

BuildCentrix

CONSTRUCTION IN THE CLOUD

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Integrated Platforms: The Future of Construction Tech



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Integrated Platforms: The Future of Construction Tech

Integrated software platforms that better serve customer needs create significant opportunities for contractors in a changing world.

By / Jessica Kirby

It wasn't until the early to mid-2010s that construction firms began to dive into SaaS and App technology in a noticeable way. For decades prior, tools, equipment, and mediums for completing in-shop tasks like estimating and billing used traditional, age-old methods that got the job done in reliable, predictable ways. But then everything changed. Slowly but surely, logistics and fast-tracking forced a second look at technology, mainly to address basic needs like communication, time-keeping, digitizing paper-based activities, and plugging the feature and functionality gaps that older installed software systems are unable to fill.

Although the construction tech investment train was gaining momentum prior to covid, two years of contractors completing essential service work in a deadline-driven and unpredictably delayed environment drove the need for technology to new heights.

Today, especially on the heels of a pandemic and looking ahead at uncertain economic times, the construction industry has almost unanimously dived into tech with its clothes on. However, still on the inquisitive end of proficiency, most company leaders prefer integrated, full-suite programs that lessen the burden

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and time commitment of trying to manually integrate several pieces of software so the entire operation hums along without interruption. Hence, the platform era has begun.

Most contractors don't have the internal resources or required time to manage multiple solutions properly. They can implement, but lack on the continuing execution and updating. In a platform, they are dealing with a single vendor, and this simplifies the onerous process of staying on top of the tech stack.

BuildCentrix (BCX) launched in 2012 with an eye on the future as the only platform that does not rely on any old, installed software packages. The leadership team committed to building an application that contains its own content. That means fabrication standards, weights, labor times, calculated fitting values, cost, and price are all managed in the application. BCX started with field ordering for sheet metal at Webduct and ran for four years before rebranding as a full-service, integrated platform for mechanical contractors. Because of this breadth of experience, BCX customers know what they want and why. They are savvy, forward-thinking, and like to save a buck without compromising quality, productivity, or their highly skilled workforce.

Midwest Fabrication & Supply is a sheet metal and pipe fabrication shop in Minnesota that has been using BCX since 2019. Before adopting the software, the team was managing its operations using spreadsheets. Today, 50 to 80 tradespeople use BCX timecards and roughly 100 field users submit work packages for pipe, plumbing, HVAC, specialty, and multi-trade systems.

Mike Nelsen, Plant Manager at Midwest Fabrication & Supply, says that in 2018, the team set out to find a system for managing its work in the manufacturing environment. They chose BCX for many reasons, including its suitability for multiple trades.

“We chose it for its digital time entry, ability to send digital work orders from the field and shop, and detailing capabilities, all working from one common database,” Nelsen says. “Jobs and cost codes are managed programmatically, allowing our timecard users to focus on the work, not paperwork.”

The company also favored BCX because of its functionality to measure real-time productivity by job, phase, cost, or work package, and its ability to manage work packages through all facets of the manufacturing process.

“We needed order visibility between shop and field in real time, automated order confirmation, and competitive pricing,” Nelsen adds.

Since using BCX, the team has seen productivity and efficiency benefits, especially in the hours reporting module, which is a huge benefit to the entire team and simple to use. “We wanted—and received—something that is easy to use and that provides stakeholders with valuable information with minimal effort.”

Looking ahead, key trends toward efficiency and productivity will continue to drive development for technology platforms like BCX.

“The industry is always begging for more information with minimal effort to increase efficiency,” Nelsen says. “The focus will be placed on moving more field hours to the shop. We've made some large gains in the last few years, but I don't believe we've even scratched the surface yet.” ■

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

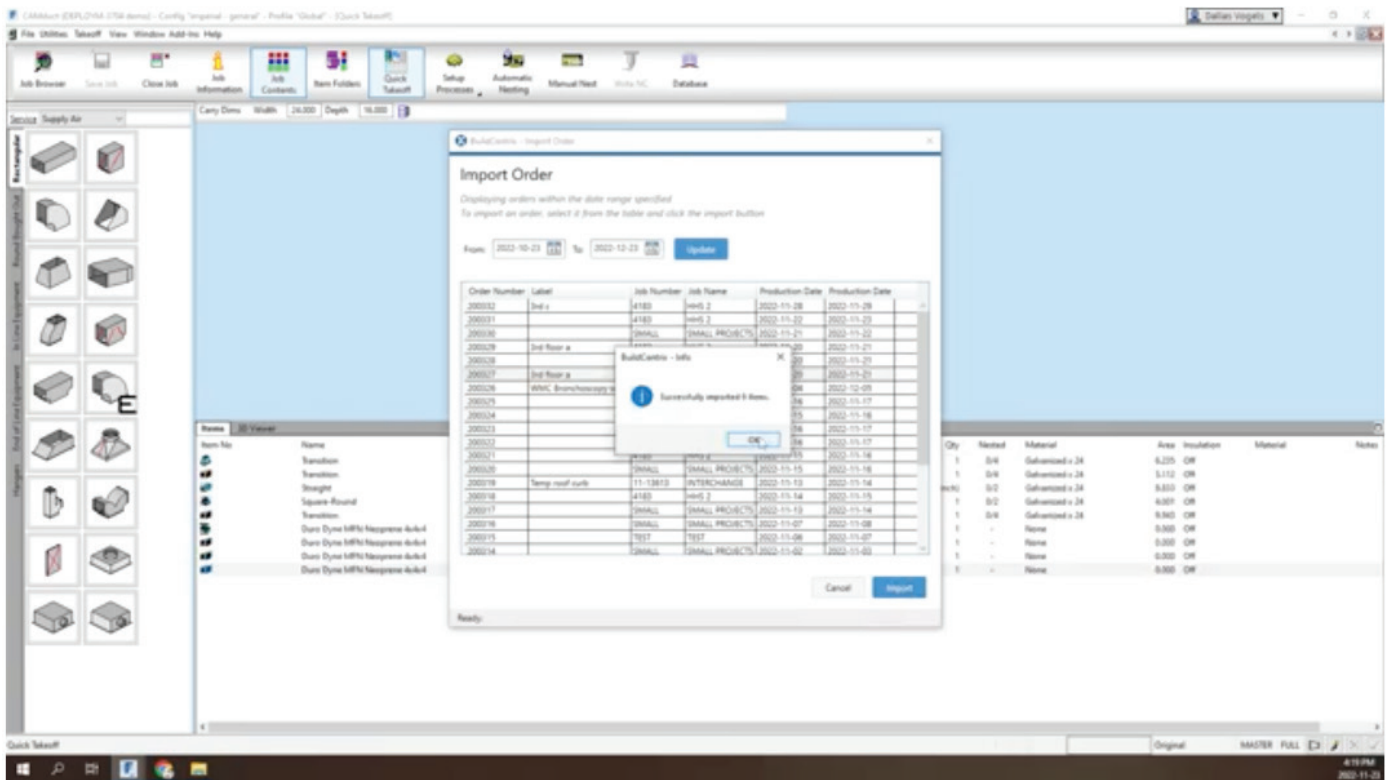
- Field ordering of sheet metal and piping and plumbing
- Machine integration
- CAM integration (Trimble, PractiCAM, CAMduct)
- Watts Orbital Welder
- Field timecards
- Shop timecards
- Labor reporting
- Payroll integration (all applicable payroll packages for contractors)
- ERP/accounting integration for jobs and labour codes
- Revit integration
- CAD integration
- Content generation (not dependent on old windows databases)
- Labor and material costing and pricing

Update to BCX CAM plugin

BCX has integrations into Revit, CAD, and CAM through its native plugins. The company has recently updated the CAMduct plugin to 'get' orders. This allows a shop manager to simply select the order they would like to import while staying in CAM and the content imports over. This new functionality can also extract database information back into BCX. ■

End-to-end

The speciality trades market complains about the lack of innovation or investment in the old software packages they used to run. All new technology companies in the mechanical MRP space exist to plug holes in the old software packages' functionality. This environment is the exact reason innovation is at a stand-still. We are striving to be end-to-end. Content is managed in the cloud. Content is used in modelling tools. Labor and material cost and price are built into the content. The modelled content or field ordered content is broken down into work orders. Actuals are tracked (shop + field hours) against budgets. Work orders directly integrate into fabrication equipment. Content management is instantly updated without reliance on old, installed software. ■



BITS & BYTES

3D engine done right

BCX chose Three.js as its 3D library tool. Being 100% cloud native means BCX doesn't want to build out with reliance on installed software. There are other options, so-called video game engines, but they are not cloud native, and they require a dependency on installed software. The future is cloud native, not installed.

Choosing Three.js for 3D rendering means BCX can deliver a true 3D browser experience. There are other 3D engines available, including some 'game' engines. The downside of those is that they're like a desktop application trying to run on mobile. They're powerful, but they are still installed software and come with installed software headaches. ■