Keeping up with the pace of change isn’t easy, but it has definite benefits in this industry.

The two color-coded building models shown here illustrate the kind of visualization that is readily available using the BIM data. The fact that the coloring of the models is something we do as part of our existing processes and practices, not something that is out of the ordinary or only on certain jobs, means this kind of visualization tool is available on any project. Additionally, because using BIM is integrated into our business operations, there is no project that is too small for BIM, whether it’s a gas station or a high-rise building. If you’re doing it right, you don’t increase your costs by using BIM. Rather, you decrease your risks and you increase your quality.

Our in-house software developers continue to write custom programs that allow us to focus on the “I”—the information—in our BIMs to a higher degree than ever before. This allows us to combine the features of the software that we love with some of the information that is not otherwise accessible using the standard package.

Today we have automation everywhere we can in our fabrication and erection operations, including some places where you’d least expect it. But we’re always looking for additional tools to improve quality and productivity. That brings us to one of the wonders of modern technology, which is that its price is actually falling.

The falling cost of technology means that if you visit the show floor at the upcoming NASCC: The Steel Conference in Dallas (April 18-20), you’re going to see machinery vendors there offering machines that cost less than last year’s models did, as opposed to more. By bringing down the cost, smaller fabricators can leverage some of the advantages of computerized fabrication tools that previously were unaffordable.

Take drill lines, for example. Ten years ago the only drill lines available were very large, and out of reach for most small fabricators. Now, if you were to poll the exhibitors on the Steel Conference exhibition floor, you’d likely find their hottest selling models are not the super-expensive, luxury, highest-capacity, deepest-section drilling machines. Rather they are the machines that a small fabricator can afford, machines that are both more flexible and provide more value. That’s a good thing for the industry, generally speaking. For the more we can make steel more competitive in the marketplace, the better it is for all who are employed in this industry.

Think about what an influence it would have on the quality of the deliverables and the cost of those deliverables, from a global perspective.
perspective, if every steel fabricator in the world had a CNC beam line. Think of all the ramifications that could have on energy use, and even steel recycling. As the cost of technology comes down, people can improve their quality without increasing their cost. That makes everybody more efficient, and being more efficient is better, no matter what supply chain you’re talking about.

➤ Model showing a building before much of the steel erection. Red members have yet to be erected.

➤ Overlaying the model with a photo of the completed project is not something we commonly do, but it’s one of the best visualization tools for demonstrating to a client or supplier that all of this is ultimately about putting up a real building, not just generating digital data.

➤ Model of the same building, nearing completion, with green indicating that members are erected.

➤ With access to the model, field personnel can get very particular and detailed information for each steel member as well as other modeled components.