

Subject: Advance Material & Technology in
Architecture

Topic: Green Building Concept

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INDIAN GREEN BUILDING **COUNCIL**

- The Indian Green Building Council (IGBC) was formed in the year 2001 by Confederation of Indian Industry (CII).
- The aim of the council is to bring green building movement in India and facilitate India to become one of the global leaders in green buildings by 2015.



IGBC RATING SYSTEM

- IGBC has developed green building rating programmes to cover commercial, residential, factory buildings, etc.
- Each rating system divided into different levels of certification are as follows:
 - „Certified“ to recognise best practices.
 - „Silver“ to recognise outstanding performance.
 - „Gold“ to recognise national excellence.
 - „Platinum“ to recognise global leadership.

GREEN BUILDINGS PROJECT IN INDIA

- Suzlon Energy Limited-Pune
- Biodiversity Conservation India-Bangalore
- Olympia Technology Park-Chennai
- ITC Green Centre-Gurgaon
- The Druk White Lotus School-Ladakh
- Doon School-Dehradun
- Raintree Hotels-Chennai
- Nokia-Gurgaon
- Rajiv Gandhi International Airport-Hyderabad
- Hiranandini-BG House, Powai
- ABN Amro Bank, Chennai
- Palais Royale at Worli, Mumbai
- Punjab Forest Complex, Mohali



- **SUZLON ENERGY LIMITED,PUNE:**

- Several accolades continue to shower upon Suzlon’s global headquarter in Pune “One Earth”.
- LEED certified it as „PLATINUM“ and it is built on an area of 10.13 acres.
- One Earth can be counted as among the largest green building projects in India.



- **RAJIV GANDHI
INTERNATIONAL
AIRPORT-
HYDERABAD:**

- India's first Greenfield airport is undeniably among the top 10 green buildings in India.
- First airport in Asia to be certified with „SILVER“ rating.
- This green building ensures optimal use of natural light and minimal wastage of electricity or energy consumption.



- **NOKIA-GURGAON:**

- „GOLD“ rated building by LEED.
- Its smart lighting, heat recovery wheel and high efficiency chillers makes this office stand out from the rest.



SOME IMAGES OF GREEN BUILDINGS



DIFFERENT FROM OTHER **BUILDINGS**

- The design, maintenance and construction of buildings have tremendous effect on our environment and natural resources.
- Green Building is different from the other buildings because it use a minimum amount of nonrenewable energy, produce minimal pollution, increases the comfort, health and safety of the people who work in them.
- It also minimize the waste in construction by recovering materials and reusing or recycling them.

INCREASING GREEN BUILDINGS IN INDIA

- Today more than 1053 green buildings (as on April 2011) are being constructed all over India, of which 147 green buildings are certified and fully functional.



BENEFITS OF GREEN BUILDING

- Buildings have a large effect on the environment, human health and the economy.
- The successful adoption of GREEN BUILDING development can maximize both the economic and environmental performance of the buildings.



ENVIRONMENTAL BENEFITS

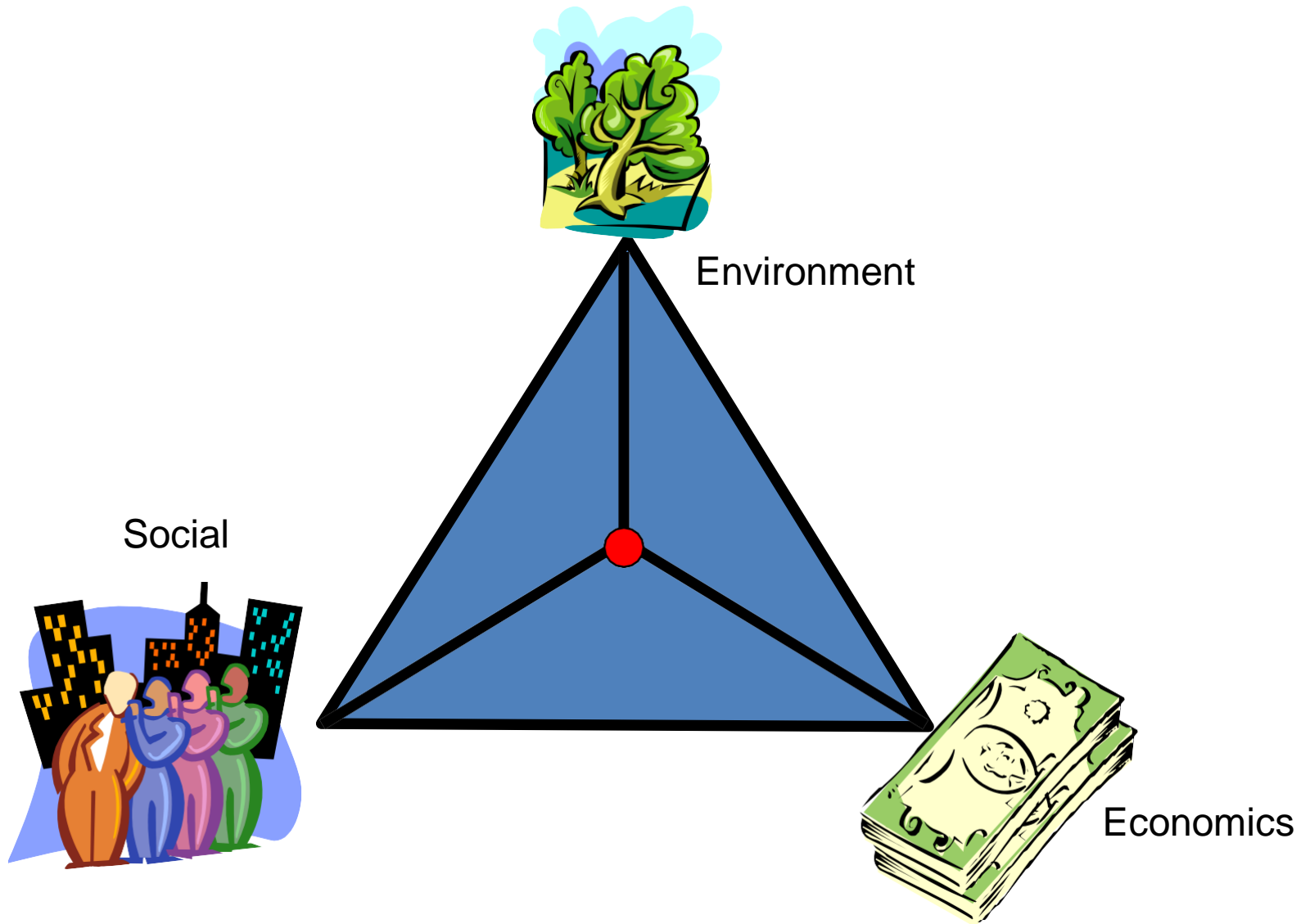
- Protect biodiversity and ecosystems
- Improve air and water quality
- Reduce waste streams
- Conserve natural resources

ECONOMIC BENEFITS

- Reduce operating costs
- Create, expand, and shape markets for green product and services
- Improve occupant productivity

SOCIAL BENEFITS

- Enhance occupant comfort and health.
- Heighten aesthetic qualities.
- Minimize strain on local infrastructure.
- Improve overall quality of life.



AFFECT ON NATURAL RESOURCES

- According to surveys conducted in 2006, 107.3 million acres of total land area is developed, which represents an increase of 24 percent land covering green buildings over the past 3 years.
- In terms of energy, buildings accounted for 39.4 percent of total energy consumption and 67.9 percent of total electricity consumption.

CONCLUSION

- This research identified the exciting developments taking place on the technology front and analyzes their implications for intelligent and green buildings, highlighting examples of “best in class” buildings employing green and intelligent technologies. These buildings are dynamic environments that respond to their occupants’ changing needs and lifestyles. This research provided documented evidence to educate and influence end-users, building owners, architects, and contractors that a “greener building” can be achieved using intelligent technology and that this “greening” will provide a tangible and significant return on investment.

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START THINKING GREEN

