“What we are seeing,” said Cliff Greenlief, managing director of Walter P. Moore’s Kansas City office, “is that there have been projects that have been put on hold and they are starting to pop loose.”

What Greenlief saw, most of his colleagues did, too. They also recognized the “flip side,” as Greenlief explained, “namely, that schedules on these projects are just outrageously aggressive.”

After five years of generally slow growth, aggressive schedules are the kind of problems that Greenlief and his colleagues welcome. They had gathered at Ingram’s Freight House district offices for an Industry Outlook assembly on the future of the architectural and engineering industry and, by extension, the future of the American economy.

Sponsoring this year’s Industry Outlook was NSPJ Architects, whose specialty is residential design and whose co-president and CEO, Bill Prelogar, ably chaired the assembly.
Predictors

As it happened, the shocks of 2008 helped NSPJ grow. When home ownership lost its luster, the demand for high-end, multi-family rentals grew, and that demand played to NSPJ’s strength. NSPJ's story, however, is anomalous.

As Prelogar explained, "The architecture and engineering industry is kind of the leading edge of what moves the economy up and down." The industry tends to feel economic shock waves before other industries. Given the industry’s predictive value, Prelogar asked his colleagues in which direction they thought the economy was moving.

“I think there’s a lot of optimism across the board in all markets and almost all regions,” said Robert Treece, a principal with Thornton Tomasetti. The one exception Treece pointed out was the west coast, which had not recovered from the downturn.

“The opportunity really is in the volume of projects that are out there,” said Treece. “They present an opportunity for us to now grow like we weren’t really doing over the last five or six years. We were all in survival mode, I think.”

“Proposals that our marketing group responded to far exceeded the previous years,” said Rick Maniktala, principal and partner with M.E. Group. “I could just definitely notice an uptick this year vs. previous years.”

Maniktala cited the energy sector, higher education, and health care as areas that were showing signs of life.

Cliff Greenlief spoke of strong opportunities in the higher education market, in sports, including professional sports, and in convention centers, “which are starting to happen across the country.”

Jim Megerson, director of engineering at Design Mechanical, observed another trend, one precipitated in part by the recession. His firm has been doing considerable renovation and repurposing work of older buildings, and the firm's service side saw increased demand as businesses looked for more energy efficiency. “Some very old buildings are being repurposed and reused, which is very good,” said Megerson.

“We are seeing a lot of clients with very creative ways to make projects come together and that’s pretty non-traditional,” said David Rezac, principal and owner of 360 Architecture. He referred to several innovative public-private partnerships. “It’s fantastic,” said Rezac. “Just that whole creative process really helps projects get kicked off.”

“We’re seeing the same thing, especially with retailers relying on developers to take the risk,” said Rich Majors, principal and COO of BRR Architecture. Majors has also seen an increase in hotels and hotel projects across the country. That much said, some projects are still in suspension because developers are having a hard time coming up with cash.

One of the biggest challenges Majors acknowledged facing is in that the past four years, architects and engineers have been viewed by clients as something like commodities “to the point to where we’re answering and getting projects through purchase orders like we’re selling steel or something.”
“The days of being able to pull the trigger on a building are still not back,” cautioned Mitch Hoefer, partner and principal of Hoefer Wysocki Architecture. He was referring to speculative new office projects. The market, as he saw it, was definitely coming back, “but there is still a need for a decent number of tenants before you can pull the trigger and get the funding.”

“We also are seeing some lending issues,” said Scott Rosemann, structural engineer at Rosemann & Associates.
His firm specializes in the residential market, including multi-family, across a wide spectrum of age and economic demographics. Rosemann sees a lot of lenders who, while interested in a project, are reluctant to get the project really started.

One area that is growing and that is sure to grow steadily, as Rosemann pointed out, is one in which his firm is very active across the country, senior housing and all its various subsets, from independent living to assisted living to memory care and all places in between.

Greg Fendler, a principal and partner with Lankford + Associates, expressed a certain wariness about the dynamics of future development deals. “I think while people have been creative at getting deals done,” he said, “we need to be cautious to not find ourselves in the same boat that we were in five years ago.” That much said, Fendler described himself as “cautiously optimistic.”

Staffing Up
As Bill Prelogar observed, subcontractors are having difficulty finding people capable of “swinging a hammer” in the numbers that were normative seven or eight years earlier. “Where did all these folks go?” he asked.

“We need electricians,” said Rich Majors. “We need skilled carpenters. I don’t know where they went, but there are jobs now.” He speculated that the demand for oil and natural gas workers throughout the center of the country and in Canada has impacted the work force.

Prelogar observed that there were shortages across the board—drywallers, framers, concrete finishers, brick masons, painters. “It’s like, where did all the people go?”

David Rezac spoke to the frustration of having a package ready to be put on the street and not having enough subcontractors to bid on it. “There is nothing more frustrating,” he said.

Rick Maniktala suggested that when some of the contractors went under during the past five years, some consolidation occurred. This meant fewer competitors, many of which were reluctant to staff up. “As the margins go away, there is less to fund future growth,” said Maniktala. “So instead, the model is to get more done with less. That’s what we are preaching internally.”

“The banks aren’t willing to lend a subcontractor 60 to 90 days of cash flow,” said Scott Rosemann. “And that’s tough as well.”

As to engineers, there are plenty of new ones. “The difficulty,” said Robert Treece, “is filling the middle level.” Treece explained that new recruits need experienced people to help guide them, and those are hard to find.

“If they are good,” said Majors, “they are staying where they are, and they are getting paid to stay, and so it is hard to pull the seven-to-10-year person away.”
Others, suggested David Rezac, left the industry during the downturn and found other ways to make a living. “We need that middle talent,” said Rezac, “and they don’t need us. They’ve moved on to other places.”

The employment policy at NSPJ, Prelogar explained, always has to go to the universities when they need people and hire new graduates. The fact that NSPJ’s sector of the economy was growing while others were contracting enabled the firm “to attract some very talented young people.”

**The Internet Effect**

Bill Prelogar asked his colleagues, especially those in the retail arena, whether they believed Internet sales would continue to eat away at sales at the brick-and-mortar establishments and, if so, what would be the consequences.
“We are at the intersection of digital and physical,” said Rich Majors. He suggested that the problems FedEx and others had with delivery over the Christmas season argued for the continued viability of traditional retail. Internet selling “is definitely impacting what we do,” said Majors, “but it’s not necessarily reducing the number of physical stores.”

One positive side effect of the Internet explosion, Prelogar pointed out, was the increase in demand for logistical spaces, large warehouses, and distribution centers.

Scott Rosemann observed that FedEx has had a big push for many more, yet smaller, distribution centers. “The logic,” said Rosemann, “is that many more smaller and more locations will speed deliveries so they are able to guarantee faster delivery.”

This follows “a wait and see” period in the industrial sector as the major distributors pulled back after the recession. Rick Maniktala saw this up close as the M.E. Group does energy and sustainability consulting for a number of warehouse providers. “The building in that sector is really back to where it was,” said Maniktala, “and they are still focused on sustainability which is a good thing.”

“It used to be that a 200,000-square-foot warehouse was a big building,” said Prelogar, “and now there are people out there in Kansas City that are building 750,000-square-foot buildings and looking at larger ones.”

Rick Maniktala has seen considerable work done on existing warehouses that had been abandoned but are now being renovated and repurposed.

Kirk Gastinger, principal of Gastinger Walker Harden + BeeTripplett Buck + Kincaid Malone, spoke to the issue of how totally interdependent the world had become on technology and precision scheduling.

Recently, for instance, a 90-minute delay caused by a malfunctioning crane in the Port of Los Angeles caused Chicago-area JC Penny stores to put off their Memorial Day sales. Supply-chain issues, said Gastinger, affect everyone “whether you are buying on the Internet or in the store.”

One other obvious change that the Internet had made on the office design industry is the democratization of space. Several of the participants spoke to the move among a wide range of businesses to do away with individual offices in favor of common spaces that are open to anyone with a laptop. This has allowed businesses to accommodate their work force in less physical space than they once might have, given that many employees at any particular time might be working at home, be on the road, or on vacation.

**KCI**

Although slightly off topic, the question of whether KCI should proceed with the proposed new terminal held great interest for the participants both professionally and personally.

As a frequent flyer, Bill Prelogar confessed to liking the current configuration of the airport. “I have probably been in and out of 20 airports...”
in the last four or five years," he said. "None of them are as convenient at this one." Given that, he has a hard time understanding the rationale behind the concept of a single terminal airport for a city that is not likely to become a hub city.

Kirk Gastinger had questions about KCI’s ability to handle baggage, but barring that, he expressed doubts about current plans. "I don’t know if that’s what’s driving the need to replace" the current configuration, he said, "when all the convenience is there and all the attractiveness that we like of a small-scale airport.

assigned to suburban retail projects, said David Rezac, was counter-sustainable. 4. Mitch Hoefer said reconstruction of KCI should make passenger convenience a high priority.
“People don’t want to hear this,” said Greg Fendler, “but airports aren’t built for the people. They are built for the airlines.” He did not disagree that the airport is convenient, but he questioned whether the terminals were configured to meet current airline needs.

Rick Maniktala raised another concern: KCI’s unattractiveness to passengers who are connecting in Kansas City. “I hear from other travelers that are sitting next to me on the plane how much they dislike having the connection in Kansas City,” said Maniktala, “so much so they will try to avoid having a connection in Kansas City because to them, it’s just not convenient.”

“The question,” said Mitch Hoefer, “is can we build a bigger airport, have more convenient travel, and still be very convenient for us to do just what we do?”

Prelogar addressed the question of an intermodal facility at KCI and its potential as a mover of freight. “We’ve got a lot of land out there,” he said. “We sure can put it to use.”

The Living Environment

Among the questions raised was whether the industry was doing anything significant to enhance what Bill Prelogar called the area’s “living environment.”

Scott Rosemann zeroed in on zoning. “A lot of local jurisdictions have zoning regulations that haven’t been updated in a long time or haven’t had land planning updates,” said Rosemann. He was concerned that some suburbs and other jurisdictions “have a fear of density,” and their zoning laws reflect that fear. This, in turn, makes mass transit impractical.

David Rezac argued that some suburbs mandate an excess amount of parking spots per retail occupant, a phenomenon he described as “counter-sustainability.” One positive change that Rezac has witnessed is the evolution of the mixed-use development in which residential units are integrated into the larger commercial mix.

Dave Oxborough of Drexel Technologies cited the new Prairiefire development on 135th Street in Overland Park as an example of that mixed-use trend. Many were skeptical when Prairiefire was being developed, and Rich Majors confessed to being among them, but he believes that the project is working.

Majors wondered whether there was adequate residential in the Prairiefire mix. “It’s small and it’s sustained,” answered Mitch Hoefer. Rental units have the added advantage of helping the developers create more realistic walkable spaces and get more use out of a given parcel of land.

Prelogar cited the project going up at 51st and Main in Kansas City as another viable example of mixed-use development, this one in the city itself. “I like to see much higher density development going on in the inner city and Midtown areas,” said Prelogar. “I think these are the kinds of changes that would have bigger impact on the image of Kansas City in the nation than a shiny new airport.”
Technology

Project design is not the only thing evolving in this industry. The technology for creating and presenting those designs is changing even more dramatically.

“It is radically different,” Bill Prelogar said of the kinds of presentations he makes today compared to those he might have made at the beginning of his career. Today, when he goes to present at a zoning commission meeting or the like, he brings all he needs on a flash drive.
1. Technology in the design field has advanced to the point of using holograms in presentations, said Dave Oxborough. | 2. Kirk Gastinger questioned the need for a complete overhaul of the terminal structure at KCI. | 3. Airports, Greg Fendler pointed out, aren’t built for the passengers; they’re built to meet the needs of the airlines that use them.

He sticks it in a computer that the city has provided at the lectern, and the images come up onto the screens all around the room. “I’m not hauling these giant boards around anymore,” said Prelogar. He is also able to communicate his plans with contractors around the country.

As Dave Oxborough noted, Drexel Technologies got its start printing blueprints and big boards but, although it is still printing both and plenty of them, it has long since moved into digital technology. The industry is now even using holograms to make presentations. Although the goal of the presenter has not changed, “There are more pies, and there are more pieces.”

“When you’re talking technology,” said Oxborough, “you are talking about people who can produce an image that you can walk around in and see it and tweak it and do whatever.”

The constant improvements that Drexel and others have made put pressure on industry participants to keep up. Oxborough observed that a product his company released a few months ago might be refined or replaced a few months later. “It just keeps progressing,” he said.

“You have to be careful,” confirmed David Rezac, “on what technology you embrace. It really is changing how we work and how we use our drawings, how we work in team with all of our consultants and contractors and everybody in our industry.”

These dramatic improvements in technology have changed the relationship between the designer and client. “They can participate with everything now,” Prelogar said of the clients. “They couldn’t read 2-D drawings before, but now they can literally be involved in the slightest, tiniest detail. They really do understand it.”

Not everything has changed. Mitch Hoefer spoke to the expectation by out-of-town clients that, even if they can connect digitally or through a video conference, they want to see the designers face to face. “We still have to get on that plane,” said Hoefer. “They still want to see us.”

“We see the technology to be a big struggle intergenerationally in the work place,” said Scott Rosemann. To deal with differing levels of comprehension and interest among clients, Rosemann and his colleagues choose certain project managers to match with certain clients.

All agreed that enhanced technology has significantly improved flexibility and productivity as well as intensified scheduling demands by clients. That flexibility helps keep architects and engineers optimistic about succeeding in an industry that has never been kind to people averse to change.