King of the parking structures

Harry Gleich had big plans for his engineering degree when he started at the University of South Florida in Tampa in the early 1970s. But when he graduated in 1976, the country was in the midst of one of the worst recessions to date and people were struggling to find work. Fortunately, a friend of Gleich's who specialized in water-systems engineering landed him an interview at Florida Mining and Materials, a prestressed concrete manufacturer in Lakeland, Fla.

"He didn't really want the job, so he suggested I go in his place," Gleich says. "I knew absolutely nothing about prestressed concrete," he says, but he was in need of work. "So I went to the interview, and I got the job."

Gleich stayed at Florida Mining and Materials for five and a half years, doing all the design work at one of the company's three plants under the chief engineer, his mentor David Bracewell.

"He was very hands-on with me, and he pushed me to get better," Gleich says.

In the early 1980s, Gleich was recruited by Durastress, which offered him his own position as chief engineer.

"It was too good an offer to pass up," he says.

He spent almost five years there, working on a variety of department of transportation projects, bridges, buildings, and parking structures. In 1986 he joined Metromont Corp. in Greenville, S.C., where he has worked for the past 30 years.

One of the things he says loves about Metromont is its commitment to innovation for the entire industry. "They really understand the importance of staying active in the precast community," he says.

Indeed, when Metromont recruited him, Gleich insisted that they support his involvement in PCI as part of his professional growth plan.

"I spent my career in the southeast United States," he says, "but when you go to PCI meetings you meet people from all over the country who all do things differently."

The opportunity to get to know his peers, ask questions, and find guidance has been critical throughout his career. "When I was young, I asked the questions. Now people call me when they need answers."

Gleich has spent his career building all kinds of precast concrete structures, though he is best known for his innovative work on parking structures. He has played a part in many of the innovations that have transformed the way project owners think about these buildings.

"When I got started designing parking garages, they were all just gray boxes," he says. Today, however, these designs are as varied as the buildings they support."

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The parking structures he designs now are often surrounded by apartments and topped with malls, swimming pools, and other multiuse features. They are also clad in a rich array of architectural designs, features, and brightly colored materials.

"You would never call it a 'gray box' today," he says.

The technology behind these precast concrete designs has also improved over the years, he says. The advent of carbon-fiber-reinforced double tees reduced the risk of concrete degradation, and the use of recycled materials, including fly ash, has reduced the carbon footprint of these projects.

"It makes us leaner and greener," he says.

Gleich's most innovative accomplishment, though, was his work load testing precast concrete L-shaped spandrel beams with open reinforcement configurations, as opposed to the traditional closed stirrups. Such research-and-development efforts were common among Gleich's peers at PCI, and they helped push the precast concrete industry forward. He worries, however, that the next generation of precasters won't be as engaged in these initiatives.

"They don't see the benefits of doing research and participating on committees," he says, but he hopes that will change as they work in the industry. "There is so much value in being involved with PCI," he says. "If you don't get involved, you won't know where the industry is headed."