



BUILDING
DESIGN+CONSTRUCTION.
INSPIRING THE BUILDING TEAM

Rethinking Project Delivery

An Owner-Centered Approach

Earlier this year, New Millennium Building Systems surveyed architects, engineers, contractors, building owners, and developers to determine which issues were top-of-mind going into 2008. To drill deeper into the statistical findings, *Building Design+Construction* invited 10 professionals representing all facets of the U.S. design and construction industry to participate in a roundtable discussion of the survey results.

Collectively, the 10 panelists are involved in the ownership, design, and construction of

commercial, industrial, office, educational, mixed-use, and retail projects in the one- to five-story height range.

Bert Hollman, President of Fort Wayne, Ind.-based New Millennium, framed the discussion with several probing questions: "How do we get teamwork? How do we find common ground with the traditional methodology when we have a common cause with the design/builder to get the job done? How do we find common ground when we are three or four steps removed from the owner, and it is a fixed-contract basis?"



NEW MILLENNIUM
BUILDING SYSTEMS

Roundtable Sponsored by
New Millennium Building Systems

Dear Construction Professional:

Before the idea of this roundtable was conceived, New Millennium conducted a survey with the help of *Building Design+Construction* to find out what business challenges were currently on your mind. Of course, being a steel joist and deck company, we were especially interested to learn your concerns regarding joist and deck supply; however, in addition, we came away learning about a problem that goes beyond this.

A serious problem, you said, is the need for better information sharing at every step of the design and construction process. Incomplete structural drawings and prolonged requests-for-information (RFIs) increase this need; and while there is much debate about such approaches as Building Information Modeling (BIM), we can all agree on this: Communication problems can add unnecessary time and cost to a project; and everyone's ultimate customer—the building owner—should not be asked to bear the cost of inefficient project planning, coordination and execution.

However, the problem of information sharing is complex and worthy of discussion, and that is why we sponsored this roundtable entitled "Rethinking Project Delivery: An Owner-Centered Approach." We thank all of the participating professionals for making the roundtable a very valuable and worthwhile event.

As for our part, New Millennium was built on being owner-centric through the setup of flexible production systems and a service model that asks the simple question: "What do you need, and when do you need it?" This model opens the lines of communication early in the process and allows New Millennium to be *flexible to the finish* in addressing all of our customers' needs.

Sincerely,



Bert Hollman
President, New Millennium

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FLEXIBLE to the FINISH

“We have to adapt our business practices, or we won't survive.”
—Bert Hollman, *New Millennium Building Systems*

New Millennium's survey of architects, engineers, contractors, building owners, and developers found that 87% of respondents ranked "on-time delivery" of key building components like steel as crucial to the success of construction projects. Yet while 85% of architects, engineers, and building owners cited this factor as extremely important, fully 96% of contractors and build firms did so. Similarly, while "good communication" was cited by 80% of respondents overall, 94% of build team/contractor respondents cited this factor as extremely important. Finally, 81% of contractors and build teams ranked the phrase "works like part of my team" as important, compared to 62% of respondents overall.

These findings surprised roundtable participant Andy Vazzano, FAIA. "I'm surprised not to see 'budget' at the top as well as on-time delivery, because we're usually held to both," said Vazzano, Managing Partner in the Chicago office of SmithGroup, an architecture/engineering firm that specializes in large institutional and healthcare projects.

"I think on-time is certainly important, considering there are business objectives that are all hinging on operational costs and tied into opening a building," he said. Vazzano said that clients want their projects delivered "on time, on budget, and without sacrificing quality."

Joseph P. Caprile, AIA, expressed concern at what he saw as the relatively low ranking of teamwork by survey respondents. "The industry has come to a point that communication and integration are absolutely critical, and I'm surprised teamwork is as low as it is, because projects are getting larger and more demanding," said Caprile, Vice President of Project and Development Services in the Chicago office of real estate services firm Jones Lang LaSalle.

INTEGRATION AT WORK

Moving to the topic of project integration, Vazzano cited a SmithGroup project, the \$1.3 billion, 850,000-square-foot California Pacific Medical Center in San Francisco. Vazzano said the owner, Summit Health Care, insisted on an integrated approach based on the use of building information modeling (BIM). As a result, the owner, architect, and contractor are working under a single integrated agreement.

The finished plan "will be a document that everyone owns," he said. "We all own the drawings, we all own the cost, we all own the schedule. There's a fair amount of risk with that approach, but the owners said this is such a significant building that the traditional delivery process wouldn't work."

Such a process, Vazzano told the roundtable participants, binds the team members toward a common goal. "We are mutually responsible for bringing the project in on budget with the right quality," he said. "It isn't adversarial. We're all bound together by the agreement."



“One of the challenges of technology is that everyone has to buy into it.”
—Joseph P. Caprile, *Jones Lang LaSalle*

BIM is a “group package. Everyone has to get on board to make it work.”

—Brad Wood, Northern Builders, Inc.

There are certainly risks. It is not a perfect process, but you have to work together to solve problems.”

In another success story, Carol Drucker, Principal at Drucker Zajdel Structural Engineers, Inc. Naperville, Ill., told about a project that involved building a 30-story addition atop an existing downtown building. “From day one, we attended meetings with the owner’s rep, the fabricator, general contractor, and our client,” she said. “It did build a team effort. Each of our [individual] problems became everyone’s problems. If there is a problem way at the top, we are there to help them solve it. It was a wise client who invited us.”

Tracy Nicholas, Vice President with Alter Construction Group, Skokie, Ill., related her experience as a project facilitator for six years. She said the process would begin with an initial session to discuss needs and expectations; after that, the team would meet weekly. These meetings were reinforced with quarterly follow-ups and a monthly scorecard that went into the owner’s report. “It was hard at first,” she said. “It took a while to get the corporate culture to realize, This isn’t doing *more*, it’s doing it *differently*. Then there was an ‘Aha!’ moment, where everybody said it was a great idea.”

IS BIM THE NEXT BIG THING?

Building information modeling has been hailed as the tool that will revolutionize construction. Yet, of the 10 participants at the roundtable, only SmithGroup’s Vazzano is using BIM, and even he sees BIM as “still in development.”

“Ease of implementation and maintenance are certainly factors, but the software is getting more developed every day,” said Vazzano. “I’m amazed that you can look at many more options early on in the process, and I think that’s where the value is to model building.”

Jones Lang LaSalle’s Caprile predicted that BIM will be a factor in more large-scale projects. “One of the challenges of technology is that everyone has to buy into it,” he said. “Technology is going to help us address the demands of the marketplace. I think bigger, more challenging projects provide the fees [and the] educated owners to drive the technology and filter [it] down through the system.”

“It took a while to get the corporate culture to realize, This isn’t doing *more*, it’s doing it *differently*.”

—Tracy Nicholas, Alter Construction Group

Clients have become more sophisticated in terms of their knowledge of technology, said Josh Robbins, Senior Leasing Representative with Duke Realty Corporation, a real estate investment trust headquartered in Indianapolis, Ind. “They all have experts, project coordinators, or architects on their staffs. If they are forcing everyone to use BIM, it will force us to react.”

Brad Wood, Vice President of Construction with Northern Builders, Inc., Schiller Park, Ill., said that the challenge of BIM is that it has to be a “group package. Everyone has to get on board to make it work.”

Vazzano predicted that, partly as a result of BIM, the traditional design-bid-build process will be replaced by a more integrated “model-design-build” process. But technology can be a two-edged sword, according to Sam Haldeman, President of Grabe Iron Works, Aurora, Ill. “In the old days, you drew shop drawings by hand. You didn’t have to know the size of the beam. Now, you can’t build a three-dimensional model without knowing exactly all the grid dimensions, what the elevations are, what the beam sizes are.

“Yes, technology does make the job better; it does bring the coordination to bear,” said Haldeman. “When we’ve done the job in 3D modeling, it goes up clean unless there was an error in fabrication. We still build with human hands, and we still make mistakes. But sometimes, getting there is like pulling teeth.”

MEETING THE OWNER’S NEEDS

Some panelists attributed the adversarial nature of the construction business to the bid process. “The bid process kills cooperation,” said Haldeman. Fred P. Haas,



AISC, agreed. “If you want to be efficient, the bidding process is not the way to go,” said Haas, an erector consultant in Burr Ridge, Ill. “If you’re competing, there are contractors who will sell you down the road. I don’t know that the owner is coming out ahead.”

“Getting subcontractor input is critical—not that you don’t have a good relationship with the general contractor, but you want to gather more information, get further down into the details of the systems and the cost,” said Jones Lang LaSalle’s Caprile.

Owners need options, said Bob Goodpaster, Midwest Division Manager of Stevens Painton Corporation, based in Portage, Ind. “[We need to] get the owner information on the options they have, not just how cheap they can design it.”

Owners also want to be educated about new technology and manufacturing processes, said SmithGroup’s Vazzano. “Ultimately, the owner’s expectation is, ‘How

“If clients are forcing everyone to use BIM, it will force us to react.”

—Josh Robbins, Duke Realty Corporation



ROUNDTABLE PARTICIPANTS

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MANAGING PARTNER
SMITHGROUP
CHICAGO, ILL.

BRAD WOOD
VICE PRESIDENT OF
CONSTRUCTION
NORTHERN BUILDERS, INC.
SCHILLER PARK, ILL.

“I’d much rather focus on getting the job done and protecting the customer than protecting myself.”

—*Bert Hollman, New Millennium Building Systems*

do I get the highest value for what I’m trying to do in my budget? Typically, that means a lot more creativity than coming up with the most creative *designs*. [It means] coming up with the most creative *process*.”

Roundtable participants agreed that AEC teams have to adapt quickly to changes in projects. Bert Hollman, President of New Millennium Building Systems, Fort Wayne, Ind., told panelists that his company has to juggle hundreds of jobs every week. “We anticipate and try to manage ahead,” he said. “Time becomes your enemy when solving problems, and we expect there *will* be problems.”

“Agility is responsiveness to the owner,” said SmithGroup’s Vazzano. “The owner needs to be advised that there will be changes, and we should try to anticipate them and budget for them.”

“Agility is responsiveness to the owner.”

—*Andy Vazzano, SmithGroup*

MANAGING ESCALATING COSTS

Besides communication, teamwork, and flexibility, project teams must also manage soaring materials costs in a global economy. Jones Lang LaSalle’s Caprile said many firms are going to China to buy steel, aluminum, and glass for their projects. “There are huge risks, but they are doing it,” he said.

New Millennium’s Hollman agreed that risk is inherent in today’s construction environment. “We have to adapt our business practices or we won’t survive,” said Hollman. “In January, we saw steel prices increase from \$60 a ton to \$100 a ton in one month. I can remember when you could go a decade and that was about what you’d see.”

Hollman’s conclusion: “It is a risk for many companies, but one that can pay off. Whoever takes the risk will be rewarded for it.”

“Each of our individual problems became everyone’s problems.”

—*Carol Drucker, Drucker Zajdel Structural Engineers*