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Cutting edge technologies in construction and how to stay informed - by Steve Haines

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New technology solutions are rarely, if ever conceived as some new capability, conjured up from one's imagination. Rather, it is most frequently the confluence of existing technology, augmented by seemingly unrelated developments that are then combined in a creative way that makes us say: "That's brilliant! Why didn't I think of that?"

For example, drone technology is a veritable tower of progressive innovation. From the remote controlled airplanes our dads soared as boys, evolved the easy-to-fly and stable quad-copter. Add lightweight lithium polymer batteries and tiny high resolution cameras, and we have a very interesting photographic platform offering previously unachievable views of our projects. Combine this with digital photogrammetry, survey-quality GPS, mobile devices, widely accessible App development platforms and virtually unlimited cloud computing power. What we then have is an almost real-time survey platform delivering rendered point cloud data, allowing accurate daily updates of job-site progress and much more. As we add specialized armatures and other appendages to these flying marvels, the opportunities for innovation continue to grow.

Virtual Reality (VR) is another cutting-edge technology that presents the opportunity to literally look at our process from another perspective. Renderings and flythroughs resulting from 3D design have led to more informed designs, confident decision makers, and have accelerated the pace of making choices on a project. However, they are still usually presented on flat media. Flat displays, projectors and paper cannot capture what a space will feel like the way VR can. VR offers an immersive experience that allows the viewer to understand scale and depth in a way that is much closer to reality. While VR can help our clients fully comprehend our designs prior to construction, it is likely even more important to ensure our project teams use this technology as they design and build to validate their ideas and better coordinate systems.

These are just a couple of the many examples of how layering technologies on top of others to solve real world business challenges is changing the construction industry. This allows new business opportunities and at the same time threatens the status quo of others. Either way it can be disruptive. Sometimes there is a steady beat of innovation that can be observed and allow a relatively long runway of adoption. Other times the innovation is like throwing a switch and overnight the industry has changed.

One of the best ways to position your company for these opportunities is to be aware of how innovative technology is applied by some of the most forward-thinking companies in our industry, and looking for similar opportunities in your business. To stay even further ahead of the curve, it pays to get a glimpse of some of the visionary technologies and processes that are in development right now so you can be prepared to be the next industry innovator.

The Construction Institute is offering just such opportunities in the coming months through two exciting programs.

On April 20, I will be moderating the Construction Institute breakfast program, "Cutting Edge Technology in Construction," hosted by CohnReznick. This program will include Dean Lou Manzione of the University of Hartford's College of Engineering, Technology, and Architecture, presenting on The Internet of Things (IoT). Technology and software developments are not just a West Coast phenomenon. Our panelists represent three New England-based companies that have developed unique technologies that can enable better jobsite safety, improve communication, and allow us to more easily access information about our buildings.

On May 11, the Construction Institute will be hosting the Eighth Annual Visionaries Forum at the Connecticut Science Center in Hartford. The Visionary Forum will present a group of extraordinary innovators who are developing, providing and implementing some of the most cutting-edge technologies and processes in our industry. This captivating and stimulating event will offer attendees the opportunity to learn how a culture of innovation can provide their firms with a unique edge in our increasingly competitive climate and offer a view into the future of our industry.

Whether you are a lifelong technologist, business leader or just working your way up, these programs offer an excellent opportunity to get current with the latest technologies and how they can improve or even revolutionize your business in the future. For more information, please visit www.construction.org.

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