

LEED India Rating System



CI I -Sohrabji Godrej Green Business Centre



“Centre of Excellence” for Green Buildings, Energy,
Environment, Water, Renewable Energy &
Climate change activities in India

© Confederation of Indian Industry

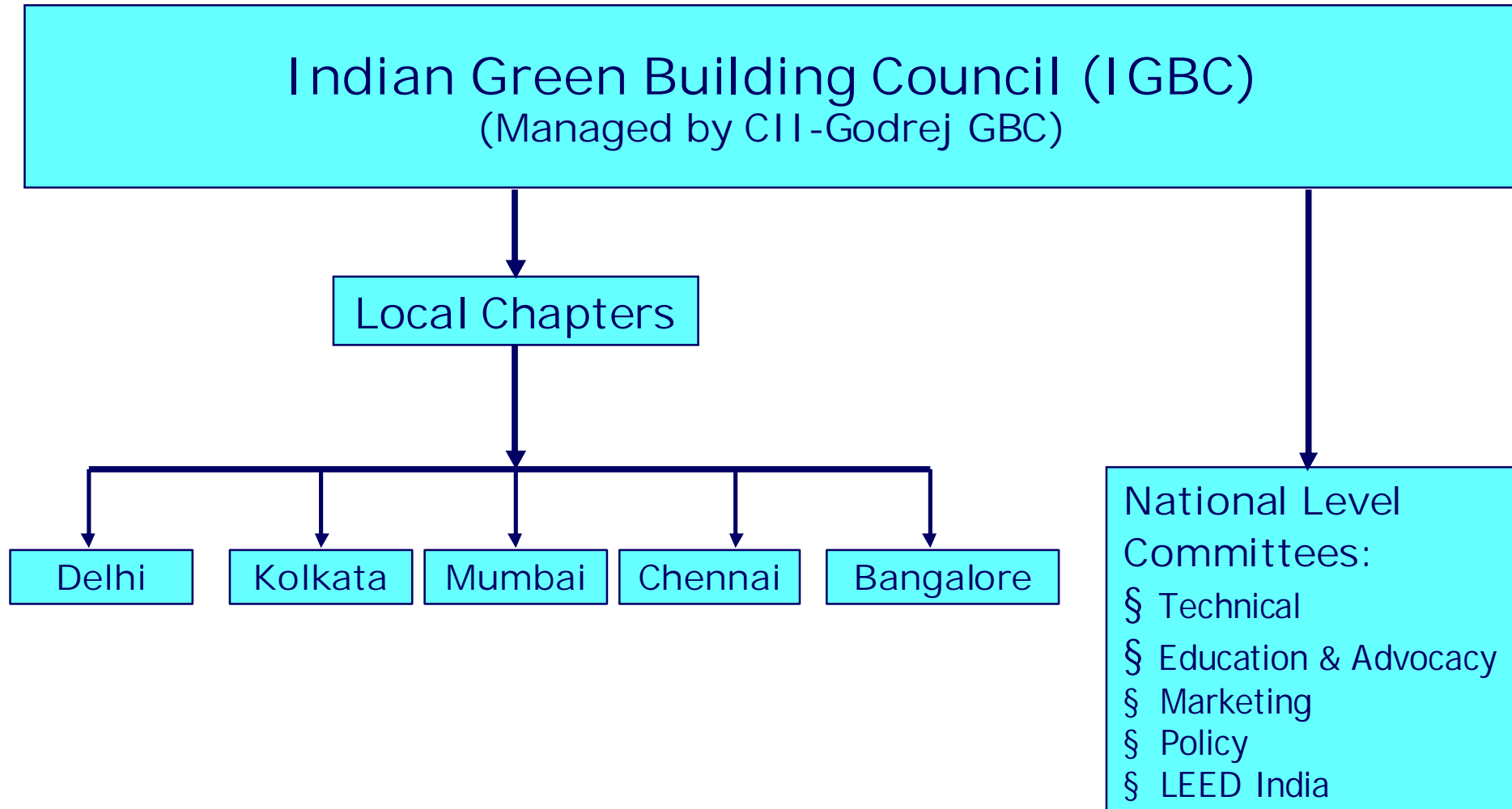


Vision of IGBC (Indian Green Building Council)



- √ To usher in a green building movement in India
- √ India to become one of the world leaders in green buildings by 2010

IGBC Structure



IGBC - Services Offered

1. LEED India Certification
2. LEED workshops
3. Green Building Congress
(Annual Conference –cum-Exhibition)
4. Publications & Information dissemination
 - ✓ 'Green Habitat' – Quarterly News letter
 - ✓ Information dissemination through www.igbc.in
5. Membership services
6. Green Building Tours
7. LEED AP Examination



Salient Features of a Green Building

- ✓ Effective Use of soil & Landscapes
- ✓ Efficient Use of Water
- ✓ Energy Efficient & Eco Friendly Equipment
- ✓ Effective Control & Building Management Systems
- ✓ Use of Renewable Energy
- ✓ Use of Recycled/Recyclable Materials
- ✓ Improved indoor air quality for health and comfort

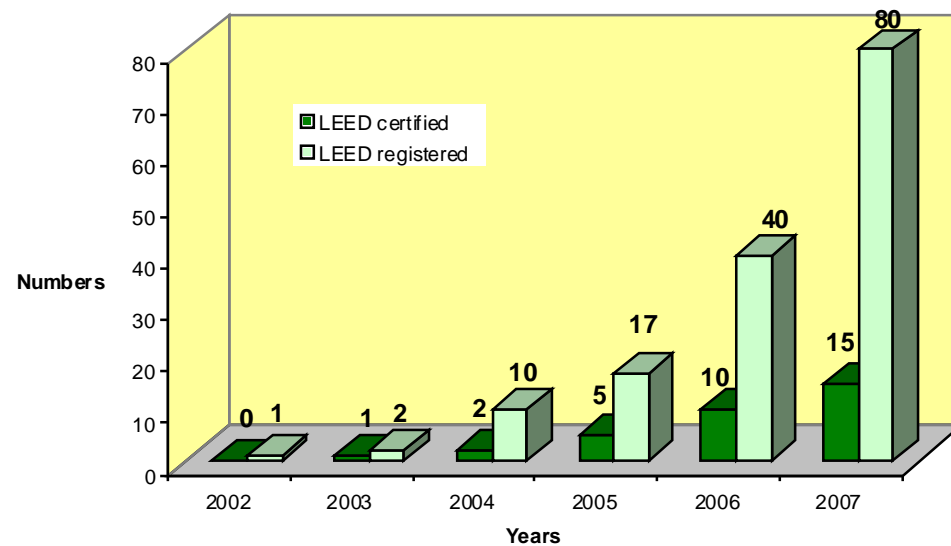
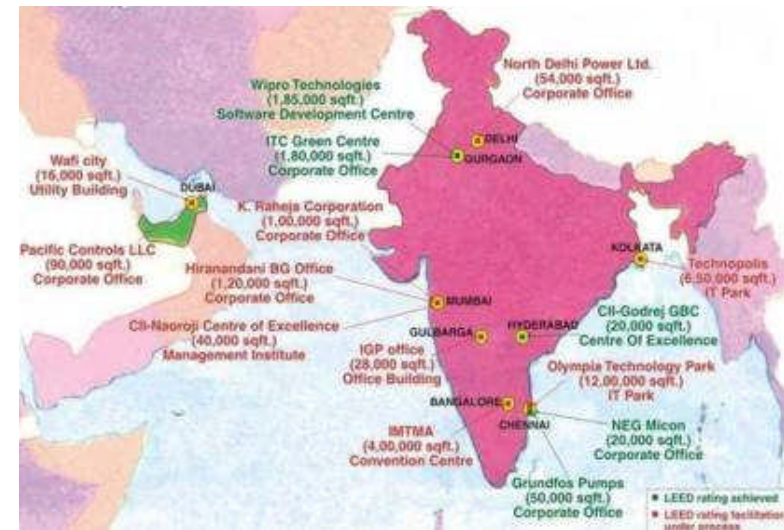


CII – IQ Building, Bangalore

Green Buildings in India

v Varieties of buildings registered for LEED Green Building Rating in India

- ∅ IT Parks
- ∅ Offices
- ∅ Banks
- ∅ Airport
- ∅ Convention centres
- ∅ Educational institutions
- ∅ Hotels
- ∅ Residential



Green Building vs. Conventional Building

✓ Externally : both look alike

✓ Building Use : both are same

✓ Differences

∅ Operational savings

∅ Concern for human comfort &
indoor environment



CII-Godrej GBC,Hyderabad
Platinum Rating

Tangible Benefits

✓ Reduce operating costs from day one



ITC Green Centre, Gurgaon
Platinum Rating

- ✓ Energy savings: 40 – 50 %
- ✓ Water savings: 20 – 30 %
- ✓ Reduction in initial investment

Intangible Benefits of Green Design

- ✓ Health and Safety benefits

- ∅ Enhance occupant comfort

- ✓ Improve Productivity of occupants

- ∅ 12-15 % improvements documented in schools & other buildings

- ✓ World Class Standards & Procedures

- ∅ Few Examples

- q NBC guidelines (Soil erosion)
 - q ASHRAE 90.1 2004 / ECBC (Energy)
 - q ASHRAE 62 2004 (Indoor Air Quality)
 - q IPMVP (For monitoring performance)
 - q SMACNA (For Construction IAQ)



L&T EDRC I, Chennai
Silver rating

Do Green Buildings Cost More?

- ✓ Cost is relative
- ✓ Depends on green features already considered
- ✓ Decide based on life cycle cost rather than first cost



Operational savings offset incremental cost

Cost of Green Buildings - Indian Experiences

Building	Year awarded	Built-in Area (Sqft)	Rating Achieved	% increase in cost	Payback (Yrs)
CII-Godrej GBC, Hyderabad	2003	20,000	Platinum	18 %	7 years
ITC Green Centre, Gurgaon	2004	1,70,000	Platinum	15 %	6 years
Wipro, Gurgaon	2005	1,75,000	Platinum	8 %	5 years
Recently Rated Green Buildings					
Technopolis, Kolkata	2006	72,000	Gold	6%	3 years
Spectral Services Consultants Office, Noida	2007	15,000	Platinum	8%	4 years
HITAM, Hyderabad	2007	78,000	Silver	2%	3 years

- ✓ Cost showing a decreasing trend over the years
- ✓ Incremental Cost lower if base design has already factored normal Green features

What is LEED?

Rating of buildings by IGBC



Leadership in Energy & Environmental Design

LEED in India

- v Voluntary, Consensus-based, Market driven
- v Based on professional reference standards like NBC, ASHRAE, ECBC etc.,
- v Assessment by III Party Assessors & USGBC



Grundfos Pumps, Chennai
Gold Rating

LEED Projects Across The Globe (As on September 2007)



LEED India Green Building Rating System – Certification Levels

Rating	New Construction (NC)	Core & Shell (C&S)
LEED Certified	26-32	23-27
LEED Certified Silver level	33-38	28-33
LEED Certified Gold Level	39-51	34-44
LEED Certified Platinum Level	52-69	45-61

LEED India Green Building Rating System

Points for individual Credits

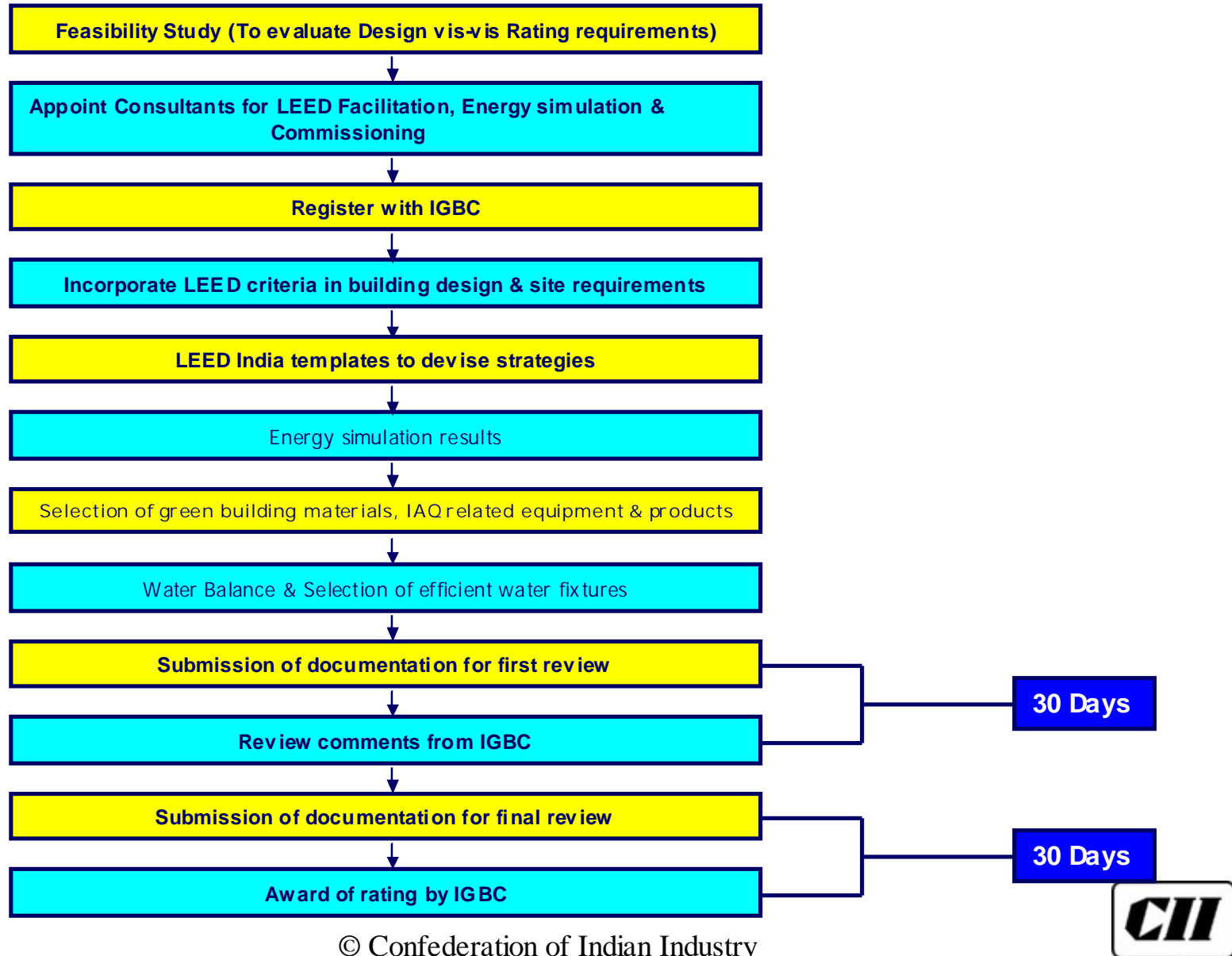
SI No	Credits	New Construction	Core & Shell
	Prerequisites	7	7
1	Sustainable Sites	13	14
2	Water efficiency	6	6
3	Energy and Atmosphere	17	14
4	Materials and Resources	13	11
5	Indoor Environmental quality	15	11
6	Innovation and Accredited Professional points	5	5
	Total	69	61

Complying with Prerequisites is mandatory for all LEED India Projects

Which Rating Programme to Apply

LEED Rating Programme	Type of Building
LEED for New Construction	<ul style="list-style-type: none">✓ All new high-rise buildings✓ Residential buildings of 4 or more habitable stories
LEED for Core & Shell	Rented / Leased commercial buildings
LEED for Commercial Interiors	Tenant or self-occupied spaces
LEED for Existing Buildings	Existing buildings occupied for at least 2 years

Process To Achieve LEED India Rating

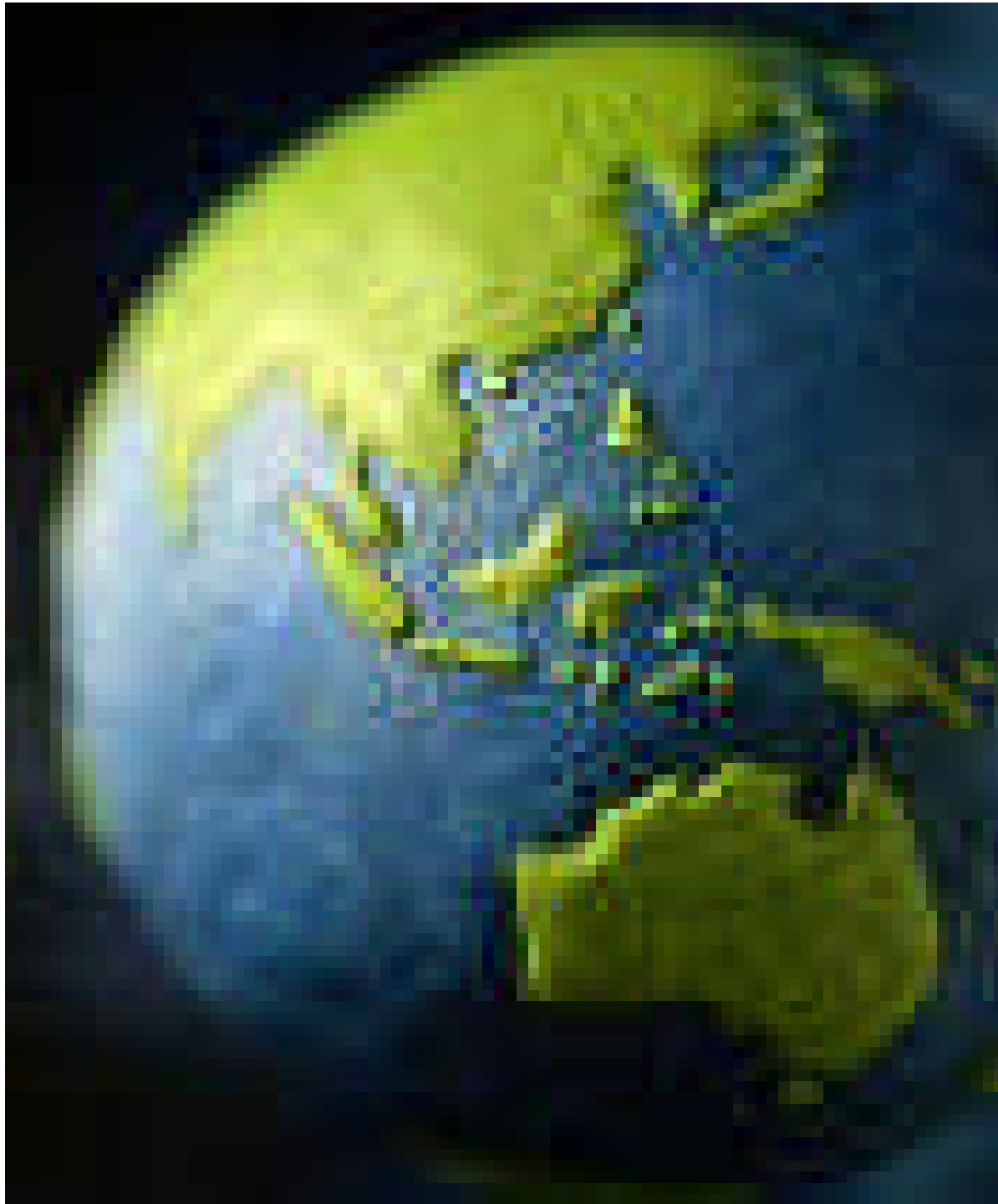


To Sum Up

- ✓ Green Buildings
 - Ø Excellent opportunity to reduce operating costs from day one
- ✓ Tremendous benefits
 - Ø Tangible & Intangible



"Green makes Business Sense"



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