

Strategic Thinking

by Gil Friend

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More on the Cost of Green: Why Green Building is Good Business

Speaking of assumptions about the cost of green (as I did in some recent articles on [financial risk](#) and [product regulation](#)) . . .

I witnessed an interesting conversation recently. At a design charrette for a proposed new office building, the lead architect challenged the client with a goal: a building 60% more energy efficient than the prevailing community standard. The cost estimator said, "Can't be done within budget." The mechanical and electrical engineers said, "Can't be done at all." The "green building" consultant said, "Can be done. We've done it. And here's a list of other buildings that have done it."

Which could have been the beginning of a useful and informative conversation, except the players continued doing laps of the field, saying much the same thing. "Can too." "Can't either." Another example -- sadly, all too common -- of business decisions based on assumptions, not facts.

The fact is that a key part of the green building revolution now underway has been the revolution in economics. Two years ago, a [LEED](#) Gold building might have cost 20% more on a first cost basis. (Still a good deal, given that reduced operating costs would typically provide a 10%-20% per year return on investment (ROI) on that incremental investment.) Today, with several years of learning curve behind them, practitioners are finding a different story.

An [analysis of 33 green buildings](#) conducted for the State of California by Greg Kats of Capital E found a range of zero to 2% incremental first cost, and handsome ROI from lower operating costs, but -- and this is key -- essentially no correlation between greenness and cost. The most significant correlates, in our experience, are whether greening -- and stakeholder inclusion -- are integrated into the project from the very beginning, or whether they're added in (or slapped on) later. Some cases in point: Toyota [recently opened a 626,000 square foot LEED Gold building](#) in Torrance, Calif., that draws just half the electricity from the grid as a comparable building -- due to a combination of good design and on site photovoltaics; the building came in, according to California Construction, "on a budget (\$90 per ft. for shell and interiors) that would be consider[ed] modest for speculative development, let alone a corporate headquarters proves that green can be 'mainstream.'" Herman Miller's C1 and MarketPlace buildings cost less than local comparables.

As Robert Pitts, Toyota group vice president for administrative services, [said](#):

"Every decision along the way also had to make good business sense and fall within budget guidelines... We wanted to show that building an environmentally sensitive office complex does not have to be limited to small or unique projects - or ones with inflated budgets."

"Rating buildings in this way [reveals how inefficient traditional buildings and building processes are](#)," The Economist observes. "'We can sometimes waste up to 30 cents on the dollar,' says Phillip Bernstein, an architect and professor at Yale University. 'It's not just the consumption of energy, it's the use of materials, the waste of water, the incredibly inefficient strategies we use for choosing the subsystems of our buildings. It's a scary thing.' In part, he says, this is because the construction industry is so fragmented. Designers, architects, engineers, developers and builders each make decisions that serve their own interests, but create huge inefficiencies overall."

And there's the key. My colleague Bill Reed, one of the developers of the LEED rating system observes that the key to [successful projects with successful economics](#) is three "E"s: Everyone, Everything, and Early. Engage all stakeholders; consider every aspect of the project in an integrated way; start early in the development process.

Guess what? It's as true about business strategy, product design, industrial processes, food system and transportation infrastructure as it is about buildings.

As Neal Pierce of the Washington Post [comments](#),

"It seems obvious: the reason only a tiny percentage of new American buildings and retrofits aren't green isn't cost. It's lack of ingenuity or knowledge of new construction techniques -- architects and builders wed to the 'same-old,' lenders leery of anything unconventional.

"The fault also lies with national leaders unwilling to tell us in clear terms that a nation secure economically and environmentally and against foreign threats, means energy savings across the board -- efficient and sustainable buildings included. It's a message our current president apparently doesn't comprehend, at least won't articulate."

But that's a story for another time.