In today’s competitive world, property developers are trying their best to build sustainably. Resource-efficient buildings clearly have impact, from the corporate bottom line to a homeowner’s pocket. But how does a developer confidently capture this value while gaining brand recognition?

The Verde Two Monteverde Tower residential building in Jakarta is EDGE-certified by GBC Indonesia.

The solution is EDGE, a green building certification system for emerging markets created by IFC, a member of the World Bank Group. **EDGE is a measurable way for builders to optimize their designs,** leading to a more investment-worthy and marketable product. By keeping certification fast and inexpensive, EDGE keeps pace with the momentum that developers need to stay at the forefront of the green building trend.

The EDGE software shows within minutes how committing to a few practical energy and water-saving options improves building performance at little or no cost. The numbers are brought to the forefront to reveal the most economically viable path to building green.

EDGE focuses the certification process on technical aspects that yield meaningful results. This makes it easier for developers to build a portfolio of innovation that attracts new customers and boosts brand equity.

“**Occupants of our exceptionally designed buildings benefit from lower energy and water bills. We’re committed to building green and have received EDGE certification for our projects, which gives us global recognition.**”

– Budiarsa Sastrawinata
President Director
PT Ciputra Residence

GBC Indonesia is an independent, not-for-profit organization that drives market transformation in the construction, property and urban development industries, encouraging the Indonesian archipelago to be more responsible and sustainable.
EDGE proves that the next generation of buildings can be more profitable while making a lighter carbon footprint. To qualify for certification, a building must achieve a 20% reduction in energy, water, and embodied energy in materials compared to a conventional building. EDGE works for a variety of residential and commercial buildings in more than 150 countries, including homes and apartments, hotels and resorts, office buildings, health care facilities, and retail establishments.

Building design teams can now adopt a quantitative approach, as the EDGE software shares localized costs and climate data for site-specific results. The interface enables easy modeling of future performance without sacrificing design integrity. EDGE is useful for all stages of a project’s life cycle – from the pivotal moment when design is born, straight through to on-site decision-making.
Beneath an intuitive interface is a powerful engine that understands local climatic conditions and how the building will be used by occupants. Discover the ideal bundle of measures for the best investment return within minutes.

The EDGE software is free to everyone with certification available at a modest cost.

With EDGE, green buildings are suddenly available to all.

“EDGE leverages the power of gaming…it only took me 30 minutes to design my first project.”

– DevelopingSmartCities.org
From affordable apartments to high-end residences, from business to luxury hotels, and from commercial properties to healthcare facilities, millions of square meters of floor space have become EDGE certified.

These green buildings dot the landscape in countries around the world, bringing a higher asset value to their owners with better operational performance and reduced carbon emissions. To view project studies, visit www.edgebuildings.com/projects.
Edge FOR HOMES

Smart homebuyers understand the tangible benefits that owning a green home brings. Through such sensible solutions as low-energy lighting, thermal glass, and water-conserving fixtures, developers can meet the expectations of consumers who want to save money while living in comfortable spaces with good ventilation and abundant daylight.

EDGE-certified homes attract prospective buyers who understand the long-term value of their investment in a green residence, with its lower utility bills and potential higher re-sale price. Homeowners also believe in the sense of fulfillment that comes with making a responsible choice. Developers can capitalize on these advantages and aspirations to win new customers and promote their brand.

Why Homebuyers Prefer a Green Home

- Cuts utility, maintenance, and repair costs.
- Commands a higher re-sale price.
- Creates a more comfortable lifestyle.
- Inspires pride of ownership.
- Protects the planet.

RESIDENTIAL CASE STUDY
Affordable Homes in Tangerang, Banten
Ciputra Group

"My home has good air circulation so we don’t need to use air conditioning during the day. In my previous home, I used to spend IDR800,000 on electricity each month. Now we spend only IDR200,000 per month. It’s a huge difference!"

– Emilia Sutedja
Resident, Citra Maja Raya

<table>
<thead>
<tr>
<th>SOLUTIONS</th>
<th>SAVINGS</th>
</tr>
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<tbody>
<tr>
<td><strong>Energy</strong></td>
<td>30%</td>
</tr>
<tr>
<td>■ Reduced Window to Wall Ratio</td>
<td></td>
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<tr>
<td>■ External Shading</td>
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<tr>
<td>■ Natural Ventilation</td>
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<tr>
<td>■ Energy-Saving Lighting</td>
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<tr>
<td><strong>Water</strong></td>
<td>26%</td>
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<tr>
<td>■ Low-Flow Showerheads</td>
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<tr>
<td>■ Low-Flow Faucets for Kitchens &amp; Bathrooms</td>
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<tr>
<td>■ Dual-Flush Water Closets</td>
<td></td>
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<tr>
<td><strong>Materials</strong></td>
<td>60%</td>
</tr>
<tr>
<td>■ Autoclaved Aerated Concrete Blocks for Internal and External Walls</td>
<td></td>
</tr>
<tr>
<td>■ Micro Concrete Tiles on Steel Rafters for Roof Construction</td>
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**RESULTS**

<table>
<thead>
<tr>
<th>Extra Costs &amp; Payback Time</th>
<th>Green Solutions (Rp/home)</th>
<th>Payback (Yrs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 million</td>
<td>1.8</td>
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<tr>
<td></td>
<td>190,000</td>
<td>203</td>
<td>12</td>
<td>201</td>
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<table>
<thead>
<tr>
<th>Environmental Benefits</th>
<th>GHG Savings (tCO2/year/home)</th>
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<tbody>
<tr>
<td></td>
<td>0.13</td>
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</table>
There are many reasons to opt for a resource-efficient commercial building. Tenants and guests will appreciate the value proposition of reduced operational costs. Lower break-even occupancy rates will protect against market variability. And investors will respond well to a strong balance sheet.

The EDGE software provides an opportunity to explore technical options while viewing capital expenses and utility savings. Extra capex of just two percent has been known to produce savings greater than 10 times the initial cost of building green. In addition, the building itself will command greater market value due to its ability to deliver on the operational front.

Top Reasons to Own an EDGE-Certified Building

- Sends a positive signal to investors.
- Drives profitability that leads to expansion.
- Increases property valuation.
- Ensures cost control and consistency across properties.
- Complements efficiencies in construction and labor.
- Contributes to a brand of corporate sustainability.

COMMERCIAL CASE STUDY
The 101 Bogor Suryakancana Hotel in West Java

Located in Changxing, the “Bruck” Passive House by Landsea is EDGE-certified.

“... initiatives that we have undertaken, from the building’s orientation to the design solutions in the building's interior and on the external façade, are essential in providing maximum resource savings and greater comfort for our guests.”

- Adjid Kurniawansyah
  General Manager,
  The 101 Bogor Suryakancana Hotel

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<tr>
<th>SOLUTIONS</th>
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<tbody>
<tr>
<td><strong>Energy</strong></td>
<td>46%</td>
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<tr>
<td>- Reduced Window to Wall Ratio</td>
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<td>- External Shading</td>
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<td>- Low-E Coated Glass</td>
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<td>- Variable Refrigerant Volume Cooling System</td>
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<td>- Heat Pump for Hot Water</td>
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<td>- Energy-Saving Lighting</td>
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<td><strong>Water</strong></td>
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<tr>
<td>- Dual-Flush Water Closets</td>
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<tr>
<td>- Water-Efficient Urinals, Dishwashers and Landscaping</td>
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<tr>
<td>- Aerator and Auto Shut-off Faucets in Bathrooms</td>
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<tr>
<td><strong>Materials</strong></td>
<td>41%</td>
</tr>
<tr>
<td>- Autoclaved Aerated Concrete Blocks for External and Internal Walls</td>
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<tr>
<td>- UPVC Window Frames</td>
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RESULTS

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<tbody>
<tr>
<td>Green Solutions (Rp/building)</td>
<td>100 million</td>
<td>0.06</td>
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<tr>
<td>Payback (Yrs.)</td>
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<thead>
<tr>
<th>Savings</th>
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</thead>
<tbody>
<tr>
<td>Utility Bills (Rp/month)</td>
<td>142 million</td>
<td>0.06</td>
</tr>
<tr>
<td>Energy (kWh/month)</td>
<td>110.310</td>
<td>181</td>
</tr>
<tr>
<td>Water (kL/guest/night)</td>
<td>181</td>
<td>515</td>
</tr>
<tr>
<td>Embodied Energy (MJ/m²)</td>
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<table>
<thead>
<tr>
<th>Environmental Benefits</th>
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<tbody>
<tr>
<td>GHG Savings (tCO₂/year)</td>
<td>819</td>
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</table>
EDGE Certification

HOW IT WORKS

Certification is initiated at the early design stage, when details of the project are entered into the EDGE software and green options are selected. The project must reach the EDGE standard of a 20% improvement in energy, water, and materials as measured against local construction practice. When achieved, the project is registered for certification.

During the certification process, documentation is submitted by the client and reviewed by EDGE-accredited auditors at the design and construction stages, with a site audit performed. Projects that meet the EDGE standard receive a certificate confirming predicted performance.

Ciputra Residence’s corporate leadership at an EDGE certification ceremony.

GBC Indonesia

A GLOBAL CERTIFICATION PARTNER FOR EDGE

IFC works with premier partners to scale up green building growth in emerging economies.

The Green Building Council (GBC) Indonesia collaborates with various stakeholders such as architects, engineers, developers, academics, government representatives, manufacturing industries and contractors. To achieve its goals, GBC Indonesia has three main programs:

- Education for building professionals and interested members of the public
- Implementation of green building certification, including EDGE
- Increased general awareness of green buildings through networking, advocacy and publications

For more information, including pricing, visit www.gbcindonesia.org or email edge@gbcindonesia.org
EDGE
An innovation of IFC, EDGE creates intersections among developers, building owners, banks, governments, and homeowners to deepen the understanding that everyone wins financially by building green. EDGE jumpstarts the mainstreaming of green buildings to help tackle climate change.

IFC
IFC is a member of the World Bank Group that focuses on private sector development. Working with partners in more than 100 emerging markets, IFC invests, advises, and mobilizes resources from others, creating opportunity for clients in a broad range of industries.

www.edgebuildings.com

EDGE in Indonesia is supported by:

Swiss Confederation

Federal Department of Economic Affairs, Education and Research EAER
State Secretariat for Economic Affairs SECO

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