

BuildCentrix

CONSTRUCTION IN THE CLOUD

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Calling the Shots:

Who should decide on
tech used company-wide?



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Who's Calling the Shots?

▶ Contractors must ensure company-wide technology purchases are a collaborative, multi-departmental decision

By / Jessica Kirby

Every day, more construction companies are adopting new technology, thanks to proven productivity and cost savings. But who is making key decisions about which company-wide software systems to choose? Leadership relies on the departments that use it most, but one-dimensional decision making does not support today's collaborative construction environment.

The virtual design and construction (VDC) department at a construction company manages integrated multidisciplinary performance models of design-construction projects, including the product (i.e., facilities); work processes; and organization of the design-construction-operation team to support explicit and public business objectives. It is they who use technology the most in their daily role, so they have a vested interest in selecting technology that best serves their own area of expertise.

The caveat is, their decisions are sometimes based on experience bias with old software. Their breadth of knowledge can be limited to the tech stacks they're familiar with, and their preferences and biases leak into decision making. For example, they may not consider what works in the field or shop. These same departments making these kinds of choices complain about the technology's lack of innovation or improvement, but continue propagating the old tech with lack of vision.

→ Construction Industry Demands

A fast-paced, collaborative industry demands a more robust solution. Schedules are strict, competition is fierce, and the room for error in all departments is razor thin. To get the best out of teams, technology decisions should be made in groups or at least involve consideration of what accountants, estimators,

field workers, and project managers need and want to manage productivity and cost-saving pressures. These positions have shifted from siloed, task-based jobs to a venn diagram of project teams where each department has a separate but interrelated specialty. Technology should support each function and its connection with the whole project.

→ Accounting

While the accounting department continues to be somewhat separate from the shop, field, and day-to-day construction services departments, it is by no means an island. Short timelines demand optimization and productivity improvements that take the accounting department away from task-based projects and into a dynamic, connected role. Software that includes accounting modules moves accountants into more of a business advisor role as they have access to the full breadth of a project's costs and income.

→ Estimation

The days of pencils and papers, 2D drawings, and basic software to manage estimates are long gone. Estimating software must now be cloud-based, mobile, and shareable across a large team. Every player has a take in the estimation process and must understand how decisions are made and their part in achieving the project's bottom line.

→ Field Workers

Something as simple as being able to order materials from the field can make that task up to 80% more productive than completing it manually. This figure combines time spent inputting the order from a set, self-correcting database of parts, the speed at which the order arrives at the shop and the accuracy of that order, error reduction, and cost savings in labor and administration associated with processing the order.

→ Project Management

Perhaps no one is as affected by technology as the project management team. Tasked with running a smooth project on a tight schedule with tight lead times, project managers have to stay on top of data submittals, RFIs, email, inventory, job costs, labor, wages, insurance, safety, change orders, and compliance—all under budgetary restraints that prioritize productivity and real-time cost savings. Full-service technology that brings all of these areas together and demonstrates their interaction with other departments is the best solution for progressive project teams.

→ Complete Systems

Full-service construction SaaS systems are built to support the entire team, including accounting, estimation, field workers, project managers, and VDC. Combining cloud-based, real-

time data on human resources, accounting, job costing, project management, inventory, equipment, and document management brings the team together, streamlining communication and workflow. Data can be shared instantly across any digital platform, negating the need for multiple installations and clunky data transfer across platforms.



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→ A New Solutions

Implementing technology is challenging for organizations of all sizes, but implementing technology with a built-in dependency on legacy installed data exposes an organization to a risk—they're going to need to do this again. There are also the challenges of relying on technology that is managed outside of a software vendor's control. If there is downtime, updates, or new releases, the vendor needs to foresee those coming and react.

BCX has a common data format for content in specialty trades that is not dependent on legacy software to maintain. Other vendors are attempting to use the legacy content and bring it to IOS or other platforms. Inevitably, it still needs to be managed in old software packages, and it still has the risks.

BCX offers a new database management opportunity. Its approach is agnostic, with open integration opportunities. While no one can predict the future, the team at BCX knows there will be changes that correspond to beneficial trends. The merit of true cloud native technology is something the building trades are behind on actualizing. ▪

Snaptrude gets VC backing to take on Autodesk in building design space

Snaptrude, a young start-up headquartered in New York, is the second company in the design space to raise capital to tackle the problem of antiquated design technology. Its mission is to disrupt Autodesk in the building design space, giving customers modern and broader sets of features at a more affordable cost. Through a seed fund co-led by Accel and Fundamental VC, company's efforts have raised \$6.6 million toward taking on an industry that has relied on decades-old code and where cloud-based collaboration is still elusive.

“The problem has been that the industry is very backward in nature,” said Altaf Ganihar, founder and CEO of Snaptrude, in an interview. “It's dominated by companies like Autodesk, humongous companies, software built largely in the 90s. So, the software stack is very old.”

Building Information Modeling (BIM) solutions, including Autodesk's Revit, lack interoperability and require high-end computers. Architects, engineers, construction firms, and industry groups have raised these concerns in numerous open letters to the \$40 billion Autodesk with little to no success.

Arcol, which started in January 2021, is also trying to solve the same problem with their models. Ganihar said that Snaptrude is offering a full-fledged solution in the market, which is different from Arcol and other startups that may take a couple of years to bring their products out.

“There are hardly any players in a full-stack scenario,” he said.

Read the full story | techcrunch.com

BCX adjustments update

Over the course of their business operations, every MEP contractor will do some custom work or work that is outside their typical commercial scope. That type of work requires flexible, customizable software that handles irregular inputs and a place to combine all aspects of a job. BCX provides contractors the ability to add adjustments for any fabrication type, which allows contractors to add cost, price, weight, and fab time to any order in BCX.

BCX is also offering a new Calendar Fabrication Breakdown by Fab Type, which allows contractors to view fabrication hours by type for every day on the calendar. ■

How do databases work for mechanical parts?

BCX uses look-up tables—stored in Mongo and available through the BCX API or in the interface—to manage factors. These tables dictate how the parts are made and what/how much is calculated for each part. For example weight, price per lb, diameter inches, labour tables, material cost, material price, and gauge are available in these tables. These are what drives the content layer of the database. ■

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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