How developers can harvest the benefits of green building accreditation while reducing risk and cost

2010-05-04

Stand out!

Source: canstockphoto.com
Agenda

Key Green Accreditation Challenges

Adapting Quality approach to Green

Integrated Approach to Green Buildings

Green benefits for Developers
### Key green accreditation challenges

#### Technical challenges
- Environmental requirements touch all aspects of a building.
- No environmental solution works in isolation so simply pushing down requirements to individual supplier doesn’t work.
- Local conditions like climate pattern and site location determine heavily best solution for a project.
- Due to the rapid evolution of green building accreditation scheme, today’s green buildings might not meet tomorrow’s standards.

#### Business challenges
- Choice of the appropriate green building accreditation scheme(s).
- Choice of green features to be integrated or not in the project.
- Marketing strategy to maximize visibility and impact of the efforts invested in the project.
- Mitigating the risk associated with green building accreditation scheme(s).
- Limiting the potential additional cost associated with green buildings.
- Change to existing organization required to deliver green development.
Agenda

Key Issues faced by Developers

Adapting Quality approach to Green

Integrated Approach to Green Buildings

Benefits of Green for Developers
Quality and green have much in common

<table>
<thead>
<tr>
<th>Quality</th>
<th>Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>âInvolves all aspect of a development projects</td>
<td>âInvolves all aspect of a development projects</td>
</tr>
<tr>
<td>âAll value chain must adopt quality approach</td>
<td>âAll value chain must adopt green approach</td>
</tr>
<tr>
<td>âMust address source of non-quality</td>
<td>âMust address source of green issues</td>
</tr>
<tr>
<td>âOwn ISO standards (9000)</td>
<td>âOwn ISO standards (14000)</td>
</tr>
<tr>
<td>âTakes time to build a quality culture</td>
<td>âTakes time to build a green culture</td>
</tr>
<tr>
<td>âQuality can command a premium and become a source of competitive advantage</td>
<td>âGreen can command a premium and become a source of competitive advantage</td>
</tr>
<tr>
<td>âQuality can be costly but can also reduce risk and cost at the same time</td>
<td>âGreen can be costly but can also reduce risk and cost at the same time</td>
</tr>
</tbody>
</table>

Quality approach can be applied component by component

Green requires an integrated approach
Agenda

Key Issues faced by Developers

Adapting Quality approach to Green

Integrated Approach to Green Buildings

Green benefits for Developers
The case for integrated approach

Environmental performance depends on multiple factors and dependencies

A fully integrated approach looks at green requirements from start to end

Only then can developers make explicit and relevant trade-offs

For example choosing a inner city location

Â façade options like orientation often very limited with negative impact on energy

Â often good public transports connectivity, numerous amenities and potential reuse of existing structures

The alternative is to leave end result to luck

Table: Site selection

<table>
<thead>
<tr>
<th>Level</th>
<th>Site</th>
<th>Cost</th>
<th>Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$ 275 / ft²</td>
<td>102'000 ft²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$ 446 / ft²</td>
<td>56'000 ft²</td>
</tr>
</tbody>
</table>

Certification:

<table>
<thead>
<tr>
<th>Level</th>
<th>Site</th>
<th>Cost</th>
<th>Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum</td>
<td>12/14</td>
<td>$ 275 / ft²</td>
<td>102'000 ft²</td>
</tr>
<tr>
<td>Certification</td>
<td>5/14</td>
<td>$ 446 / ft²</td>
<td>56'000 ft²</td>
</tr>
</tbody>
</table>

Price x2 but only certified!
Integrated design: Adopting mutually supportive solutions

Example of integrated design review process
Managing for performance

- **Objectives**: Define objectives and priorities
- **Measurements**: Define methodologies for appraisal and simulation studies
- **Elements**: Create performance matrix for design integration and design conflicts resolution
Objective-driven approach required

- **Objectives**
  - Spatial
  - Visual
  - Thermal
  - Acoustical
  - Air Indoor Quality
  - Safety & Security
  - Accessibility
  - Energy
  - Waste
  - Maintenance

- **Measurements**
  - Physical
  - Financial
  - Environmental
  - Physiological
  - Psychological
  - Sociological
  - Social

- **Elements**
  - Location
  - Structure
  - Envelop
  - Interior
  - M & E
  - Finish & Furniture
  - Exterior & Landscape

Performance is meaningless without clear objectives and priorities

Trade-off decisions based on explicit, measurable objectives and priorities

Not exhaustive

©2010 GreenA Consultants

All rights reserved
No reproduction even partial
Traditional organization not adapted

Simplified illustration
Green integrated approach

Shared vision
Faster decisions
Early design
Conflict resolution

Developers
Architects
Structural M&E Engineers
Facility Managers
Green Consultants

Whole team involved from day 1 until completion

Matching approach with organization
Agenda

Key Issues faced by Developers

Adapting Quality approach to Green

Integrated Approach to Green Buildings

Green Benefits for Developers
Green Buildings benefit Business

Costs
- Reduce the need for consumption (insulation, integrated design)
- Use natural sources (daylight, water harvesting)
- Limit losses (leakage detection, efficient lighting)
- Right-size installation (small chillers due to improve envelop)
- Increase life span (reduced usage like low consumption lighting)
- Minimize maintenance and remediation costs (monitoring)
- Reduce health cost (low VOC painting, CO₂ monitoring)
- Increase marketing efficiency (free public relation)

Revenue
- Improve marketability (higher performance building, comfort) and price
- Increase rental (green premium) and occupancy ratios
- Enable new product development (eco living, green townships)
- Trade carbon credit and develop CDM projects (renewable energy)
- Utilize potentially undervalued land (brown fields)
- Create opportunities for redevelopment

Financing
- Tap specialized funds (green a key growing investment theme)
- Improve cash flow (inventory turn-over)
- Impact company valuation (investor relation, branding)
- Use public and private incentives (grants, tax rebates)
Higher prices possible in Malaysia too

Malaysian buyers like Green homes...

- % Malaysians who would like to live in Green homes: 100%

...and are willing to pay more for them

- Over 15%
- 10 to 15%
- 5 to 10%
- 35%
- Same price

Acceptable Price Premium for Green Homes

(1) Survey during MAPEX expo
source: Property Buyer 19 August 2009
Going beyond accreditation: Marketing benefits of Green

Starwood launched Green Hotels in 2008

**ELEMENT Hotel**

- Extended stay hotels
- 5 new hotel since 2008
- 20 new until 2012 including Canada & UAE

**Positioning**

“Modern, upscale and intuitively designed hotel experience that allows guests to live well and feel in control. … with an emphasis on nature. All Element hotels are LEED certified”

**Business Model**

- Franchising to third-party operators

**Key green features**

Day lighting, energy-efficient appliances, water-efficient faucets

Source: http://www.starwoodhotels.com/element/index.html
Thank you...