

BuildCentrix

CONSTRUCTION IN THE CLOUD

November 2019



Standardized Workflow &
Powerful Integration
People and Technology





BuildCentrix

A truly successful business must run like a well-oiled machine. It's a bit cliché to use that expression, but it is also a deliberate pointing out of the importance of changing times. Using a dated expression in a publication about new technology amplifies the need to stay current at all times and in all places. This issue looks at two more important examples of that.

A business needs technology, indeed, but implementing software without also standardizing workflow processes is like putting a suit jacket on over your pjs to dress for a business meeting—it only does a half-way job of achieving its purpose. Check out page 3 for all the ways BuildCentrix has evolved with features that help your company get the *whole* job done.

People are our biggest asset. A happy, productive workforce means a smooth-running, profitable business—but the opposite is also true. When your people resist change and cling to "the way things were" the implementation process slows and, if business owners aren't careful, will eventually hit a wall. So, what to do?

Remember, fear of change is exactly that: fear. Will I understand it? Will I struggle and look foolish if I don't get it right away? Will the technology take away my job? Will it change how I feel about my job? These are all things a hesitant workforce is thinking, so put your guard down and deal with fear as fear. Check out page 5 for more suggestions.

As always, the BuildCentrix team is here to help you through any stage of implementation or change, so reach out. You won't regret it. ■

Looking to keep up to date with news and information on BuildCentrix? Find us online via these social media channels:



November 2019

CONTENTS

3 STANDARDIZED WORKFLOW, POWERFUL INTEGRATION

Standardized workflow processes are as important as strong data integration for contractors leveraging technology.

5 PEOPLE AND TECHNOLOGY

There is no greater challenge for companies than implementing change, but not rising to the challenge means being left behind.

BITS & BYTES

- 6 Five HVACR Trends to Keep on Your Radar
- 6 Look Up, Way Up - Drones with Smart Sensors are Coming
- 7 Build Smart, Build Safe
- 7 Customer Appreciation - Thank you from BuildCentrix

JESSICA KIRBY, Editor
jkirby@pointonemedia.com

COVER
© Can Stock Photo / murrstock

All contents ©2019 by BuildCentrix
302 - 1228 Hamilton Street Vancouver, BC

Find BuildCentrix online at buildcentrix.com. A full archive of *Construction in the Cloud* is available at issuu.com/buildcentrix.

For comments or questions, email support@buildcentrix.com.



STANDARDIZED WORKFLOW & POWERFUL INTEGRATION

Strong data integration is one of the keys to success for contractors looking to leverage technology to streamline operations and improve efficiency. To get the most out of highly integrated technology, however, you also need to have a standardized workflow process.

BuildCentrix started out by building a standardized workflow to get work orders from the field into the shop and to get materials or components delivered to the job site while generating accompanying data for the accounting department. Over the years the BuildCentrix team learned many valuable lessons about successfully standardizing workflow processes that helped influence and inform the platform's development. From submitting work orders from the field and importing them into CAM, and from getting order materials to the jobsite and getting order data to accounting, BuildCentrix has honed its workflow to provide benefits to all stakeholders.

As time progressed, BuildCentrix followed up with tool and asset tracking and time keeping. In late 2018 the team added robust Application Programming Interfaces (APIs) to allow contractors to fully integrate their ERP/accounting software with the BuildCentrix platform. This year saw more APIs exposed for almost every module in the platform, and many clients jumped in to connect data from their accounting/ERP systems directly to their workflow processes. Now, the BuildCentrix team is pleased to launch CAD/Revit integration along with integrated multi-trade functionality.

With this launch, CAD/Revit work orders (spools) from detailing can follow the same workflow and processes as field tickets and other orders. Project data can now flow from multiple trades through multiple input points all connected to internal software systems for a fluid and efficient workflow.

STANDARDIZED WORKFLOW

The simultaneous launch of new multi-trade functionality means contractors can leverage the same workflow they use in sheet metal across other trades, streamlining production and reducing costs.

By offering robust integration between the model, production, and accounting along with standardized workflow for all trades, BuildCentrix offers a whole new opportunity for integrated contractors to reduce waste and improve efficiency.

MORE ABOUT MULTI-TRADE

While BuildCentrix started out in sheet metal and HVAC the team is now pleased to fully support multi-trade contractors. The past few months saw the completion of the final updates for classifying every user, project, phase, labor code, transaction, and product in the platform by trade. From users and work orders to labor codes and tool tracking, site administrators can now filter and report on project phases and people by the trade assigned to them.

This powerful new functionality means the successful workflow processes used in sheet metal production can now be fully used by other trades such as piping, plumbing, and electric. The new trades functionality combined with robust APIs means all trades can work using the same data originating from the client's accounting or ERP system. Improved efficiency, lower training costs, and reduced errors make multi-trade functionality a winner for integrated mechanical contractors.

CAD/REVIT INTEGRATION

The new CAD/Revit functionality allows contractors to include all production orders from the field and detailing department into one workflow system.

The new BuildCentrix Autodesk CAD/Revit plugin allows users to upload files directly from the Revit environment to their BuildCentrix deployment. Users can select an assembly/spool and send it to BuildCentrix complete with the job, phase, trade, assigned user, and date requested. Now, whether work orders are generated in the field or from detailing, production can be managed and reported on by job, phase, and trade in one place and in real-time. The cost and time savings are huge especially when users, project numbers, and labor codes are all connected via APIs to the client's accounting/ERP system.

Just like the Revit Model provides contractors with a single source of data for a building project, the BuildCentrix platform provides a single source for production management. This creates an efficient standardized system for managing production and reporting on projects. ■



"Whether work orders are generated in the field or from detailing, production can be managed and reported on by job, phase, and trade in one place and in real-time."





people & technology

As companies strive for productivity, efficiency, and profitability technology becomes essential. But what if the workforce won't buy in? This is where strong leadership and good communication save the day.

There is no greater challenge for companies than implementing change, and there has been no greater change than the fast and furious advance of information technology over the last 25 years.

There is, of course, a parallel between the plethora of change opportunities and the rapid advance of technology. This tandem evolution has left traditional software vendors in the dust, and it no longer just promises results—it delivers. Real-time data shared across multi-platforms connected to a central source can, and will, provide huge competitive advantages to those who use it, but too often there is a huge wildcard in the mix—people. No matter how great the realities of new technology are, if the people doing the actual work don't, won't, or can't participate, many of those promised benefits will remain unrealized.

Why is it some people can't or won't adapt to new technology or processes? Well, I'm sorry to tell you, they can and will adapt—it's just that 95% of the time they feel certain they ultimately won't have to. Poor planning, poor education, and poor implementation of new initiatives mean with just the right amount of foot dragging and whining, new initiatives and processes will die on the vine. Those who resist know that with enough fuss they'll be back to "doing it the way they always have" in no time, and they're not wrong.

Please don't mistake these comments as a condemnation of management or operations personnel; it is more of a condemnation of commitment levels and implementation processes or, too often, a lack thereof. At the end of the day, there are four basic criteria when it comes to launching a new initiative.

- 1. Proper understanding** - People need to know why they need to change, including upstream and downstream benefits.
- 2. Training** - Stakeholders need to be properly trained and supported on an ongoing basis.
- 3. Success metrics** - What does early success look like? These metrics need to be clearly defined, achievable, and scalable.
- 4. Leadership** that stays the course and screens out the noise - Some people will resist change no matter how beneficial it is, so it's important to "put on hearing protection" when a project meets its success criteria and still has vocal detractors. Be patient. In time, these people will comply and find some new change to eschew.

People have an uncanny ability to sniff out a lack of commitment. Miss any part of the roll out process and it will kill or severely reduce the benefits of any new initiative. Have you ever wondered why people can adapt so fast to things like smartphones yet be so resistant to adapting to new technology in the workplace? It's all about motivation. They easily understand the benefit of having that smartphone, they can learn how to use it in-store or online, and success is easily defined by all the cool things they can do with it. This, of course, means they will stay the course and adapt.

The stakes are high in the digital revolution. The construction industry is not going back to paper and pen, and if incumbents don't seize the day new players will enter the market and redefine how the game is played. It's in everyone's best interest to work together, even when change seems impossible. ■

5 HVACR INDUSTRY TOPICS TO PUT ON YOUR RADAR

According to AHR Expo 2020, these are trends you don't want to overlook

According to the U.S. Energy Information Administration, the built environment accounts for nearly 40% of electricity consumption in the U.S. A large portion of this energy is consumed by HVACR systems efforts to heat or cool the indoor environment. The HVACR industry has always been versatile with ever-evolving practices, upgrades, and disruptive products and technologies. Though shifts may often seem slow progressing to the general population, the industry is currently primed to utilize and contribute to big tech trends and, more importantly, is gearing up to be on the center stage of global change.

Indoor Climate Controlled Growth Facilities

Indoor growth facilities are seeing an increase in interest for a few reasons. The first is the practicality behind their use in supporting rapid population growth. With progress made in HVACR and systems capable of cooling and heating extreme external environments, we are now living in areas of the world previously thought uninhabitable. This has pushed the boundaries of human living areas and expanded the built environment with fewer limitations.

Building Automation & Control

The area of Building Automation & Control (BAC) is quick paced and always changing. It maintains a prominent presence at the AHR Expo, and each year showcases new technologies and products that push boundaries. Where technology will take us is yet to be seen, and that makes this a buzzworthy topic for the foreseeable future. What's more, the BAC discussion is expanding to include the Industrial Internet of Things (IIoT) and Industry 4.0, artificial intelligence (AI) and security.

Changing Consumer Demand

Consumer demand speaks to all the above-mentioned topics as the driving force behind innovation and change. The recognition that the largest population of building occupants is the incoming millennial generation, and that this cohort will also be the next generation of building owners brings to light a number of considerations that may not have mattered in the same way to previous generations. Millennials perhaps more than any generation prior are active in the quest for sustainable options. They've been dubbed "generation green," with 66% even stating they are willing to pay more for products and services that come from companies with commitments to positive environmental impacts, according to a Nielsen global survey.

Job Force Recruitment

The trend that perhaps stands to be the greatest obstacle for the HVACR industry in the immediate future is the need to replenish

an aging job force. Due to a reduced interest in skilled trades as a career path and the economic recession in the early 2000s that contributed to stagnation in hiring, the industry faces a lag of incoming professionals to meet the replacement demands of those aging out of the industry. What's more, even if rising students are interested in pursuing engineering or a skilled trade, they may not choose the HVACR industry over others requiring similar applied skills. The industry needs to take notice of these challenges and work together to recruit a new generation of HVACR professionals. This is an industry where long-term careers can be built as the role of HVACR is and always will be vital to all areas of the world, in every building and in every home.

All these topics and more are discussed at www.ahrexpo.com. ■

LOOK UP, WAY UP - DRONES WITH SMART SENSORS ARE COMING TO A JOBSITE NEAR YOU

Formerly the stuff of aviation enthusiasts, drones are becoming more popular as tools and equipment in several industries, including construction. And they aren't the hum-drum base models one sees zipping around at the park—these are the Cadillacs of technology with sensors, microphones, thermal imaging, cameras, and a host of technologies at the ready for improving job site activity, efficiency, and productivity.

Enter the "smart" drone—a sensor-enabled device that allows users to gather and store information in the cloud through a hub that is compatible with Windows, Android, and Linux operating systems. The data is captured and relayed in any number of formats, layouts, and user interfaces, and it is searchable, organizable, and ready for custom labels or sorting.

The benefit, of course, is timeliness. Smart drones can monitor and report on people, places, and things in a constant, up-to-the-minute fashion that slashes the amount of time it takes to make corrections in the event they are needed or to solve problems when things go awry. Smart drones are used to track inventory—use them to do check-in and check-out procedures, monitor RFID tagged inventory, or locate and map inventory—and all the data collected can be integrated with project work orders for completely seamless systems.

In fact, the "construction map" is the next big thing for overseeing and keeping in order the various moving parts on a job site. Smart drones and their associated technologies, such as RFID tags and reporting software, help owners and managers create fully integrated blueprints of a job site containing everything anyone needs to know about what and who is moving on the ground; what materials are present, on the way, and needed;

the availability of infrastructure; incoming and outgoing labour force; and ongoing productivity updates. At the end of the day, the data and its interrelationships are layered into a single presentation platform for all to see and work from.

As job sites become more complicated and operate under increasingly strict timelines and budgets, smart drones might just be the saving grace. ■

BUILD SMART, BUILD SAFE

Monitoring technologies like AI and 4/5G are on the rise on construction sites where they are being used to ensure the laborforce works safer and smarter on all aspects of the job. An intrinsically risky industry, construction is the perfect stage for new monitoring equipment and technologies, which ensure safety protocols are in place and being followed, and which ensure help is immediately available in the event of an incident.

According to the United States Occupational Safety and Health Administration (OSHA) being struck by a falling object caused nearly 60 percent of construction worker deaths in 2017. Sensors and other internet-enabled smart devices allow monitoring from afar. As well, design and engineering teams are integrating said technologies to help predict areas that hold the potential for problems and to purposely design worksites with safety in mind.

Large scale projects with multiple suppliers, contractors, subtrades, and other activity on site at once benefit from IoT technologies in many ways. Internet-enabled delivery trucks, for instance, are traceable and trackable, which allows operators to study way to increase efficiency and refine processes, not to mention the additional safety features that improve driver and pedestrian safety.

Unmanned aerial vehicles (UAVs), wifi-supported handheld devices, IoT-backed sensors, and other emerging technologies deployed in the construction industry, both in the supply chain and on actual worksites, are supporting the safety and efficiency of crews everywhere. ■

CONSTRUCTION TECHNOLOGY HITTING HIGH SCHOOLS IN OREGON

Beaverton, Oregon high schools are placing a bigger emphasis on teaching the skilled trades. Voters approved a \$680 million bond in 2014, part of which will be used by Merlo Station High to accommodate a renovation that makes room for a new commercial construction technology program.

A \$1 million shop and classroom space including mechanical, electrical, and plumbing mock-up walls will begin in March of next year and will depend on constructive partnerships with contractors in a multitude of trades. Aloha and Mountainside high schools—also in this district—are part of a growing movement to develop construction technology programs in high schools.

Currently a six-week elective course, construction technology is set to blossom into a program that essentially teaches and supports pre-apprentice skills. The premise will be providing the best education possible for high school students while including access to trade-related skills in plumbing, electrical, and other areas.

Read more at merlostation.beaverton.k12.or.us/ ■

CUSTOMER APPRECIATION

Thank you from BuildCentrix

BuildCentrix has been at the forefront of feature development over the past year, striving to provide a better, faster, smarter, more robust platform to our users.

We would like to take a moment to thank all of our valued customers who work with us to share feedback, report on successes and challenges, and offer their support in myriad ways. We couldn't do it without you.

Here are just a few of the comments our customers have sent over:

“BuildCentrix is the first time we've seen a dedicated product to foster and support our company's needs going forward.”

-Mario Pitoscia

*Director of Construction
Modern Niagara*

“Without a program like BuildCentrix, we wouldn't have the competitive edge to meet SMACNA standards in a cost effective timeframe while reducing manhours spent on administrative tasks.”

-Hannah Monteiro

*Manager
Silicone Valley Mechanical*

“The amount of time BuildCentrix has saved us is incredible. It's got to be around 40% administrative / input time savings.”

-Pete Connor

*Director
Pure Fabs UK*

For more information about BuildCentrix or its product offerings, visit www.buildcentrix.com ■



BuildCentrix

Integrate • Automate • Fabricate

Photo courtesy of PSF Mechanical Inc.

Lean construction technology for mechanical and HVAC contractors

BUILT FOR YOUR INDUSTRY

BuildCentrix is a modular multi-trade platform built specifically for integrated mechanical and HVAC contractors.

ALL THE TOOLS YOU NEED, NONE OF THE HASSLE

100% cloud-based, with integration points for accounting, ERP, and fabrication software provide you with a high return on investment without sacrificing the power you need in the field, shop, and office.

Call us toll Free at 1-855-932-3828 for a free trial or email support@buildcentrix.com

See it for yourself. Visit www.bulldcentrix.com to schedule an online demo today.