

Understanding LEED Version 3

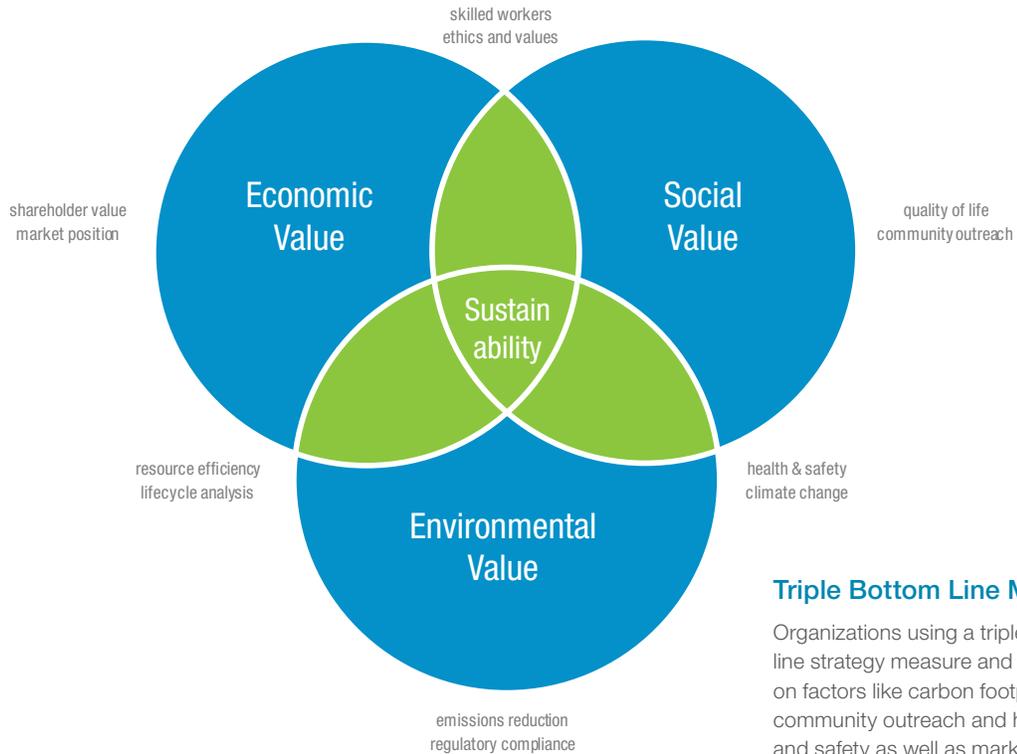


Steelcase WorkLab - LEED Platinum certified

Green Buildings in Context

Sustainability has become an increasing global force in business and its impact extends well beyond products and services. Today, sustainability permeates every aspect of a company's strategic business plan: social investments, manufacturing processes, real estate, materials, energy use, procurement, certifications and market claims. The social, economic and environmental implications of business decisions, often described as the triple bottom line or more recently coined integrated bottom line, are becoming part of a more universal business framework.

At their core, triple and integrated bottom line thinking represents the transition from a solely profit-driven culture to one of balance and optimization. The relevant challenge for businesses today is to use available tools and resources to create solutions that optimize people, profit and planet value creation. An organization's social and ecological performance, combined with economic factors like shareholder value and market position become the net measure of success.



Triple Bottom Line Model

Organizations using a triple bottom line strategy measure and report on factors like carbon footprint, community outreach and health and safety as well as market position and shareholder value. It is at the intersection of economic, environmental and social performance that sustainability occurs.

Where do green buildings fit?

Just like products and services, companies see environmentally-responsible real estate and workplaces as an important part of a triple bottom line strategy.

Why are buildings crucial to sustainability:

There is a wide misconception that the benefits of green buildings begin and end with increasing a company's operational savings and employee satisfaction and performance. Though it's true that sustainable buildings directly impact these outcomes, the social implications of environmental issues caused by the construction and operation of buildings reach well beyond its occupants:

- + Buildings are the single largest consumer of energy produced by fossil fuel powerplants and therefore the biggest contributor to carbon emissions - beating out transportation and manufacturing.¹
- + In the U.S., buildings account for 74% of electricity consumption, 39% of total energy use, 40% raw material use and 30% waste output.²
- + Inefficient buildings trigger variable operating expenses like spikes in energy use, maintenance issues and costs to change.³

Real estate development has a tremendous role in global climate change, material consumption and waste output. Therefore, it has a direct influence on environmental health, quality of life and the social fabric of communities.

In the end, it is not just about minimizing the eco-impact of buildings - it is about creating a better business climate, sustainable culture and social climate.

POTENTIAL BENEFITS OF SUSTAINABLE BUILDINGS

The impacts of sustainable buildings are documented in reports by the U.S. General Services Administration⁴, World Business Council for Sustainable Development⁵ and the Environmental Protection Agency⁶ and more.⁷ Their findings show the direct benefits of buildings from a social and environmental perspective as well as business and profitability.

Society & Environment

- + Preserve natural resources
- + Protect ecosystems and environmental health
- + Improve human health
- + Reverse climate change
- + Minimize contributions to greenhouse gas emissions
- + Reduce water consumption
- + Reduce waste output
- + Minimize strain on local infrastructure
- + Equitable distribution of world resources

Business

- + Improve employee performance through satisfaction
- + Improve occupant health
- + Maximize asset value
- + Reduce energy use
- + Optimize lifecycle performance
- + Enhance indoor environmental quality
- + Lower maintenance costs
- + Positive exposure for environmental actions

If every person on Earth consumed resources like the average American, we would need over 5 planets to support the population.⁸

¹ "Emissions of Greenhouse Gases in the United States," US Department of Energy, Energy Information Administration, 2007.

² "Green Building Facts," U.S. Green Building Council, accessed October 16, 2009: <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1718>

³ "Investment Returns from Responsible Property Investments," Pivo and Fisher, Boston College, University of Arizona and Indiana University, 2009.

⁴ "Assessing Green Building Performance: A Post Occupancy Evaluation of 12 GSA Buildings," GSA Public Building Services, 2008.

⁵ "Energy Efficiency in Buildings," World Business Council for Sustainable Development, 2008.

⁶ "An Introduction to Air Quality," U.S. Environmental Protection Agency, 2008.

⁷ Ibid. 2.

⁸ "The UK interdependence Report," New Economics Foundation, 2006.

Environmental standards and certifications: A roadmap for corporate change

The movement toward sustainable business operations is driving standards, legislation and certifications. There are now over 450 eco-labels globally.⁹ These voluntary and involuntary guidelines shape programs for materials chemistry, indoor air quality, lifecycle improvements, carbon taxation and chain of custody certification - just to name a few.

Buildings are no exception. There are more than a dozen well-known green building programs in use throughout the world. Please see the Addendum for a list of these programs.

The world's first sustainable building certification program was launched in 1990 by the Building Research Establishment (BRE), a UK government-funded research entity. The BRE Environmental Assessment Method, known as BREEAM, is a gauge for sustainable design and construction through environmental performance standards. According to its web site, BREEAM has certified over 110,000 buildings and has over 500,000 registered projects mainly in Europe and the Gulf regions.¹⁰

Today, the LEED®¹¹ (Leadership in Energy and Environmental Design) Green Building Rating System

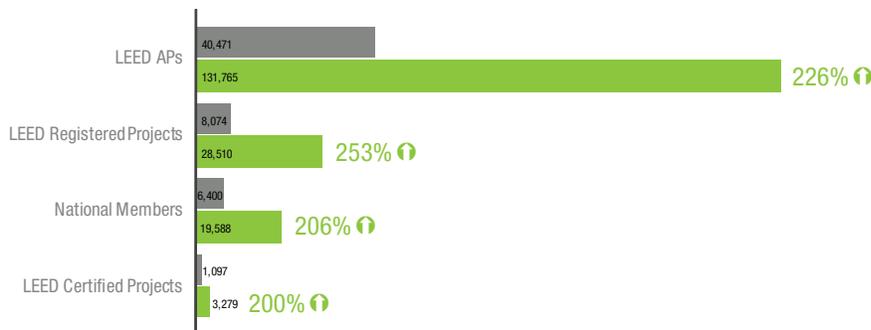
is among the best known and most followed green building model in the United States and a number of countries around the world. Inspired by BREEAM, LEED was launched in 1998 by the U.S. Green Building Council (USGBC), the nation's foremost coalition of leaders from every sector of the building industry. LEED is a measurement system for key areas of real estate performance including site development, water conservation, energy efficiency, materials selection, indoor environmental quality and sustainable innovation.

Over the past decade, the growing awareness of energy issues, environmental stewardship and sustainable incentive programs has resulted in record expansion for USGBC. They have experienced over 200% growth in their national membership, project registrations and certifications, and professional accreditation programs.

Programs like LEED and BREEAM have proven to be powerful market drivers for sustainability. They have put real estate center stage and provide facility targets for corporations and institutions. The myriad of sustainable resources and programs born from these building standards are providing organizations with packaged solutions to help meet sustainable operational goals.¹²

USGBC Growth

■ Sept. 2007 ■ Sept. 2009



LEED Growth Outside the U.S.

There are currently 30,000+ LEED projects in 114 countries. USGBC reported in August 2009 that international LEED registered projects had risen from 8 in 2004 to 1,120 in 2009 - equating to 27 percent of the total square footage registered for LEED certification.¹³

In 2001, Steelcase was awarded the first LEED certification for a manufacturing facility - its Wood Plant in Michigan.

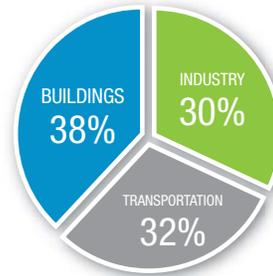
⁹ "Who's deciding what's green?" Big Room Inc., accessed November 16, 2009: <http://ecolabelling.org>
¹⁰ "BREEAM Around the World," BREEAM, accessed November 16, 2009: <http://www.breeam.org/page.jsp?id=135>
¹¹ 'LEED' and related logo is a trademark owned by the U.S. Green Building Council and is used with permission.
¹² "LEED Projects Grow Rapidly Outside the U.S.," U.S. Green Building Council, accessed October 16, 2009: <http://www.usgbc.org/News/USGBCInTheNews.aspx?ID=4169>
¹³ "LEED Projects Grow Rapidly Outside the U.S.," U.S. Green Building Council, accessed October 16, 2009: <http://www.usgbc.org/News/USGBCInTheNews.aspx?ID=4169>

Changes to LEED V3

The U.S. Green Building Council (USGBC) enhanced the LEED® Green Building Rating System in 2009 to include an expanded focus on reducing energy use and carbon dioxide (CO₂) emissions.

The burning of fossil fuels and the destruction of native forests has significantly increased the amount of carbon dioxide in the atmosphere. Carbon dioxide and other greenhouse gases (GHG) trap solar heat in the atmosphere and consequently temperatures on earth are rising. This rise in temperature is not only threatening the very foundation of ecology, it has the potential to threaten social and economic foundations regionally and globally.

Since buildings directly account for 38% of CO₂ emissions in the U.S.¹⁴, experts ranging from the United Nations to the World Health Organization agree sustainability strategies should focus on the two largest sectors impacting GHGs - the energy required to design, construct and operate buildings and the transportation to and from these buildings.



Buildings Huge Impact

The production of power is the largest source of CO₂ emissions. However, buildings in both the commercial and residential sector, account for the largest portion of GHGs that affect climate change.¹⁵

It is with this new evidence and urgency that USGBC launched LEED Version 3 (LEED V3) on April 27, 2009. All projects registered after June 27, 2009 are evaluated under this new version.

LEED V3 includes a:

- + Simplified rating system (referred to as LEED 2009)
- + Faster and more user-friendly project tracking system (LEED Online)
- + Quicker, better managed certification and accreditation process (Certification Model)

LEED 2009

ADVANCEMENTS TO THE RATING SYSTEM

LEED ONLINE

FASTER, SMARTER & A BETTER USER EXPERIENCE

+ CERTIFICATION MODEL
GBCI & CERTIFICATION BODIES

= LEED V3

Source: U.S. Green Building Council

¹⁴ "Assumptions to the Annual Energy Outlook," U.S. Department of Energy, Energy Information Administration, 2008.

¹⁵ "Emissions of Greenhouse Gases in the United States 2008," U.S. Department of Energy, Energy Information Administration, 2008.

LEED 2009: Advancements to the Rating System

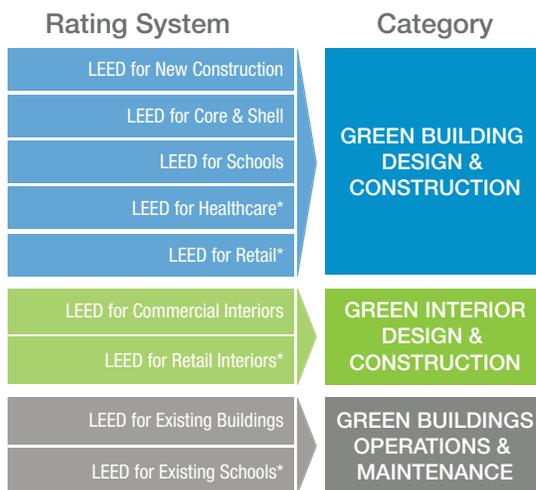
LEED® 2009 includes three major technical enhancements to the rating system:

- 1 Prerequisite & Credit Alignment
- 2 Credit Re-weighting
- 3 Regional Priority Credits (RPCs)

Prerequisite & Credit Alignment

USGBC consolidated, aligned and updated all existing credits and prerequisites for consistency and clarity across all LEED rating systems. Previously, each individual rating system evolved independently. Additionally, credit interpretation rulings (formal guidance from USGBC on credits) were reviewed and any precedent-setting language was incorporated into the new prerequisites and credits.

USGBC merged the previous rating systems into three main categories: Green Building Design & Construction (BD&C), Green Interior Design and Construction (ID&C), and Green Buildings Operations & Maintenance (O&M).



*These rating systems are under development or in pilot phase.
Source: U.S. Green Building Council

In addition to the three new rating categories, the other most visible change to LEED is the migration to a 100-point scale. Under the new system, all LEED rating categories will have a total of 100 possible points and a consistent set of points to qualify for certified, silver, gold and platinum ratings. The previous rating system had unique point ranges for the certification levels shown in the charts below.

PREVIOUS LEED VERSION 2 CERTIFICATION LEVELS

	LEED-NC v2.2 New Construction	LEED-CI v2.0 Commercial Interiors	LEED-EBOM v2.0 Existing Buildings
Certified	26-32 points	21-26 points	34-42 points
Silver	33-38 points	27-31 points	43-50 points
Gold	39-51 points	32-41 points	51-67 points
Platinum	52-69 points	42-57 points	68-92 points

NEW LEED VERSION 3 CERTIFICATION LEVELS

	NEW LEED V3 BD&C, ID&C, O&M
Certified	40-49 points
Silver	50-59 points
Gold	60-79 points
Platinum	80-100 points + 10 'extra credit' points

Credit Re-weighting

The LEED credits were assessed and prioritized by their potential impact on reducing greenhouse gas emissions. Therefore, LEED awards more points for credit strategies that result in greater energy efficiency and reduced carbon dioxide emissions – deemed as urgent priorities by USGBC. This credit re-weighting did not fundamentally change or eliminate any credits; it only changed the point spread.

The credit categories of Sustainable Sites, Water Efficiency and Energy & Atmosphere were given significantly more importance (weightings) while Materials & Resources and Indoor Environmental Quality remained very similar. The extra credit opportunities were expanded including an additional point for Innovation in Design and the addition of Regional Priority credits. Below are examples of those changes. Please see the Addendum for detailed charts of changes to the LEED point structure.

Green Building Design & Construction (BD&C)-	
Category	CHANGE
Sustainable Sites	+12 credits
Water Efficiency	+1 prereq.; +5 credits
Energy & Atmosphere	+18 credits
Materials & Resources	+1 credit
Indoor Environmental Quality	no change
Innovation in Design	+1 extra credit
Regional Priority	+4 extra credit

Green Interior Design & Construction (ID&C)	
Category	CHANGE
Sustainable Sites	+14 credits
Water Efficiency	+1 prereq.; +9 credits
Energy & Atmosphere	+25 credits
Materials & Resources	no change
Indoor Environmental Quality	no change
Innovation in Design	+1 extra credit
Regional Priority	+4 extra credit

Green Building Operations & Maintenance (O&M)	
Category	CHANGE
Sustainable Sites	+14 credits
Water Efficiency	+4 credits
Energy & Atmosphere	+5 credits
Materials & Resources	-4 credits
Indoor Environmental Quality	-4 credits
Innovation in Design	+1 extra credit
Regional Priority	+4 extra credit

MAJOR POINT CHANGES

Sustainable Sites

USGBC is promoting new urbanism defined as “giving people many choices for living an urban lifestyle in sustainable, convenient and enjoyable places, while providing the solutions to peak oil, global warming, and climate change.”¹⁶ Summed up, it is the densification of neighborhoods to enable public transport and walkable amenities. The available points under Sustainable Sites increased to encourage more sustainable modes of transportation thus reducing energy consumption and vehicle emissions.

Water Efficiency

Americans use 408 billion gallons of water per day¹⁷ or 1,330 gallons per person which is straining the supply in some parts of the country. Beyond the direct consumption issues related to this volume of water, significant amounts of energy are required to withdraw, treat, convey, consume and dispose of this potable water.¹⁸ In recognition of this, the Water Efficiency credits incorporate a new prerequisite and significantly increase the potential points within this area of the rating systems.

Energy & Atmosphere

Energy is generated through the burning of fossil fuels, such as oil, natural gas and coal, which release carbon dioxide and other greenhouse gases that contribute to climate change. The Energy & Atmosphere credit category more than doubled in weight for LEED-BD&C and tripled for LEED-ID&C. The focus on credit strategies that reduce energy consumption (and the resulting emissions) has increased the relative importance of this category.

¹⁶ “New Urbanism,” NewUrbanism.org LLC, accessed October 16, 2009: <http://www.newurbanism.org>

¹⁷ “Estimated Use of Water in the United States in 2000,” U.S. Department of the Interior, U.S. Geological Survey, 2000.

¹⁸ “Energy Demands on Water Resources: Report to Congress on the Interdependency of Energy and Water,” U.S. Department of Energy, 2006.

Changes to the Extra Credit System

USGBC has doubled the “extra credit” point opportunities in LEED V3. A total of ten points can be achieved through a combination of Innovation in Design points (6 points possible) and a new category, Regional Priority (4 points possible). As a result, 110 points are possible under the V3 rating system.

Innovation in Design

The Innovation in Design (ID) category motivates participants to exceed the standard requirements and pioneer green building strategies. There are a possible six ID points in LEED 2009, increased from five points in the previous version.

The ID extra credit points may be achieved through a combination of two strategies - Innovation and Exemplary Performance. The strategy for obtaining ID points is determined by project teams. ID points are unique to each project - meaning a point for a strategy on one project does not guarantee the same result for a separate project.

Innovation points (1 - 5 points possible)

A point is awarded for significant environmental performance using a strategy not addressed in the project’s registered rating system. Only one point can be awarded per innovation strategy.

ID Innovation Strategy - Example 1

Use a credit from another rating system. If the project is registered under the BD&C rating system as a New Construction or Core and Shell project, submit for Low-Emitting Furniture (IEQc 4.5) specified in the ID&C rating system.

ID Innovation Strategy - Example 2

The team could develop an innovative approach that is not in any reference guide, such as sustainable education about green buildings.

Innovation Point (ID Credit 2) – 1 point possible

At least one principal participant of the project team is a LEED Accredited Professional.

Exemplary performance points (1 - 3 points possible)

One point may be earned by doubling the credit requirements. Within each reference guide there are specific details listing how a credit can achieve exemplary performance.

ID Exemplary Performance - Example 1

20% recycled content is required to achieve the Recycled Content credit. However, an additional credit could be obtained if the total recycled content value is 30% or higher.

New in 2009 – Extra Credit: Regional Priority Credits (RPCs)

Regional Priority Credits are new to LEED 2009.

They offer extra incentive for project teams to address environmental issues that are identified as local/regional priorities by USGBC’s regional councils, chapters and affiliates.

When a project is registered with LEED, it is automatically assigned extra credit opportunities based on the project zip code. If the project achieves the region-designated credit in the standard five main credit categories, it automatically receives an additional point for its regional priority. There are a total of four extra credit RPCs possible.

Regional Priority - Example

In rural Michigan, a regional credit may be obtained through achieving the Sustainable Sites Credit 6.1 and 6.2 to minimize the amount and improve the quality of stormwater entering into the Great Lakes.

A state-by-state listing of credits sorted by zip code is available: <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1984>

Steelcase contributed to innovation points awarded to a Fortune 500 company’s LEED project. The project utilized Steelcase’s Cradle-to-Cradle products and a Steelcase-developed sustainable education program.

UNDERSTANDING LEED V3: LEED ONLINE

LEED Online:

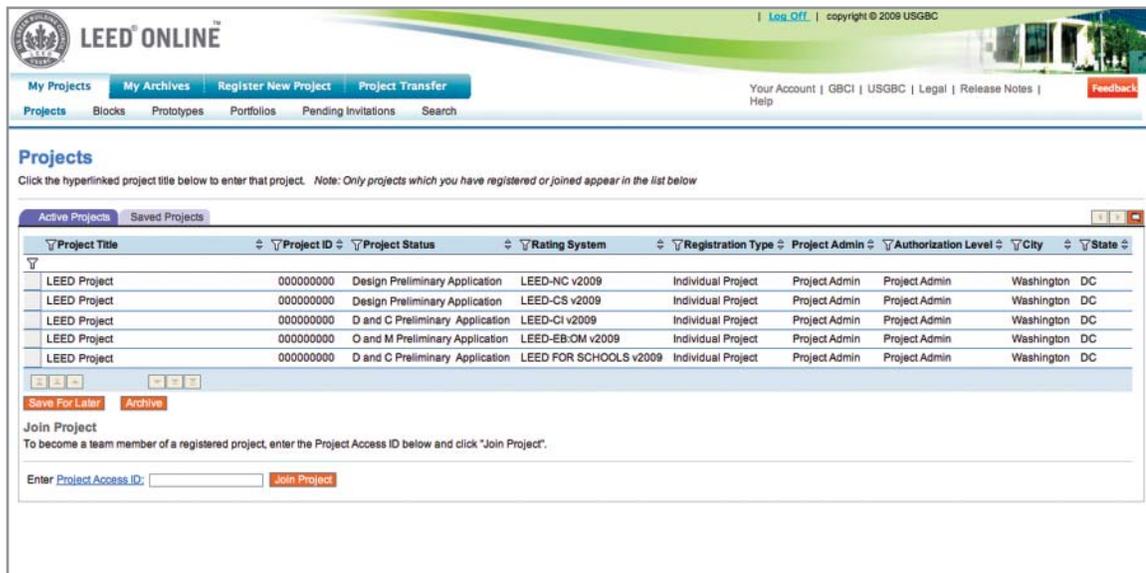
Faster, Smarter & Better User Experience

The second major change in LEED® V3 is the launch of a faster, more user-friendly LEED Online project web site. It is the tool that project teams use to manage the LEED certification process. With its improved design, the online system fosters better communication between project teams and certifying bodies. It also incorporates the changes in the LEED 2009 rating system.

Improvements include:

New functionality – tools to sort and group multiple projects, improved team member administration, visual process of status and timeline

Additional support for review and submittals – embedded support throughout the process, enhanced communication within the web site, automated project data entry and data checks to save time.



The screenshot displays the LEED Online user interface. At the top, there is a navigation bar with the LEED logo and 'LEED ONLINE' text. Below this, there are tabs for 'My Projects', 'My Archives', 'Register New Project', and 'Project Transfer'. A search bar is also present. The main content area is titled 'Projects' and includes a note: 'Click the hyperlinked project title below to enter that project. Note: Only projects which you have registered or joined appear in the list below'. Below the note, there are tabs for 'Active Projects' and 'Saved Projects'. A table lists several projects with columns for Project Title, Project ID, Project Status, Rating System, Registration Type, Project Admin, Authorization Level, City, and State. Below the table, there are buttons for 'Save For Later' and 'Archive'. At the bottom, there is a 'Join Project' section with a text input field for 'Project Access ID' and a 'Join Project' button.

Project Title	Project ID	Project Status	Rating System	Registration Type	Project Admin	Authorization Level	City	State
LEED Project	00000000	Design Preliminary Application	LEED-NC v2009	Individual Project	Project Admin	Project Admin	Washington	DC
LEED Project	00000000	Design Preliminary Application	LEED-CS v2009	Individual Project	Project Admin	Project Admin	Washington	DC
LEED Project	00000000	D and C Preliminary Application	LEED-CI v2009	Individual Project	Project Admin	Project Admin	Washington	DC
LEED Project	00000000	O and M Preliminary Application	LEED-EB:OM v2009	Individual Project	Project Admin	Project Admin	Washington	DC
LEED Project	00000000	D and C Preliminary Application	LEED FOR SCHOOLS v2009	Individual Project	Project Admin	Project Admin	Washington	DC

Source: U.S. Green Building Council

Learn about all the new features of LEED Online by viewing the online demo at:
<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1998>

Certification Model: GBCI & Certification Bodies

The final change to LEED® is the addition of an improved certification model. Prior to the release of LEED V3, the USGBC managed the entire LEED process from project registration and certification to professional accreditation. The USGBC appointed an independent, non-profit organization, the Green Building Certification Institute (GBCI), to help improve capacity, speed and performance and to make the process more third party. Together with partnering certification bodies, the GBCI manages LEED certification and accreditation. USGBC's role is now focused on providing support through education programs and resources for certification and accreditation.

The LEED Professional Accreditation system significantly changed under LEED V3. The GBCI has introduced a tiered credential system with more stringent requirements and a Credentialing Maintenance Program (CMP), which is designed to continue professional development to maintain and advance knowledge of sustainability. The new program has three distinct levels of excellence for a professional to pursue: LEED Green Associate, LEED AP and LEED Fellow.

LEED Green Associate

The LEED Green Associate is a designation for non-technical professionals who want to demonstrate a basic knowledge and skill in understanding and supporting green design, construction and operations. To be eligible for the LEED Green Associate exam, individuals must provide documentation of one of the following:

- + Previous involvement with a LEED Registered Project
- + Employment or previous employment in a sustainable field of work

- + Engaged in or completion of a green building education program

LEED Green Associates must participate in the CMP earning 15 continuing education credits hours during a two-year period.

LEED Accredited Professional

The LEED Accredited Professional credential is a step beyond LEED Green Associate. It is for individuals who wish to signify an extraordinary depth of knowledge in a specialty area of green building practice. Unlike before, LEED APs will be required to specialize in Building Design & Construction, Interior Design and Construction, Operations and Maintenance, or Homes and Neighborhood Development. The LEED AP test includes the LEED Green Associate exam as well as a specialized exam in the area of practice.

To be eligible to take the LEED AP exam, individuals must provide documentation of professional experience on a LEED project within the last 3 years. It must be verified through LEED Online or employer attestation.

LEED APs must participate in the CMP earning 30 continuing education credits hours during a two-year period following the date of their awarded credential.

LEED Fellow

The GBCI is developing the LEED Fellow credential that is intended for an elite class of leading professionals who are distinguished by their years of experience and contributions to the green building field. The LEED Fellow program has not been released and is currently under development.

What happens to existing LEED AP designations? LEED APs accredited under previous systems are grandfathered in and can continue to bear this credential without the required CE hours. However, if a specialty designation is desired, a professional must go through the new credentialing system.

Steelcase Contributions to LEED

Impact of LEED V3 on Interior Furnishings

Furniture, like other green interior products such as flooring and millwork, contributes to credits for LEED® in the Materials & Resources and Indoor Environmental Quality categories. The point totals in these categories were not significantly changed.

Steelcase's contributions to LEED have not been reduced in the LEED V3 rating system but the overall impact of interior furnishings has been reduced. The new 100+ point system expanded the number of points in the other categories including Sustainable Sites, Water Efficiency, and Energy & Atmosphere categories, plus the addition of the Regional Priority credits.

Steelcase products can impact and help achieve LEED certification in the categories of Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality and Innovation in Design.

The charts on the following pages outline Steelcase's direct and indirect contributions to a project's pursuit of LEED Certification across the Building Design & Construction, Interior Design & Construction and Operations & Maintenance platforms.

LEED CONTRIBUTION COMPARISON FOR FURNISHINGS

- Points Steelcase may contribute to
- Other points
- Regional points

LEED VERSION 2



LEED VERSION 3



Steelcase Contributions within LEED BD+C

GREEN BUILDING DESIGN & CONSTRUCTION 2009 Edition				
LEED Building Design & Construction V3 credits	Steelcase Products			Steelcase Contribution Details
	Achieve credit requirement	May impact	May indirectly impact	
Energy & Atmosphere				
EA 1: Optimize Energy Performance		X		- User controlled task lighting and occupancy sensor products can contribute to reducing ambient light requirements and energy load
Materials & Resources				
MR 2: Construction Waste Management			X	- Product packaging is either returnable (blanket wraps) or recyclable (cardboard, plastic, wood) - The Steelcase Environmental Partnership Program assists with options to redeploy, recycle or donate existing Steelcase products, actions which can contribute to this credit for Major Renovation projects
MR 3: Materials Reuse		X		- Flexible, long-lasting furniture may be re-used
MR 4: Recycled Content		X		- Steel products such as desks, systems, seating, filing, architectural products contain approximately 25% post-consumer and 7% pre-consumer recycled steel - Composite wood core products (desks) contain up to 91% pre-consumer recycled content.
MR 5: Regional Materials			X	- This credit has been expanded from building materials or products manufactured within 500 miles of the project site to both manufacturing location and location of extraction, harvest or recovery – thereby making it difficult to track.
MR 6: Rapidly Renewable Materials		X		- Textile and surface material options may contribute to achieving this credit
MR 7: Certified Wood		X		- FSC-certified veneer options may contribute - Turnstone and Coalesse offer FSC core options
Indoor Environmental Quality				
IEQ 4.5: Low-Emitting Materials, Furniture and Furnishings – LEED for Schools projects only	X			- Most products are certified low-emitting and carry third party certifications like Cradle-to-Cradle and SCS Indoor Advantage, meeting the requirement
IEQ 6.1: Controllability of Systems - Lighting			X	- User controlled task lighting and occupancy sensor products can contribute to reducing ambient light requirements and energy load
IEQ 8.1: Daylight & Views - Daylight			X	- Steelcase offers a range of architectural and systems products and application support to assist in achieving this point – Steelcase Privacy Wall, low-height and open-plan furniture systems
IEQ 8.2 Daylight & Views – Views		X		- Steelcase offers a range of architectural and systems products and application support to assist in achieving this point – Steelcase Privacy Wall, low-height and open-plan furniture systems
Innovation in Design*				
ID credit: Cradle to Cradle (C2C)		X		- Steelcase has more Cradle-to-Cradle certified products than any other manufacturer
ID Credit: Low-Emitting Materials, Furniture and Furnishings (from LEED-ID&C)		X		- Under LEED-BD&C, low emitting furniture like Steelcase's SCS Indoor Advantage Certified products may be submitted as an ID Credit
ID credit: Ergonomic Strategy		X		- Furnishings and accessories that reduce the risk of work-related musculoskeletal disorders can contribute to achieving an innovation point for ergonomics training
ID Credit: Sustainable Education			X	- Steelcase has a comprehensive sustainable education program including a website, interior signage, tour maps and survey
ID Credit: LEED Accredited Professional			X	- LEED Accredited Professionals are available to identify and support credit applications

*Innovation in Design credits are determined on a project-by-project basis. An innovation point for an ID strategy for one project does not guarantee a point for the same strategy on a separate project.

Steelcase Contributions within LEED ID+C

GREEN INTERIOR DESIGN & CONSTRUCTION				
2009 Edition				
LEED Building Design & Construction V3 credits	Steelcase Products			Steelcase Contribution Details
	Achieve credit requirement	May impact	May indirectly impact	
Energy & Atmosphere				
EA 1.1: Optimize Energy Performance, Lighting Power		X		- User controlled task lighting and occupancy sensor products can contribute to reducing ambient light requirements and energy load
Materials & Resources				
MR 2: Construction Waste Management			X	- Product packaging is either returnable (blanket wraps) or recyclable (cardboard, plastic, wood) - Existing onsite furniture can be diverted from landfills through the services of the Steelcase Environmental Partnership Program
MR 3.2: Resource Reuse, 30% Furniture and Furnishings		X		- Reusing existing furniture can contribute to this credit - The Steelcase Environmental Partnership Program can help locate used or refurbished product
MR 4: Recycled Content, 10-20% post-consumer and ½ pre-consumer		X		- Steel products such as desks, systems, seating, filing, architectural products contain approximately 25% post-consumer and 7% pre-consumer recycled steel - Composite wood core products (desks) contain up to 91% pre-consumer recycled content.
MR 5: Regional Materials, 20% Manufactured Regionally		X		- Contributions are dependent on project location and product selection - Steelcase manufacturing locations: major steel products – Toronto, ON; Grand Rapids, MI; Athens, AL; wood manufacturing – Grand Rapids, MI; custom products – several locations
MR 6: Rapidly Renewable Materials		X		- Textile and surface material options may contribute to achieving the point for this credit
MR 7: Certified Wood		X		- FSC-certified veneer options may contribute - Turnstone and Coalesse offer FSC core options
Indoor Environmental Quality				
IEQ 4.4: Low-Emitting Materials, Composite Wood Laminate Adhesives			n/a	- Systems furniture and related seating products are excluded from this requirement as they are covered by credits within IEQ 4.5
IEQ 4.5: Low-Emitting Materials, Furniture and Furnishings	X			- Most products are certified low-emitting and carry third party certifications like Cradle-to-Cradle and SCS Indoor Advantage, meeting the requirement
IEQ 6.1: Controllability of Systems - Lighting			X	- User controlled task lighting and occupancy sensor products can contribute to reducing ambient light requirements and energy load
IEQ 8.1: Daylight & Views - Daylight			X	- Steelcase offers a range of architectural and systems products and application support to assist in achieving this point - Steelcase Privacy Wall and low-height and open-plan furniture systems
IEQ 8.2 Daylight & Views – Views		X		- Steelcase offers a range of architectural and systems products and application support to assist in achieving this point - Steelcase Privacy Wall and low-height and open-plan furniture systems
Innovation in Design*				
ID credit: Cradle to Cradle (C2C)		X		- Steelcase has more Cradle-to-Cradle certified products than any other manufacturer
ID credit: Ergonomic Strategy		X		- Furnishings and accessories that reduce the risk of work-related musculoskeletal disorders can contribute to achieving an innovation point for ergonomics training
ID Credit: Sustainable Education			X	- Steelcase has a comprehensive sustainable education program including a web site, interior signage, tour maps and survey
ID Credit: LEED Accredited Professional			X	- LEED Accredited Professionals are available to identify and support credit applications

*Innovation in Design credits are determined on a project-by-project basis. An innovation point for an ID strategy for one project does not guarantee a point for the same strategy on a separate project.

Steelcase Contributions within LEED O+M

GREEN BUILDING OPERATIONS & MAINTENANCE				
2009 Edition				
LEED Building Operations & Maintenance v3 credits	Steelcase Products			Steelcase Contribution Details
	Achieve credit requirement	May impact	May indirectly impact	
Energy & Atmosphere				
EA 1.1: Optimize Energy Performance		X		- User controlled task lighting and occupancy sensor products can contribute to reducing ambient light requirements and energy load
Materials & Resources				
MR 2: Sustainable Purchasing, Option 2: Furniture <ul style="list-style-type: none"> ▪ 40% of furniture must meet one or more of outlined requirements ▪ contains 50% rapidly renewable materials ▪ contains 50% of FSC certified wood 		X		<ul style="list-style-type: none"> - Steel products such as desks, systems, seating, filing, architectural products contain approximately 25% post-consumer and 7% pre-consumer recycled steel - Composite wood core products (desks) contain up to 91% pre-consumer recycled content.
Indoor Environmental Quality				
IEQ 1.1: Best Management Practices		X		- Certified low emitting products may contribute to a successful IAQ management plan
IEQ 2.2: Controllability of Systems - Lighting			X	- User controlled task lighting and occupancy sensor products can contribute to reducing ambient light requirements and energy load
IEQ 2.4: Daylight & Views, Option 1 - Daylight			X	<ul style="list-style-type: none"> - Steelcase offers a range of architectural and systems products and application support to assist in achieving this point - Steelcase Privacy Wall with glazing and systems panels with lower heights or transparent panels will contribute as long as the building shell design provides adequate window area
IEQ 2.4: Daylight & Views, Option 2 – Views		X		<ul style="list-style-type: none"> - Steelcase offers a range of architectural and systems products and application support to assist in achieving this point - Steelcase Privacy Wall with glazing and systems panels with lower heights or transparent panels will contribute as long as the building shell design provides adequate window area
Innovation in Operations*				
ID credit: Cradle to Cradle (C2C)		X		- Steelcase has more Cradle-to-Cradle certified products than any other manufacturer
ID credit: Ergonomic Strategy		X		- Furnishings and accessories that reduce the risk of work-related musculoskeletal disorders can contribute to achieving an innovation point for ergonomics training
ID Credit: Sustainable Education			X	- Steelcase has a comprehensive sustainable education program including a web site, interior signage, tour maps and survey
ID Credit: LEED Accredited Professional			X	- LEED Accredited Professionals are available to identify and support credit applications

*Innovation in Design credits are determined on a project-by-project basis. An innovation point for an ID strategy for one project does not guarantee a point for the same strategy on a separate project.

Summary

Sustainable business practices have shifted from market differentiation to expectation as clients demand green products and services, and environmental legislation and regulations are implemented. It is this market shift combined with a substantiated connection between sustainability, profitability and long-term growth that is driving companies to evolve their business model to incorporate sustainable business strategies.

It is estimated that over 60% of companies expect that their customers will ask them to provide their carbon footprint by 2010.

They are looking beyond LEED - going outside the walls of their operations and buildings - demanding sustainable practices from partners and suppliers.

Here is a summary of research on sustainable business strategies²⁰ to consider:

Create a sustainable action plan

- + Create a sustainability policy that will truly impact and influence upstream and downstream operations
- + Commit to a continual assessment of policies and practices to make the appropriate adjustments to your triple bottom line criteria
- + Create a decision framework that helps you to optimize economic, social and environmental factors
- + Use recognized sustainability certifications and eco-labels to guide preferred or mandatory purchasing criteria for products and services
- + Create a carbon footprint reduction goal and build an implementation and communication plan to help you achieve it; Tactics: (a) carbon offsetting - the purchase of credits to fund the production of clean energy such as wind farms to offset carbon footprint; (b) reduce energy use through efficient facilities, manufacturing processes and technologies; (c) invest in alternative energies



What is a carbon footprint?

A carbon footprint is a measurement of greenhouse gas emissions and can be calculated for activities such as extracting natural resources to creating a product or operating a building, a nation, a company or an individual.

In 2006, Steelcase committed to reducing its overall environmental footprint by 25% by 2012, the company's 100th anniversary.

Partner with sustainable suppliers

- + Create and practice a strategic sourcing program that not only informs buying decisions but signals corporate priorities in the marketplace
- + Ensure social and environmental criteria related to supplier attributes and operations are routinely included in the evaluation of supplier bids and proposals
- + Use suppliers that make a positive difference to society, including fair trade, co-operative, social enterprise and other social-purpose businesses
- + Encourage suppliers to manage their operations in ways that foster sustainability - help them wherever possible

Steelcase is a Corporate Champion in the U.S. Environmental Protection Agency's (EPA) Green Suppliers Network - helping many small and mid-sized manufacturers incorporate green processes into their operations.

²⁰ Multiple resources: (1) "The Lean and Green Supply Chain," U.S. Department of Energy, 2000. (2) "Building Green from Principle to Practice," Natural Resource Defense Council, 2009. (3) "Acceleration of Eco-Operation: Achieving Success and Sustainability in the Supply Chain," BPM Forum, 2009.

Summary (continued)

Make your real estate efficient

- + Evaluate your real estate portfolio for opportunities to increase efficiencies both in space and system performance
- + Consider LEED or other green building standards when renovating or building new
- + Update inefficient buildings with energy efficient designs and systems
- + Build a space that supports human and environmental health and inspires your people

While these strategies are not intended to be comprehensive, they represent action steps organizations can take to incite long-term changes and achieve an integrated bottom line, sustainable business model. ■

RELATED LINKS

U.S. Green Building Council
<http://www.usgbc.org>

Green Building Certification Institute
<http://www.gbci.org>

BREAAM
<http://www.breaam.org/>

GreenBiz.com
<http://www.greenbiz.com/>

Environmental Leader
<http://www.environmentalleader.com/>

Steelcase Corporate Responsibility Report
<http://www.steelcase.com/na/files/flash/na/responsibility/popup.html>

U.S. Department of Energy
<http://www.energy.gov/>

U.S. Department of Energy: Energy Efficiency & Renewable Energy
<http://www.eere.energy.gov/>

U.S. Department of the Interior
<http://www.doi.gov>

U.S. Environmental Protection Agency
<http://www.epa.gov/>

World Business Council for Sustainable Development
<http://www.wbcsd.org/>

ADDENDUM: Point Comparison - LEED V2 vs. LEED V3

The tables shown here compare the previous LEED rating system (LEED V2) with the current, LEED V3 rating system's required prerequisites and points. Note that the largest point increases were for categories having the most impact on CO2 emissions.

Green Building Design & Construction (BD&C)					
Category	PREVIOUS LEED-NC v.2.2		NEW 2009 LEED-BD&C v3*		CHANGE
	Prerequisites	Credits	Prerequisites	Credits	
Sustainable Sites	1	14	1	26	+12 credits
Water Efficiency	-	5	1	10	+1 prereq.; +5 credits
Energy & Atmosphere	3	17	3	35	+18 credits
Materials & Resources	2	13	2	14	+1 credit
Indoor Environmental Quality	3	15	3	15	no change
Innovation in Design	-	5	-	6	+1 extra credit
Regional Priority	-	-	-	4	+4 extra credit
Total Points	9	69	10	100 + 10	

*Point structure is shown for LEED for New Construction and Major Renovations. LEED for Core & Shell and LEED for Schools point structures vary.

Green Interior Design & Construction (ID&C)					
Category	PREVIOUS LEED-CI v.2.0		NEW 2009 LEED-ID&C v3		CHANGE
	Prerequisites	Credits	Prerequisites	Credits	
Sustainable Sites	-	7	-	21	+14 credits
Water Efficiency	-	2	1	11	+1 prereq.; +9 credits
Energy & Atmosphere	3	12	3	37	+25 credits
Materials & Resources	1	14	1	14	no change
Indoor Environmental Quality	2	17	2	17	no change
Innovation in Design	-	5	-	6	+1 extra credit
Regional Priority	-	-	-	4	+4 extra credit
Total Points	6	57	7	100 + 10	

Green Building Operations & Maintenance (O&M)					
Category	PREVIOUS LEED-EBOM v.2.0		NEW 2009 LEED-O&M v3		CHANGE
	Prerequisites	Credits	Prerequisites	Credits	
Sustainable Sites	-	12	-	26	+14 credits
Water Efficiency	1	10	1	14	+4 credits
Energy & Atmosphere	3	30	3	35	+5 credits
Materials & Resources	2	14	2	10	-4 credits
Indoor Environmental Quality	3	19	3	15	-4 credits
Innovation in Design	-	5	-	6	+1 extra credit
Regional Priority	-	-	-	4	+4 extra credit
Total Points	9	90	7	100 + 10	

ADDENDUM: National & International Green Building Rating Systems

While U.S. Green Building Council's LEED green building rating system is considered to be the de facto standard for most builders in North America, it is important to recognize that there are numerous other programs for green buildings around the world. Some examples of current programs include those listed below:

U.S. Green Standards and Rating Systems

2030 Challenge	Architecture 2030 was created in 2003 by Edward Maxria, an internationally recognized architect, author, researcher and educator. It is a voluntary challenge posed to the global architecture and building community to achieve 50% or better than average building efficiency now and full carbon neutrality by the year 2030. http://www.architecture2030.org/
ASHRAE 189	Announced in 2007, ASHRAE 189 is a joint effort of ASHRAE, IESNA (Illuminated Engineers Society of North America) and USGBC to provide minimum guidelines for green building practices that can be worked into local code. http://spc189.ashraepcs.org/
Energy Star	A joint program of the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE), Energy Star measures products and buildings for their energy efficiency. The Energy Star labeling program was founded in 1992 but did not include buildings until 1995. http://www.energystar.gov/
Green Globes	The origins of the Green Globes dates back to 1996 when BREEAM (see International) was introduced in Canada. The program morphed into the Green Globes and in the U.S. it is now managed by the Green Building Initiative (GBI). The program is a voluntary building environmental design and management assessment and rating system. http://www.greenglobes.com/
Living Building Challenge	In 2005, the Cascadia Region Green Building Council (a chapter of the USGBC and Canadian Green Building Council that includes Oregon, Washington, British Columbia and Alaska) developed the Living Building Challenge that is comprised of 16 prerequisites. It aims to pushing projects to the limits of using sustainable building practices and cutting edge technology – it is not intended to compete with LEED but rather is a complementary voluntary challenge. http://www.ilbi.org/
Title 24 California Code of Regulations	Title 24 is a building code in California that mandates energy consumption in buildings. It is considered to be more stringent than the ASHRAE standard addressed in LEED. It was introduced in 1978 but it has been revised continuously since then, as recent as August 2009. http://www.energy.ca.gov/title24/

International Green Building Systems

International	BREEAM	Developed in the early 1990's, the Building Research Establishment's Environmental Assessment Method was introduced by the Building Research Establishment, an organization funded mainly by the UK government. It measures sustainable design and construction with environmental performance standards. Versions of BREEAM are available for the United Kingdom, the Gulf and Europe. www.breeam.org
Australia	Green Star	The Green Building Council of Australia formed in 2002 and developed the Green Star rating system that evaluates the environmental design and construction of buildings. It is the predominant rating system in Australia. http://www.gbca.org.au/green-star/
Canada	BOMA BEST	In 1996, the Building Research Establishment's Environmental Assessment Method (see International) was introduced in Canada. Today, the program runs under the name of BOMA BEST. It is operated and maintained by the Building Owners and Managers Association of Canada (BOMA). http://www.bomabest.com/
Canada	LEED	In 2003, Canada licensed the LEED Green Building Rating System®. It operates under the guidance of the Canadian Green Building Council (CaGBC). The LEED program has been tailored specifically for Canadian climates, construction practices and regulations. http://www.ca gbc.org/
China	Three Star System/ Green Building Evaluation Standard	The Green Building Evaluation Standard was introduced in 2006 by China's Ministry of Construction. The voluntary standard has been dubbed the Three Star System because it offers three levels of ratings: 1-star, 2-star and 3-star. http://chinagreenbuildings.blogspot.com/2009/02/ministry-of-construction-green-building.html
Germany	German Sustainable Building Certification	German Sustainable Building Council rolled out the German Sustainable Building Certification program in January 2009. It is a merit-based rating system that measures sustainable construction. http://www.dgnb.de/en/certification/the-german-sustainable-building-certification/index.php
India	LEED	In 2005, India licensed the LEED Green Building Rating System®. It is operated by the Indian Green Building Council. http://www.igbc.in:9080/site/igbc/index.jsp
Japan	CASBEE	The Comprehensive Assessment System for the Built Environment (CASBEE) was developed in 2001 by the Japan Sustainable Building Consortium. It is a tool to assess the environmental performance of buildings. http://www.ibec.or.jp/CASBEE/english/index.htm
Mexico	LEED	In 2005, Mexico licensed the LEED Green Building Rating System®. It operates under the guidance of the Mexico Green Building Council. www.mexicogbc.org
New Zealand	Green Star NZ	Green Star NZ is a comprehensive, voluntary environmental building rating method developed in 2006 by the New Zealand Green Building Council (NZGBC). http://www.nzgbc.org.nz/main/greenstar
South Africa	Green Star SA	The Green Star SA green building rating program was developed in 2008 by the Green Building Council of South Africa. It is based from the Australian Green Building Council's Green Star program. http://www.gbcsa.org.za/home.php