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CONSTRUCTION IN THE CLOUD

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Building business with experience and technology

Shifting labor force demographics are opening the door for technologies that simplify workflow and offer appeal across generations.

By / Jessica Kirby

The construction industry used to be one of the slowest to implement new technology, but changes in that trend are the biggest news of the decade. The digitization of key tasks in construction is on the rise, thanks to the industry's renewed focus on sustainability, resource optimization, reducing material and labor costs, and improved quality craftspersonship.

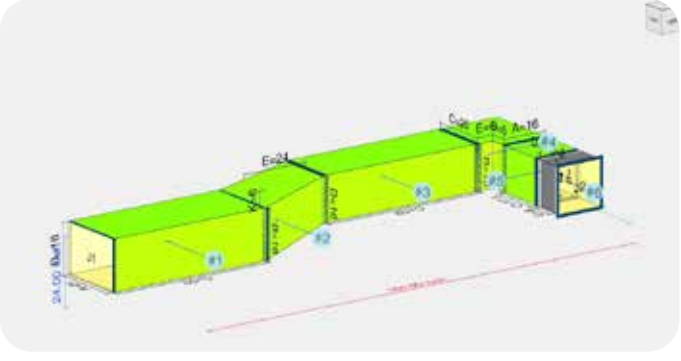
Perhaps the most dramatically affected metric is labor. The United States will need to fill half a million positions in the construction industry over the next five years, and in Canada, 20% of the construction workforce will retire in the next decade. Filling these positions will not be as simple as running a help wanted ad. Success will require a specific demographic that is

tech-savvy and productivity-driven, with fingers on the pulse of innovation. The next generation workforce wants creativity and for their work to have meaning. Most of all, they want technology that speeds up or eliminates the more draining elements of their work.

Notice we aren't pigeon-holing this next generation with age brackets. Anyone can be tech-savvy and appreciate the usefulness of functionality like ordering materials online, rather than by phone or on paper. Younger workers might be more comfortable adopting new technologies, having grown up with devices in their hands, but the experienced generation also appreciates simplicity and productivity. Also, experienced workers have a wealth of legacy knowledge that the industry simply cannot afford to let dissipate as this generation retires.

That makes the solution to the construction industry's labor problem a hybrid, reciprocal approach to supporting technology integration with legacy knowledge. It means leveraging the best of all generations to facilitate training and best practices, while streamlining digital tools integration. Everybody wins.

BCX has been building out its modules and services using feedback and input from all generations. It addresses multiple pain points with simple tools like 3D rendering for complex fittings, the ability to create online takeoffs, and functionality that offers joint recommendations and automated angle calculations.



> *"Experienced tradespersons require the system to be simpler to use and faster to implement, and younger generations want a robust platform that automates tasks like ordering and job costing."*

"Everything we do is mobile-friendly, a key feature for the next generation of workers," says James Beveridge, CEO at BuildCentrix. "Experienced tradespersons require the system to be simpler to use and faster to implement, and younger generations want a robust platform that automates tasks like ordering and job costing."

BuildCentrix allows users to create 3D rendering on fittings that change dimensions as they are modified, creating an immediate and gamified visual of what they are creating. Users can also upload blueprints and complete a takeoff right over the digital file, so quantities and costs are fully interactive and visible in real time.

With shop standards built in, BCX removes the guesswork and eliminates user error since the system will not accept fittings that don't meet the standards. All the checks and mandatory fields ensure that orders must contain all the data points, or the order will not be processed. Access to the timekeeping tool allows mobile tracking of shop production and delivery, so hours and costs don't have to be entered manually or by phone.

"BCX is focused on building smarter and better," Beveridge says. "Contractors who implement technology that simplifies tasks and drives productivity will most certainly have the advantage when it comes to recruitment."

Discover BuildCentrix today with a free demo. ▪

BuildCentrix

BCX comprises the following modules. While there is no requirement to use them all, they are available for contractors to grow into.

- Field ordering of sheet metal and piping and plumbing
- Machine integration
- CAM integration (Trimble, PractiCAM, CAMduct)
- Watts orbital welder
- Field timecards
- Shop timecards
- Labor reporting
- Payroll integration (all applicable payroll packages for contractors)
- ERP/accounting integration for jobs and labor codes
- Revit® integration
- CAD integration
- Content generation (not dependent on old Windows databases)
- Labor and material costing and pricing
- 3D Blueprint takeoffs for duct, plumbing, and piping

Embracing Technology Critical for Construction Industry's Survival: Report

By / Grant Cameron | Journal of Commerce

Construction companies must embrace change and leverage new technologies and tools such as big data collection and analysis, machine learning and trend analysis, and digital twin modeling if they hope to remain competitive, says Jordan Thomson, a professional engineer and senior manager at KPMG.

"We feel the move to digital and the broad array of technologies and approaches that it unlocks holds enormous benefit to all members of the project team," Thomson explains. "As we've seen in the manufacturing industry, digital transformation promises to bring new levels of efficiency and performance. Contractors and designers that embrace these new technologies will be able to increase efficiently, develop more innovative solutions, improve safety outcomes, and provide better value to owners.

"While some construction companies have started this transformation, we feel there is a real risk that companies that don't embrace these technologies will get left behind."

Thomson, along with Kathleen Boyd, a manager at KPMG, who both work within the firm's Global Infrastructure Advisory practice, recently provided their perspective on the issues in an insight report produced by the Canadian Construction Association (CCA) that looked at innovation and R&D in construction.

The report notes that, given the construction industry accounts for six per cent of global GDP, the adoption of new technologies and ways of working could have significant economic and social impacts across Canada and around the world.

Thomson says the shift is not just about delivering projects more cost effectively, but it will also enable the industry to take on more projects and more complex challenges to deliver on the demand for infrastructure.

"This is not to say that the industry is not adopting new technologies," he says. "We see leaders in the industry making significant investment in new technologies and even naming chief information officers to prioritize pushing these types of initiatives forward. Even small- and medium-scale players across the industry are exploring how these technologies can improve their businesses, however these efforts are often piecemeal and siloed."

Projects and the industry more broadly need a unified approach to how technologies will be implemented and how data will be collected, managed and shared across the project team in order to encourage investment and avoid duplication, he says.

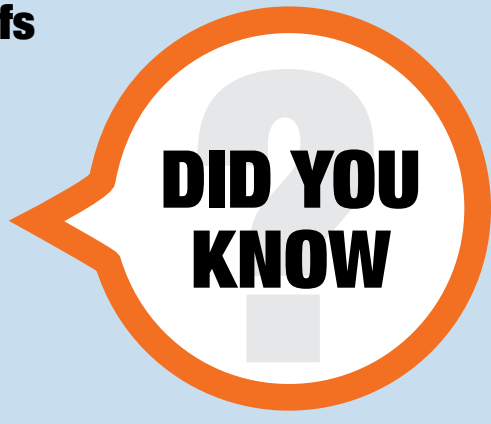
"The key to driving this technological shift will be owners. Ultimately a lot of the upside of these new technologies reside with the owners, so they need to be the ones championing the technologies."

Read more at | canada.constructconnect.com ▪

Breaking News: Building piping and plumbing takeoffs just got easier.

The BuildCentrix development team has been working hard to make the piping and plumbing takeoff process even easier. As part of this effort, it recently released a new version of the 3D Takeoff module that allows users to create takeoffs without having to select diameters each time they add a new fitting. Now users can select a pipe, set a diameter, and when they add a fitting to the pipe it will automatically do a look-up and set the same diameter, as long as it exists for the fitting in question. If you have any questions about creating online takeoffs for piping, plumbing, or ducting please email support@buildcentrix.com We'd love to hear from you! ▪

Shop managers can create pre-fabricated takeoffs and share them with all field forepersons.



Creating frequently used pre-fabricated takeoffs for piping, plumbing, or sheet metal can save time and improve productivity in the shop and field. Not only can all field forepersons create and clone a frequently used takeoff, but shop managers can also create sets of standardized takeoffs they can share with all personnel. Managers can preset and lock all the standard dimensions while leaving some dimensions changeable by the field. Pre-fab components are faster and easier to order and much more efficient to produce in the shop. For more information on creating pre-fab takeoffs, contact support@buildcentrix.com. ▪