO, Chicago Climate Exchange

"We are proud to announce these results, which stem from our close collaboration with the Chicago Climate Exchange and the strong involvement of all Knoll associates," said Andrew Cogan, CEO, Knoll. "This strong effort to reduce our impact on the environment is part of our long-standing commitment to sustainability in our products and our operations."



## Knoll a Sponsor of 2009 Clinton Global Initiative Annual Meeting. Generation by Knoll® sets the stage.

For the fourth year in a row Knoll was a sponsor of the Clinton Global Initiative Annual Meeting, held in New York the week of September 21. President Barack Obama addressed the opening session of the event, which brought together a community of global leaders to address issues of common concern, from education, energy and climate change to global health and economic empowerment. Program areas for 2009-2010 focused on achievable ways, in a time of economic downturn, to empower communities, harness innovation for development, strengthen infrastructure, develop human capital, finance a sustainable future and invest in girls and women.

In a fitting debut, Generation by Knoll® made its inaugural public appearance at the event. Generation is the first chair to be rated SMaRT® Sustainable Platinum, a certification that recognizes leadership in environmental health, energy efficiency, sustainable materials and manufacturing innovation.

To date, Knoll has made capital investments of more than \$2.7 million dollars in energy efficiency initiatives and has instituted a comprehensive Energy Management Program that includes infrastructure, protocols and procedures designed to meet continuing long-term, company-wide energy reduction goals.

### Major energy reduction activities in 2009 included:

**Air Wars** – a best practices initiative focused on increasing efficiency and reducing waste in compressed air operations at Knoll manufacturing sites. Reductions in compressed air usage and waste results in substantial energy and cost savings.

Laurence Bouchard, EHS Manager, Knoll Toronto, explains: “Compressed air is a very inefficient and expensive way to use electrical resources. It uses six times more electricity than an electrical tool to do the same job. By replacing air guns with electric screw guns, we can accomplish the same task with 1/6 the amount of energy.”

The Toronto and East Greenville sites developed air leak test devices that measure air losses and identify leaks to enable repairs that stem waste. Piping isolation valves were installed in compressed air systems to minimize compressed air piping during non-production hours, cutting the supply when it is not needed and reducing energy use.

At the Toronto facility steps were taken to eliminate inefficient use of compressed air in production areas, including replacing air guns used for cleaning (blowing off) surfaces with vacuum cleaners, brushes and pans where feasible; replacing air driven assembly hand tools with more energy-efficient battery driven electric hands tools where feasible; installing mechanically operated valves with built-in limit switches to control air flow to vacuum lifters powered with compressed air; installing isolation valves that shut off compressed air when equipment is down; and eliminating cabinet cooling with compressed air utilizing small HVAC cabinet coolers.



As a result of Air Wars initiatives, Toronto shut down a 150 HP air compressor full time, saving 419,456 Kwh and reducing CO2 emissions by 255.9 tons per year. And the East Greenville facility shut down an air compressor on weekends in the Lubin building for savings of 26,208 Kwh and 16 tons of CO2 per year.

**Intu!** – In 2009 the East Greenville Lubin fabrication building installed the Intu! wireless control energy savings system beta tested at the site in 2008. During its first year of operation the system was used to control lighting. Intu! smart nodes at every lighting position enable ballasts to be turned off and on using software commands. In addition to the environmental benefits from reduced energy use, Knoll benefited financially through participation in a power shedding program through which it sheds power at critical times and receives rebates.

Paul Nowicki, the plant manager at Lubin, says “Intu! makes lighting very flexible which is perfect for a lean manufacturing operation like ours.

Lighting can be provided at hubs of activity as needed and configurations of lights can be changed electronically as conditions on the floor change.” In the last four months of 2009, in which 25% of the system nodes were active, the company saved 75,753 Kwh of electricity and \$6,288 in energy costs (this in a year when energy prices were 15% higher than the year before due to rate hikes.) Scaled to a full year this represents over 300,000 Kwh and over \$25,000 saved per year. When all nodes are activated total savings are expected to reach \$100,000 per year.

Going forward, facility managers at the Lubin building will be testing load-shedding capabilities during lunch and breaks; applying day lighting via the wireless network; testing optic sensor control of lighting; and testing on-off relays for HVAC equipment. •



Our Lubin Manufacturing Facility in East Greenville, PA, is LEED Gold certified under the Existing Building pilot program and an OSHA VPP Star site.

# ENVIRONMENTALLY RESPONSIBLE MATERIALS, PRODUCTS AND PROCESSES

Four Knoll Products Receive SMaRT<sup>®</sup>  
Certification in 2009

**Certified Sustainable to the Triple Bottom Line: Good for the Environment, the Economy and Social Equity.**

It doesn't get any smarter. SMaRT<sup>®</sup> (Sustainable Materials Rating Technology) from MTS (Market Transformation to Sustainability) is the most comprehensive, stringent and widely adopted product sustainability standard. Knoll is far ahead of others in the industry in developing products to meet SMaRT<sup>®</sup> criteria and its rigorous auditing requirements. The first contract furniture manufacturer to achieve SMaRT<sup>®</sup> with the Life<sup>®</sup> chair in 2007, Knoll continues to add new products to the roster.



# SMaRT<sup>®</sup>

To achieve SMaRT<sup>®</sup> Sustainable Product Certification at any level, products must achieve 14 prerequisite points and score a minimum of 28 out of a possible 162 points in the following areas covering all product stages across the global supply chain:

- ▶ Safe for Public Health & Environment
- ▶ Renewable Energy & Energy Reduction
- ▶ Bio-based or Recycled Materials
- ▶ Facility or Company Requirements
- ▶ Reclamation, Sustainable Reuse & End of Life Management
- ▶ Innovation in Manufacturing

Under these areas, product manufacturers *are required to*:

- ▶ Provide Feedstock Inventory Documentation
- ▶ Document the Input and Output of Stockholm Chemicals
- ▶ Maintain a Manufacturing Facility Energy Inventory
- ▶ Keep an Inventory of all Bio-based and Recycled Content Materials
- ▶ Have EMS Environmental Policies and Targets
- ▶ Have Social Indicator Reporting for Manufacturers (working conditions)
- ▶ Use ISO Life Cycle Assessment Process
- ▶ Have Operational Reclamation and/or Sustainable Reuse Programs
- ▶ Have Product Performance Durability (long lasting products)

## Generation by Knoll<sup>®</sup> is the first task chair to earn SMaRT<sup>®</sup> Sustainable Platinum

Manufactured primarily from a high-performance elastomer, the exceptionally flexible and responsive Generation chair contains high recycled and recyclable content materials; is free of volatile organic compound (VOC) emissions; is polyvinyl chloride (PVC) free; is available with sustainable upholstery fabric options; is constructed using minimal materials; and is manufactured using clean technologies in a LEED<sup>®</sup> Gold, ISO 14001 certified building in East Greenville, PA, which is also an OSHA VPP Star site.

**To achieve the Sustainable Platinum rating, the Generation by Knoll<sup>®</sup> chair earned 91 points:**

- + 30 points: Safe for Public Health & Environment**  
GREENGUARD Children & Schools<sup>SM</sup> certified
- + 30 points: Renewable Energy & Energy Reduction**  
Lubin Manufacturing Facility offsets 100% of electricity used at site with wind energy
- + 7 points: Bio-based or Recycled Materials**  
25%+ Recycled Content
- + 15 points: Facility or Company Requirements**  
Completed ISO Life Cycle Assessment
- + 4 points: Reclamation, Reuse & End of Life**  
Extended product life
- + 5 points: Innovation in Manufacturing**  
Dematerialization



### *Generation by Knoll<sup>®</sup> at Greenbuild<sup>®</sup> 2009*

Generation by Knoll<sup>®</sup> took the expo floor as part of the “I’m SMaRT<sup>®</sup> Ask Me Why” campaign at the U.S. Green Building Council’s 2009 Greenbuild International Conference and Expo. Launched in 2002, Greenbuild is the world’s largest conference and expo dedicated to green building. The 2009 event, held in Phoenix from November 11-13, brought together manufacturers, customers, advocates for the environment and design professionals for educational sessions, green building tours and networking events. Knoll joined a select group of sustainability leaders including Philips, Forbo Flooring, Milliken Contract, Eaton and the Alliance for Sustainable Built Environments in the SMaRT<sup>®</sup> campaign.

## Knoll Moment™, Template™ and Calibre® earn SMaRT® Sustainable Gold

### Knoll Moment Chair

Moment, a streamlined, elegant side chair is the third product in the furniture industry to earn SMaRT® Sustainable Product Certification. The Moment chair contains high recycled and recyclable content; is constructed using minimal materials; is manufactured using clean technologies in a LEED Gold, ISO 14001 certified building in East Greenville, PA, which is also an OSHA VPP Star site; is finished using a powder coat paint process that is 99% Volatile Organic Compound (VOC) free; and is plated using a trivalent chrome process, an environmentally conscious way to achieve chrome finish.

To earn a Sustainable Gold rating, the Knoll Moment chair earned 89 points:

- + 30 points: Safe for Public Health & Environment**  
GREENGUARD Indoor Air Quality Certified®  
GREENGUARD Children & SchoolsSM certified
- + 30 points: Renewable Energy & Energy Reduction**  
Lubin Manufacturing Facility offsets 100% of electricity used at site with wind energy
- + 10 points: Bio-based or Recycled Materials**  
40%+ Recycled Content
- + 15 points: Facility or Company Requirements**  
Completed ISO Life Cycle Assessment
- + 4 points: Reclamation, Reuse & End of Life**

### Knoll Calibre Files and Storage

Calibre includes a range of storage solutions, from lateral files to architectural towers and hybrid cabinets, that organize, customize and personalize the officeplace. The fifth product in the furniture industry to earn SMaRT® Sustainable Product Certification, Calibre includes wood components with FSC-certified materials; has a powdercoat on steel finish that is virtually Volatile Organic Compounds (VOC) free; is available with 100% recycled content fabric; contains 100% recycled content particleboard; and is manufactured using clean technology in an ISO 14001 certified facility in Muskegon, MI.

To achieve the Sustainable Gold rating, the Knoll Calibre Files and Storage earned 72 points:

- + 18 points: Safe for Public Health & Environment**  
GREENGUARD Indoor Air Quality Certified® and GREENGUARD Children & SchoolsSM certified
- + 28 points: Renewable Energy & Energy Reduction**  
Lubin Manufacturing Facility offsets 100% of electricity used at site with wind energy
- + 7 points: Bio-based or Recycled Materials**  
20%+ Recycled Content
- + 15 points: Facility or Company Requirements**  
Completed ISO Life Cycle Assessment
- + 4 points: Reclamation, Reuse & End of Life**



Moment





### Knoll Template Storage System

Template is a rugged, diverse system of storage options for open plan and private offices. The sixth product in the furniture industry to earn SMA<sup>RT</sup>® Sustainable Product Certification, it includes wood components with FSC-certified materials; has a powdercoat on steel finish that is virtually Volatile Organic Compounds (VOC) free; is available with 100% recycled content fabric; contains 100% recycled content particleboard; and is manufactured using clean technology in an ISO 14001 certified building in Muskegon, MI.

**To earn a Sustainable Gold rating, the Knoll Template Storage System earned 69 points:**

- + 18 points: Safe for Public Health & Environment**  
GREENGUARD Indoor Air Quality Certified®
- + 28 points: Renewable Energy & Energy Reduction**  
Muskegon Manufacturing Facility utilizes suppliers that must meet stringent energy efficiency guidelines
- + 6 points: Bio-based or Recycled Materials**  
20%+ Recycled Content
- + 13 points: Facility or Company Requirements**  
Completed ISO Life Cycle Assessment
- + 4 points: Reclamation, Reuse & End of Life**



Left: Template  
Bottom: Calibre



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## KnollTextiles Focuses on Recycled Fibers in 2009

KnollTextiles added 13 new environmental fabrics to its collections in 2009, including 11 made with recycled materials, and reformulated its popular *Ultrasuede* line to enhance its sustainability.

Introductions included three fabrics from the *State of Matter* Collection by Suzanne Tick: *Earthworks* and *Biota* made of 100% recycled polyester; and *Photon*, which contains 50% recycled poly content. Four STI wallcoverings containing 58-64% recycled poly also made their debut: *Triose*, *Gravity*, *Candela* and *Cosma*.

Other introductions included *Parasol* and *Sandpiper*, which are made of 100% recycled poly and *Sahara*, *Fairway* and *Nematic*, which contain between 49 and 64% recycled poly fiber content. Two new Eco-Intelligent fabrics were added: *Bocce*, made of 100% Eco-Intelligent Poly, and *Cat's Cradle*, which contains 56% Eco-Intelligent Polyester\* and 35% post-industrial recycled poly.

Two fabrics made of natural fibers joined the array of new environmental options: *Plain Linen*, woven of 97% linen ground cloth; and *Cornaro*, woven of 75% pure new wool and 20% silk.

With its tech-savvy 2009 makeover, *Ultrasuede*, which has been exclusively offered to the contract market by KnollTextiles since 2006, is now being made with 80% post-industrial recycled microfiber from a film processing plant that makes film used in products such as plasma screen TVs. A new production process reduces energy consumption and CO2 emissions by an average of 80%. Twelve new *Ultrasuede* colors were added, bringing the total number to 118.



Cat's Cradle, Biota

### Eco-Intelligent® Polyester

Eco-Intelligent® Polyester fabrics are produced and dyed with environmentally safe ingredients including a catalyst that replaces the heavy metal, antimony, a known carcinogen. The fiber is a "technical nutrient" designed to be safely recycled into new fabric with no hazardous by-products. It is Cradle-to-Cradle certified by MBDC (McDonough Braungart Design Chemistry) and GREENGUARD Indoor Air Quality® certified.

### Green Bar

More than one half of all KnollTextiles patterns introduced in 2009, including all those discussed above, are designated "Green Bar," indicating they contain at least 49% recycled content, at least 75% rapidly renewable material (natural fiber), or Eco-Intelligent fiber. Green Bar fabrics can help companies, healthcare organizations and educational institutions achieve LEED certification.

### Terratex®

In 2009 KnollTextiles continued to feature Terratex fabrics in its collection. Textiles bearing the Terratex mark are available with 100% recycled content fabric and all Terratex fabrics are certified Green-e, which means that 100% of the electricity used to make those products is matched by Green-e certified renewable energy certificates that support clean wind energy.

### Crypton Green

With the 2009 introduction of *Sandpiper*, KnollTextiles expanded its collection of Crypton Green fabrics, which combine post-consumer recycled polyester fibers with an optimized chemistry for reduced environmental and indoor air quality impact. The Crypton Green formula provides moisture, stain, odor and bacteria resistance with low VOC emissions.

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## Design for the Environment: It's in Our DNA

Knoll has been able to achieve leadership in sustainable products because we have painstakingly built the infrastructure to make it happen. We have encoded sustainable materials, protocols and processes into our genetic material. In 2009 we made significant efforts in four important areas.

### 1. New Product Commercialization Process (NPCP) Incorporates SMaRT® Criteria

You can't make the journey without a road map and this is ours. Our NPCP lays out a process map for product development and rules for solving problems along the way. We have now made it a more sustainable process by embedding stringent SMaRT® criteria. A robust database governs the process. *Products in development must meet targeted environmental standards before they can proceed to the next step.* These include standards relating to materials (e.g. PVC cannot be used), material content (e.g. minimum recycled content must be achieved) and processes (e.g. only trivalent chrome plating, which is much more environmentally

and operator friendly than hexivalent plating, is permitted). When a new parts vendor is used, Knoll requires documentation of practices backed by a third-party audit. When new materials are sourced, suppliers must provide documentation of sources and of post-consumer and post-industrial recycled contents.

"When we started this process nobody was talking about this stuff," says Charles Lieb, Knoll Vice President, Product Development. "Now we have many suppliers who recognize our values and agree to support them. It's become easier. We're not talking to people who are ignorant of the issues or don't want to play our game. We approach every product with an eye toward SMaRT® requirements to ensure that if we want to pursue SMaRT® certification we can."

### 2. Engineering Change System (ECS) Revamped to Flag Environmental Data

The Engineering Change System is a workflow methodology that provides notification and approval of materials, parts, processes, prices and a range of other system data that may change over time. In 2009 Knoll revamped the process to include environmental data. Now ECS enables all parties involved with changes in products or suppliers that affect environmental compliance to be notified and involved. For example, if Knoll purchasing wishes to add a back-up supplier for parts on a LEED-compliant chair, the Site Environmental Manager must be given appropriate documentation and approve the addition of the new supplier to the infrastructure. "A Lotus Notes-based system handles the work flow required to move from an engineering change request to an engineering change notice," explains Cynthia Boscia, MS, PMP Business Consultant, Knoll Inc. "It requires the attachment of documents and EHS approvals to ensure that environmental standards are maintained. If we have a new supplier, we must vet. If we have a new part, we must test. And the system now includes a LEED tab so we spell out the LEED information for all parts. Lou Newett, the Manager of EHS drove these



## What is Energy from Waste (EfW)?

EfW is a greener alternative to energy from coal and oil. It is classified as "renewable" by the U.S. Department of Energy, the Energy Policy Act of 2006 and 23 U.S. states. The EPA has stated that EfW produces electricity "with less environmental impact than almost any other source of electricity."

EfW takes solid waste and transfers it to combustion chambers where it is burned at high temperatures. The heat generated from combustion heats water in the steel tubes that form the walls of the combustion chamber, turning the water to steam that generates electricity. Mercury waste contained in lamps and CRT's are separated and sent to a recycling facility. Trace amounts of PVC/vinyl waste is combusted in a high tech process that uses scrubbers to remove toxic gas emissions, preventing them from entering the atmosphere.

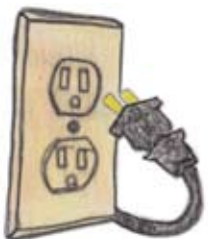
It is estimated that existing EfW facilities prevent 30 million tons of carbon dioxide from entering the atmosphere every year. Combusting one ton of waster in an EfW facility prevents the equivalent of one ton of CO<sub>2</sub> from entering the atmosphere.

changes, but in the end we have something that's not only good for EHS, it's good for everyone."

### 3. Life Cycle Assessment (LCA) Process Advances

In 2009 Knoll continued to perform LCAs on its products using the on-line *openLCA* tool developed by Andreas Ciroth, PhD, of GreenDeltaTC in Berlin. Knoll East Greenville Environmental Manager, Chris Marozzi, became one of a select group of just 39 LCA practitioners nationwide to be awarded accreditation as an LCA Certified Professional (LCACP) by the American Center for Life Cycle Assessment.

During 2009 the company created a program to measure and analyze Gate-to-Gate metrics (those relating to the internal product manufacturing phase) in order to assess energy consumed in making a given product. These energy metrics will be incorporated into product LCAs to produce a more robust analysis. Knoll Energy Manager, Barry Bach, is creating the methodology for following a product through every step of its production, as well as an ISO procedure for how to do an embodied energy analysis. "These flow charts enable you to do activity-based costing when you're making decisions about products," he says. "Once you have built enough LCAs, you can look at new products in development and see the energy used and the environmental impact at each step. So before a product gets approved for manufacture we can assess its energy costs and raise a red flag if it doesn't meet sustainability standards."



CB3 Ottomans



### 4. Education and Training in Sustainable Practices Shared with the Industry

In 2009 Knoll continued to make education and training important components of its Design for Environment strategy. Lou Newett, Knoll Manager of EHS, conducted Life Cycle Assessment (LCA) training for Knoll associates in Los Angeles, Pittsburgh, Detroit and other cities. He conducted education sessions on the new ECS Process for Knoll associates in manufacturing facilities. And he provided training on the new FSC Standard for Knoll wood products, via a webinar, for Knoll A&D managers, sales representatives and dealers.

Outside the company, Newett's unmatched knowledge of sustainable principles and practices in the contract furniture industry put him in great demand as a speaker and participant in conferences and panels and in educational presentations to corporate clients and leading design firms. He played a leading role in more than 25 such events during the year. In 2009 Newett was joined in education and training efforts by other sustainability "champions" within the company. Among them is Kathleen Neary, Knoll A&D Manager in L.A.

Neary, a LEED AP, conducted sustainability training for major A&D firms in Southern California, from Santa Barbara to San Diego. She has been trained and is in the process of conducting Continuing Education Units (CEU) sessions on: GREENGUARD, GREENGUARD for Healthcare and GREENGUARD for K-12 Schools, FSC, LCA, LEED, SMaRT®, CCX and BIFMA Level. Acknowledging that she is "a green advocate from a green state," Neary is confident that education in sustainability is

having the desired effect. "I believe that in the future material content will be required on product labels, just as nutrition information is required on food," she says. "What is now LEED will all be code."

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## Knoll Closes the Loop with Integrated Sustainable Solutions for Product Life-After-Life

Full Circle is the first program in the contract furniture industry to provide comprehensive, integrated services for surplus furniture, fixtures and equipment (FF&E): reselling, repurposing, recycling and avoiding landfill through Energy-from-Waste conversion.

Knoll developed the program in partnership with ANEW, a non-profit organization dedicated to extending the life cycle of FF&E in an economically, socially and environmentally responsible way. ANEW will deliver Full Circle through alliances with InstallNET, a company with more than 250 independent quality furniture installers across the U.S. and Canada, and Covanta Energy, which owns and/or operates more than 40 Energy-from-Waste facilities in the U.S. that produce clean, renewable energy and recycle metals. Knoll conducted the research, formed the ANEW partnership and developed program protocols in 2009. Full Circle will roll out with pilot projects in 2010.

### The Hard Facts

- ▶ Not all surplus furniture has resale value and much of it ends up in landfills.
- ▶ Certain materials become toxic as they break down over time and these toxins can enter the water supply, creating health hazards for humans, animals and the environment.
- ▶ Methane gas from organic materials (such as wood) in landfills can contribute to climate change.



### What our Research Showed

- ▶ Existing take-back programs are typically specific to a select group of new products and, in many cases, require shipping products or components long distances for recycling.
- ▶ A few competitors identify reuse options, but only for their own products.
- ▶ Some companies have landfill conservations programs, but only for their own facilities, not their client's projects.
- ▶ Customers are interested in more sustainable ways to dispose of surplus FF&E but they would like a process that includes a wide array of interior furnishings, offers options and manages the logistics.
- ▶ There are third parties out there who handle individual parts of the surplus management process: private resellers, re-furbishers and recyclers as well as non-profit organizations that find new homes for surplus products. But until Full Circle, no program existed for coordinating the activities of these parties to achieve a comprehensive sustainable solution.

Bob Stoudt conducted the research for Knoll. He explains, "We started out looking for ways to take back all the furniture in our entire product line. We looked at recyclers for various kinds of materials and calculated the financial and environmental costs of moving products long distances for recycling. We investigated auto shredders and national solid waste management companies and considered material separation and trucking costs. None of these proved viable as truly sustainable options. Then we checked out the network of people who identify places to donate products and found ANEW. Finally, it was when we talked to manufacturers in the carpet industry and learned about energy from waste technology that the whole thing came together."



Knoll brought ANEW with its InstallNET alliance together with Covanta Energy and the loop was closed. The process had come full circle. This is how it works:

**ANEW, working in collaboration with the Knoll dealer, develops a Full Circle Decommissioning Strategy for a customer's surplus based on the customer's objectives and the following services:**

- ▶ **Resale** – Sell usable FF&E to capture financial value for the customer, either as a profit or to help offset the costs of FF&E removal, recycling and/or transportation to an Energy to Waste facility.
- ▶ **Repurpose** – Donate usable FF&E to local non-profits for social equity in the community and the tax benefits of donating to a 501<sup>c</sup>(3) organization (ANEW.)
- ▶ **Recycle** – Recycle FF&E that has no resale or repurpose value.
- ▶ **Recover Energy** – Convert waste to clean energy, diverting from landfill anything that cannot be recycled.
- ▶ **Report** – ANEW reports to the customer including documentation for use toward LEED Certification. (Various aspects of the Full Circle program, including donation and recycling, can earn the LEED Material Resources, Construction Waste Management credits.)

**Full Circle is a total solution:**

- ▶ Applicable to projects of all sizes
- ▶ Addresses Knoll and non-Knoll furnishings
- ▶ Encompasses furniture, fixtures and equipment: everything from telephone and HVAC systems to carpeting and elevators.

Look for details as Full Circle is introduced in the first quarter of 2010. •

## ANEW: A Home-Grown, Design Industry Creation

ANEW was founded in 2005 by Rose Tourje, an interior architect and former V.P. of Planning and Design for Warner Bros. Corporate Real Estate. She was driven by a vision. "I had been contributing to unnecessary waste most of my career by assuming others were acting responsibly," she says. "But the defining moment came when I observed useable furnishings being tossed from a five-story office building window. The need for action became clear. The focus was to change social behavior in the area of surplus liquidation, bringing together a cohesive set of services that met economic, social and environmental corporate needs." Lila Grant, also an interior architect with decades of experience at major A&D firms, joined Tourje in 2007 and is now Executive Director of the non-profit organization. "ANEW struck a chord," she explains. "Rose had figured it out."

Tourje and Grant took their first-hand knowledge as professionals in the industry and applied it to this new venture. It quickly caught on with corporate end users, designers, dealers and movers. They formed an alliance with InstallNET, a national furniture installation company, to handle the physical logistics. Repurposing is ANEW's first priority, with diversion from landfill its goal. But even after these efforts, a significant amount of material still ended up in landfill. The final piece of the puzzle was missing until Tourje was introduced to Lou Newett of Knoll. He saw the future in clean, renewable energy and teamed ANEW with Covanta Energy. "This piece from Lou is brilliant," Tourje says. "It completes the cycle by diverting from landfill to create energy from waste."

With the introduction of Full Circle in 2010, the ANEW principals have started a movement. "At ANEW we're doing what's right with what's left<sup>®</sup> and together with Knoll, we're shaping the future. It's all about education." Tourje says.

# THIRD PARTY CERTIFICATION

## Knoll Toronto showroom earns Platinum and Plaudits

**The Knoll Toronto showroom is the first project in Canada's cultural and financial capital to receive a LEED®-CI Platinum rating.**

The new 10,500 square foot showroom and office space is located in Liberty Village, a former manufacturing area that is now a vibrant live/work community revitalized as part of Toronto's master plan. The 100-year old building was completely gutted and renovated. The expanded space provides new opportunity to show the full breadth of Knoll product in display and at work, and accommodates Knoll staff and visitors in comfort and style. Its high profile as a LEED Platinum project enables it to model sustainable practices for the local design community.

*"LEED in Canada is a very big thing and in Toronto among the design community it is especially important. This showroom makes a real statement about how committed Knoll is to sustainability. Design firms and customers are coming to us to see how we did it. It gives us the chance to talk about our values and decades-old history of sustainability as well as our products."*  
— Greg Rapier, Toronto Regional Manager

**The Knoll Toronto LEED-CI Platinum certification was awarded by the Canada Green Building Council (CaGBC) for achievements that include the following:**

### **Sustainable Sites**

- ▶ 100% of parking underground
- ▶ Site located within residential zone with at least 12 basic services within 800 meters
- ▶ Site located within required proximity to mass transit
- ▶ Project provides reserved bike storage and shower/changing room facilities

### **Water Efficiency**

- ▶ Project has reduced potable water use by 32.7%

### **Energy and Atmosphere**

- ▶ Lighting power density reduced by 28.3%
- ▶ Project provides appropriate zoning and controls and equipment efficiency
- ▶ Energy Star rated equipment
- ▶ Project used Enhanced Commissioning agent
- ▶ Sub-metering equipment provided to measure electrical consumption
- ▶ 100% of tenant electricity offset for 2 years by purchase of Renewable Energy Certificates



## Materials and Resources

- ▶ Project recycles paper, cardboard, metal, glass and plastics
- ▶ Project diverted over 92% of on-site construction waste from landfills (for reuse or recycling)
- ▶ 31.45% of total building materials and furniture have combined pre-consumer and post-consumer recycled content
- ▶ 82.25% of all materials manufactured regionally
- ▶ 29.08% of materials manufactured and extracted regionally
- ▶ 80.28% of total wood-based building materials from FSC®-certified forests

## Indoor Environmental Quality

- ▶ Building and project meet ASHRAE 62.1-2004 requirements + increased breathing zones of outdoor air by at least 30% above minimum
- ▶ Project minimizes exposure to environmental tobacco smoke
- ▶ Project uses outdoor air delivery and monitoring
- ▶ Indoor air quality tests completed before occupancy
- ▶ All adhesives and sealants comply with VOC limits of South Coast Air Quality Management District#1168

- ▶ All paints and coatings comply with VOC limits of Green Seal Standard GS-11
- ▶ All carpet meets CRI Green Label Plus program requirements for low VOC emissions
- ▶ No composite wood or laminate adhesives contain added urea-formaldehyde resins
- ▶ Office casegoods and seating GREENGUARD™ certified
- ▶ 100% of occupants can make adjustments to suit individual tasks and lighting preferences
- ▶ 50% of occupants have access to temperature and ventilation controls
- ▶ 95.4% of all regularly occupied seated spaces have direct line of sight to outside views

## Innovation and Design Process

- ▶ Regionally manufactured materials
- ▶ Recycled content in materials and furniture
- ▶ Electricity offsets by Renewable Energy Certificated
- ▶ LEED AP design team member



Knoll Toronto showroom



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## Three Knoll Showrooms Earn LEED-CI Gold in 2009

### Knoll Washington D.C. Sets the Gold Standard

The Knoll Washington D.C. showroom and offices occupy the second floor of a new LEED-NC Gold certified office building designed by Hickok Cole Architects. The spacious 12,000 square foot space includes an angled overhang above the lobby that allows products to be seen from the street and, at night, creates a spectacular display. The new showroom provides enhanced resources for the design community, showcases the full range of workplace and residential products from Knoll, and puts a spotlight on the company's leadership in sustainability.



Knoll Washington D.C. showroom

**The Knoll Washington D.C. showroom earned USGBC LEED-CI Gold certification for achievements that include the following:**

#### Sustainable Sites

- ▶ 100% of parking is underground
- ▶ Site has a vegetated roof covering 53.75% of its area
- ▶ Site reduces potable water by 100%
- ▶ Site within a residential district and half mile of at least 10 basic services
- ▶ Site located within half mile of rail lines and quarter mile of bus routes
- ▶ Project provides bike storage and changing room facilities

#### Water Efficiency

- ▶ Project has reduced potable water use 50.94% below Energy Policy Act of 1992

#### Energy and Atmosphere

- ▶ Lighting power density reduced to 25.00% below ASHRAE/IESNA Standard 90.1-2004
- ▶ Every solar exposure has a separate HVAC zone and all offices and specialty occupancies have active controls
- ▶ 89.7% of tenant electricity offset for 2 years by purchase of Renewable Energy Certificates

#### Materials and Resources

- ▶ Project recycles paper, cardboard, metal, glass and plastics
- ▶ Project diverted 70.01% of on-site construction waste from landfills (for reuse or recycling)
- ▶ 21.48% of total building materials and furniture have combined pre-consumer and post-consumer recycled content
- ▶ 62.27% of total building materials and furniture manufactured within 500 miles of project site
- ▶ 58.06% of total wood-based building materials from FSC-certified forests

#### Indoor Environmental Quality

- ▶ Building and project meet ASHRAE 62.1-2004 requirements + increased breathing zones of outdoor air by at least 30% above minimum
- ▶ Project minimizes exposure to environmental tobacco smoke
- ▶ CO2 sensors installed in every densely occupied space
- ▶ All adhesives and sealants comply with VOC limits of South Coast Air Quality Management District#1168
- ▶ All paints and coatings comply with VOC limits of Green Seal Standard GS-11



- ▶ All carpet meets CRI Green Label Plus program requirements for low VOC emissions
- ▶ No composite wood or laminate adhesives contain added urea-formaldehyde resins
- ▶ All office casegoods and seating meet GREENGUARD or BIFMA standards for emissions
- ▶ 100% of occupants can make adjustments to suit individual tasks and lighting preferences
- ▶ At least 50% of occupants can make adjustments to air temperature to suit individual preferences
- ▶ Monitoring system and corrective process in place to ensure occupant thermal comfort

#### **Innovation and Design Process**

- ▶ Knoll space utilizes green housekeeping to limit use of harsh chemicals
- ▶ Exemplary performance in water use reduction over the 40% threshold
- ▶ Exemplary performance for alternative transportation: public transit access



## Envision

Knoll partnered with Envision, an award winning environmental design practice, on all four 2009 LEED-accredited showroom projects. The collaboration is based on shared values. Envision, named 2009 Firm of the Year by the National Capitol Region of the USGBC, was founded 11 years ago as an environmentally-based company specializing in sustainable interiors. All designers on staff are required to hold LEED AP certification. “We don’t have a green team or a green focus,” Envision designer Michele LeTourneur says. “It’s what all of us do all the time.” Commenting on Knoll’s 2009 LEED achievements, she explains:

“In the LEED projects it undertakes, Knoll is often educating people associated with the building—owners, developers, contractors and housekeeping staff. They are real groundbreakers, especially in areas where LEED practices are new. People often know green soundbites, but don’t realize what green action really means. It’s not just what you buy, it’s what you do with it, how you use it, how you dispose of it. It’s about the whole cycle. Knoll understands the process, so working with them can be a great education.”

#### **Knoll Phoenix Goes Gold**

The 6,000 square foot Knoll showroom and office is located in a new building in Tempe, a developing neighborhood that is the place to be. Showroom and working offices are comfortably located on either side of the elevator core. High ceilings and glass windows are integrated into the space through a window-fronting display platform and use of KnollTextiles’ *Air Rights*, which has a subtle texture that helps focus the eye. The LEED-CI Gold certified space provides a sparkling showcase for Knoll products and the company’s commitment to sustainable design.

**The Knoll Phoenix showroom earned USGBC LEED-CI Gold certification for achievements that include the following:**

#### **Sustainable Sites**

- ▶ 87.53% of parking is underground
- ▶ Project reduces potable water use by at least 20% below Energy Policy Act of 1992
- ▶ Average site density for project and adjacent areas is 128,117.97 square feet per acre
- ▶ Site located within half mile of rail lines and quarter mile of bus routes

#### **Water Efficiency**

- ▶ Project has reduced potable water use 31.88% below Energy Policy Act of 1992

#### **Energy and Atmosphere**

- ▶ Lighting power density reduced to 15.2% below ASHRAE/IESNA Standard 90.1-2004
- ▶ Energy Star rated equipment and appliances
- ▶ Sub-metering equipment provided to measure electrical consumption
- ▶ 100% of tenant electricity offset for 2 years by purchase of Renewable Energy Certificates

#### **Materials and Resources**

- ▶ Project recycles paper, cardboard, metal, glass and plastics
- ▶ Project diverted 80.95% of on-site construction waste from landfills (for reuse or recycling)



Knoll Phoenix showroom

- ▶ 26.54% of total building materials and furniture have combined pre-consumer and post-consumer recycled content
- ▶ 58.06% of total wood-based building materials from FSC-certified forests

### Innovation and Design Process

- ▶ Knoll space utilizes green housekeeping to limit use of harsh chemicals
- ▶ 100% of tenant electricity offset for 2 years by purchase of Renewable Energy Certificates
- ▶ Exemplary performance for alternative transportation: public transit access
- ▶ 13.18% of Knoll furniture is SMaRT® certified (well over the 2.5% threshold required for an innovation point)

### Indoor Environmental Quality

- ▶ Building and project meet ASHRAE 62.1-2004 requirements + increased breathing zones of outdoor air by at least 30% above minimum
- ▶ Project minimizes exposure to environmental tobacco smoke
- ▶ All adhesives and sealants comply with VOC limits of South Coast Air Quality Management District#1168
- ▶ All paints and coatings comply with VOC limits of Green Seal Standard GS-11
- ▶ All carpet meets CRI Green Label Plus program requirements for low VOC emissions
- ▶ No composite wood or laminate adhesives contain added urea-formaldehyde resins
- ▶ All office casegoods and seating meet GREENGUARD or BIFMA standards for emissions
- ▶ 100% of occupants can make adjustments to suit individual tasks and lighting preferences
- ▶ MERV 13 filtration media installed and indoor particulate matter from copiers contained
- ▶ Monitoring system and corrective process in place to ensure occupant thermal comfort
- ▶ Project achieved a minimum 2% glazing factor in 100% of regularly occupied spaces
- ▶ 93.6% of all regularly occupied seated spaces have a direct line of sight to outside views

### Knoll Seattle Expresses the City's Green Culture with LEED-CI Gold Certification

The Knoll Seattle showroom occupies a light-filled space on the 20th floor of the IBM Building, an iconic 70s design by architect Minoru Yamasaki. Enclosed by glass walls on three sides, the 4800 square foot showroom and office space offers breathtaking views of downtown, including the Seattle Space Needle, and the mountains beyond. The space includes a café area with a standing-height counter where architects, designers and clients can gather for coffee, lay out drawings and enjoy informal meetings. Green culture is so embedded in this northwest city that the showroom not only recycles, it composts.

"We really strived for LEED Gold," says Paul Rynearson, Regional Manager. "In our market you have to be environmentally conscious or you're not a player. It's imperative. This space helps us communicate the total story about our products and our sustainability, to designers, architects and end users. We pinch ourselves every day when we get to the showroom. It's just an amazing space."





Knoll Seattle showroom

**The Knoll Seattle showroom earned USGBC LEED-CI Gold certification for achievements that include the following:**

**Sustainable Sites**

- ▶ 100% of parking is underground
- ▶ Site located within half mile of residential zone and at least 12 basic services
- ▶ Site located within quarter mile of mass transit bus routes

**Water Efficiency**

- ▶ Project reduces potable water use by 29.85%

**Energy and Atmosphere**

- ▶ Project provide appropriate zoning and controls and equipment efficiency
- ▶ Energy Star rated equipment and appliances
- ▶ 100% of tenant electricity offset for 2 years by purchase of Renewable Energy Certificates

**Materials and Resources**

- ▶ Project recycles paper, cardboard, metal, glass and plastics
- ▶ Project diverted over 95.96% of on-site construction waste from landfills (for reuse or recycling)
- ▶ 30.8% of total building materials and furniture have combined pre-consumer and post-consumer recycled content
- ▶ 50.47% of total wood-based building materials from FSC-certified forests

**Indoor Environmental Quality**

- ▶ Building and project meet ASHRAE 62.1-2004 requirements
- ▶ Project minimizes exposure to environmental tobacco smoke
- ▶ All adhesives and sealants comply with VOC limits of South Coast Air Quality Management District#1168
- ▶ All paints and coatings comply with VOC limits of Green Seal Standard GS-11
- ▶ All carpet meets CRI Green Label Plus program requirements for low VOC emissions
- ▶ No composite wood or laminate adhesives contain added urea-formaldehyde resins
- ▶ All office casegoods and seating meet GREENGUARD or BIFMA standards for emissions
- ▶ MERV 13 filtration media installed and indoor particulate matter from copiers contained
- ▶ 100% of occupants can make adjustments to suit individual tasks and lighting preferences
- ▶ 50% of occupants have access to temperature and ventilation controls
- ▶ Project achieved a minimum 2% glazing factor in 100% of regularly occupied spaces, glare control provided
- ▶ 98.5% of all regularly occupied seated spaces have a direct line of sight to outside views

**Innovation and Design Process**

- ▶ Over 200 bus rides per day within a quarter mile
- ▶ Project uses 14.69% SMaRT® materials (based on total cost of all materials)
- ▶ LEED AP design team member



*“Deforestation is one of the major impacts on climate change. You need to have a balanced program that allows people to make a livelihood sourcing the wood in their area but not devastate the forest. The program that does it on an international level covering a good part of the world is FSC. By participating in FSC we are helping to address climate change in yet another way.”*

*—Lou Newett, Environmental, Health & Safety Manager, Knoll Inc.*

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## Knoll Actively Pursues Third Party Certification of its Products and Processes

Knoll has long been a leading advocate for independent third party certification because it provides the most impartial and trustworthy foundation for industry-wide compliance. Certification by well-established and respected third parties ensures that all manufacturers are held to stringent, uniform environmental standards. It tells customers that they can trust a manufacturer's claims about the environmental attributes of its products.

As the number of third-party certifiers grows, those that uphold the most stringent standards, the "benchmark" certifications, are the ones driving long-term, meaningful change. LEED, FSC, GREENGUARD and SMaRT® are acknowledged leaders in this regard. All were developed with the mission to actively promote sustainability through infrastructure investment and all share the imperative that applicants meet demanding prerequisites, not just options, in order to achieve certifications. Knoll is committed to the high standards set down by these certifiers as it pursues its goal of becoming a sustainable company.



*"There's still a lot of green wash out there. Knoll is part of the Leadership Standards Campaign led by the Natural Resources Defense Council and other leading environmental groups, and major purchasers and leaders of the design community, including HOK, Gensler and Perkins & Will, to promote LEED, FSC and SMaRT®. The purpose of the campaign is to get rid of all the confusion around what constitutes meaningful environmental standards and certification."*

—Michael Italiano, Founder and President  
MTS (Market Transformation to Sustainability)

### In 2009 Knoll received and/or maintained certifications from the following:

- ▶ CCX (Chicago Climate Exchange) Phase II (2007-2010)
- ▶ Cradle-to-Cradle and SCS (Scientific Certifications Systems) certifications for textiles
- ▶ ISO 14001 (International Organization for Standardization)
- ▶ FSC (Forest Stewardship Council)

**FSC** is the international standard-setting body for defining and measuring a well-managed forest and providing traceability through chain of custody certification. Knoll FSC certification ensures that Knoll products bearing the FSC mark are manufactured with wood from forests that protect environmental, social and economic values. The Rainforest Alliance through its Smartwood program audits and administers Knoll's chain of custody certifications. In addition, as part of its Controlled Wood Policy, which establishes detailed procedures and protocols for all wood purchased by the company for use in its products, Knoll partners with the Rainforest Alliance to leverage the company's power in the marketplace with suppliers to increase the long-term supply of FSC-certified wood.

**GREENGUARD** GREENGUARD (Indoor Air Quality) certification is the gold standard for identifying products that meet stringent testing criteria and have no adverse impact on indoor air quality. In 2009 Knoll certified products included additional KnollStudio products; all Knoll North American systems, seating; KnollStudio seating; KnollExtra accessory products; and the majority of textiles.

**GREENGUARD for Children & Schools<sup>SM</sup>** is an even more stringent standard developed for sensitive populations. In 2009, the Generation by Knoll and Moment chairs were GREENGUARD for Children & Schools<sup>SM</sup> certified as part of their

SMaRT® certification. All Knoll Office Seating products now hold GREENGUARD for Children & Schools certification.

**LEED** (Leadership in Environmental Design, an initiative of the USGBC, US Green Building Council) In 2009, the new Knoll Toronto showroom received LEED-CI Platinum certification. The Knoll Washington D.C., Phoenix and Seattle showrooms received LEED-CI Gold certification.

LEED (recycled content) databases were completed in 2009 for Template, Generation, Moment and for all new KnollStudio products. Creating data-bases for KnollStudio products requires vetting detailed information on materials used in manufacturing Knoll products from hundreds of suppliers in six countries on three continents.

In 2009 Knoll supplied LEED documentation on Knoll systems, seating, furniture and textiles for more than 200 client projects. In addition to the LEED-CI Platinum Toronto showroom and LEED-CI Gold Washington D.C., Phoenix and Seattle showrooms, the following projects containing Knoll products achieved LEED certification in 2009:

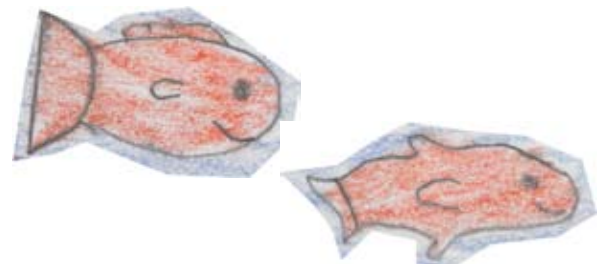
Associated Space Design (ASD), Atlanta GA, LEED-CI Gold; Bausch & Lomb, Newport Beach CA, LEED-CI; CB Richard Ellis, Minneapolis MN, LEED-CI Gold; Fenwick + West, Seattle WA, LEED EB Gold; Greater Waco Chamber of Commerce, Waco TX, LEED-NC Gold; Mecklenburg County Medical Examiners, Charlotte NC, LEED Gold; Moore & Van Allen CC33, Charlotte NC LEED Gold; O'Melvany & Meyers, San Francisco CA, LEED-CI Gold; Sweetwater Sound Headquarters, Fort Wayne IN, LEED Platinum; Toyota of Rockwall, Rockwall TX, LEED-NC Gold.

**SMaRT®** (Sustainable Materials Rating Technology from MTS, Market Transformation to Sustainability) is a comprehensive sustainability standard covering areas including Public Health and Environment; Renewable Energy and Energy Efficiency; Bio-based or Recycled Materials; and Innovation in Manufacturing. SMaRT® addresses 80% of the world's products and has been adopted by more entities than any other product certification. It mandates an ISO-compliant LCA as a prerequisite.

SMaRT® is in partnership with the federal government to educate manufacturers and purchasers on credible sustainable product attributes and prerequisites. •

*“Once again, Knoll is pursuing industry-leading standards for environmental sustainability with an initiative that makes it easier for the design community and Knoll customers to blend environmental responsibility with workplace planning.”*

*— Art Graves, Knoll Executive Vice President, Sales and Distribution*



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## FSC Certified Wood Established as Standard for Knoll General Office Open Plan Systems, Casegoods and Tables

Knoll now provides FSC-certified wood *without asking, at no surcharge and at standard lead times* on office systems, casegoods and tables with the exception of certain products from the KnollStudio Collection. The FSC Certified Standard applies to the core of all Knoll products with laminate and domestic cherry, maple, oak and walnut natural veneer surfaces and related core Knoll finishes. It includes Knoll open plan office systems AutoStrada, Currents, Dividends Horizon, Equity, Morrison, Reff, and Template; as well as the Graham Collection, Interaction Tables, Magnusson Desks and Upstart Tables.

The FSC standard is an extension of the Knoll Sustainable Wood Policy, which is targeted to protect endangered forests and promote sustainable harvesting of wood resources. Establishing FSC-certified wood as the standard for Knoll products is part of a continuous improvement process that recognizes that sustainable wood harvesting can contribute to reversing environmental and social trends—and that Knoll can be part of the solution.

As the largest contract supplier of FSC-certified furniture in North America, the Knoll FSC standard raises the sustainability bar, affirming that, at Knoll, sustainability is business as usual. The company was able to carry out this ambitious program because it has spent more than a decade developing the supply chain for sustainable wood; creating the infrastructure in business and manufacturing processes for sourcing, tracking and incorporating FSC wood into products; and building FSC certification into its ISO 14001 process.

In total, the Knoll FSC standard encompasses 95% of the wood in systems and tables manufactured at Knoll facilities. And in 2009 Knoll continued its partnership with the Rainforest Alliance in an ongoing effort to source non-domestic FSC wood veneers including African Anigre, Sapele and Makoree and European Ash and Sycamore.



*“Knoll is a stellar company to work with. They are so far down the road in the sustainable wood process that they need help with just the last 5% of their veneer imports. We started near the very end of the wood veneer search with them because they have been doing this for so long.”*

— Mark Comolli, Director of Markets, Forestry Division, Rainforest Alliance

# THE KNOLL 8


1. Protection of the Biosphere
2. Sustainable Use of Natural Resources
3. Waste Reduction and Disposal
4. Conservation
5. Risk Reduction
6. Safe Products and Services
7. Environmental Restoration
8. Informing the Public

Knoll has established a set of ambitious standards for guiding and reporting on our progress toward becoming a more sustainable company.

They are mandated in a comprehensive Environmental, Health and Safety Plan and are defined under Eight Principles that are the foundation of this report.







# 1

## Protection of the Biosphere

We will strive to make continued progress toward reducing or eliminating the release of any hazardous substance in an effort to safeguard all habitats affected by our operations.

*We will continue to reduce the use and/or emissions of hazardous air pollutants and volatile organic compounds from our manufacturing operations through the introduction of clean technologies.*

- ▶ PVC was eliminated from edge banding on the majority of Knoll laminate work surfaces in 2009.
- ▶ Knoll U.S. manufacturing facilities were more than 95% hazardous air pollutants (HAP) and VOC free.

*We will provide water treatment facilities that meet or exceed discharge criteria.*

- ▶ In 2009, the state-of-the-art water treatment facility in East Greenville treated 15,406,495 gallons of wastewater.

*We will monitor storm water, conserve water use and develop processes to minimize water pollution.*

- ▶ The plaporization process for pre-treating metal parts at the East Greenville facility delivered savings of more than 1,000,000 gallons of water in 2009.
- ▶ The Grand Rapids facility upgraded outdoor containers holding steel scrap for recycling to steel containers with lids to prevent rainwater water from accumulating and ensure that oil contaminants do not leak into storm water runoff.
- ▶ The Muskegon facility continued to pipe wastewater to a county treatment facility that employs sludge ponds and settling ponds to treat water, which is then used to irrigate food-producing farm plots on the property.



# 2

## Sustainable Use of Natural Resources

We strive to make the best use of renewable resources, such as water, soil and forests, and conserve non-renewable natural resources.

*We will make sustainable use of renewable natural resources through efficient use and careful planning.*

- ▶ In 2009, KnollTextiles offered a wide range of fabrics made with natural fibers (e.g., linen, cotton, wool) from rapidly renewable sources.
- ▶ Composite board used in manufacturing Knoll products contained 97% recovered or recycled post-industrial material.

*We will continue to seek opportunities to use sustainable forests in our products.*

- ▶ In 2009, Knoll advanced the implementation of its Sustainable Wood Policy by establishing FSC Certified Wood as standard *without asking, at no surcharge and at standard lead times on office systems, casegoods and tables* with the exception of certain products from the KnollStudio Collection. The new standard encompasses 95% of wood-containing products manufactured at Knoll facilities.
- ▶ Knoll continued to partner with The Rainforest Alliance to certify sustainable forestry compliance under its SMARTWOOD program, and wood provenance under FSC Chain of Custody protocols.

*We will minimize the use of wooden pallets.*

- ▶ Knoll continued to repair, reuse and recycle pallets at all facilities. In 2009, 29.60 tons of wood pallets were recycled.

*We will attempt to recycle or make beneficial use of wood scrap generated in our manufacturing operations.*

- ▶ Knoll facilities recycled 4,279.52 tons of wood scrap and 3,236.1 tons of sawdust in 2009.
- ▶ In 2009 East Greenville sent 100% of its wood scrap to a waste-to-energy facility, diverting it from landfill and increasing wood recycled and/or waste to energy from 27% to 87%.
- ▶ The wood scrap waste-to-energy program at the Grand Rapids facility kept 1,687 tons of wood waste out of landfill.
- ▶ The Toronto facility continued to burn wood scrap as heating fuel in the winter and use excess heating capacity to provide hot water for finishing processes in the warmer months. Burning wood scrap in place of natural gas reduced total gas consumption by 25,382.52 cubic feet in 2009.

*We will continue to recycle steel, aluminum and other metal components.*

- ▶ In 2009, Knoll facilities recycled 3,723.09 tons of steel and 122.63 tons of aluminum.

*We will continue to seek recycling opportunities for scrap generated in our manufacturing operations.*

- ▶ In 2009, Knoll facilities recycled a total of more than 640.19 tons of corrugated cardboard, 78.81 tons of paper, 135.02 tons of textiles, and 12,289.98 gallons of waste oil.

*We will continue to utilize post-consumer and post-industrial materials in our products where practical.*

- ▶ In 2009, the majority of the wood used to make composite board products at the Knoll Toronto, East Greenville and Grand Rapids facilities contained an average of 97% recovered or recycled post-industrial material.
- ▶ KnollTextiles fabrics include products made of 100% post-consumer recycled content.
- ▶ In 2009, more than 80 KnollTextiles fabrics carried a “Green Bar” on their label, indicating 49%+ recycled content or 75%+ natural fiber.

*We will be environmentally responsible in our purchase of materials.*

- ▶ The Knoll FSC Certified Wood Standard and Sustainable Wood Policy certified through The Rainforest Alliance ensured that wood materials used in our products in 2009 came from environmentally responsible sources.
- ▶ In 2009, all Knoll leather goods were obtained as by-products of the meat packing industry. No hides or skins from endangered species were used.



# 3

## Waste Reduction and Disposal

We will reduce, recycle, and where possible, eliminate waste and will dispose of all waste using safe and responsible methods.

*We will seek opportunities to reduce waste and recycle process scrap from our operations.*

- ▶ In 2009, Knoll facilities recycled virtually 100% of all aluminum and steel scrap generated in manufacturing. In addition, wood, leather and fabric scrap was recycled for beneficial use wherever possible. The East Greenville, Grand Rapids and Muskegon facilities recycled printer cartridges.
- ▶ Knoll facilities also recycled 1,640 pounds of batteries, one ton of fluorescent lights and 5.12 tons of glass in 2009.
- ▶ At the East Greenville facility, 87.3% of all scrap materials were recycled or diverted for waste to energy. The volume of waste to landfill decreased from 3301 tons in 2008 to 455 tons in 2009, a significant step in the goal to become a zero waste facility.
- ▶ In 2009, the Toronto facility reduced waste solvents at its metals plant by 50% over 2008, keeping 422.72 gallons of solvent out of the waste system.
- ▶ At the Toronto plant, recovery and recycling of paint line wash water saved 369,879.73 gallons in 2009.

*We will dispose of our waste only in well-operated permitted facilities.*

- ▶ All Knoll manufacturing facilities adhered to stringent mandates for disposal of waste in approved and monitored facilities.



# 4

## Conservation

We will conserve energy by improving the efficiency of our internal operations and the goods and services we sell. We will make every effort to use environmentally safe and sustainable energy sources.

*We will conserve energy and improve energy efficiency.*

- ▶ In 2009 Air Wars, an energy conservation program focused on increasing efficiency and reducing waste in compressed air operations, was initiated in the Toronto and East Greenville facilities. As a result, Toronto shut down a 150 HP air compressor full time, saving 419,456 Kwh and reducing CO2 emissions by 255.9 tons per year; and the East Greenville facility shut down an air compressor on weekends in the Lubin building for savings of 26,208 Kwh and 16 tons of CO2 per year.
- ▶ The wireless control system for lighting at the East Greenville facility, in which 25% of the system nodes were activated, saved 75,753 Kwh of electricity and \$6,288 in energy costs in the last four months of 2009. Scaled to a full year this represents over 300,000 Kwh and over \$25,000 saved per year.
- ▶ Toronto upgraded a Homag braking system to an AC Drive system, saving 331,000 Kwh and 202 tons of CO2 .

*Paper recycling:*

- ▶ 1,340 trees saved
- ▶ 551,670 gallons of water saved in processing

Recycling paper vs. using new paper reduces air pollution by 95% and water pollution by 80%.

*Steel recycling:*

- ▶ 9,307,725 pounds of iron ore saved
- ▶ 446,771 pounds of limestone saved

Recycling steel vs. using new steel reduces air pollution by 86% and water pollution by 76%.

*Aluminum recycling:*

- ▶ 1,557,499 Kwh of electricity saved

Recycling aluminum vs. using new aluminum reduces air pollution by 95%.

*We will implement a program to upgrade existing low-efficiency motors to higher efficiency motors.*

- ▶ In 2009, Knoll continued to specify high-efficiency motors on all equipment purchases at all North American facilities.
- ▶ Total Preventive Maintenance (TPM) at manufacturing facilities required machine operators to monitor and maintain motors to optimize energy efficiency.

*We will implement a program to upgrade existing lighting, where practical, at each facility.*

- ▶ Lighting upgrades (bulbs and ballasts) are near completion at all Knoll North American facilities.



## Risk Reduction

We will strive to minimize the environmental health and safety risks to our associates and the communities in which we operate through safe technologies, sound transportation practices, safe facilities and operating procedures, and preparing for emergencies.

*We will design our processes to prevent injury to the health and welfare of Knoll associates, the community and the environment.*

- ▶ Knoll facilities overall incident rate in 2009 was 3.91%, which is 1.89% below the industry average of 5.8.
- ▶ The Knoll East Greenville location recertified its “Star” rating under the Occupational Safety and Health Administration’s OSHA Voluntary Protection Program (VPP). The Star rating makes Knoll part of an elite group of less than 2,400 companies nationwide that have demonstrated exceptional dedication and commitment to safety.
- ▶ In 2009 the Muskegon facility continued a Kaizen program expanding pedestal fabrication line improvements to the paint line. Mechanized lifts were installed to raise pedestals onto paint hooks to minimize lifting and reaching.
- ▶ In Toronto, air compression guns were replaced where feasible by electric guns that are smaller, lighter and easier to use.

*We will develop and implement health and safety policies and programs to help prevent injury and illnesses to our associates.*

- ▶ Knoll facilities conducted continuous ergonomic reviews at workstations under the Knoll Employee Health and Safety Analysis program. This practice identifies how work processes might be redesigned and what additional working aids are required.
- ▶ The Muskegon facility instituted a lanyard system and fall protection training in 2009 for Knoll associates and outside contractors who use lifts to make equipment repairs; and instituted a Personal Protection Equipment (PPE) program to analyze equipment, identify requirements and provide training.
- ▶ In 2009 Toronto initiated Safety Score Cards to track key safety measurables in each department. The information elicited will be used by senior management for setting policy and conducting performance reviews.
- ▶ Knoll U.S. manufacturing facilities continued to offer a voluntary stretching program that includes instruction and 10 minutes of free time at the start of each shift for stretching exercises.
- ▶ All facilities continued to maintain safety teams, regular safety inspections and monthly safety meetings.

*We will develop and implement health and wellness awareness and illness prevention programs.*

- ▶ Knoll manufacturing facilities continued the hearing conservation program that includes testing of all workers in in-house hearing booths with physician review of test results, provision of hearing protection and education.
- ▶ In 2009, Knoll provided free flu shots to associates and their families. Additional nurses were brought in to administer the program.
- ▶ A successful weight loss program, “Knoll’s Biggest Loser” was instituted in Muskegon in which twenty five participants followed nutrition and exercise guidelines and attended weekly weigh-ins for six weeks.
- ▶ The Knoll East Greenville, Grand Rapids and Muskegon facilities conducted successful blood drives.

*We will design and develop training programs to provide Knoll associates with the necessary skills and knowledge to fulfill the objectives of the Environmental, Health and Safety Plan.*

- ▶ In 2009, Knoll U.S. facilities conducted regular safety meetings, showed safety videos, trained volunteer safety observers, and created safety posters and newsletters.
- ▶ Knoll facilities continued to train employee First Responder volunteers in CPR, AED (Automated External Defibrillator) and first aid.
- ▶ In 2009, Knoll EHS teams monitored ISO/OSHA compliance and best practices through uniform procedures in all facilities. The Muskegon facility successfully completed an unannounced wall-to-wall OSHA audit.

# 6

## Safe Products and Services

We will reduce and, where possible, eliminate the use, manufacture or sale of products and services that cause environmental damage or health or safety hazards. We will inform our customers of the environmental impacts of our product or services in an effort to prevent unsafe use.

*We will design and engineer durable products; investigate using recycled materials in the design of our products; and design safety features and ergonomics into our products.*

- ▶ In 2009, the Generation by Knoll and Moment chairs, and the Template and Calibre Storage Systems were awarded SMaRT® Gold certification. SMaRT® certification from MTS is the world's most comprehensive standard for product certification that addresses environmental and social equity. Knoll is the first contract furniture manufacturer to have its products SMaRT® certified.
- ▶ Knoll continued in 2009 to design and engineer durable products that use recycled materials in their manufacture, have high recyclability, and include ergonomic and safety features.
- ▶ Knoll Environmental Design Guidelines were followed in the design and development of new products in the pipeline. Guideline principles include economy of materials, recycled content, clean technology, ergonomics, durability and ease of assembly and disassembly. LCA (Life Cycle Assessment) was completed for products in development seeking SMaRT® certification.
- ▶ KnollTextiles added 16 new environmental fabric collections in 2009. Fourteen are made with recycled materials and two of these are Eco-Intelligent Poly, which is classified as a "technical nutrient." Two of the new fabric lines are woven of natural fibers. More than one half of all KnollTextiles patterns introduced in 2009 are designated "Green Bar," indicating they contain at least 49% recycled content, at least 75% rapidly renewable material (natural fiber), or Eco-Intelligent fiber.
- ▶ KnollTextiles also expanded its collection of Crypton Green fabrics, which combine post-consumer recycled polyester fibers with an optimized chemistry for reduced environmental and indoor air quality impact. KnollTextiles continued to feature Terratex fabrics in its collection.
- ▶ KnollTextiles Ultrasuede was reformulated and is now made with 80% post-industrial recycled microfiber from a film processing plant that makes film used in products such as plasma screen TVs. A new production process reduces energy consumption and CO2 emissions by an average of 80%.

*We will provide independent testing to help assure the safety of our products.*

- ▶ All Knoll systems, seating, KnollTextiles fabrics, KnollStudio seating and non-wood conference and training tables, and all KnollExtra accessory products, are GREENGUARD certified.
- ▶ All Knoll office seating are GREENGUARD for Children and Schools<sup>SM</sup> certified.
- ▶ Knoll performs structural testing of our products using ANSI/BIFMA protocols. Products are tested in our Quality Assurance Laboratory and independently at outside labs certified by the Canadian General Standards Board (CGSB).
- ▶ All Knoll urethane foam cushioning on seating products meets or exceeds requirements of California Technical Bulletin 117 (CAL 117).
- ▶ Most Knoll seating products include upholstery options that comply with California Technical Bulletin (CAL 133), the most stringent flammability test protocol in the industry.

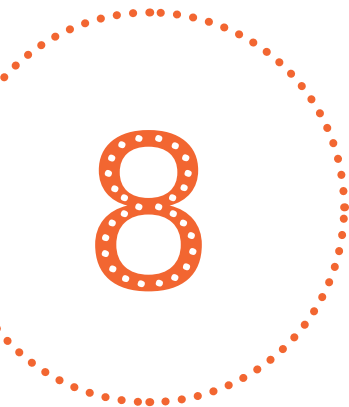
- ▶ All Knoll systems are listed products with Underwriter's Laboratories. Listing includes periodic testing of upholstered vertical panels and UL audits of Knoll and component suppliers' factories four times per calendar year.



## Environmental Restoration

We will comply responsibly with the law to address conditions we have caused that endanger health, safety or the environment.

- ▶ In 2009, Knoll caused no conditions that endangered health, safety or the environment.



## Informing the Public

We will comply with the law to inform in a timely manner those who may be affected by conditions caused by our operations that might endanger health, safety or the environment and will encourage associates to report dangerous incidents or conditions to management.

- ▶ There were no pollution incidents at any Knoll facility in North America in 2009 that either affected the surrounding community or required public notification.



### Ecofont "The green font with holes"

During printing, Ecofont "shoots" holes into the letters that you have typed, and can save up to 25% on ink or toner. Considering ink is expensive and polluting, this could add up to substantial savings.

Ecofont software will be available via [www.ecofont.com](http://www.ecofont.com) by summer 2010. Users can choose to print in an environmentally friendly Ecofont version of one or more of the well-known fonts, such as Arial, Verdana and Calibri. Ecofont versions of corporate typefaces can be added to the software at the customer's request. The software can be used in Microsoft Word and Outlook versions 2003, 2007 and 2010.

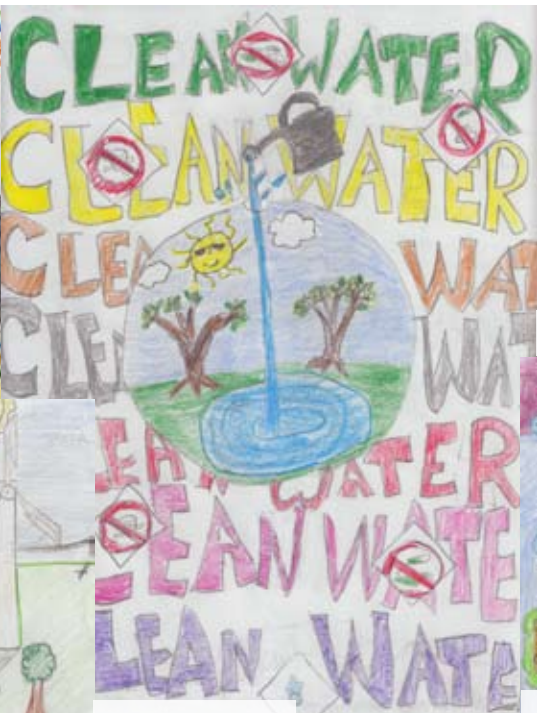
Ecofont won the 2010 *European Environmental Design Award*, an initiative of DIMAD (Asociación Diseñadores de Madrid).

#### More printing tips

- ▶ Only print when necessary and use a modern, efficient printer and unbleached paper.
- ▶ Print double-sided (automatic duplex) or print Ecofont in combination with draft mode.
- ▶ A printer sends a signal when the cartridge is almost empty. It does this on the basis of the number of prints, not on the basis of the actual ink or toner level. So keep using your cartridge until your prints are (almost) no longer legible.
- ▶ If you throw away most of your prints the same day you print them, you can use the temporary ink made by Xerox. After 24 hours, the printed text disappears and you can reuse the paper.



Haley Stauffer



Ciera Laureano



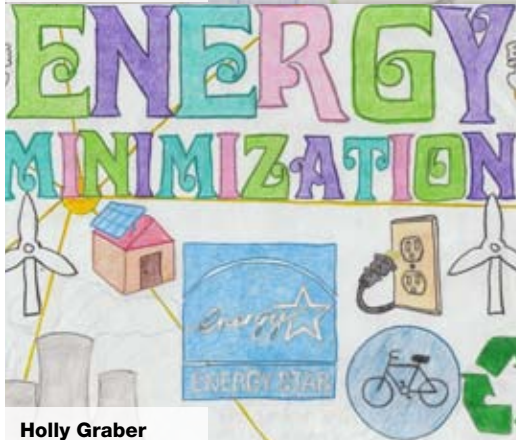
Rachel Landis



Alex Weidner



Angela Englert



Holly Graber



Emily Hasson



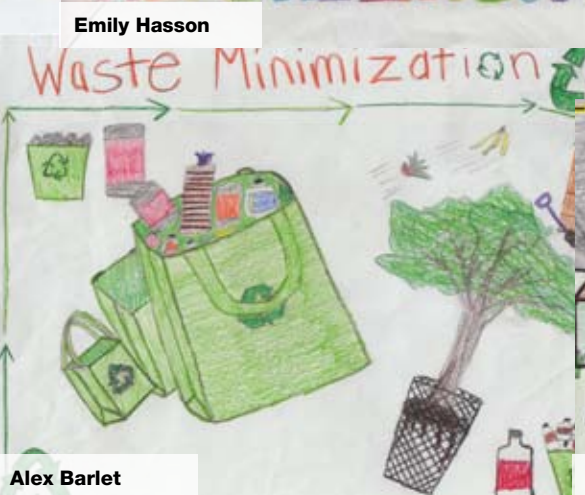
Chandler Carberry



Ryan Mercado



Anna Sellers



Alex Barlet



Regina Moser