

Going Green.

Is it the Elephant in the Room?



About Building Engines

Building Engines is a web-based suite of integrated modules that provides owners and managers of any property type with a comprehensive solution for improving operations and workflow management. Building Engines helps companies increase occupant satisfaction, manage assets more efficiently, and limit exposure to risk and liability while reducing costs and enhancing management visibility into operations.

Advanced Technology. Superior Support. A Flexible Fit

Going Green

Is it the Elephant in the Room?

by David S. Osborn
Chairman & CEO, Building Engines

Everywhere you look today you see something about GREEN - is it the elephant in the room? Green has come to the forefront on such a broad scale because we are now witnessing the undeniable changes to our environment driven by a consumption oriented society.

On a global scale, issues like global warming and the possibility of having an ice free north pole have dominated the headlines. But these issues are so large that it is difficult to understand what, on an individual level or as owners and operators of real estate, can be done to improve our environment.

The current environmental challenge involves millions of actions and activities that are largely uncoordinated and seemingly unrelated. Today we realize that both the obvious and the seemingly benign are deeply connected and, when combined with volume and time, can lead to devastating results on a global scale or its inverse.

Something as obvious as the Cuyahoga river fire of 1969 in Cleveland can highlight the need to address the obvious but addressing the seemingly benign is much more challenging. It is much easier to grasp why having toxic sludge in a river is bad - it clearly harms the environment and the results are very visible. But what is the impact of hundreds of thousands of janitors cleaning with high VOC (Volatile Organic Compounds) every day?

The greening of the commercial buildings industry presents the challenge of addressing both the obvious and seemingly benign and presents many of the challenges that we see when trying to solve problems on a global scale. A building is a living breathing organism and involves hundreds or even thousands of people. The people who live and work in buildings represent various and disparate constituencies.

Opposed to a top down organizational structure, buildings

rely on interdependence among different groups, who often have competing interests, in order to function. Owners, brokers, property managers, asset managers, engineers, tenants, and more all have a particular function within the framework of the building's operations. Aligning all of these constituencies and their functions into a green framework poses both obvious and hidden challenges, most of which are solvable utilizing the right processes.

Green. Is it here to stay?

Lacking a clear national or international consensus, the states and a number of municipalities have independently attempted to manage green issues. Some parts of the country have historically been more environmentally conscious than others, which is reflected in the divergent environmental policies enacted across the 50 states. The rust belt was, and in some cases still is, dominated by heavy industries. In this economically battered region additional regulation that could help the environment could eliminate hundreds or thousands of jobs that are then off shored to developing countries willing to tolerate pollution and environmental degradation.

The West Coast, benefiting greatly from the new economy, has dominated the environmental movement because of the acute nature their environmental issues and lack of reliance on heavy industry. At the state level, the green movement is lead largely by California...and as California goes, so does the rest of the country.

With its sheer size and population, California is the 6th largest economy in the world. It represents such a tremendous market that when California adopted cleaner emissions standards than the national standards the automotive companies complied - but only after the fierce federal court battle resulting in the California law being upheld. In contrast, if Wyoming would have enacted such legislation the automakers might not have cared because the market is so small - and in the market economy there is no Virginia compromise.

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The greening of California has occurred at every level of government and has been embraced by both the right and the left. So much so that in 2004 California began requiring new building and existing building projects funded by the state to meet a comparable measure to the US Green Building Councils' LEED Silver standards (Executive Order #S-20-04). And, like the auto industry, when California raises the environmental bar, businesses listen.

Like with auto emissions, many states and municipalities soon adopted California standards. Today the US Green Building Council estimates that 28 states, over 120 municipalities, and numerous corporations that have adopted LEED will drive a \$12 billion market for green building projects.

The greening of California has been a process of constant incremental changes in response to a population boom and resulting environmental crisis that still threatens Californians across the state. Mass suburbanization beginning in the 1950 has created an air quality issue in most of the major metropolitan areas. This seemingly benign activity of building single family homes in mass volume over four decades has rendered parts of the state an air quality nightmare due to CO2 emissions emitted by commuters.

Uncontrolled, uncoordinated growth resulted in the construction of commercial, industrial, and residential development in areas prone to wildfire which constantly threatens the welfare of residents. Overdevelopment has also created issues with water quality, flash flooding, land slides, and much more.

What has differentiated California, and indeed Washington and Oregon, from many other states is that California has been forced to address the acute nature of their environmental crises but has also chosen to implement proactive incremental changes like requiring population density in new construction, building mass transit, implementing growth management plans, and, of course, requiring LEED comparable measures for new construction projects funded by the state. And while

California is no where near where it needs to be to claim they have achieved the green panacea, the policy positions of the state endorse the continuation of green and is a requirement to do business in the state.

In 2007 the US Green Building Council reported a nearly 80% growth in LEED registered or certified projects. That is on top of a 50% increase in 2006 and a cumulative increase of 270% since 2005. The total valuation of these new construction project totals more than \$35 billion. A tremendous sum of money in and of itself, but what is even more impressive is how green has become institutionalized in non-governmental, governmental, and corporate entities. What's more, the green movement, once considered a cause for extremists, has come mainstream and is being rationally adopted on a broad scale with people willing to make dramatic lifestyle changes, like going out and trading in their SUV for a new hybrid. Therein, however, lies the challenge: Is trading in your SUV for a hybrid really green?

What is Green?

As discussed before, being green involves a series of actions, not obviously connected, but that overall culminates in a smaller or softer impact on the environment. This is often referred to as our footprint. With the example of the SUV vs. the hybrid, there are many considerations you have to make when determining if your action, once all of the actions that led up to your action are added up, will result in a smaller footprint.

This is where green becomes tricky. What are all of the actions that have led up to your action? Obviously it is difficult to account for and accurately quantify all of the different activities that have to take place in order for you to purchase your new, and allegedly, green machine.

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As we know from our example of the Cuyahoga river fire in 1969, heavy manufacturing is a dirty business. And as the steel belt turned in the rust belt steel manufacturing didn't simply vanish - it moved to China, a country not known for their good environmental record. The plastics that make up your new hybrid are made from petroleum - an obvious villain in more than one respect. Indeed, you also have to account for all of the gas and oil that was consumed by the workers to get to the plant, the cost of transporting the car to the dealer, the cost of you driving to the dealer, and much, much more.

Would it have been environmentally cheaper to keep your SUV? Is there an economic benefit to buying the hybrid? Just like your existing building's operations - is it economically and environmentally beneficial to trade in the old model or go with a new one?

There have been attempts to quantify the carbon footprint of different activities but the challenges are enormous and the effort itself can generate an even larger footprint. For buildings, the challenges are equally difficult to understand but fortunately the buildings industry has the US Green Building Council to pool resources and knowledge and create standards where the value of X activity can be quantified.

Today the industry has compiled enough information to conclude there is a tremendous economic and environmental value to going green - but to realize and maximize that value you have to have the right tools and information to implement and maintain your green program.

Getting Started on the Green Road

As with most things, the first step is usually the hardest step. Getting started on the green road requires a process that deconstructs past and current activities, realigns those activities, and then measures your activities on an ongoing basis. Getting started on the green road also requires an introspective look into the heart and soul of the building. An honest look at what

really goes on in the building every day. This usually requires an outside consultant with an independent perspective and the knowledge to understand the cumulative size of your footprint.

Once you've started down the road you'll inevitably find yourself herding cats. After all, owners, brokers, property managers, asset managers, engineers, and tenants are very different constituents. This is also true no matter what level of the organization you are at. The CEO of the company that owns the building has a great deal of control over the management company that he hired to run the building but he has very little control over the tenants and what they do.

Tenants deal most directly with the property manager and engineers, this relationship makes selling green to the tenants easier through the management company. Still the property manager works for the management company and, unless the management company sees the value in green, the property manager's superiors may not embrace the owner's green initiative and merely appear green to appease the owner. For green to be successful green must be embraced beyond appearance. It must be measurable. It must be quantifiable.

Communication is critical to the success of your green program. Everyone in the company should know why green is important, what green will do for them personally and for the environment, and what is expected of them in the green process. Establishing support for a green program in your building requires much more than printing signs that say "be green". In fact that would only increase your footprint. In order to embrace your green program every constituent needs to understand the value proposition and how it applies directly to them.

For owners, going green means a more marketable building and a reputation as a responsible corporate citizen.

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For asset managers, it could involve better cost savings with a greener preventive maintenance program. For brokers and property managers, green is a tremendous selling point to current and prospective tenants. For engineers, it could mean fewer work order requests. For tenants, a safer, healthier environment using organic cleaning supplies instead of high VOC solvents.

Of course each building will need to have its own green profile compiled and some will achieve higher levels of green than others due to factors presently outside of your control, like being located on a subway line as opposed to the beltway. But when speaking of the environment all boats rise if our collective footprint is reduced because success is measured by adding all of the parts of the whole.

Most importantly you should focus on constant incremental changes that are coordinated and aligned with your green program. To do this you will need to have a means of collecting information and measuring results. This will give you the ability to account for your successes and see where you need to improve.

Green Results

After you implement your green program and eliminate the use of aerosol spray canisters you probably won't look up at the sky and see the ozone layer get bigger. Your individual activities are a part of a much larger picture, but you can and need to see visible results. There are two key visible results that you can effectively measure: The first is the success of your program in comparison to an established standard such as LEED EB which will help your ROI. The second is the marketability of your property to current & prospective tenants and prospective buyers.

Because going green is a process that requires the involvement of so many constituents it is critical that all of these constituents are on board and that green processes that have been enacted are being executed.

This can become an increasingly more difficult challenge if you are implementing green on a portfolio wide scale, especially across a broad geographic region.

In order to do this you will need to utilize tools that enable to you to effectively track your green activities and provide an at a glance view of your operations. This will allow you to enact policies developed by your green building consultant and have the ability to manage and report on your success. As an added benefit, capturing your green building data will help you determine your ROI and, if you so choose to apply for LEED-EB certification, your application data will already be prepared, saving you time and expense.

Recent research has demonstrated that buildings who can achieve LEED-EB equivalencies can generate a tremendous ROI. In a recent white paper by the Leonardo Academy comparing LEED-EB buildings vs. data from BOMA's Experience Exchange Report 2007 demonstrated

LEED-EB certified buildings achieved superior operating cost savings in 63% of the buildings surveyed ranging from \$4.94 to \$15.59 per square foot of floor space, with an average valuation of \$6.68 and a median valuation of \$6.07.

In addition the overall cost of LEED-EB implementation and certification ranged from \$0.00 to \$6.46 per square foot of floor space, with an average of \$2.43 per square foot demonstrating that implementation is not expensive especially in comparison to cost savings. These costs should be significantly reduced if automation and technology are integrated into the implementation.

Additional data from the National Building Institute shows that LEED buildings, on average, are 25-30% more efficient than non-LEED certified buildings and Gold and Platinum LEED certified buildings deliver energy savings of nearly 50%.

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The second area where green has shown measurable results is in retaining current tenants new tenants while attracting prospects with your green appeal. A recent report by Costar showed that LEED buildings rent for \$11.24 per square foot more than non-LEED buildings and have 3.8% higher occupancy rates.

A recent article by the San Francisco Business Journal revealed that LEED certified building had a 100% occupancy rate as of May 2008. With a pipeline of new LEED projects being developed, tenants will definitely be looking to move out of their non-LEED buildings and relocate to LEED accredited buildings. A trend that will undoubtedly sweep the nation.



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Building Engines
www.buildingengines.com
(866) 301-5300