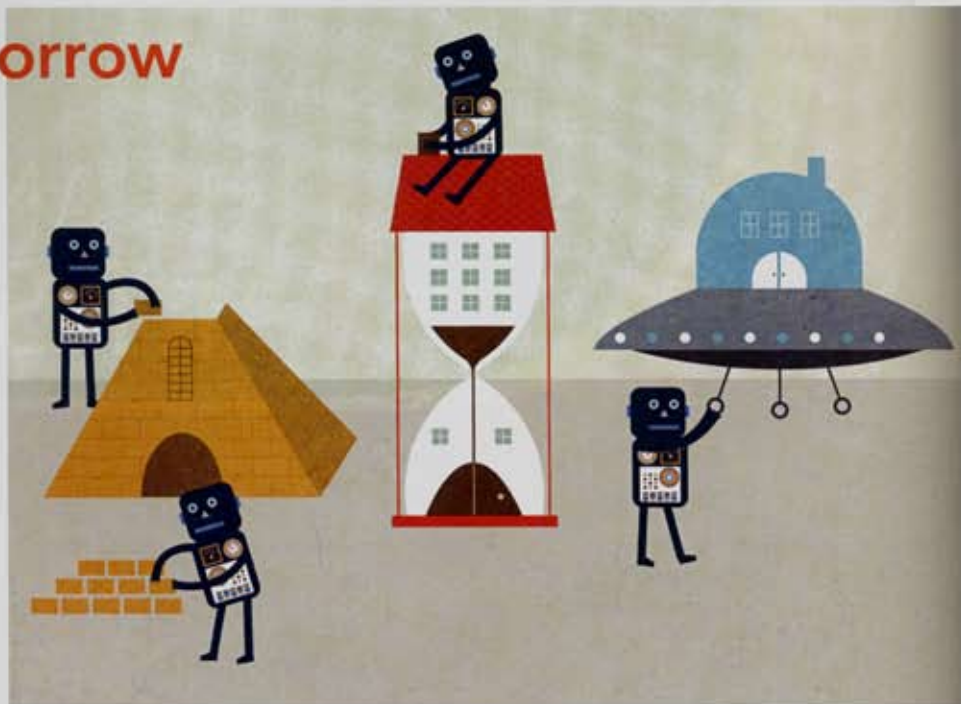


# Building Tomorrow

What will the future hold for contractors and builders? We asked three industry leaders for their prognostications.



## Move On

Richard Wetzel is assistant vice president of business development for JE Dunn Construction. As a licensed architect, he is interested in integrating design and construction to create buildings that are more sustainable and better built.

"From a materials and methods standpoint, we're still building variations of the pyramids, for the most part. Three thousand years later, and we're still stacking bricks—especially in the United States. In the future, we need to make our systems work for us more. We need to take advantage of our building's skin to generate power and to adapt to different conditions in real time. And we need to automate more. I don't think we'll ever have construction robots, but we can definitely take advantage of automation on a factory scale, with large components being constructed in controlled environments and then plugged together on-site. I'm not saying that we'll build buildings the way Boeing builds airplanes, but there will definitely be some similarities, especially with larger projects. Design and construction will need to be a much more integrated operation in the future."

## Slow Down

John Brown is a principal with Housebrand and founder of the slow-home movement. He has dedicated his career to helping others understand the power of a relaxed pace in the house design and construction process, similar to that embraced by the slow-food movement.

"I believe that home construction in the future will recognize the value of a slower pace. A quickly designed and constructed house saves time up front, but does it really reflect who you are? Not always. In my mind, an incremental process makes more sense for many of my clients, especially those unfamiliar with the design process. I recommend that they proceed at their own pace—room by room if necessary. I tell them to bring different materials into their houses, and to live with them for a while. If they're building new, I tell them to leave a couple rooms raw, then finish them out one by one after they've had a chance to experience the space. It's about the journey as much as the end product. Home design and construction should be pleasurable: You plan, you work, you react, you live. It's an adaptive process. Embrace the fact that things change."

## Look Up

Kelly Humphries is a spokesperson for NASA at the Johnson Space Center in Houston, Texas. Trained in public relations, he's nevertheless at home amidst all the engineers. If you've ever tuned into the NASA channel, you've probably heard his voice.

"We can learn a lot about how to build in the future by looking at how we are building now at the International Space Station. All the issues we deal with down here exist in an amplified state in space. We've figured out ways to be truly sustainable. We generate our own power. We recycle everything—absolutely everything—even the astronaut's own urine and perspiration are processed into potable water. The conditions we design for are beyond harsh, and the site where we build is very hard to get to. We prefabricate our components and ship them up, and we build them with such precise tolerances that they lock perfectly together into place. We have to exceed efficiency up there, and so much of what we do ends up being applicable down here." ■

● The construction of the Golden Gate Bridge sparked a few safety innovations. The modern hard hat was developed for the project, and the installation of safety

netting on the bridge saved the lives of 19 men during construction, who became known as the "Half-Way-to-Hell Club."