

Construction Tech Goes Beyond Drones

By utilizing new technologies, companies can continue to build and help Texas grow, despite lack of available labor, which helps to keep overall costs down, says Joel Galassini in this **EXCLUSIVE**.

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A ready-mix truck stands by for a roadway upgrade in Grand Canyon National Park.

HOUSTON—As with the CRE industry as a whole, the [use of technology](#) in the construction industry is slowly evolving from a manual and paper-dependent

industry. [CEMEX](#), a global building materials company headquartered in Houston, has been at the forefront of the evolution. In this **exclusive**, Joel Galassini, regional president, Texas and New Mexico Region of CEMEX, discusses these innovations, the company's platforms and other tech benefits.

GlobeSt.com: How has the construction industry changed in the last five years, driving the need for new and more technology? How will technology help the industry to grow in the next five years?

Galassini: Construction has seen a wave of new technologies: platforms, drones, automation and more. There is a lot of interest in drones in building materials and construction. CEMEX recently received a Portland Cement Association safety innovation award for our program that uses drones for visual inspections of enclosed areas, specifically for fire hazards. I think innovations that offer tremendous safety and precision benefits are great areas for development in the years to come.

In terms of digital change, the construction industry has been one of the slowest to adopt new technologies. While we can now order virtually anything that we want from the comfort of our couch, the construction industry is still very manual and paper-dependent. Just recently, the construction industry has started to adopt new technologies. In addition to the drones previously described, digital sensors are now being used to monitor all phases of the construction eco-system. For instance, sensors are being embedded into concrete as it is being poured to help better understand its long-term strength and durability characteristics. An example of the benefits of these types of technologies can easily be seen within the nation's infrastructure. Instead of waiting for a highway or bridge to fail, these sensors can monitor the physical characteristics of the concrete to provide better information so we can fix any issue before a failure occurs.

GlobeSt.com: How is CEMEX implementing technology to improve or advance construction projects at the job site?

Galassini: Ultimately, CEMEX works directly with contractors and customers to ensure innovative solutions meet the specific job criteria and goals. Using our digital platform and sensors, as well as nano-technology to develop innovative materials, makes our products perform even better in harsh environments. These new materials help increase strength and overall durability to allow engineers to dream even bigger.

GlobeSt.com: How does this digital platform accelerate decision making and reduce potential mistakes? And how do these benefits potentially impact the consumer?

Galassini: Before CEMEX Go, it could take managers hours to identify needed building materials, order, schedule delivery, track status, etc., and they would be further limited to getting this time-consuming work done while in their office or otherwise at a desk. This can now be accomplished in minutes and with far greater accuracy, with CEMEX Go. By providing a digital platform for project management, the entire workflow benefits by ensuring each step of the project is managed with greater efficiency. This helps customers and our customers' customers, which in many cases are consumers, by helping projects stay on track and on time.

GlobeSt.com: What assurances do drones provide in conducting visual inspections that were not possible before?

Galassini: Drones provide eyes in places that are difficult or dangerous to access. Drones can make the impossible now possible because they can withstand elements, such as extreme temperatures, that would present extraordinary risks to workers. Also, by using drones, we can greatly decrease the time to perform a task. For instance, when having to perform inspections at height, a drone can be utilized, eliminating the need to utilize expensive lifting equipment while keeping our employees safely on the ground. Also, drones were recently used to inspect post-hurricane Harvey damage. These drones helped speed up the overall inspection process as a great deal more ground could be covered as opposed to traditional methods.

GlobeSt.com: Beyond the obvious benefits of delivering a project on time or even ahead of schedule, what are other benefits to accelerating project completion and efficiencies that are driving this transformation in the construction industry?

Galassini: The construction industry is and should be embracing its own digital transformation, if for no other reason, than to be future-ready. We must work smarter alongside other booming industries to maintain our relevancy in building a better future. Also, as the Texas job market continues to tighten, it is becoming more difficult to obtain skilled labor. By utilizing these new technologies, we can continue to build and help Texas grow and not be limited by a lack of available labor. This in turn will help keep overall costs down.

GlobeSt.com: What are foreseeable trends in the use of building materials for major construction projects?

Galassini: Weather-proofing is a big trend that we see growing in nearly every major US market, whether it's using materials to withstand hurricanes, floods, fire, tornadoes or other extreme weather conditions. We also see a trend toward more natural materials and concrete is an obvious choice. By utilizing different colors and textures, concrete provides architects and designers with a virtual limitless canvas.

GlobeSt.com: What are key projects in Texas that CEMEX has been involved with?

Galassini: In Texas, we have been involved with the Capitol Tower as well as the Glassell School of Art at Houston's Museum of Fine Arts, to name a few.