

WILLIAM McDONOUGH + PARTNERS

Cradle To Cradle Design™ Integration For Building Materials Selection And Optimization



Our goal is a delightfully diverse, safe, healthy and just world, with clean air, water, soil and power – economically, equitably, ecologically and elegantly enjoyed.

*This goal statement was created while writing *The Upcycle: Beyond Sustainability—Designing for Abundance*, William McDonough and Michael Braungart, published in 2013 by North Point Press, a division of Farrar, Straus & Giroux.

Consulting Services for Materials Selection and Optimization

William McDonough + Partners practices a positive, principled approach to design that draws inspiration from living systems and processes. Our services go beyond designing Cradle to Cradle Circular Economy-inspired buildings and communities around the world. We advise with architects and their design teams, builders, developers, communities, cities and countries on materials selection and optimization for their project needs.



In their 2002 book ***Cradle to Cradle: Remaking the Way We Make Things***, architect William McDonough and chemist Michael Braungart presented an integration of design and science that provides enduring benefits for society from **safe materials, water and energy in circular economies** and eliminates the concept of waste.

Design for the Circular Economy
starts with **Good Materials** 



MBDC are the creators and foremost implementers of the Cradle to Cradle Certified™ Products Program.

In 2010 William McDonough and Michael Braungart co-founded the Cradle to Cradle Products Innovation Institute, which reviews product assessments conducted by assessors such as MBDC, making it an independent, third-party verified standard.

Cradle to Cradle Certified™ is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.

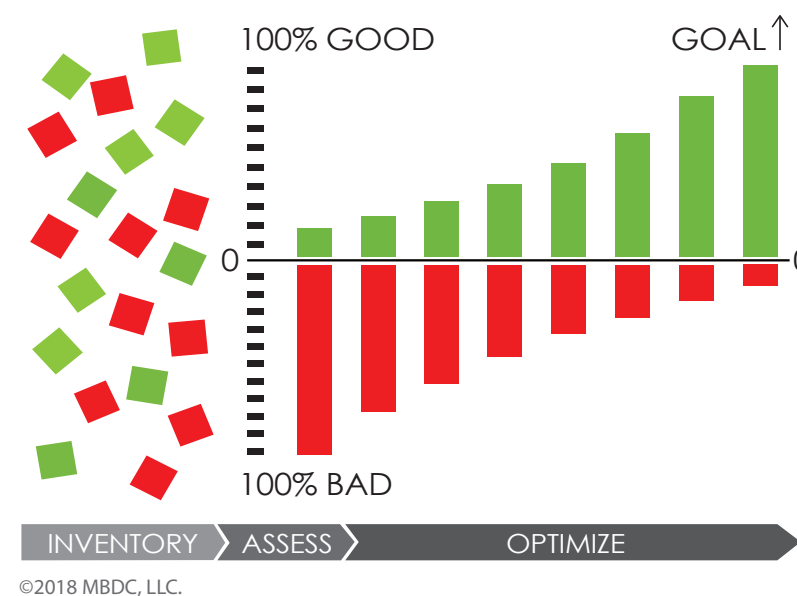
Cradle to Cradle Certified™ Products Program

WM+P works with our sister company, MBDC, who created Cradle to Cradle Certified™ Products Program to be the world's most comprehensive product assessment and certification system based on:

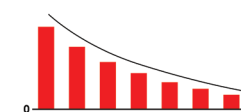
- GOOD MATERIALS**
Safe, healthy, biological and technical nutrients
- GOOD ECONOMY**
Circular, sharing and shared
- GOOD ENERGY**
Clean and renewable
- GOOD WATER**
Clean and available
- GOOD LIVES**
Safe, creative and dignified

WM+P's Approach to Innovation and Continuous Improvement

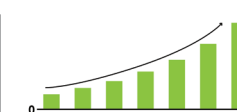
Products are often described as **goods**. We select, assess and integrate products to make sure they actually are.



The Upcycle Chart
Enables our clients to **1) inventory, 2) assess and then 3) optimize** materials, processes and systems with positive intentions and beneficial goals.

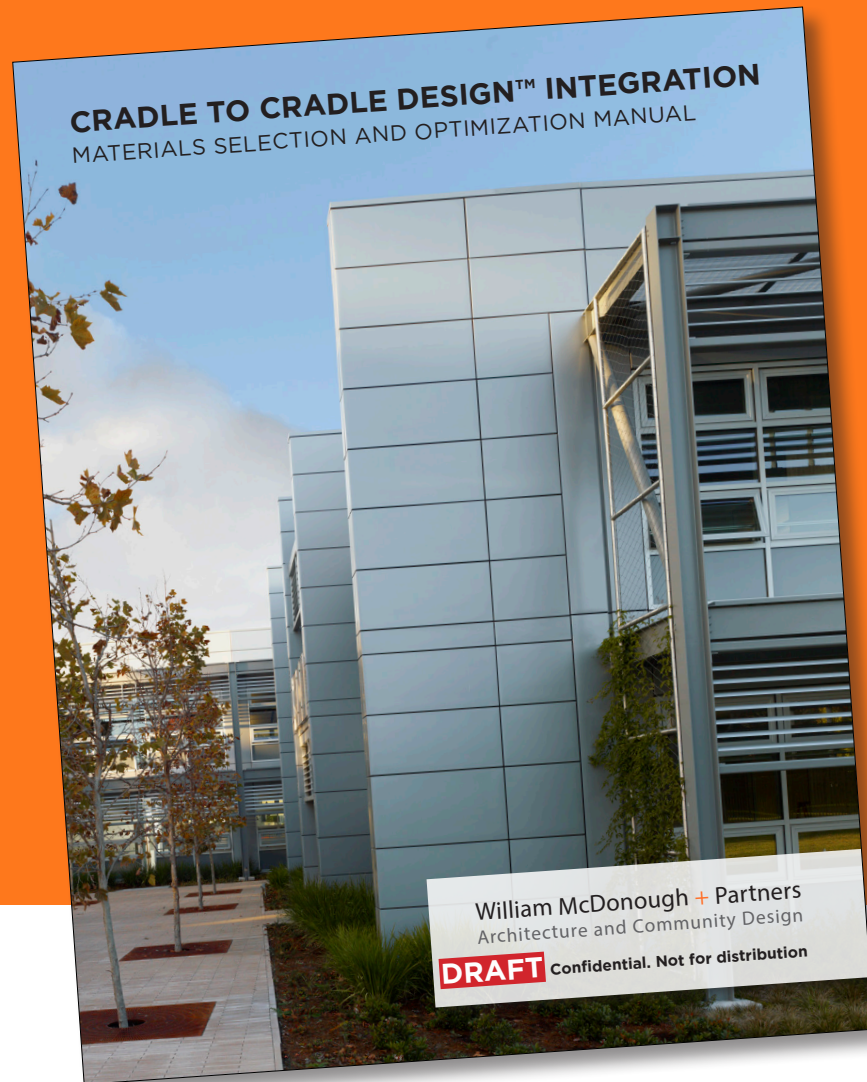


Industry can do better than conventional, eco-efficient approaches which seek to reduce or minimize damage and typically portray reducing a negative footprint.



By adding eco-effective approaches and integrating positively defined goals based on Cradle to Cradle® values and principles, we are able to direct innovation in a coherent and positive trajectory.

Cradle to Cradle® is a registered trademark of MBDC, LLC.



WM+P has **developed tools** such as a **Materials Selection and Optimization Manual**, which provides a defined methodology for safer and healthier materials selection using the C2C Certified™ Products Program as a foundation and guide.

WM+P begins with companies' values to design projects which integrate Cradle to Cradle Certified™ materials, embrace Design for the Circular Economy™, use renewable energy and celebrate diversity to encourage environmental health and abundance.

Read about WM+P's clients who have benefited from **integrating safe then circular** building materials into their projects





B/S/H (BOSCH SIEMENS)
Inspiration House at Park 20|20
BREEAM GOOD Rating

Park 20|20 is the largest installation of Cradle to Cradle Certified™ materials worldwide

“We have looked at the best architects all over the world for the most innovative development in The Netherlands—a place known for sustainable thinking, business performance and economics—and there is no one better than William McDonough + Partners. Our clients, like Bosch Siemens, agree. This is the best architect imaginable for their business.”

– Dr. Coert Zachariasse, CEO, Delta Development Group

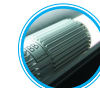
Sample C2C Certified™ materials used:



Accoya® Wood
(certified gold)



**Daas Baksteen Zeddam BV
ClickBrick®**
(certified silver)



**BB-Lightconcepts LED Lightpipe®
System**
(certified bronze)



Royal Mosa Floor and Wall Tiles
(certified silver)



Saint Gobain Gyproc
(certified bronze)



Xero-Flor® Moss Sedum
(certified silver)



Interwand Intersmart® Wall System
(certified basic)

- An integrated supply chain has resulted in reduced construction costs of 19% while improving quality at the same time, according to Cradle to Cradle® and BREEAM-NL Standards
- Each building is designed for disassembly and constructed as a “material bank”
- Financial leases with material suppliers lower upfront construction costs
- Buildings are designed as integrated systems to feed and nourish each other



NASA SUSTAINABILITY BASE
First Space Station on Earth
LEED® PLATINUM

Federal facility on a tight schedule and conventional budget goes beyond sustainability

“Working closely with Bill McDonough and his team was inspirational and extremely beneficial. The collaborative process yielded a highly sustainable and beautiful design—optimized for building performance and representative of our values.”

– Steven F. Zornetzer, Ph.D, NASA Ames Research Center, Associate Center Director

Sample C2C Certified™ materials used:



Centria Dimension Series® panels
(certified silver)



Alcoa, Inc. Kawneer 1600 SunShade® louvers
(certified silver)



PPG Industries Solarban 70XL™ architectural glass (certified silver)



Alcoa, Inc. Kawneer 1600 Wall System® (certified silver)



Mechosystems, Inc. Mecho®/5 with EcoVeil (certified silver)



Icestone® Durable Surface
(certified gold)



Herman Miller Mirra® chair
(certified silver)

- Cradle to Cradle Certified™ framework guided the project to be *safer, healthier than circular* materials
- Designed for disassembly by choosing a steel structure (rather than concrete) that can be easily dismantled as well as repaired after a seismic event
- Effective material use reduces the amount of steel needed
- Net-positive energy building with an intelligent, adaptive control system
- Augmented by NASA technologies, this “extreme green” laboratory combines technology demonstration and dissemination tools to engage business, academic and federal collaborators

METHOD HOME

South Side Soapbox, Chicago

LEED® PLATINUM



First LEED® Platinum manufacturing facility in its industry

“Method is built from a belief that business should play a leading role in creating good society. William McDonough helped us translate that set of values into principles that we would manifest in the building. Design, as McDonough would say, is the first signal of human intention. This building is a signal of Method’s intention to be part of a positive future.”

– Adam Lowry, Co-Founder, Method

92% of Method’s product lines are Cradle to Cradle Certified™



- Holistic Cradle to Cradle Design™ integration into their facility and products
- First LEED® Platinum facility in its industry
- Features an on-site wind turbine and solar trees
- First new manufacturing facility to bring economic revitalization to Chicago’s South Side in nearly 30 years
- Front lawn operates as a public park for the community
- Largest rooftop greenhouse (at the time of completion)



NIKE



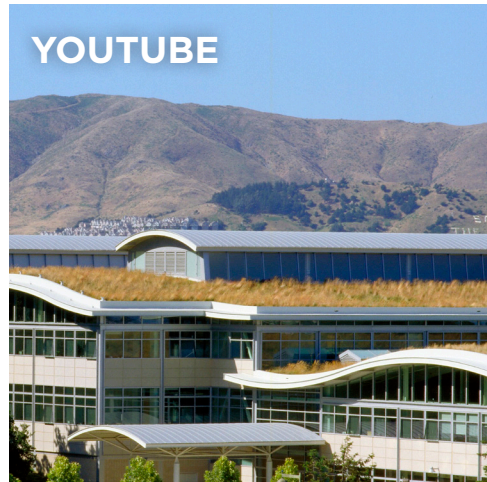
NASA



HERO MOTOCORP



FORD MOTOR
COMPANY



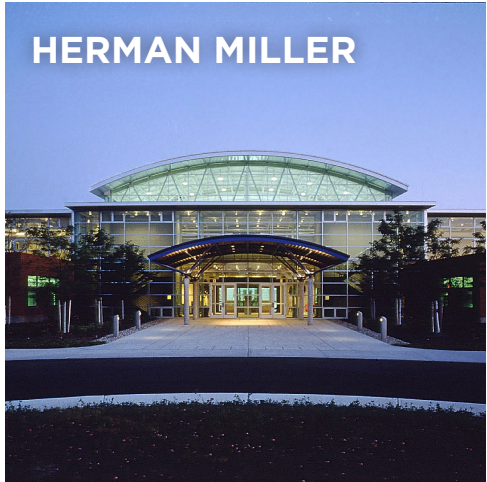
YOUTUBE



DROPBOX



METHOD



HERMAN MILLER



B/S/H
(BOSCH SIEMENS)

Join this growing global community of innovative companies who are positively transforming the design of the built environment by selecting *safe then circular* materials for their projects.

Start your path to integrating
Cradle to Cradle Certified™ Products



Your Path to Integrating Cradle to Cradle Certified™ Products

WM+P has decades of experience working with owners, developers, contractors, architects and designers to evaluate and select **safe then circular** materials and products to meet performance, cost and aesthetic requirements. WM+P and MBDC support and advise clients throughout the entire process.

1 ENGAGE WM+P TO ANALYZE THE ENVIRONMENTAL IMPACTS OF MATERIAL CHOICES AT THE EARLIEST STAGES OF DESIGN

WM+P provides guidelines that put Cradle to Cradle Design™ principles into action, from design development to construction within the framework of the client's values (cost, performance, aesthetics and/or sustainability)

General contractor instructs that C2C Certified™ products are preferred where cost effective

Final product selection determined by owner and architect

2 ENGAGE MBDC TO REVIEW NON-CERTIFIED MATERIALS FOR C2C POTENTIAL

MBDC issues questionnaire to manufacturers

Evaluates data against the Product Standard criteria

Cross-references ingredients with the Banned Chemicals List

Concludes if products meet eligibility requirements for C2C Certification

3 MBDC WORKS WITH MANUFACTURERS* TO CERTIFY NEW MATERIALS

MBDC submits data to the Cradle to Cradle Products Innovation Institute

The Institute provides independent verification of assessment and issues certificate

**Manufacturers works with MBDC at their own cost*



4 GENERAL CONTRACTOR USES C2C CERTIFIED™ PRODUCTS

Final material selection is determined through a conventional tender process

Preference is given for C2C Certified™ products

Cradle to Cradle Certified™ supports global building rating systems

Multiple building rating systems such as USGBC's LEED®, BREEAM, DGNB and HQE in Europe, Green Star in Australia and The WELL Building Standard align with the Cradle to Cradle Design™ philosophy, Cradle to Cradle Certification™ as well as the Cradle to Cradle Products Innovation Institutes' Material Health Certificate on different points. Certification provides assurance that products and materials integrated into design projects meet minimum standards set by the Cradle to Cradle Products Innovation Institute for human health and well-being.

Cradle to Cradle Certified™ is also recognized as a preferred product certification by major retailers, organizations and cities.



WALMART
Through the company's Commitment to Sustainable Chemistry, Walmart encourages the use of Cradle to Cradle Certified™ Silver and above products.



AMAZON.COM
Amazon, as part of it's Responsible Sourcing Policy, has made a commitment to develop new features that will make it easier for customers to identify and purchase products with sustainable attributes, by making third-party certifications related to safe chemistry and sustainability, including Cradle to Cradle Certified™, more prominent.



GOOGLE PORTICO
Google's Healthy Materials Program includes the Cradle to Cradle Certified™ Product Standard as part of its selection criteria for products to use in its facilities.



LEED
LEED has recognized Cradle to Cradle Certified™ products to earn points toward LEED certification within the v4 MR credit: Building Product Disclosure and Optimization.



BREEAM
BREEAM-NL 2014v1.0 rewards the use of Cradle to Cradle Certified™ products in two different credits: Construction Materials and Responsible Sourcing.



WELL BUILDING STANDARD
Cradle to Cradle Certified™ is recognized within the WELL Building Standard in WELL Feature 26, and WELL Feature 97 via option c.



WALGREENS
Walgreens/Boots Alliance is working to enable consumers to make informed choices by encouraging suppliers to obtain credible certifications (including third-party certifications such as Cradle to Cradle Certified™ and EPA Safer Choice) and to make it easy for consumers to find these more sustainable products.



THE HOME DEPOT
The Home Depot Eco Options program allows suppliers to use Cradle to Cradle Certified™ and the Material Health Certificate from the Cradle to Cradle Products Innovation Institute at an achievement level of Silver or higher in the material health category to qualify for their program.



US EPA
The Cradle to Cradle Certified™ Product Standard has been recognized by the United States Environmental Protection Agency (EPA) in its Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing.



CITY & COUNTY OF SAN FRANCISCO
The City & County of San Francisco require all carpet and adhesives installed in city-funded construction projects be Cradle to Cradle Certified™. Carpet tiles must be Cradle to Cradle Certified™ Silver or higher, and adhesives must have a Material Health Certificate at the Bronze level or higher.

When building owners, designers and contractors take a stand for **safe then circular materials in the built environment**, industry takes note. Through **William McDonough + Partners' expertise**, Cradle to Cradle Certified™ products have been integrated as preferred products by major corporations and developments for their buildings and campuses while encouraging their peers to adopt similar values.

William McDonough + Partners

Architecture and Community Design

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