

# Sustainability Already “OLD HAT?”

By John McKeon

Last fall the U.S. General Services Administration changed Lance Davis’s job title, a small change with big implications. Once titled “Sustainability Expert for the Chief Architect,” Davis became “Program Manager for Design Excellence, Architecture.”

Gone was the word sustainability, and the change made Davis happy. “There was no need for sustainability to be done by a separate person off on the side,” he explains. “Every single building that GSA is producing is supposed to be a high performing green building. We don’t need a special sustainability person, we need every single person doing sustainability.”

GSA has launched a much-publicized effort to end its facilities’ reliance on fossil fuels by 2030 and to have all “net zero” energy efficient designs by 2020. “In the very near future, we won’t expect architects or engineers to come to us with a LEED consultant,” Davis says. “We expect them to have that expertise in-house.”

A large part of the A/E/C industry is preparing to dance to whatever tune GSA calls, yet Davis himself frankly admits that only a minority of the industry is really ready for an environment in which sustainability is a given.

“The market is still broken up into two groups,” he says. “A part of the market does ‘get it,’ but there is a large portion that still needs to be educated.”

Michael Germinario, PE, CCM, program director at U.S. Customs and Border Protection, compares today’s sustainability mindset with the origins of another critical design element a century or so ago.

“For a hundred years or more, buildings weren’t built with any kind of fireproofing,” he says. “All of a sudden, there was a push to improve fire safety, and codes came out, and it created a whole cottage industry of fire protection engineers. How is what we’re doing in sustainability today any different?”

“We have to realize that this is just what we do and not make such a big deal out of it, but conversely, make a big deal when it’s *not* included. I don’t think we’re there yet.”

Christopher J. Griffith, PE, CCM, senior vice president of KCI Technologies, Inc., thinks both the cost of sustainable design/construction and the industry’s understanding of the process have progressed rapidly in recent years. In the early years, he comments, “it probably added 15 to 20 percent to the cost of a project. Nowadays, it’s maybe 5 percent, and maybe not even that much. It’s just part of the process now. The manufacturers, suppliers, everybody has become accustomed to the requirements. It’s what the industry has geared up for, and it’s what is expected.”

## WEIGHING THE ECONOMICS

Griffith also notes, however, that some of the old assumptions have held on stubbornly, particularly among less experienced owners. “With some of the laggards, they may still have the concept that it’s going to cost extra money, they’re still thinking of years ago. You may have a small municipality doing their first building in a couple of years, and they don’t know how much has changed.”

Economics also play a big role in the pace at which different specialties embrace sustainability, observes Dana K. "Deke" Smith, FAIA, executive director of the buildingSMART Alliance, National Institute of Building Sciences. He sees a close relationship between high performance buildings in general, and sustainability in particular, and the adoption of Building Information Modeling.

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—Lance Davis, AIA, LEED, of GSA

"The contractors have really bought into it, especially the MEP contractors. But there's still a reluctance on the design side. The return on investment isn't as great. We're sadly still in a position where designers are saying, 'Do I really have to do this?'"

One big difference between designing for sustainability today and meeting fire codes in the last century is obvious: Sustainability goals leave a lot more room for discretion and decision-making. "In fire protection they quickly came out with a code and you couldn't mince matters," says Germinario. In the sustainability world, though, "we do trade-off analyses all the time."

Deke Smith cites another complicating factor, the sheer volume of information available to today's decision makers, coupled with the fact that this information can lead in multiple directions. "There are a lot of cases where one decision is in complete opposition to another," he explains.

Consider the humble parking lot. "One argument says, put all the cars under the building," says Smith. "The security guys say, don't do that, spread them out on the site. Then the environmental guys say, don't do that, you're just paving the whole world."

#### MORE THAN JUST ENERGY

Moreover, Smith and others point out, sustainability has to address more than just energy savings: Water, wastewater, recycling, jobsite waste reduction and a project's impact on an area's transportation infrastructure all have to be considered.

"If you look at how much raw material goes into construction as opposed to other industries, construction is way, way out ahead. We haven't really addressed things like modularization, prefabrication, but these things really control the waste stream." Smith observes that the manufacturing community as a whole wastes about 26 percent of its raw materials, but 57 percent of construction materials are wasted.

"Apply that 31 percent waste differential to \$1.288 trillion in design and construction in the United States, and we're talking about huge amounts of money."

And even more data to analyze, factors to weigh.

"We have all these tools," Smith concludes. "None of them give the same answer, and are any of the answers equal to the actual performance of the building?"

It's particularly important, Lance Davis says, to keep sight of both the forest and the trees. "We can get so focused on energy efficiency that we forget why we have these buildings. We have these buildings so that people can do their jobs."

Helping owners keep these goals in mind, and navigate a confusing array of decisions and trade-offs, is a natural job for the Construction Manager.

"It's important that the CM be the honest broker," says Germinario. "Unveiling the mysteries of the cost benefit of sustainability is a role for the honest broker, the CM, protecting the owner's interest."

Stressing sustainability creates yet another argument for getting CMs involved earlier in projects and programs, Germinario says.

"For the CM to have an impact these decisions have to be made as early in the process as possible. You need the CM in earlier to protect your interests in terms of constructability. To the long list of reasons we should be involved earlier, sustainability is yet another, and maybe among the most important."

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of U.S. Customs and Border Protection

For Deke Smith, the future of sustainable design and construction "all comes down to leadership. Who is supposed to be the leader?"

"It will ultimately be the progressive owner," he answers. "It's up to the owners because they are the ones that pay the bills. There's a job to be done, and whoever steps up to it first is going to be the winner." **CM**

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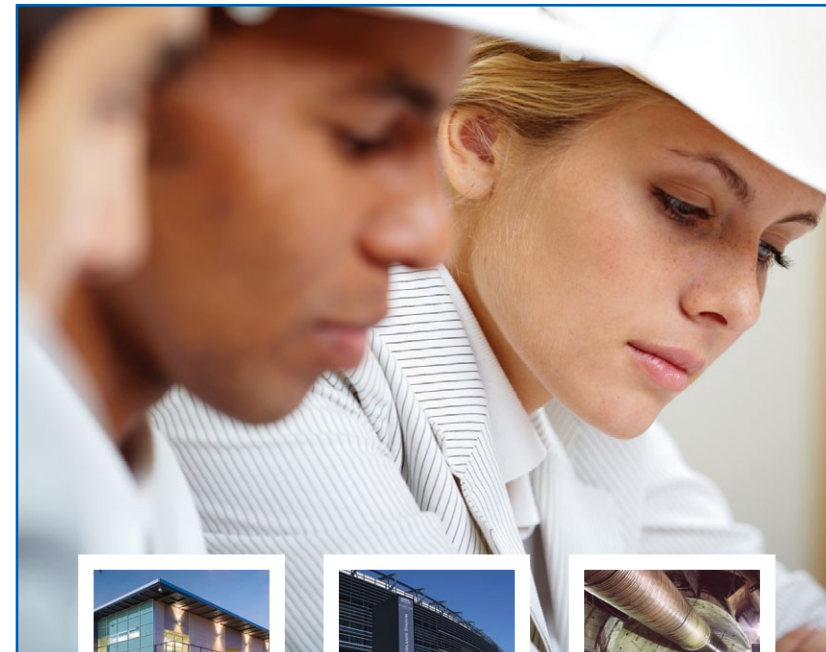
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