

BuildCentrix

CONSTRUCTION IN THE CLOUD

March 2019



**Across the Atlantic: Pure Fabs, UK
BuildCentrix Visits Forge Accelerator
The Digital Side of Lean Construction**



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5



6

BuildCentrix

A WORD FROM THE PRESIDENT

As you know, in January this year we successfully re-launched our new brand after spending the better part of last year repositioning our service offering and rebranding. Response has been excellent, and customers are excited to be able to expand use of the platform to into their entire enterprise.

While a lot of stuff has changed over the years, our plan has always been the same: connect people, materials, and data to improve efficiency and reduce costs for our clients. Our clients have expanded and diversified, and we continue to follow their lead.

We've built lightweight tools and features to support our clients' workflow. We've connected jobs, phases, timecards, and work orders into one easy to manage platform so clients can standardize their processes and manage data easier. We've added robust application programming interfaces (APIs), which allow clients to pull and push data between the BuildCentrix platform and their companies' internal and external systems (think accounting software or timetrackers). We've opened the door to other trades to help clients standardize and reduce time spent on training and implementation costs.

The lessons we've learned over the years building, designing, integrating, and servicing mechanical contractors has given us a huge advantage in designing pragmatic solutions that deliver results, and the future is bright. Our clients are innovators and technology leaders who help to define our service, our role in their individual technology stack, and within the technology landscape of the construction industry.

Everyone at BuildCentrix is excited about new technology we'll be rolling out this year, and we're proud to play an expanding role in our clients' technology operations. ■

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CONTENTS

3 ACROSS THE ATLANTIC: PURE FABRS, UK

Since implementing BuildCentrix, Pure Fabs has seen an approximate 40 percent time savings on data input in the office.

5 BUILDCENTRIX VISITS AUTODESK FORGE ACCELERATOR

BuildCentrix went to San Francisco to learn and understand the various APIs Autodesk Forge has available.

6 THE DIGITAL SIDE OF LEAN CONSTRUCTION

Connecting people, materials, and data for mechanical contractors is the key to operating a lean construction company.

BITS & BYTES

6 SaaS Digging Into Research and Development

6 Big Data, the Next Big Thing

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COVER
Courtesy of Pure Fabs

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Across the Atlantic: PURE FABS, UK

By / Jessica Kirby

Photos courtesy of Pure Fabs

WE ALL KNOW TIME IS OF THE ESSENCE and in manufacturing every dollar counts. So when a process fails to meet benchmarks for efficiency and cost-savings, what can a company do? Go lean, go digital, and go to the cloud.

Pure Fabs manufactures sheet metal rectangular ductwork and ancillary items for the HVAC industry throughout the UK. It is part of the Pure Companies Group, which also operates Pure Vent, a contract and installation company, and a plastic ductwork and fume cupboard manufacturing company called Pure Labs.

Pure Fabs employs 16 team members, and within the Pure Companies Group there are over 30 employees and as many as 80 subcontractors working on various projects throughout the UK. Like most of the construction industry world-wide, Pure Fabs used to rely on pen and paper to receive manufacturing orders. But that simplicity came with complicated problems.

“We were receiving information in so many different formats—text, MMS, WhatsApp, email—and some of the site drawings were literally written on the back of a cigarette packet, if we were lucky!” says Pete Connor, director at Pure Fabs.

The information was difficult to read and duct sizes were often misinterpreted, causing setbacks at the company’s expense—it’s hard to argue with a customer when a number one is mistaken for a seven, Connor says.

“The time implications of having to rush through these items caused other scheduled jobs to be placed further down the manufacture schedule, having a knock on effect, too, with other jobs,” he adds.

The Pure Fabs management team members are huge lean and 5S enthusiasts. Although ventilation ductwork is perceived to be a fairly archaic part of the construction industry, says Connor, the company staff was keen to explore ways to improve their position with customers.

“We wanted to offer them a service that differentiates us from other manufacturers in the UK,” he says. “We were certain there had to be a better way of working that would cut out obvious overlaps and double-inputting of information.”

Like many other manufacturing businesses, as the company had grown, Pure Fabs had simply added new systems to its process, many of which were intended short-term, but became a more permanent “new norm” over time.

“As a team, we carried out a processing mapping exercise,” Connor says. “We found that some jobs had over 85 touch points before delivery.” Something had to change.

The management team started researching off-the-shelf MRP systems and although some had great features, most of them were geared more towards high-volume, low-cost item models, which was not a good fit for Pure Fabs.

“None seemed to tick all of the boxes, but we are fortunate in that our IT guy is rather tenacious when it comes to problem solving,” Connor says. “He spent many an evening scouring the internet for a solution, and this is when he came across BuildCentrix.”

The team read up on BuildCentrix’s ordering, CAM integration, reporting, Production Calendar, and Delivery Calendar services and realized it could be a suitable platform if BuildCentrix was willing to span the distance and time zones, and create a metric measuring option.



“The team at BuildCentrix welcomed our initial approaches,” Connor says. “They already had their eyes on the European market, so maybe the timing of us reaching out was good, or maybe we pushed their decision to press forward with this extension to their portfolio.”

Either way, after a few conference calls between Vancouver and Manchester, both sides agreed it would make sense to push on with a new build of the system, and timelines for implementation and delivery were established. Project teams from both sides were put together, and regular web meetings were scheduled.

“The BuildCentrix team made sure their side of things was as close to being ready as possible, and a week for implementation of the system was agreed upon and carried out, pretty much on plan,” Connor says. “It really helped that the BuildCentrix team understood the realities of the industry we work in. The challenges faced in North America are pretty much the same as those faced in Europe, and their experience really showed through during the install process.”

Since implementing BuildCentrix, Pure Fabs has seen an approximate 40 percent time savings on data input in the office. There has been good uptake by the field engineers, who identified the benefits more or less immediately and enjoy the ability to add the price of a job into the contract cost center right away rather than waiting for the price to come back to them.

Another benefit is the way BuildCentrix has standardized Pure Fabs' process for drawing and inputting trickier double offset items using the pre-installed menus for these pieces. “There are no longer the confused conversations about which view an item has been drawn in, and this has cut down on time, materials, and money in remaking items and transporting to site where a field team has been waiting to finish a job,” Connor says.

BuildCentrix has helped Pure Fabs centralize its job information—any relevant drawings and timeline information can be attached to and highlighted on the work order. Production and delivery dates can be changed to meet the demands of operating on many

sites at the same time. “In construction, what may be required can change in the blink of an eye, and BuildCentrix has incorporated that into its offering,” Connor says.

The implementation was quick and surprisingly easy. Being involved with the comprehensive install meant the office team had the chance to learn the program well, which granted them the confidence to roll it out to the field teams. When both the BuildCentrix platform and the metal (CADDuct) side were fully integrated, rolling out to external customers was a relatively pain-free process, Connor says.

“Every workshop has different ways of manufacturing, and BuildCentrix has to be able to integrate with various machinery and equipment profiles,” Connor says. “With the excellent back up from BuildCentrix, these challenges were kept to a manageable level. Any issues that arose were no different from the usual day-to-day problems faced by every manufacturing facility the world over, and knowing what the end game would produce makes this part of the learning process a more robust and worthwhile experience.”

Currently, Pure Fabs and BuildCentrix are collaborating to improve the way Pure Fabs collects data from the system. “This allows us to produce workshop key performance indicators (KPIs) for the first time, along with adding certain metrics to produce a more detailed overall equipment effectiveness (OEE) for production, along with monitoring waste material closer within individual projects,” Connor says.

As the world expands and timelines shorten, the manufacturing sector is looking increasingly for easier ways to do their daily jobs, and BuildCentrix offers solutions. From its easy-to-use Shopping Cart, which mimics some of the top names in online shopping, to its real-time data integration, it is with no doubt the way of the future.

“BuildCentrix places you quite firmly in the realms of Industry 4.0 offering a Cloud-based ordering system,” Connor says. “It puts you ahead of the majority of other suppliers, and you only have to look at the age of the people who will be ordering products in the future to know that the winners will be the ones offering the most relevant systems.”

BuildCentrix as a company does not sit still. Its proactive approach and quick reaction time when necessary puts it ahead of the competition. And, they listen.

“Most importantly, they understand the process, the challenges, and the industry we are working in,” Connor says. “Why would you look to work with a company that hasn't been born from the particular environment you are in?”

“Paper and pen may still have a place in construction, but it will become increasing less so every year that passes—get on board now, or risk being left behind.” ■



BuildCentrix Visits Autodesk Forge Accelerator

By Jessica Kirby
Photos courtesy of Dallas Vogels

Dallas Vogels, chief technology officer for BuildCentrix (BCX), attended Autodesk Forge Accelerator in San Francisco in early March. The four-day event was an opportunity to work intensively on a chosen project with help, support, and training from Autodesk Cloud engineering teams.

Forge is Autodesk's application programming interface (API). BuildCentrix is using Forge to pull modelling data from Autodesk Fabrication CADmep and Revit into BuildCentrix. Every mechanical shop gets fabrication data from the field and from the model.

Dallas went to learn and understand the various APIs that Autodesk Forge has available. Autodesk employees who are involved in the decisions and programming of the Forge APIs were present to provide expert support.

As part of his project, Dallas built an integration into Revit and CADmep to communicate with BuildCentrix's API and the Forge APIs, and built an integration with BCX's API and different document storage systems including BIM360, Dropbox, Google Drive, and Amazon S3.

He successfully took a Revit/CAD model, sent it to the API, and rendered the model in 3D in a web-page, and proved that the Forge design-automation API and model-

derivative API provide the necessary functionality to automate managing spooling within the BCX platform.

BuildCentrix currently uses Lookahead orders to schedule production, schedule delivery, assign to site foreman, and report on time. For BuildCentrix, using Forge automates this process by integrating the modelling information directly into the BuildCentrix system.

Dallas having attended the event means BuildCentrix is close to being able to integrate Autodesk Fabrication CADmep and Revit data directly into the platform. This integration will mean BuildCentrix customers can get rid of spreadsheets, phone calls, and emails between the field, shop, and CAD department to schedule fabrication and track materials.

For contractors, they can have all of their production data in one system for production management, delivery management, and shop fabrication tracking.

For BuildCentrix, having the fabrication data from CADmep and Revit means the company can provide a streamlined workflow between the field, shop, and CAD department.

Watch for future developments at BCX that leverage Dallas' work with AutoDesk. ■

the digital side of lean construction



Photo courtesy of Canstock

By / Joe Perraton
President, BuildCentrix

IN THE FAST-PACED AND DIGITALLY EVOLVING WORLD, connecting people, materials, and data for mechanical contractors is the key to operating a lean construction company. Connected people, processes, and systems provide the data required to answer the simple, yet complex question, “How are my projects going?”

Disconnected people, processes, and systems mean you only get part of the story and probably a day late and a dollar short. Lean construction is all about understanding what’s happening right now and making the small changes required to make big gains in efficiency. Getting the whole story in a construction company in a timely fashion is no easy task. Connecting old and disparate computer systems, standardizing redundant workflow, and changing people’s habits can be a daunting process, but like lean construction itself, small things can add up to the big wins.

So where do you start?

Like any lean construction/manufacturing process, it starts with the simple things, and most of the time those simple things create the biggest bang for the buck. It’s a proven fact clean, organized shops run more efficiently and safely than dirty, disorganized ones. So clean, efficient digital workflow processes will also reduce cost and waste as orders flow through production and all the way to accounting.

Modern technology is built to connect; whether the systems are old or new, internal or external (mobile), the tools and technology are available, flexible, and proven to deliver. A good place to start is unifying job data and connecting transactions (work orders, timekeeping, and production) in a standardized process. This provides the framework to create and collect the information needed to identify improvements in efficiency and ways to reduce waste. It also builds a solid foundation for adding functionality as the construction industry becomes more and more digital.

Nothing happens without an order

This is a very simple but important concept to understand: no invoices, materials, labor, or data can be produced without a work order. Committing to creating all work orders in the same standardized digital format connected to job data means other information such as labour and materials can be created and associated with these orders. Without a standardized digital work order the cost, time, and waste of answering the simple question, “How are my jobs doing?” is unnecessarily high.

Time is of the essence

So, now you have a digital work order; it’s time to take the next step and assign labor to it in real-time. This is one thing people offer very little resistance to since paychecks depend on it. Rolling out digital time cards is typically easy and the gains are huge, as all those time entries are downloaded right into accounting, saving hours of administration costs per week. Easy-to-use, mobile-friendly time cards connected to work orders and jobs can also provide a real-time answer to the most critical questions about actual labor versus budgeted. Knowing which jobs are performing well, which aren’t, and why will help increase efficiency and tighten project estimating. Labor is 70% of the cost of most projects. Knowing more about your labor faster is the key to successful projects.

Keeping it simple

As they say, lean construction/manufacturing is a journey, not a destination. While technology and computer based systems can seem complex and confusing, taking some thoughtful, simple first steps can provide a solid foundation to becoming a lean, more profitable contractor.

The world is getting more and more mobile, so leveraging modern technology to connect, standardize, and digitize basic work processes will create immediate gains in efficiency and reduce waste. With these basics in place, contractors will be well-positioned to tackle the more complex challenges the increasingly digital construction industry. ■

SAAS DIGGING IN TO RESEARCH & DEVELOPMENT

Analysts at Blossom Street Ventures recently compared revenue expenditures between major software-as-a-service (SaaS) companies like Dropbox, Survey Monkey, and Jive, and discovered big players in this coming of age market are spending nearly a quarter of their revenue on research and development. Smaller businesses spend even more—up to 41% on R&D because they are working harder to catch up with their larger, more mature competitors, but the investment pays off—small companies tend to grow at about 127% annually over yearly 47% growth for the big dogs.

So, what does that mean to you? For companies using SaaS, it means the foundation, integrity, and very reason for using these programs is being preserved and enhanced

among successful SaaS companies. SaaS allows live, real-time product upgrades and seamless transitions into new features and bug fixes. No more downloading one version just to find out another is necessary in three months—SaaS works quietly and efficiently in the background so users can focus on the more important business of running their companies.

If you are considering switching to an SaaS application, be sure to ask your prospectives what they are spending on R&D. What features are they planning for? What drives their innovation? How clunky will bug fixes be? These questions are as important as the functionality of the programs, and stable, innovative companies will wow you with their answers. ■

BIG DATA, THE NEXT BIG THING...

What do drugs tailored to a person's genetics, airplane assembly line simulations, and smart devices that monitor tree cutting in remote forests have in common? More than you think, says Emily Jackson in her *Ottawa Citizen* article titled, "Move over oil, Big Data is the new fuel to run the world."

According to the article, all three technologies are among the first to get funding from British Columbia's digital technology supercluster, one of five innovation hubs the federal government is investing \$950 million in over five years in hopes of spawning world-leading technologies and companies.

Innovation, Science, and Economic Development granted the BC hub \$153 million, with 29 members pitching in another \$200 million. An additional 500 organizations including non-profits have signed on as associates without making a financial commitment. It's mission? Unlock the potential of the 99.2% of data that is collected and never analyzed.

Most certainly the driver behind technology advancement and innovations in digitization is the ability to collect, analyze, and relate large amounts of data in tangible,

manageable, and relatable ways, and some experts are calling this ability or "big data" the new currency fuelling the global economy now and over the next decade. Just about everything we touch collects or produces information, but what good is it floating about in random sequence? How limited is a data collector that can not see how one set of information relates to another?

That is just what the Western Canadian hub is trying to find out and change.

"Just like oil coming out of the ground is not a very useful resource, data that's swirling around in big pools is not a very useful resource," Sue Paish, chief executive of the digital technology supercluster, said in the article. "But if you can actually extract the data that you need, analyze it, refine it, leverage it, deploy it, monetize it, it becomes an incredibly powerful part of society."

Big data—the field that treats of ways to extract, analyze, and relate data—is set to revolutionize the business world. As technology evolves, so too does the drive to apply and relate it to different ways that leverage and expand a company's operational capacity and bottom line. ■

WONDERING HOW BUILDCENTRIX WILL INTEGRATE INTO YOUR COMPANY?

Schedule a demo today to learn more about how BuildCentrix can be come a valuable tool in your company. Let our team share their knowledge and experience with you today. Visit www.buildcentrix.com to book your demo.



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Webduct Evolved

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.buildcentrix.com to schedule an online demo today.