



Sustainability Is the New Normal

By Rob Chomiak, PE, LEED AP, of Heery International

In today's world, meeting sustainability goals is increasingly part of the early planning on nearly every project. In the most general terms, the goal of sustainable building design is to minimize a building's impact on the environment. As a result, there have been many innovative planning and design concepts developed over the past few years to achieve this goal.

But this isn't innovation for innovation's sake. The operational savings that owners can achieve justify taking a sustainable approach to most buildings even before calculating the benefits that accrue when there are fewer occupant complaints and less material headed to landfills, among other things. One of the side benefits of the sustainability push has been that it forces the question: What is the true cost of building ownership? The true cost of building ownership is the capital cost of construction plus the operational cost of the building over some specific period of time minus the value of the building to the owner.

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In many cases, capital and operational costs are coming from two completely different pots of money, and therefore, the analysis of the capital elements often does not go beyond a cursory review of the long-term operational costs, particularly when a reduction in operational costs will lead to additional capital expenditures.

One area of the industry that shows the most activity in terms of engaging owners and occupants in examining true building costs is in the Public Private Partnership process. A PPP project calls for a

thorough assessment and understanding of capital costs versus true building costs, propelled in large measure by the fact that the PPP must maintain the facility for the long-term, sometimes for as long as 30-50 years. When you take a long-term view, it can drive different short-term decisions in terms of materials and other first-cost items involved in the capital cost of a project.

The PPP business model is accelerating adoption of more sustainable infrastructure and facilities—especially with budget-challenged municipalities and utilities. By leveraging private-sector debt and expertise and sharing in risks, entities are able to eliminate the most common barrier to implementation of sustainable practice—upfront, available funding. The PPP model has been leveraged heavily in Europe and is quickly gaining traction in Canada and the U.S. Heery has found the model most beneficial in allowing us to maximize best practices, allowing our clients to not just become sustainable but profitable over time.

Another reason that the PPP model fosters sustainable thinking is that it is by definition a highly integrated team. Integrated Project Delivery creates a whole-team environment from beginning to end, and it is this holistic thinking that is at the heart of truly sustainable design and construction.

Most owners value designing and constructing the most sustainable facility their budgets allow because of the operational savings and impact. The question for them is increasingly becoming whether or not to seek formal certification. Among the various certification programs for sustainability that exist today, the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) program is the one most cited. The organization has continued to expand and modify guidelines for attaining the various levels of LEED certification based on project type, and now there are nine different categories: new construction, commercial interiors, core and shell, schools, retail, healthcare, homes, neighborhood development and existing buildings/operations & maintenance.

Since the beginning of sustainability rating systems, there have been owners who have wanted to model their facilities according to an organization's certification criteria, but didn't necessarily want to spend the additional dollars and effort to get that "Good Housekeeping" seal of approval. Others have clearly seen the benefit associated with an unbiased outside party's clear guidelines that define different levels of sustainability. For many owners, the benefits of the formal approval include a marketing advantage, either in terms of attracting tenants, addressing employee environmental concerns or highlighting their organization's environmental consciousness with the local community.

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On occasion, a building owner will look to obtain LEED certification because it is the latest trend, without focusing on what sustainability really means or the benefits it offers. In this case, Construction Managers should replace the "checking boxes from a LEED checklist" mentality with a true evaluation of the long-term impacts and benefits associated with being sustainable. This is where Construction Managers can add value for owners—making sure they know what they are buying and that it is delivered by all the members of the project team.

The ultimate question for most owners is how does a facility perform? Are there lower operating costs and fewer occupant complaints that translate into true savings on the bottom line? Consider this recent project. Heery designed a hospital that has become the largest, most complex LEED Gold healthcare facility in the nation. Right now, though, the goal is to test actual energy consumption. Actual energy consumption isn't something that can be mapped immediately in this instance because hospitals aren't fully occupied when they first open. To validate systems and determine whether they are operating as planned requires actual performance data. Depending on the actual figures, i.e., whether water consumption during the summer is higher or lower than anticipated, the next question is how to design and construct such a building differently in the future to achieve even more optimum results. The bottom line for this client isn't being able to put a plaque on the wall—although they do have that—but being able to see the natural resources and money they've saved. Another tangible benefit that often can be overlooked is

how does patient care improve in a LEED Gold facility? In other words, the future may not be as tied to LEED certification as it will be to actual building performance.

The topic of sustainability will not go away—it is ubiquitous these days and contained in product marketing of all types. Just as Heery's energy consulting practice that began in the 1970s became embedded as part of the firm's standard approach to designing and managing construction of projects, sustainability will remain relevant, but will become more a part of standard operating procedure. The natural progression observed in Heery's energy consulting practice, where it simply becomes more and more a natural part of the initial design and construction conversation, will become the norm.

As Program and Construction Managers, our role is to manage the process, guide our clients with our expertise and verify that the facility envisioned is the facility delivered. It is very difficult to manage a process if you have no knowledge of it, so it is incumbent upon us to encourage professionals to secure their LEED accreditation or other advanced training in sustainability. The training provides them with the tools they need to effectively counsel clients and guide the design and construction process. Our goal isn't just to be a bystander following the lead of the design or construction team, but to take an active role from day one, helping point out potential areas where more efficient systems, resources and processes can be integrated into the process. Where LEED certification is being sought, it's critical that PMs and CMs monitor each contractor to verify that targeted points are being addressed in the most appropriate manner. [CM](#)

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