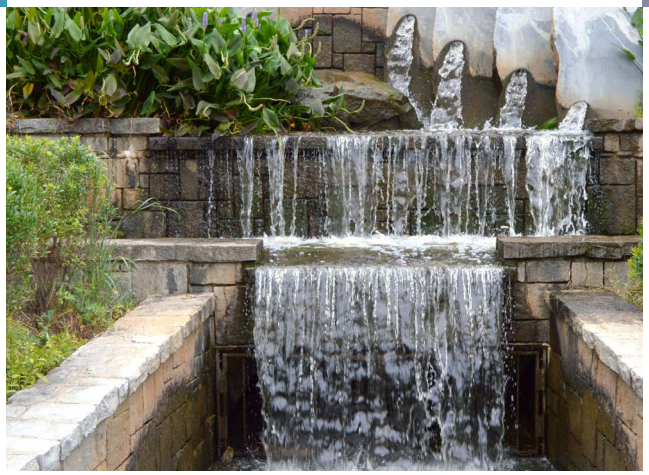
Rating Systems Help Achieve Sustainability Goals

Green Ratings Benefits and Summaries



Enhances the design process

Green rating systems offer guidelines and metrics that improve collaboration and provide a framework that defines "sustainability" and links project issues and solutions within the context of sustainability. For the LEED Gold Argonne National Laboratory Energy Sciences Building, the design team held open meetings and workshops for interested scientists and staff members; fostering connections even before the building was completed.

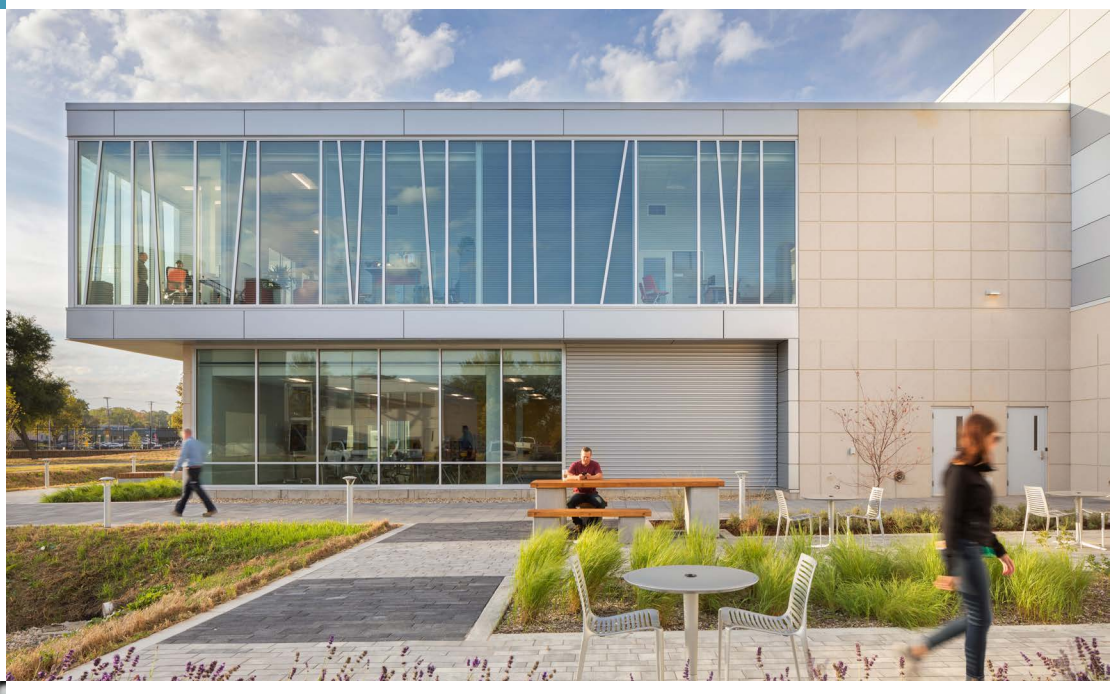
Provides economic benefits

Using a green rating system often results in a more efficient, durable and resilient project. Utilizing a sustainability framework helps to reduce waste and energy costs and provides opportunities for tax incentives and long-term operating cost savings. The LEED-certified Fort Bliss Hospital Replacement illustrates the economic benefits of reviewing sustainable technology design alternatives.

Reduces risk

Green rating systems focus attention on project goals, means and methods. Green projects are better prepared to mitigate the severe impacts of natural disasters. These projects are also better designed to prevent losses from fire and plumbing damage and withstand unpredictable energy prices. Designed to the standards of the Living Building Challenge, the Jim Pattison Centre of Excellence is a great example of reducing energy use and dependence on outside energy.

More livable and resilient communities whose residents enjoy improved air and water quality.



Adds a competitive advantage

Green rating systems challenge teams to look at the project from new angles that present possibilities for reducing costs, extending project life, attracting investors, appealing to stakeholders and the public, improving community well-being and many other benefits that increase the owner's competitive edge and the project's ROI. The LEED rating system informed the design of the Humber River Hospital, the first fully-digital hospital in North America.

Increases accountability

Green rating systems link sustainability policy to planning and design, to help ensure the overall project vision is used throughout the process. These rating systems also promote stakeholder participation and provide milestones, which help to monitor progress and keep the project team on track. For the Envision Platinum rated Holland Energy Park, the project team worked closely with the community of Holland, which was engaged extensively in almost every aspect of planning and design.

Improves quality of life

Projects designed with the sustainable framework of a green rating system create more livable and resilient communities whose residents enjoy improved air and water quality, reduced waste, and opportunities to conserve and protect natural ecosystems. West Dowling Road, Alaska's Greenroads pilot project, promotes alternative transportation options such as walking, bicycling and public transit, helping reduce greenhouse gas emissions. The project also supports smart economic growth and invites new development through accessibility and more efficient trucking routes for local businesses.

Offers recognition

A project that earns a green rating is more visible within the community due to opportunities for media, press releases and public relations communications. Green ratings also lead to greater tenant acceptance, enhance owner image, build political capital and improve potential for other project awards. The William Jack Hernandez Sport Fish Hatchery received extensive media attention after earning the first Envision® project award.

Sustainability Rating Systems for **Buildings and Structures**

BOMA 360 Performance Program

Managed by: BOMA International

Since 2009 the BOMA 360 Performance Program has been evaluating buildings against industry best practices in six areas: building operations and management; life safety, security and risk management; training and education; energy; environmental/sustainability; and tenant relations/community involvement. All occupied commercial and industrial buildings are eligible to participate. Applicants are eligible for recognition upon meeting program requirements, including prerequisites energy performance benchmarking and participation in the BOMA Experience Exchange report.

BREEAM

Managed by: Building Research Establishment (BRE)

Launched in the UK in 1990 and predominantly used across Europe, BREEAM is an environmental assessment method and rating system for buildings, which has become one of the most comprehensive and widely recognized measures of a building's environmental performance. It encourages designers, clients and others to think about low carbon and low impact design, minimizing the energy demands created by a building before considering energy efficiency and low carbon technologies. Examples of our BREEAM projects include: The Roslin Institute Building at the University of Edinburgh, Midlothian, Scotland, UK; BBSRC National Virology Centre: The Plowright Building, Surrey, England, UK.

EDGE

Managed by: Green Business Certification, Inc (GBCI); World Bank Group; International Finance Corporation

EDGE *[Excellence in Design for Greater Efficiencies]* is a green building certification system focused on making buildings in emerging markets more resource efficient. Launched in 2013, the program offers free web-based software to help design teams and project owners assess cost effective ways to incorporate energy and water saving options into their buildings.

ENERGY STAR®

Managed by: Joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE)

Started in 1992, ENERGY STAR is a government-backed program providing tools and resources to promote energy efficiency. In addition to providing the ENERGY STAR Portfolio Manager®, they offer several opportunities to earn recognition for energy efficiency: certification for existing buildings or plants, "Designed to ENERGY STAR" for new commercial construction, portfolio-wide recognition, and organizational awards.

Estidama Pearl

Managed by: Abu Dhabi Urban Planning Council

Estidama, which is the Arabic word for sustainability, is an initiative developed and promoted by the Abu Dhabi Urban Planning Council (UPC). The program, which is the first of its kind tailored to the Middle East Region, began in 2010. The ultimate goal of Estidama is to preserve and enrich Abu Dhabi's physical and cultural identity, while creating an always improving quality of life for its residents on four equal pillars of sustainability: environmental, economic, social, and cultural. Estidama arose from the need to properly plan, design, construct and operate sustainable developments with respect to the traditions embedded within the rich local culture on one hand and the harsh climatic nature of the region on the other. An example of our Pearl projects: Cleveland Clinic Abu Dhabi, Abu Dhabi, United Arab Emirates.

Sources

boma.org/awards/360-program/Pages/default.aspx

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edgebuildings.com

upc.gov.ae/en/estidama

energystar.gov/

Sustainability Rating Systems for **Buildings and Structures**

Fitwel

Managed by: Center for Active Design (CfAD)

Created as a joint initiative led by the U.S. Centers for Disease Control and Prevention (CDC) and the General Services Administration (GSA) in addition to experts in public health and design, Fitwel was introduced in 2015 and launched for public use in 2017. The rating system is organized around specific, incremental changes that will foster a healthier workplace, regardless of size, construction year, or location. Fitwel stands for Facility Innovations Toward Wellness Environment Leadership.

Green Globes

Managed by: Green Building Initiative (GBI) (U.S.) and BOMA Canada (Rebranded BOMA BESt)

Green Globes is an online green building rating and certification tool that is used primarily in Canada and the USA. Green Globes was developed by ECD Energy and Environment Canada, an arms-length division of JLL. Green Globes is licensed for use by BOMA Canada (Existing Buildings) and the Green Building Initiative in the USA (New and Existing Buildings). Examples of our Green Globes projects include: ASU Walter Cronkite School of Journalism, Phoenix, AZ, USA, and Advanced Technology Research Facility, Federick, MD, USA.

Green Star

Managed by: Green Building Council Australia

Based in Australia since 2003, Green Star is a comprehensive, national, voluntary environmental rating system that evaluates the environmental design and construction of buildings and communities. Green Star was developed by the Green Building Council Australia, whose objective is to promote sustainable development and the transition of the property industry by promoting green building programs, technologies, design practices and operations. Green Star has established individual environmental measurement criteria with particular relevance to the Australian marketplace and environmental context. Examples of our Green Star projects include: Novartis Australia Headquarters, Macquarie Park, New South Wales, Australia; 825 Ann Street, Brisbane, Queensland, Australia; Coca-Cola Place: The Ark, North Sydney, New South Wales, Australia.

LEED® BD+C

Managed by: Green Business Certification, Inc (GBCI); U.S. Green Building Council (USGBC)

LEED is a third party certification program and the nationally accepted benchmark for the design, construction and operation of high-performance green buildings. Developed by the U.S. Green Building Council in 2000 through a consensus based process, LEED serves as a tool for buildings of all types and sizes. LEED certification offers third party validation of a project's green features and verifies that the building is operating exactly the way it was designed to. We have more than 135 LEED Certified projects, including: San Bernardino Transit Center, San Bernardino, CA, USA; Humber River Hospital, Toronto, Ontario, Canada; DuBiotech Nucleotide Lab Complex, Dubai, United Arab Emirates.

Living Building Challenge

Managed by: International Living Future Institute™

Launched in 2006, the Living Building Challenge calls itself a "philosophy, certification and advocacy tool for projects to move beyond merely being less bad and to become truly regenerative." The performance-based standard challenges design professionals to consider each aspect of design "as an opportunity to positively impact the greater community of life and the cultural fabric of our human communities." Examples of our Living Building Challenge projects include: Jim Pattison Centre of Excellence, Okanagan College, Penticton, British Columbia, Canada.

Sources

fitwel.org

thegbi.org/

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living-future.org/

Sustainability Rating Systems for **Buildings and Structures**

NABERS

Managed by: NABERS National Administrator; NSW Government's Office of Environment and Heritage, overseen by a National Steering Committee

NABERS is a national rating system that measures the environmental performance of Australian buildings. The rating system, launched in 1998, measures the energy efficiency, water usage, waste management and indoor environment quality of a building or tenancy and its impact on the environment. Our NABERS projects include: Novartis Australia Headquarters, Macquarie Park, New South Wales, Australia.

Parksmart

Managed by: Green Business Certification, Inc (GBCI)

Parksmart is a rating system focused on improving parking structure design and operation. Launched in 2016, Parksmart recognizes sustainable practices in parking structure management, programming, design and technology.

PEER

Managed by: Green Business Certification, Inc (GBCI)

PEER *[Performance Excellence in Electricity Renewal]* is designed to help industry stakeholders dramatically improve power system performance by providing a framework for continuous improvement and performance assessment. Modeled after LEED, PEER provides a comprehensive understanding of how to define, specify, and assess sustainable power to buildings. Launched in 2013, it is the nation's first comprehensive, consumer-centric, outcome-driven system for evaluating power system performance.

TRUE

Managed by: Green Business Certification, Inc (GBCI)

The TRUE Zero Waste certification program can be used to define, pursue and achieve a facility's zero waste goals. Launched in 2017, the certification focuses on the upstream policies and practices that make zero waste successful in any organization.

WELL Building Standard

Managed by: International Well Building Institute

The Well Building Standard was launched in 2014 with a focus on the health and wellbeing of building occupants. Based on thorough review of existing research, WELL specifies 100 evidence-based performance metrics, design strategies, and policies for implementation. Candidates must undergo on-site assessment and performance testing to receive recognition. We currently have two WELL projects in design.

Sources

nabers.gov.au

parksmart.gbci.org/

peer.gbci.org/

true.gbci.org/

wellcertified.com/en/

Sustainability Rating Systems for **Infrastructure Projects**

CEEQUAL

Managed by: Building Research Establishment (BRE)

CEEQUAL is an international evidence-based sustainability assessment and rating system for civil engineering, infrastructure, landscaping and public realm projects. Launched in 2003 in the UK, and available internationally since 2011, the rating system is predominantly used in Europe. CEEQUAL became part of the BRE Group in 2015, and is now being operated in conjunction with BREEAM.

Envision®

Managed by: Institute for Sustainable Infrastructure (ISI)

Launched in 2012, Envision is a planning and design guidance tool that provides industry-wide sustainability metrics for all infrastructure types. The rating system evaluates, grades and gives recognition to infrastructure projects that use transformational, collaborative approaches to assess the sustainability indicators over the course of the project's life cycle. Launched in 2012, the tool was created by a strategic alliance of the Zofnass Program for Sustainable Infrastructure at the Harvard University Graduate School of Design and the Institute for Sustainable Infrastructure (ISI). Examples of our Envision projects include: Holland Energy Park, Holland, MI, USA; Kansas City Streetcar, Kansas City, MO, USA; Historic Fourth Ward Park, Atlanta, GA, USA; I-4 Ultimate Highway Project, Orlando, FL, USA.

Greenrails

Managed by: Greenroads Foundation

Greenrails is a pilot program being operated by the Greenroads Foundation, with the intention of developing a sustainability rating system focused on railway design and construction. The program assesses all types of railway design, construction, and maintenance projects, including passenger, light and commuter rail; heavy rail; streetcars; and subways.

Greenroads

Managed by: Greenroads Foundation

The Greenroads rating system was introduced in 2014 to measure, manage and recognize sustainability in transportation projects. The system outlines best practices and activities designed to challenge project design and construction to go beyond typical environmental, social and economic practices. Examples of our Greenroads projects include: West Dowling Road Extension Phase II, Anchorage, AK, USA.

INVEST

Managed by: Federal Highway Administration (FHWA)

In October 2012, FHWA launched INVEST (Infrastructure Voluntary Evaluation Sustainability Tool) as a practical, web-based, collection of voluntary best practices designed to help transportation agencies integrate sustainability into their programs and projects. The use of INVEST is voluntary and helps transportation agencies identify characteristics of sustainable highways and provides information and techniques to them integrate sustainability best practices into highway and other roadway projects. Examples of our INVEST projects including: Sustainable Highways Self-Evaluation Project, Minnesota Department of Transportation, MN, USA; I-20/26/126 Corridor Improvements – Carolina Crossroads, South Carolina DOT, Columbia, SC, USA.

Sources

ceequal.com/

sustainableinfrastructure.org

greenroads.org/

sustainablehighways.org/

Sustainability Rating Systems for **Communities**

EcoDistricts™

Managed by: EcoDistricts

The EcoDistricts Protocol, launched in 2013, is a rigorous sustainable urban development framework for achieving people-centered, economically vibrant, planet-loving, neighborhood- and district-scale sustainability. The protocol, built around three imperatives—equity, resilience and climate protection, offers a free digital tool and a certification, aimed at fostering a new model of urban regeneration .

LEED ND

Managed by: Green Business Certification, Inc (GBCI); U.S. Green Building Council (USGBC)

LEED ND is a third party certification program designed to create better, more sustainable, well-connected neighborhoods. It looks beyond the scale of buildings to consider entire communities. Examples of our LEED ND projects include: City of Tucson and Gadsden Company Public-Private Partnership, Tucson Modern Streetcar Program Management, Tucson, AZ, USA.

Living Community Challenge

Managed by: International Living Future Institute™

In 2014, the Living Building Challenge introduced the Living Community Challenge, extending the same ideals from buildings to communities. The Challenge provides a framework for master planning, design and construction and the symbiotic relationship between people and all aspects of the built environment.

SITES

Managed by: Green Business Certification, Inc (GBCI)

SITES is a comprehensive rating system designed to distinguish sustainable landscapes, measure their performance and elevate their value. SITES certification is for development projects located on sites with or without buildings—ranging from national parks to corporate campuses, streetscapes to homes, and more. Launched in 2006, SITEs was developed by the American Society of Landscape Architects (ASLA), the Lady Bird Johnson Wildflower Center at The University of Texas at Austin and the United States Botanic Garden. Examples of our SITES projects include: Hunts Point Landing, New York, NY, USA (pilot); Historic Fourth Ward Park, Atlanta, GA; USA (pilot).

Star Communities

Managed by: STAR Communities

The STAR Community Rating System (STAR) was launched in 2010 as the first national certification program to recognize sustainable communities. The framework and certification program offers local leaders a transparent and data-driven mechanism to improve community sustainability by measuring progress across social, economic and environmental performance areas.

WELL Community

Managed by: International Well Building Institute

The WELL Community Standard™ pilot, introduced in 2014, is a district-scale rating system centered exclusively on health and wellness that aims to set a new global benchmark for healthy communities. With the launch of the WELL Community Standard, IWBI is ushering in a new era of fostering and cultivating neighborhoods, districts and other communities that have health and wellness attributes built into their DNA.

Sources

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