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Myths and opportunities about green building

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The purpose of buildings is to deliver three basic things: shelter, comfort and, arguably, aesthetics. Unfortunately, design and construction methods developed over the past 200 years in this country don't always deliver these things. When they do, they come along with unnecessary waste, inefficiency and pollution, adding direct costs to building owners, occupants and the community in the short and long term. Unfortunately, the associated costs to society, human health and the environment are "externalities" that do not show up on any projects' balance sheet.

The mission of green building is to deliver what the owner wants and pays for (comfort shelter aesthetics) without delivering what the owner doesn't want or pay for. This process creates higher performing buildings whose operations and maintenance costs are lower, and whose negative impact on occupant health and the environment is minimized, erased or reversed.

Misconceptions about green building are pervasive, and the benefits can seem elusive. Myths evolve because many people aren't familiar with practical applications of green building strategies, because it challenges the traditional process of design and construction and stakeholders fear additional risk. Likewise, people fail to realize the opportunities created by a green approach.

Let's review some of the myths and opportunities:

*"I already have a good building": Traditional buildings are grossly inefficient, wasting huge amounts of energy which is directly associated with high operating costs. They contain materials that off-gas toxic fumes and cause poor indoor air quality, unnecessarily rely on costly infrastructure to process and supply water and don't provide quality daylight or natural ventilation. Most buildings don't take advantage of passive strategies of siting or shading to minimize energy costs and therefore require larger mechanical systems than are necessary. This costs more up front and is more expensive to operate.

*"What does my building have to do with global issues?": There are many links between specific design decisions and regional or global ramifications to the environment and human health, which aren't immediately evident. For example, if your building contains materials like vinyl or PVC, you are contributing to a major source of dioxin, which causes cancer, immune system deficiency and birth defects. High concentrations of dioxin are found in human breast milk. The impacts are especially high in the regions where the manufacturing plants are located, but migrate globally through air and water. A good environmental example relates to our water supply. Specifying impervious pavement for roads and parking doesn't allow nature to replenish local ground water and results in draught conditions and increase in water costs. Alternative techniques exist and improve the quality and availability of water.

*"Green means new technologies": Green building isn't dependent on new technologies. Although new technologies can be good solutions, they don't define green building. A building that uses new technologies, but hasn't addressed basic design elements in an integrated way is not green. Green

design is defined by the process that creates it rather than the technologies that it incorporates. The first step is to insure that the basic design meets performance criteria that increases long-term efficiency and eliminates short term waste and toxicity.

*"Green costs more up front": Building smarter does not need to cost more up front. In fact, capital cost savings and reduced carrying costs can be realized through reduced infrastructure, alternative water management and conservation strategies and energy efficient design. First costs should never be analyzed without understanding the impact on operating costs. There are situations in which green building can cost more (aggressive strategies using new technologies, a design team inexperienced in sustainable approaches), but because green building relies on intense integration of disciplines and attention to system performance and material selection, any size project with any budget has the opportunity to be more 'green' and less 'brown'.

*"It's a passing phase": Minimizing environmental impact, building for energy efficiency, and improved occupant health is being incorporated into mainstream practice. It's not only design professionals and building owners who are aware of the value of improved standards, but industries such as insurance, lending, product manufacturers and development all have begun to see value from their perspectives and is influencing their sectors. However, during this transition, there is a marketing opportunity to be an early adopter.

*"Green Buildings are ugly": Building well does not require a particular style. Green buildings fit any aesthetic vocabulary, climate or use.

*"I can 'add' it on": Taking a traditionally designed building and adding on green elements does not work, and will drive up cost. The optimization of building systems depends on their full integration and coordination.

*"Tree huggers only": Green building isn't just for environmentalists, but anyone who wants to get better value for their money. There are so many dysfunctional aspects to current building practices that green building provides an opportunity to do more comprehensive and accurate life cycle costing, valuation and resource efficiency.

Some additional benefits: Buildings that provide better indoor air and environmental quality increase employee productivity. Any employer understands that salary and benefits overshadow the cost of building. By increasing employee productivity by even 1%, you've paid for your 'improvements' within the first year of operations. This, along with lower operating costs, has been a huge marketing advantage allowing faster lease-ups, higher retention and less tenant turnover.

There are no formulas or magic bullets, but there are better ways of doing business, which create superior buildings. Green building is a win-win for profitability, communities and the environment.

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