LEED IN MOTION: India
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LEED IN MOTION: INDIA

By providing a certifiable framework for greening buildings of all types, the LEED green building rating system has rapidly become one of the world’s primary tools for sustainable market transformation. Realizing that transformation, however, will not be easy. We know, for example, that today’s building sector accounts for at least a third of the world’s energy-related CO2 emissions, and nearly 60% of its electricity consumption.

Although the challenges are great and many, we are determined to meet them head-on. Driven by a belief that better buildings are our legacy, our organization has worked tirelessly to make the communities in which we live, work, learn and play healthier, more resource efficient, and less damaging to our ecosystems. To this end, we have broadened LEED’s scope, and evolved its standards to increasingly higher levels of accountability and performance.

Through LEED, corporations and governments, investors and developers, architects and planners have gained a comprehensive and globally recognized framework – a language, if you will – for designing, planning, constructing, and maintaining both new and existing buildings of all types. In LEED, the building community has discovered a path to a more sustainable future. It is a path that provides strategies that reduce waste, cut emissions, improve efficiency and performance, consume fewer resources, and nurture the health and well-being of people.

As you will see in this report, we have realized important successes around the world, and perhaps especially here in India. Today, India is urbanizing on a breathtaking scale. While this urbanization has driven a tremendous amount of economic growth, it has also created serious environmental and social challenges. Most, if not all, of the issues associated with India’s urbanization can be mitigated by building better buildings. A resource efficient, sustainably built environment, that nurtures the health and well-being of its people, will pay tremendous long-term dividends and accelerate India’s position as a global leader.

India is my home country. What happens here matters deeply to me. In this report, we will spotlight some of the Indian projects and people who are leading the way to a greener future. We will also present data regarding current building trends and opportunities. Importantly, you will hear firsthand from leaders who are building sustainably, that when it comes to building, doing the right thing environmentally is also very good for business.

So yes, the challenges that we face are great and many, but how we deal with those challenges, the choices we make today, will most certainly define our legacy. Let us never forget that developing sustainable buildings and cities will allow us to pass on a legacy to our children and their children, for generations to come. May we choose to pursue a legacy of which we can all be proud.

Mahesh Ramanujam
Chief Operating Officer, U.S. Green Building Council
President, Green Business Certification Inc.
Green Building in India

With more than 40% of India’s population projected to be in urban areas by 2030, the volume of green building will increase dramatically, reaching 20% of all building stock by 2018.

WHAT’S DRIVING THE MOVE TO GREEN:

52% Environmental regulations

28% Healthier neighborhoods

24% Because it’s the right thing to do

TOP THREE SECTORS FOR GREEN BUILDING GROWTH IN INDIA:

New high-rise residential: 48% of respondents from India expect to build in this area over the next three years, compared with only 25 percent globally

Communities: Mixed-use development expected to dominate

New commercial buildings (office, retail, hotel): 61% expect to build in this sector

EXPECTED BUSINESS BENEFITS OF GREEN BUILDING IN INDIA:

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<th>New green building</th>
<th>Green retrofit</th>
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<tr>
<td>Decreased operating costs over one year</td>
<td>10%</td>
<td>11%</td>
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<tr>
<td>Decreased operating costs over five years</td>
<td>15%</td>
<td>16%</td>
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<tr>
<td>Payback time for green investment</td>
<td>4 years</td>
<td>5 years</td>
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The vast majority of respondents, 91%, use metrics to track building performance.

Recent results suggest that new buildings provide operational savings that are slightly higher than, but overall consistent with, global medians over one year and five years. However, the quick payback period shows that construction costs are generally lower than those of other reporting countries. In addition, India reports greater decreases in operating costs for retrofits than the global average, which may encourage more growth in that sector.

SOURCE: WORLD GREEN BUILDING TRENDS 2016 SMARTMARKET REPORT
LEED

Every story about LEED is a story about leaders. And leaders are choosing LEED.

LEED AND FORTUNE 200 COMPANIES

A 2015 survey of building operations and corporate sustainability executives from 48 Fortune 200 companies:

82% are likely to continue using LEED for new construction or retrofits

60% believe LEED positively impacts their return on investment (ROI)

70% pursue LEED as a means to save money by being more energy efficient

96% use LEED to support corporate sustainability efforts

80% agree that LEED is a key way to communicate sustainability to stakeholders

SNAPSHOT

LEED IN INDIA

India is the 3rd largest market outside the U.S. for LEED

Total LEED projects in India:

2,230+

Gross square meters:

84,000,000+

(908,000,000+ square feet)

87% percent of Indian green building professionals indicated that they anticipate the use of LEED in India to increase overall

SOURCE: GBCI, 2016

SOURCE: LEED AND THE CORPORATE BUILT ENVIRONMENT, KEYBRIDGE LLC AND USGBC RESEARCH, APRIL 2015

SOURCE: USGBC RESEARCH, NOVEMBER, 2014
Three Reasons Why LEED Is Accepted Globally

1. The professional building industry – architects, engineers, contractors, and the like – developed LEED. Its strategies integrate industry thinking, and it continues to evolve based on the industry’s input and guidance. Because of this business-oriented approach, governments and corporations endorse LEED, investors support it, and owners and occupants place a premium value on it.

2. LEED is extremely flexible. Through five distinct rating systems, it accommodates all building and project types.

   **LEED: Building Design and Construction**
   New construction and major renovation

   **LEED: Interior Design and Construction**
   Interior spaces requiring a complete fit-out

   **LEED: Building Operations and Maintenance**
   Existing buildings that are undergoing improvement work or little to no construction

   **LEED: Homes**
   Single family homes, low-rise multi-family (one to three stories), or mid-rise multi-family (four to six stories)

   **LEED: Neighborhood Development**
   New land development or redevelopment projects of scale

3. LEED projects are comprehensive. Through an integrative process that focuses on a comprehensive approach to building systems and equipment, LEED certification is based on points earned in several key areas. (Additionally, projects can earn points for Innovation in Design and for addressing Regional Priority needs.)

   - **Sustainable Sites** promotes strategies to minimize impact on ecosystems
   - **Water Efficiency** accounts for water use inside & outside of a building
   - **Energy and Atmosphere** emphasizes improved building performance
   - **Materials and Resources** encourages use of sustainable building materials & reduced waste
   - **Indoor Environmental Quality** promotes healthy indoor air quality, access to better acoustics and lighting, and overall occupant comfort
   - **Location and Transportation** includes credits that encourage compact development, alternative transportation, and connection with amenities, such as restaurants and parks.
LEED and Human Health

As a growing world population experiences unprecedented challenges to its physical, emotional and social well being, builders, investors and policy makers are focusing on how our built environment impacts human health.

LEED, a brand that is synonymous with quality, has always been rooted in human health. LEED-certified buildings are structures beneficial to the health and well-being of their occupants. They can contribute to reduced sickness and disease, faster healing, and greater productivity. They are not only structures designed to stand the test of time, but also structures designed to enhance the quality and comfort of peoples' lives.

THE BENEFITS OF A HEALTHY BUILDING

Paharpur Business Centre (PBC), India’s first LEED Platinum building using LEED for Building Operations and Maintenance: Existing Buildings, is globally recognized for its healthy indoor air quality. As current PBC data illustrates, a quality indoor environment fosters greater occupant productivity.

**A QUALITY INDOOR ENVIRONMENT**

- Fine particulate matter (PM 2.5) is always less than 10 μg/m³
- CO2 levels consistently below 250 ppm over ambient
- Total VOC concentration below detectable levels

**MORE PRODUCTIVE OCCUPANTS**

- **34% fewer** respiratory ailments
- **12% fewer** headaches
- **52% fewer** eye irritations
- **9% less** asthma, and reduced hypertension
- **20% improvement** in occupant productivity, based on year-over-year (2014 to 2015) sick leave reductions

*Comparison is to occupants of traditionally constructed buildings*
GBCI and LEED: Addressing India’s Priorities

GBCI is working with business and government officials to address and meet the priority needs of a rapidly urbanizing India. To date, alliances have been formed in these key areas:

**TRANSPORTATION**

The two biggest drivers of global climate change are buildings and transportation. As such, in 2015, USGBC, GBCI and Delhi Metro Rail Corporation (DMRC) signed a groundbreaking agreement to greatly accelerate the LEED certification of new and existing metro stations across the country. Through this new collaboration, the two organizations are working together to implement appropriate LEED adaptations, regional credits, or alternative compliance paths that address the unique needs of metro installations, and improve the sustainability and performance of metro stations and depots. DMRC is committed to leadership in the sustainable design, construction and operation of metro installations and mass rapid transit systems. This partnership allows all parties to move quickly and in unison to affect real change in metro stations that are being used by millions of people every day.

**HEALTHCARE**

LEED-certified hospitals represent a strategically significant segment of the broader green building movement, one with ambitious goals to curb greenhouse gases, conserve natural resources, use healthy materials, and protect air and water quality.

In India, Wockhardt Ltd., the country’s fifth largest pharmaceutical and healthcare company, with a presence in 20 countries across the globe, has certified Wockhardt Hospital South Mumbai to LEED Platinum. By earning that certification, a first for any hospital in Asia, Wockhardt Hospital immediately amplified its stature as a world-class healing facility.

To the Wockhardt management team, LEED certification was important for two good reasons. First, it let them fully re-imagine their facility with the health of patients in mind. LEED helped them integrate components - like quality air filtration, natural light, open spaces, temperature controls, the availability of quality food and green cleaning materials - to create an indoor environment that was brighter, more sanitary, and ultimately, more conducive to healing and occupant health. Second, the certification addressed the hospital’s impact on the environment. Hospital management felt that it couldn’t, in good conscience, consider Wockhardt a true healing facility until it applied the principles of healing to the external environment as well.

At a time when we are all being tasked to think and act smarter, the management team at Wockhardt Hospital embraced LEED to help their facility perform more effectively as both healers of people and planet.
LEED Lab meets the needs of the global building industry by providing students with the skills, knowledge and expertise required to be effective communicators, project managers, critical thinkers, problem solvers, engaged leaders, and team players.

Today, LEED Lab is offered at 18 universities in the U.S., Latin America, the Middle East and Greater Asia. These institutions strongly believe that their participation in LEED Lab will allow their graduates to successfully launch careers that contribute to a more sustainable future for us all.
RESIDENTIAL

Every space in which we find ourselves—from workplaces to grocery stores to airport terminals—should support our health and our environment. But of all these building types, our homes play the biggest role. They bookend our days; and they provide shelter as well as sanctuary, safety and sinew for anchoring our families and communities. Imagine if all people started their days from a sustainable home, with a native awareness of efficiency and efficacy, of better health and resiliency. Imagine if we used our homes as the base camp for healthy living, in every aspect of our lives—from how we engage with others, to the foods we eat, to our study and work habits, and so much more. Our home could be and should be the touchstone for mindfulness of sustainability throughout our lives.

Any home can be called “green,” but how does the homeowner know that it really is? LEED certification demonstrates that a green home has been third-party inspected, performance-tested and certified to perform better than conventional homes. LEED homes are built to be healthy, providing clean indoor air and incorporating safe building materials. Using less energy and water means lower utility bills each month. And in many places, certified green homes are now selling quicker and for more money than comparable non-green homes.

DATA CENTERS

Data centers are unique projects because they have very few occupants and are huge energy users—a data center can consume as much energy as a small town. Whereas a typical building is designed to meet heating and cooling needs for occupant comfort, a data center must have massive cooling capacity for its servers. By extension, reducing water use is also a key target for data centers that use it for cooling purposes.

With the Indian data center infrastructure market expected to total $2 billion in 2016—a 5.2 percent increase from the year prior—sustainable design, construction and operation practices for these buildings is critical.

ITC Sankhya is the first building in India, and the first data center in the world, to achieve LEED v4 Platinum certification.

TATA HOUSING

Tata Housing Development Company Limited ranks among the fastest growing real estate companies in India. Its operations span land identification and acquisition, as well as project planning, designing, marketing and selling, implementing, and more. As a leading national builder, Tata Housing is keenly aware of its role as an environmental steward. By committing to developing certified green buildings, the company long ago took up the environmental cause. To that end, Tata Housing enjoys a strong relationship with both USGBC and GBCI. Recently, this relationship reached new heights, as the organizations formed a strategic alliance involving not only LEED, but also the WELL Building Standard, an evidence-based system for measuring, certifying and monitoring the performance of building features that impact human health and well-being. With this alliance, Tata Housing intends to construct and certify 20 million square feet of housing using both LEED and WELL. Tata Housing’s LEED-plus-WELL initiative marks an important milestone in healthy, sustainable living.
Industrial facilities are important in the global marketplace and impact every facet of our daily lives. Think about the computer, phone or tablet you’re using to read this report. What about the shoes you’re wearing and the chair you’re sitting in? How did you get to where you are: in a car, bus or maybe by bike? Virtually everything that you touch and use was manufactured, stored and transported before it came to you. Industrial facilities enable all of this to happen and are a significant economic driver. With India expected to rank amongst the world’s top three economies and one of the top manufacturing destinations by 2020, sustainably built industrial facilities will be paramount to India’s long-term growth and global competitiveness.

A 2014 study from Cornell University – The Impact of LEED Certification on Hotel Performance – finds that hotels gain a revenue benefit when they are certified under the LEED sustainable building program.

By comparing 93 LEED-certified hotels with a competitive set of 514 non-certified hotels, the study determined that LEED-certified hotels of all types obtain superior financial performance and substantial increases in average daily rates and revenue per available room.

Today, many of the world’s leading hoteliers – including the renowned ITC hotel chain in India – are highly committed to LEED, and realizing new milestones in efficiency, customer satisfaction, and environmental responsibility.
GBCI is the exclusive administrator of project certifications, professional credentials and certificates for LEED.

Established in 2008, the organization consists of three world-class operational teams that oversee the certification of buildings, professional training and credentialing, and high-quality customer service and technical support. Collectively, the three teams have more than 140 full time staff and 600 technical experts and consultants.

Recently, GBCI was incorporated in India. This on-the-ground commitment to India includes a new, fully staffed GBCI operational hub, as well as a global strategic partnership with Bureau Veritas. It better positions GBCI to deliver full-service onsite certification and verification, as well as in-country support to project teams.

Aside from improving customer service and making LEED far more accessible, GBCI’s incorporation helps more LEED projects qualify for Indian green building incentives. It also mitigates the complexity and risk associated with variable international currency exchange rates.

With enhanced customer service and support, GBCI is making it much easier for Indian building projects to pursue LEED.
“Partnership is the new leadership”
- Mahesh Ramanujam, COO of USGBC and President of GBCI

With its incorporation in India, GBCI is better positioned to draw on the resources of USGBC and its expanding network of LEED professionals and project teams; better positioned to amplify its outreach to Indian educators, manufacturers, and government policy makers; better positioned to widely promote the many benefits of sustainable building; and better positioned to make available a wealth of technical information and experience to the Indian building community.

Additionally, GBCI’s incorporation makes it easier to build relations with important Indian enterprises such as these:

- **All India Institute of Local Self-Government** (AIILSG)
- **Confederation of Real Estate Developers’ Associations of India** (CREDAI)
- **Delhi Metro Rail Corporation** (DMRC)
- **Gujarat International Finance Tec-City Company Limited** (GIFTCL)
- **India Smart Grid Forum** (ISGF)
- **Indian Society of Heating, Refrigerating and Air Conditioning Engineers** (ISHRAE)
- **Philips India Limited**
- **Tata Housing Development Company** (THDC)
- **The Energy and Resources Institute** (TERI)
- **Yes Bank**

**GIFT CITY**

GIFT City’s vision is to “create a world class financial city by offering an unrivalled business environment to global and local financial and service sector enterprises.”

GIFT City, which is being developed by Gujarat International Finance Tec-City Company Limited (GIFTCL), will be India’s first smart and green city. GIFTCL aims to establish GIFT City as a model sustainable smart city and to set many important precedents for future projects.

USGBC and GIFTCL will work together to accelerate greening the built environment, and USGBC will provide dedicated support to various GIFT City developers in their pursuit of LEED.

“At the design stage itself of the infrastructural services, all the sustainable parameters and performance indicators – be it power, water, solid waste management, transport, or ecology - were taken into consideration at city level. The globally accepted LEED sustainable building framework will allow GIFT City management and its developers to interact on a common platform – LEED - and thereby derive maximum benefit from optimum utilization of renewable resources, energy efficiency, cost effectiveness, people’s health and other aspects pertaining to green building development.”

— Loveleen Kumar Garg, Asst. Vice President, Environment & Sustainability - GIFT City
Leed Project Spotlights

Jaypee Vasant Continental Hotel

New Delhi | LEED Platinum

The Jaypee Vasant Continental Hotel is strategically located within New Delhi's Diplomatic Enclave. Known for its easy approachability and premium hospitality services, the Continental takes great pride in its many sustainable features and practices. Among them, the hotel recycles 99% of its total solid waste. The project team has managed to reduce the cooling demand by having over 75% of the roof area covered with paints having a high Solar Reflective Index. In regard to natural resource conservation, this LEED certified hotel saves approximately INR 7 million in energy & water savings and reclaims 44% of its potable water. Its total GHG reduction is 123 MT of CO2.

CESC House

(RP – Sanjiv Goenka Group)

Kolkata | LEED Gold

Built in 1933, CESC House is the flagship property of the RP-Sanjiv Goenka Group. It has the distinction of being the first heritage building in India to earn LEED Gold using LEED for Building Operations and Maintenance. Project highlights included an overhaul of the structure's HVAC system and the installation of an advanced chiller plant manager. These steps dramatically improved indoor air quality to the benefit of occupant health. Additional enhancements ranged from a sophisticated building automation system, to a comprehensive water management system. The result? Annual electricity savings of 25% have brought usage to 2005 levels, while water consumption has decreased by 0.3 million liters per year.
LEED Project Spotlights

EDS Global
New Delhi | LEED Platinum

Since 2002, the staff and management of Environmental Design Solutions has worked on hundreds of green building projects worldwide. Their deep experience was amply rewarded when EDS pursued LEED Platinum for its New Delhi headquarters. During construction, the project diverted 97% of all waste from landfills, while pursuing high-efficiency performance and superior indoor environmental quality. Important highlights included the installation of three-foot tall windows that spread natural light evenly throughout the open office, thereby promoting visual comfort and occupant well-being. Operational improvements yielded a significant 42% reduction in water consumption, and overall savings of 35% in energy use.

K. Raheja Corp.
Mindspace Building No. 9
Hyderabad | LEED Gold

With total floor space of approximately 1 million square feet, Mindspace Bldg. No 9 is the largest building in the company’s commercial portfolio. Project architects oriented the building, its floor plate and surrounding landscaping in such a way as to maximize natural daylight and provide occupants with stress-reducing, productivity-increasing views. Efficiency and performance were also priorities, and this project now yields annual savings of INR 24 million in energy and INR 3 million in water. With a corporate green building footprint of more than 33 million square feet of LEED-registered space, K. Raheja Corp’s commitment to environmental stewardship is irrefutable.
LEED Project Spotlights

**K. Raheja Corp.**
**Mindspace Buildings No. 5 & 6**

*Navi Mumbai  |  LEED Gold*

K. Raheja’s Mindspace Buildings No. 5 & 6 was built on expansive space and surrounded by 14,000 square feet of professionally landscaped grounds. Its park-like gardens represent nearly 15% of the site’s total area. Other sustainable innovations included 100% on-site treatment of wastewater to tertiary standards, allowing reuse for gardening and flushing. Efficiency was a fundamental requirement, and this building produces annual energy savings of INR 34 million and water savings of INR 2.8 million.

**British Council**

*New Delhi  |  LEED Platinum*

The British Council headquarters in New Delhi is a six-story, LEED Platinum structure that accommodates a staff of 200. Originally designed in 1993 by world-renowned architect Charles Correa, it earned its LEED certification in 2015. In its pursuit of LEED, the building earned maximum credits for Sustainable Sites, Innovation, and Regional Priority craftsmanship. The implementation of its many green building strategies has reduced water consumption by 44% and energy use by 26%. The clean air produced on site has demonstrably improved worker health and productivity.
LEED Project Spotlights

**Wockhardt Hospital**

*Mumbai | LEED Platinum*

“Life Wins” at Wockhardt Hospital in South Mumbai as they not only care about the well-being and speedy recovery of patients but also the health of their employees. Through LEED, they integrated components - like quality air filtration, natural light, open spaces, temperature controls and green cleaning materials - to create an indoor environment that was brighter, more sanitary, and ultimately, more conducive to healing and occupant health. From November 2014 to February 2016 alone, 30% lower energy consumption was recorded, with cost savings amounting to INR 2 million. LEED has also helped with water use reduction.

**ITC Sankhya Data Center**

*Bengaluru | LEED v4 Platinum*

ITC Sankhya Data Centre recently became the world’s first data center to earn LEED Platinum, ranking it among the most energy efficient data centers in the world. ITC Sankhya is fully powered by renewable energy. It also incorporates variable capacity technology and a sophisticated sensor network that automatically adjusts cooling, heating, humidification, and dehumidification. The resultant combined energy savings last year were INR 121 million. Other performance highlights include PM$_{10}$ in the range of 10-20 Ug/m$^3$, Carbon Monoxide below detectable limits, Formaldehyde below 27 ppb, Ozone below detectable limits for most regularly occupied spaces, along with water savings of INR 0.2 million per year.
LEED Project Spotlights

IFFCO Sadan

*New Delhi | LEED Gold*

The management team at IFFCO’s Sadan headquarters takes pride in having achieved LEED Gold while incurring virtually no incremental costs. Their approach was practical: Facility managers thoroughly analyzed all building operations, identifying and addressing performance gaps. The results were impressive, connected load reduction and included annual energy savings form KWH was **INR 1.6 million**, and water savings upward of **1.2 million liters**. The company found that timely systems overview and efficient management improves reliability, increases occupant comfort and property value, and helps meet environmental commitments. The IFFCO Sadan team intends to upgrade the LEED Gold achievement to LEED Platinum within the next five years.

Kempegowda International Airport, Bengaluru Terminal 1 Expansion

*Bengaluru | LEED Gold*

The expansion of Terminal 1 at Kempegowda International Airport in Bengaluru, India, repositions South India’s busiest airport as an important hub for international travelers and cargo. An elegantly curved roof serves as the unifying element for the new and existing facilities, creating a strong physical presence and visual identity for the airport. The roof’s undulating shape forms a canopy that protects passengers and visitors from the elements. Along with the building’s large overhang, the use of low-e glazing reduces unwanted heat gain to create an energy-efficient, high-performance structure. Skylights enable natural light to penetrate from above. At the east and west ends of the terminal, 65-foot-high glass walls flood the space with natural light while creating commanding views to the outside.
Starbucks, Chhatrapati Shivaji International Airport, Terminal 2, Departures

Mumbai | LEED Silver

This project is the champion of three prestigious milestones: it’s the first LEED-certified Starbucks store in India, it’s the 900th LEED-certified Starbucks store overall, and it makes India Starbucks’ 20th country with a LEED store. The green features in the store include water-efficient plumbing fixtures, energy-efficient appliances and LED lighting that not only reduce the demand on the water supply and energy grid, but help save money over the life of the lease. Integrating sustainable building practices and conserving precious resources is critical as India’s population grows. The certification of the first Starbucks store in India represents the company’s commitment to conserving resources and green retail but also a strong partnership between Starbucks and Tata.

Infosys EC-53 Building

Bengaluru | LEED Platinum

Infosys has designed efficient buildings for many years, and they have learned much. The EC-53 Building is one example. It boasts a custom radiant panel-based cooling system that is 30% more efficient than conventional systems. Its building envelope is fully insulated to minimize heat ingress. Over 90% of the occupied space enjoys natural light and outside views. Self-powered, peel-and-stick wireless switches and sensors reclaim energy from the indoor environment. Rainwater harvesting and an onsite sewage treatment plant reduce water consumption. Indoor air quality is continually monitored and balanced at the granular level. These interventions and others cut energy consumption by 42% over baseline, and reduced water use by 50% over LEED requirements.
LEED Professional Credentials

With employers specifying the need for green building expertise, earning a LEED professional credential signifies that you are an industry leader who actively participates in the green building movement. It also shows a clear commitment to professional growth, while underscoring your value to LEED project teams and sustainability-focused organizations.

**LEED AP**

A LEED AP credential arms you with advanced knowledge in green building, as well as expertise in a particular LEED rating system. Which LEED specialty best fits you?

**LEED AP Building Design + Construction (LEED AP BD+C)**
Promotes expertise in the design and construction phases of green buildings.

**LEED AP Operations + Maintenance (LEED AP O+M)**
Learn to implement sustainable practices, improve performance, heighten efficiency and reduce environmental impact in existing buildings through enhanced operations and maintenance.

**LEED AP Interior Design + Construction (LEED AP ID+C)**
Emphasizes the design, construction and improvement of commercial interiors and tenant spaces that offer a healthy, sustainable and productive work environment.

**LEED AP Neighborhood Development (LEED AP ND)**
Applies to the planning, design and development of walkable, neighborhoods and communities.

**LEED AP Homes**
For those involved in the design and construction of healthy, durable homes that use fewer resources and produce less waste.

**LEED GREEN ASSOCIATE**

LEED Green Associate is an entry-level credential for individuals interested in a basic understanding of LEED and sustainable building.

GBCI develops, designs and maintains all LEED credentialing exams. Exams are administered by Prometric, GBCI’s test development partner. The Credential Maintenance Program (CMP) is also overseen by GBCI. Continuing education keeps LEED professionals at the forefront of the green building industry, driving ongoing excellence in the marketplace and ensuring that LEED professionals are the most qualified in the field.

Learn more LEED Professional Credentials at GBCI.org/Credentialing.

**LEED PROFESSIONALS IN INDIA**

As India’s commitment to sustainability continues to evolve and grow, more of its building professionals are earning their LEED professional credentials.

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<th>LEED APs</th>
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SOURCE: GBCI, 2016
Who is Using LEED in India?

When we talk about LEED, we talk about the triple bottom line: People, Planet, Profits. How has LEED contributed to your triple bottom line?

Mr. B. L. Chandak

Executive Director, RP-Sanjiv Goenka Group

"People, Planet and Profit" all blends together at CESC House, our 80-year-old heritage building. We recently earned LEED certification on a retrofit. In the process, building efficiency, indoor air quality and occupant productivity have all improved. Many systems, which were once manually operated, are now automated. Where electricity consumption had been growing at 2% per year, our new system is reducing energy consumption by 30%. Water use is down by 0.3 million liters per year. Also, annual CO2 emissions have been cut by 900 tonnes. The monetary benefit of all this is valued at approximately INR 6 million per year. Plus, the Kolkata Municipal Corporation (KMC), which offers an extra 10% floor area ratio for new buildings that are certified green, is in discussion with us to allow this incentive for existing buildings – along with a green building a rebate on property taxes. In all, this adds up to a clear demonstration of CESC’s commitment to promoting greater efficiency and savings to our 2.9 million consumers and our peers."

Mr. Birinder Singh

Executive Director (CRS), Indian Farmers Fertilizer Cooperative Ltd.

"IFFCO has taken up an ambitious goal of getting many of its buildings LEED certified and highlighting its commitment to its employees and nature as a whole. Moreover, since IFFCO already follows procedures that bring efficiency into its operations, it is natural to complement the efforts of the project management team with LEED certification. As a part of this process, we are pursuing LEED for Building Design and Construction and LEED for Building Design and Construction: Core and Shell Development certification for our new buildings and LEED for Building Operations and Maintenance certification for those already in existence. LEED has helped us re-evaluate our operations and processes and identify measures we can take to optimize our resources. I sincerely hope that we all will adopt sustainability, not only in our professional space, but also in our personal space. Only then we will be able to ensure a healthy planet for ourselves and for future generations."
Who is Using LEED in India?

Mr. Alan Gemmell OBE
Director India, British Council
“Our high-performance LEED Platinum building integrated green design at every step, from the planning stage, through construction, to its ongoing operation and maintenance programs. Project considerations were organized around a “People, Planet, Profit” strategy. For occupants, indoor environmental quality was a high-value objective. Additionally, quality views, thermal comfort, ventilation, elimination of adverse particulate matter, low-VOC materials and personal climate control were among the priorities. Environmental considerations began with site location and building orientation and extended to energy and water efficiency, the use of environmentally preferable products and waste prevention and recycling programs. Containing costs and maximizing profits include automated controls for energy, water, waste, temperature, moisture and ventilation. There is also best-practices instruction targeting building occupants, managers, and maintenance staff.”

Mr. Tanmay Tathagat
Director, Environmental Design Solutions (EDS)
“Building sustainably is unquestionably the only way to ensure quality of life for everyone. The biggest benefit of this approach is the improved health and well-being of the building occupants, as well as other residents of the planet. For a country like India, which is poised to grow aggressively, a sustainable path is even more important at this juncture, as it also has the potential to create more jobs, business and services for the green economy. The LEED framework can be used as a reference to address the critical issues of growing Indian cities. These issues range from urban sprawl, transportation networks, urban design practices, and most importantly prioritization of health and well-being, as well as quality of life considerations. All told, LEED is a positive influence for People, Planet and Profit.”

Mr. Guruprakash Sastry
Regional Manager - Infrastructure, Infosys Ltd.
At Infosys Ltd., a company founded on next-generation thinking, environmental sustainability is the company way. And for Infosys, the company way includes a long-standing commitment to LEED at its most rigorous Platinum level. Infosys has found that, when its building design teams incorporate sustainable building concepts and strategies from the planning stage forward, exceptional efficiencies are achieved at no incremental cost. Today, Infosys boasts an exceptionally green corporate portfolio that includes 15 LEED Platinum certified buildings. This equates to nearly 5.65 million square feet of LEED certified real estate, and makes a clear statement regarding the company’s commitment to the future.”
Who is Using LEED in India?

Mr. Ajit Sharma

**Joint President, Operations, Jaypee Vasant Continental**

“Jaypee Vasant Continental is proud to be a pioneer in adapting our operations to achieve excellence in sustainable practices. Today we are one of only two hotels in Delhi-NCR to have earned LEED Platinum. We achieved this benchmark by working toward the triple bottom line principles of people, planet and profits. In energy efficiency, our hotel ranks among the world’s top 20% as determined by the United States’ Energy Star online benchmarking tool. With the ozone layer depleting and global warming a growing concern, our many efforts reduced our CO2 emissions by 605 mega tons. Our potable consumption of water has been reduced by 44% over an International Plumbing Code (IPC) baseline, which translates into annual savings of 5,370 kilo liters. And our custom sewage treatment plant (STP) enabled us to provide, at no cost, 100 kilo liters per day of treated water to local municipal authorities for horticulture. The many initiatives we have taken have helped us trim our engineering budget by 4.89%, further increasing...”

Mr. Shabbir Kanchwala

**Senior Vice President, K. Raheja Corp.**

“The expression “People, Planet and Profit” briefly describes the triple bottom line and the goal of sustainability. As a universally accepted brand, LEED accomplishes the goals of sustainability. “People” pertains to fair and beneficial business practice, “Planet” refers to sustainable environmental practices and “Profit” is the economic value created by the organization after deducting the cost of all inputs, including the cost of the capital tied up. K. Raheja Corp. is following LEED certification norms for all of its commercial projects on a PAN India basis. K. Raheja Corp. does this voluntarily and understands that LEED benefits human health - “people” - by providing better Indoor Environmental Quality, with provisions for maximum daylighting within the building, views to the outside, ample open space, and other sustainable practices. LEED addresses “planet” by reducing the coal-based energy usage and the associated greenhouse gases (GHG) released to the atmosphere. Further, it contributes to water savings and emphasizes the use of sustainable construction materials. “Profits” are the most essential and core part of any business activity. LEED helps to reduce energy and water usage for the customers of K. Raheja Corp’s commercial projects, which further results in a reduction in building operating costs.”
Mr. Amit V Gupta
Senior Vice President, Head of Realty Services, Citi South Asia

“At Citi, sustainability is embedded into our core business and operations. The company’s 2020 sustainability goal is to have 33% of our real estate portfolio LEED-certified. In India, more than 50% of Citi’s real estate portfolio is already LEED-certified. LEED directly contributes to Citi’s triple bottom line by helping us better manage our global facilities and supply chains to minimize our impact on the planet, reduce our operating costs, and reflect our best sustainability practices. Our LEED-certified facilities typically show a 30% reduction in energy use, a 30% reduction in water consumption and a 60% reduction in waste. These efficiency improvements contribute towards reduced GHG emissions.”

Mr. Chitranjan Dar
Group Head, ITC Central Project Organization

“As a carbon, water and solid waste recycling positive company, ITC endeavors to contribute to a better tomorrow. A LEED plaque means that a facility has gone through consistent practices or processes and has been certified to meet what is required to be a sustainable building. Green building practices substantially reduce or eliminate negative environmental impacts through high-performance design, construction and operation practices. As an added benefit such operations and management reduce operating costs, enhance marketability, increase productivity and reduce potentially damaging indoor air quality problems. Our leadership in the green building movement in India through LEED certification is an important manifestation of our commitment to shape a sustainable future for the generations to come.”

Ms. Deepa Sathiaran
Executive Director - En3 Sustainability Solutions.

“The triple bottom line is not an option for doing business anymore but is the core and essence of business. At En3, that’s what we have done. Sustainability is part of En3’s DNA and all our activities embrace 4 P’s – not just People, Planet, Profits but also Prosperity. In our view, the best companies of the future are those that will seamlessly integrate business with personal values and societal well-being. Our efforts at En3 has been to help such companies accomplish the same using several tools such as LEED, WELL, GRI, SA8000 and other well established sustainability frameworks. The success of the entire triple bottom line effort is in its own hands - in the hands of one of its P’s - the PEOPLE. We at En3 believe that if an organization and its people have the right values, then they can drive many efforts towards environmental and social change ranging from green technologies and solutions to sustainable living. In a sense, at En3 we strive towards leading responsible change for us and all our clients”

Who is Using LEED in India?
Resources

LEED helps to identify connections. From the built environment to the site it occupies, between people and the buildings where they live, work and learn and also connections between one building and another.

**USGBC and GBCI provide a wide range of support for project teams and owners.**

Start your journey with USGBC membership, access to first-in-class green building education through Education @USGBC and online access to the LEED rating system reference guides.

**LEED professional credential**

Register your project at LEED Online: Usgbc.org/leedonline/

As you work through projects you may find technical support through our knowledgeable and seasoned technical solutions and LEED coach staff. To learn more about this, please send an email to info-india@gbci.org.

For more information on GBCI, LEED in India, or to be considered for the next LEED in Motion: India report, please email Alok Jhunjhunwala at ajhunjhunwala@gbci.org.