BEYOND SMART CITIES

TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT REFRESHER TRAINING COURSE

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BENEFITS OF SUSTAINABILITY

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BUILDING SCIENCE SPECIALIST CURRICULUM

WHAT SHOULD YOU LEARN

- What is Sustainable Building
- Benefits of sustainable Building
- Economic benefits of Sustainability
- Reduction of costs
- Increase Return
- Corporate Intangible value

With the proliferation of Sustainable (green) Building practices around the world, this concept is not known throughout the industry. The principles of sustainable building are similar regardless of the system under which they are applied.

WHAT IS SUSTAINABLE BUILDING?

To build and develop sustainably, one must:

- Protect and integrate building with the natural environment
- Increase energy efficiency
- Reduce water consumption
- Promote the reuse and regional use of building materials
- Reduce building waste and pollution
- Protect occupant health and increase wellbeing

These principles are integrated into the design and construction process by regional and community planners, real estate developers, funding agencies, architects, engineers, contractors, and facility managers to create buildings and

BENEFITS OF SUSTAINABLE BUILDING

- **There are several environmental benefits of sustainable building:**
  - **Reduce pollution and waste**
  - **Restoration or preservation of natural resources**
- **Buildings built sustainably have better:**
  - **Indoor air quality**
  - **More energy efficient compare to traditional buildings (up to 40% or more)**

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ECONOMIC BENEFITS OF SUSTAINABLE DEVELOPMENT:

To build and develop sustainably, one must:

- Increased asset Value
- Tenant retention and satisfaction
- Reduce water consumption
- Shareholder value
- Employee satisfaction and morale
- Stakeholder relations
- Higher return on investment
- Net operating income (NOI) via lower operating
- Productivity improvements

Integrated design is a comprehensive holistic approach to design which brings together specialisms usually considered separately..... Design of a building which considers whole building design including architecture, structural engineering, passive solar building design and HVAC.

REDUCTION OF COSTS

Competitive first costs

- Integrated design allows high benefit at low cost by achieving synergies between disciplines and between technologies
- Reduce Operating Costs
  - Lower utility costs significantly
  - LEED EB and NC buildings have an average annual net savings of between 25% to 45%, depending on the extent of compliance to the LEED Credits

When developing infrastructure, many countries, policymakers, builders, and contractors overlook the city planning aspects. City planning is imperative for the construction of sustainable infrastructure.

INCREASE RETURNS

- Increase building valuation and ROI
  - Increased building value
  - Higher asking rents
  - Higher ROI
- Decrease vacancy, improve retention
  - Marketing advantages
  - Higher occupancy rates
  - Decreased absenteeism
  - Employee performance is better in day lighted office buildings.
  - Providing a healthy workplace
  - improves employee satisfaction
- Reduce liability
  - Improve risk management

We create world-class brands that accelerate business growth. Your brand is one of the most valuable **intangible assets** of your business.

CORPORATE INTANGIBLE VALUES

In addition to tangible values, intangible values are:

- Acknowledgment to employees their company is committed to providing them a safe, healthy and efficient building
- Acknowledgement to stakeholders that the corporation is committed to positively mpacting the bottom line
- Acknowledgement to the surrounding community that the corporation is committed to sustainability

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MARKETPLACE