

Case Study: How BNBuilders Is Elevating Site Documentation with Cupix



16x

faster site captures
compared to laser scanning

750k

square feet captured
in ~2.5 hours

As an Innovation Executive at BNBuilders, Brian Arnold has one key criterion for every piece of software his team rolls out: it has to be fun.

The biggest selling point I can use as leverage is to find platforms that are fun,” says Brian. “Anything we sign on to, if it looks like it’s going to be a bore, users are going to hate spending time in there.

Although Brian’s professional background is in BIM/VDC, he’s been encouraging BNBuilders to deploy innovative solutions everywhere from the office to the field. And this push is right in line with the Seattle-based general contractor’s mission to deliver more integrated construction projects and find forward-thinking solutions.

So, when Brian and his team had the chance to explore site documentation solutions once their previous vendor’s contract was up, they took it.

From simple site captures to full spatial intelligence

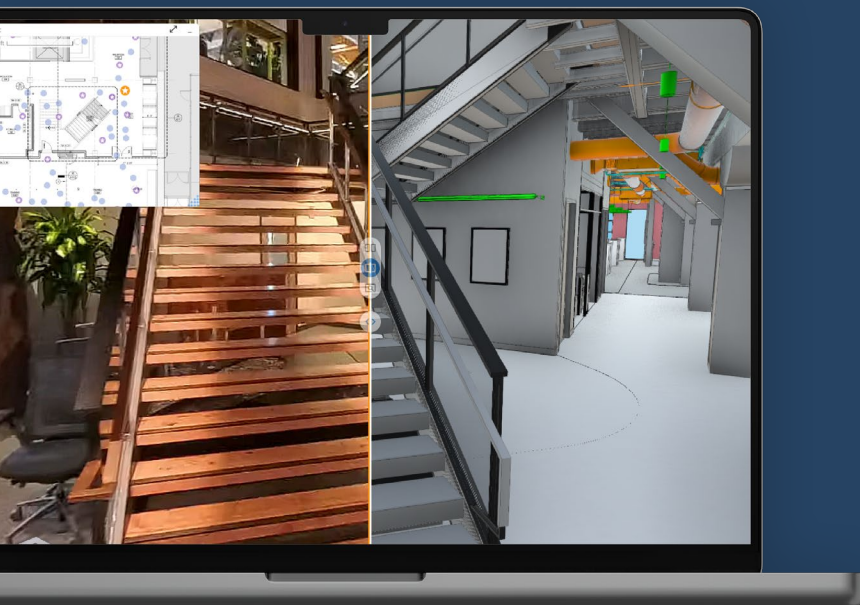
Brian and his team at BNBuilders had used site documentation and reality capture tools before, which “did everything they wanted them to do at the time.” While site documentation was going to be “table stakes” for any new solution, Brian wanted to see more functionality (and more fun).

So he got to work, assembling his 15-person team and representatives from IT and project engineering to evaluate new solutions. Some of the platforms the team reviewed over a six-month period required strict capture processes or complex equipment, but Cupix was different.

“Cupix had it all, and then some. When I show it to people for the first time, their jaws literally drop.”

Brian Arnold

Cupix had the ease of use BNBuilders was looking for, allowing teams to take high-quality progress captures within 20 minutes. But what differentiated Cupix was the strong compatibility with BIM, including accurate measurements and integrations with Revizto.

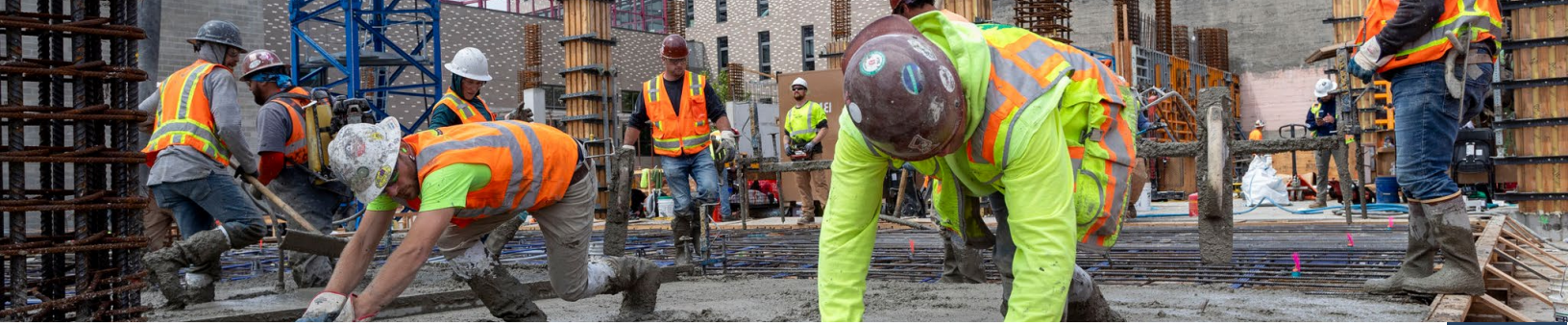


“In the innovation group, we live in 3D models, so the BIM compare feature was huge for us,” says Brian. “And there were certain features I didn’t expect and didn’t ask for, like the model transport feature where you can overlay BIM elements on 360° imagery.”

Brian adds that the Cupix customer success team has always been available for onboarding and training, and is open to any product feedback BNBuilders has.

“The customer success team was a big part of why we signed on, just to have that communication. And what really sold me was that Cupix was adding features all the time and talked to us about what we could do with the platform.”

Brian Arnold



Capturing project progress at every stage

BNBuilders is actively using Cupix on projects in all regions, including San Diego, Los Angeles/ Orange County, Seattle, Denver, and the Bay Area, with Cupix serving as the “standard photo documentation process.”

“Across the board, small to large, every region, every sector, we’re using Cupix,” adds Brian.

On a recent private high school project, multiple BNBuilders teams were using Cupix at different project stages:

- **Preconstruction**

Before significant digging occurred, the preconstruction team captured site topography with Cupix that they could refer back to later. Brian notes that the team could bring 360° cameras with them on job walks without extensive setup, which allows them to capture detailed geometric data in just minutes.

- **Construction**

After walking the jobsite, project engineers were able to compare BIM models to as-built captures when they returned to the office, speeding up the quality control process. Ahead of concrete pours or ductwork installation, teams could ensure that model elements would fit in the right place, reducing the likelihood of rework.



While none of the members on the project were from the BIM team, everyone could still use Cupix throughout the build, including project managers and project owners.

“Operations is where Cupix really proves its worth. It’s not a one-time tool—it’s a constant throughout the course of construction.”

Brian Arnold

Making life easier with easy-to-use software

Traditional site capture methods like laser scanning can take hours to set up and scan, but they can require expert training and cost tens of thousands of dollars.

And while those methods have their place, Brian notes that “the less tech-y we can make our tools, the more likely project engineers are going to latch onto it.”

At BNBuilders, project engineers have dived into using Cupix and are “hands down the biggest fans.” With Cupix, they can walk a jobsite with a 360° video camera mounted to a boom pole, and capture expansive spaces in more detail than a phone camera could. On a recent life sciences project, a team member was able to document approximately 750,000 square feet of capturable area in about 2.5 hours, noting all they had to do was “walk and record.”



And with OmniNote, Cupix users can also add annotations and voice notes to their site captures and refer back to them later.

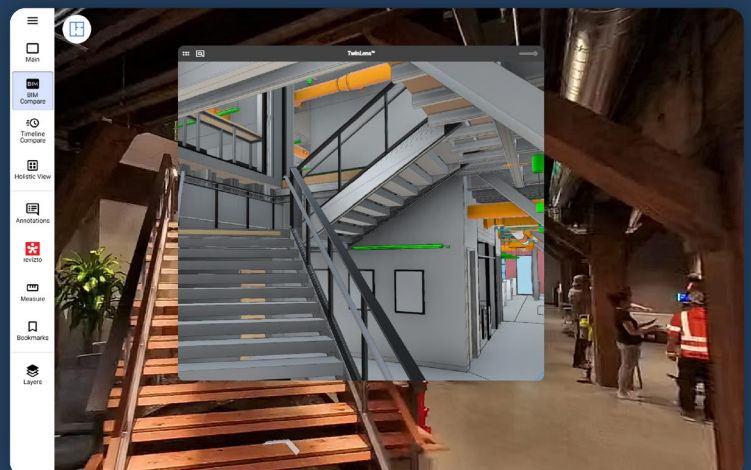
“For instance, if you have a piece of equipment or an electrical panel, you can tag that within Cupix...and see it from every angle,” says Brian. “That annotation isn’t only going to exist within the photosphere you’re standing in—you can take a step or two to the left or right, and it’s still there.”

Once project engineers get back to the office to perform quality control, all the spatial information is available in Cupix, instead of being stuck in a PDF or phone image that isn’t geotagged. Cupix allows them to take measurements within the platform, and with BIM comparison, they can easily see if a piece of equipment is out of place or if there’s damage.

Brian estimates that the continuous video walks project engineers do with Cupix are 3–5 times faster than spot-by-spot 360° photos, and 16 times faster than laser scans (which can take up to 4–6 hours).

“Project engineers don’t need to be tech experts to go out and take captures. With Cupix, they’re able to accomplish the task very easily.”

Brian Arnold



Preventing costly rework with BIM

Every job walk project engineers do creates a 360°, 3D point cloud, which Brian calls the “backbone” for photo comparison. Brian says this is “huge” for him on the BIM team to compare model conditions to reality and avoid costly rework.

On one project, a prefabricated sprinkler pipe was installed up and around a duct, instead of down and around. This error can sometimes happen since it’s hard to tell how something U-shaped should be installed from a floorplan, according to Brian.

But once the BIM model and site capture were pulled up side-by-side in Cupix, the issue was apparent.

“With the model and the photo on the same screen, you could see very clearly that it was in the wrong orientation and needed to be flipped.” says Brian.

Without Cupix, Brian estimates a traditional resolution process might take two hours, with teams having to walk out to the site, walk back, look through shop drawings, try to find which detailer was on-site and when, and start an email chain.

“It just becomes ten times more complex between the communication and installation,” says Brian. “And it probably takes an hour or two of everyone’s time...and you can imagine everyone’s billing rates.”

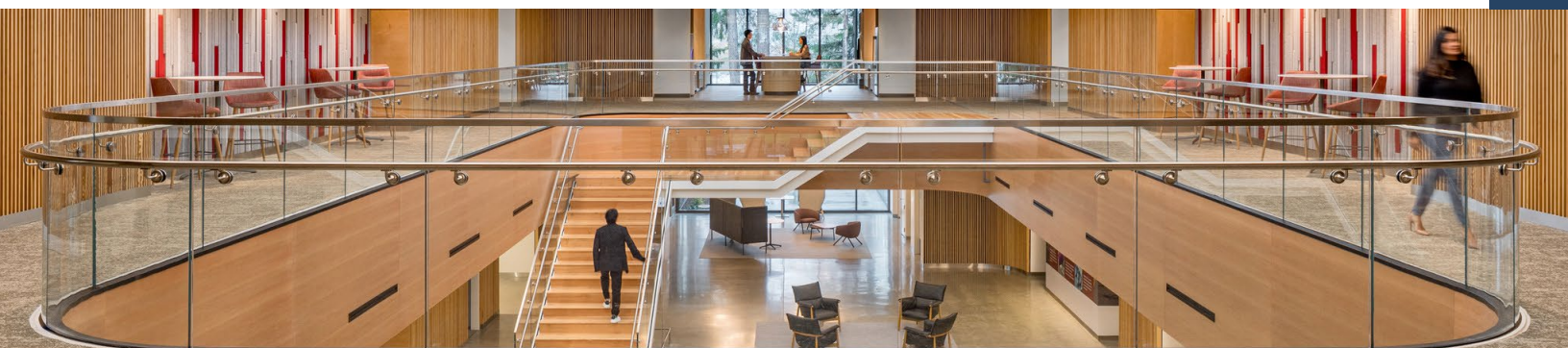
But with Cupix, it led to a quick conversation and resolution, with the pipe reinstalled in the correct orientation in around ten minutes.

Cupix is also helping BNBuilders avoid costly rework on project activities like concrete pours. Catching a mislocated sleeve in a post-tension deck could save an “enormous” amount (e.g., \$30,000) by avoiding costly cutting, scanning, re-pouring concrete, and coordinating multiple trades.

With Cupix’s timeline compare feature, Brian’s team can view up to six captures at once can see what was installed in the past and who installed it before cutting into concrete. They can also transport BIM elements onto their current site captures (one of Brian’s favorite features) and see if there are any discrepancies.

“Even if something is a couple inches off, that’s probably going to show up in Cupix. Any time you’re finding something and preventing it from happening, you’re also preventing those costs.”

Brian Arnold





Building relationships on a spatial data foundation

As much as the BNBuilders team enjoys using Cupix, external parties are also finding value in it. When BNBuilders is invited on public jobwalks, their preconstruction team will take 360° cameras with them to capture spatial data and measurements, which strengthens their bids later on.

And when BNBuilders has won a new project, they'll scan the jobsite anew and present the 3D model and 360° capture to the owners. This helps build strong relationships with an owner and can help get them invited to bid on future jobs, according to Brian.

"Cupix is our front door with an owner. They're really impressed how we're able to quickly provide a source of truth that design teams can rely on."

Brian Arnold

During construction, BNBuilders will capture site conditions with Cupix and share with other parties via SiteView, Cupix's spatial collaboration feature. Brian and his team will share project-based site views with external parties based on their roles, narrowing in on only the parts of the projects they need to know about.

Superintendents, carpenters, and other personnel on site can see the latest progress captures, which makes it easy for everyone to refer back to when there is a dispute or a repair needed. On a recent public plaza project, an owner had raised concerns about cracks in the sidewalk, but with Cupix, BNBuilders was able to confirm that the installation was in full compliance with contract documents.

"Half of the reason we're using these platforms at all is to document things that we don't know we're going to need until later. The Cupix photos are high quality and a lot more useful for the day-to-day, week-to-week, full project duration."

Brian Arnold

What's next for BNBuilders

Brian and his team have plans to roll out SiteInsights, Cupix's AI-powered progress tracking solution, on future projects. This will allow BNB's self-perform drywall group to monitor production levels with real-time data gathered during their walks, and add workforce if needed.

But ultimately, Brian will continue to find the fun in whatever functionality Cupix rolls out next.

"Cupix is a really fun app, and I love seeing people's eyes light up when I show it to them for the first time. It's very streamlined and very human, and that's really helpful for me to sell it to my project teams."

Brian Arnold

