Four Times Construction Got Productivity Right

When it comes to productivity gains—or lack thereof—construction is everyone's favorite punching bag. To be sure, the industry hasn't been able to do things better, faster, and more efficiently as a whole over the last 50 years, even as other sectors have.

But that doesn't mean innovative construction pros have just thrown up their hands at the problem and "accepted mediocrity," as one insider says. Instead, in specific cases across the industry, there are projects that are coming in ahead of schedule or companies even slashing the amount of time allotted to projects in the first place (in one case, by two-thirds).

In fact, by some measures, construction's productivity gap may not be as bad as previously thought. According to a 2018 report from the U.S. Bureau of Labor Statistics (BLS) that uses new "deflators" to measure the value of construction produced in constant dollars versus the number of hours used to build it, productivity progress is being made. The agency found that from 1987 to 2016, productivity in

single-family construction increased by 1.1% per year; multifamily improved by an average of 3.7% per year; and industrial construction, measured from 2006 to 2016, improved at 5.3% annually.

A hallmark of companies and projects that are getting it right is figuring out how to do a few things well and then doing those things over and over again. In other words, these companies and projects are using repeatable processes, just as their counterparts in the manufacturing sector have done to log productivity gains. They also leverage technology to help their teams collaborate more effectively, and earlier on during a project, to finish early in the end.

“Construction is very much a project-centric industry, and we tend to think every project is different, and in many ways, that’s true,” says Kenny Ingram, global industry director of construction at enterprise software provider IFS. “But we need to get away from reinventing the wheel every time.”

Indeed, in its productivity report, BLS cited the uniqueness of each new construction project as being one of the incessant challenges of measuring productivity in construction in the first place. “The main difficulty is that buildings differ widely in their characteristics and features,” the report says. “Similarly, the nature of the underlying terrain varies widely among construction projects. Consequently, economists, both in general and within the BLS productivity program, have found it exceptionally difficult” to measure construction productivity. Yet others in the industry say that while, yes, each project is obviously different, that doesn’t mean a construction team’s approach to each one has to be.

“The problem with the uniqueness argument is that it gives people an easy out,” says Drew DeWalt, co-founder and COO of San Francisco-based construction management software platform Rhumbix. “There’s some truth to it, but it also gets people out of making the harder decisions of how to improve productivity through repeatability.”

Here’s a showcase of projects and companies, both big and small, where construction is actually getting it right:

Removing roadblocks with tech-enabled collaboration

While building the 17,000-square-foot Jack Nicklaus Clubhouse in Reunion, Fla., JK2 Construction and second-generation builders Tucker and Garrett Holmes faced a number of hurdles. Not only did the client want the clubhouse to open three months earlier than the 14-month construction schedule had slated, it also needed to do it for less than originally budgeted.

But the ace in JK2’s hand was that they had built other clubhouses in the past and thought there may be some repeatable processes they could pull from those projects to win the job and do it right.

“Clubhouses are one of our niches, and when you do something over and over again, you learn as you go,” says Tucker Holmes, project manager at JK2. “We felt comfortable that our experience would help the owner make decisions quickly about the options we faced.”

So the Holmes brothers contacted each of the 25 subcontractors slated for the project to figure out if there was a better, more-efficient and cost-effective way to pull things off. “We reached out to the 25

subs we had hired or were talking to for the project and discussed the specifics of the bid. We would look at the systems they specified and ask if there was another option with the same design intent and features to meet the owner's needs," Holmes says. "We were able to pull roughly $275,000 out of the base bid to get it under budget right at the beginning."

Then, to coordinate with those 25 subs, JK2 elected to use Procore, a mobile construction app that loads on workers' phones to coordinate, schedule, and map progress to keep projects on track. When the team hit a snag following the architect's plans for some tall arches using standard concrete masonry units, they were able to simply snap a picture of the issue and get it back to the designer for a quick review to troubleshoot the issue.

"Those arches needed to be poured with cast-in-place concrete instead of the concrete block," Tucker says. "The superintendent was able to take a picture of the condition, where it was going to be, and then mark up the plans digitally to show what needed to be changed and submit it back to the engineer and architect."

With a little more back and forth through the Procore app—which automatically tracks the documentation and response times for an issue to help hold each person in the communication chain accountable—the team was able to come up with an alternative solution on-site and get it signed off on by the structural engineer and architect within two and a half hours. The same issue, using manual methods, could have stopped progress for days. "Instead, we were able to keep the concrete blocks going and keep everything moving for the concrete pour to be on schedule too," Tucker says.

To top it off, every week, using the team-approach methods of Lean Construction, Tucker had group meetings with his subs, architect, engineer, and owner to make sure everything was on track. “It was repetition, repetition, repetition,” Tucker says. “We’d discuss any issues we had and work through them to make sure everything on that week’s list got resolved and not let them drag into the next week. That way, everybody knew every day at 7 a.m. what they needed to do, and they showed up on-site ready to rock and roll.”

The result? The team trimmed three months off the original schedule, and the owner was able to open the clubhouse early, just in time for the start of golf season.