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Improving Productivity

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Improving Jobsite Productivity

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We make our money in the field. Or, sometimes, we lose it in the field. Either way you look at it there's only one place the product purchased by our customers is assembled—literally in the hands of our trades people. How we manage the value our labor produces it, is a big deal.

So what does this all mean? Industry-wide, the statistics paint a grim picture. According to the Bureau of Labor Statistics, compared to all other non-farm related U.S. Industries, construction labor productivity is at best flat—some studies claim it is decreasing. Other studies measuring the total percent of directly value-add work on a typical construction site report as low as 5 percent. My own studies over the last 20 years support that data. That's a lot of different measurements, and they all point to the same conclusion. In general, our industry struggles mightily to effectively manage labor productivity—that screams opportunity! I've had the good fortune to work with several contractors who've developed the expertise required to gain significant, measurable, and sustainable improvements in labor productivity. The type of improvements that provide agility in the market to get the type of work they want, when they want it. Their success also provides the ability to control risks that come with growth. Two contractors experienced triple digit revenue growth over the past few years without sacrificing world-class profitability. The standards and processes they implemented to manage labor productivity were key to navigating those waters. Unfortunately, many companies fall short of creating the type of change required to achieve similar results.

It is possible to convert labor productivity from your biggest risk to your biggest advantage. Doing so provides a strategic advantage few other initiatives can do. To do so you'll have to re-think how you think about production and productivity. Here are a few approaches to managing and improving labor productivity that all of the successful companies I've worked with share in common.

Always Have a Goal

This isn't an advanced or difficult concept, yet it surprises me that many organizations don't set profit targets on self-performed labor at the start of a job, especially among subcontractors where as much as 60 percent of total project cost or more can be direct labor cost. Even more surprising is how often no shared, well-defined goal for production exists at the project or crew level. Before you can expect to become world-class in managing production, it's imperative to create a culture that routinely defines what winning looks like. If you don't have this low-hanging fruit in your cultural DNA most other efforts, you exert to drive improvement will be piecemeal with spotty results at best.

When working to improve productivity at the crew level the first two questions I typically ask are "how much work do we need to do to win?" followed by "is there enough work available where we're working to win?" If you can't answer these two basic questions with hard numbers instead of a lot of opinions don't go any further in your process improvement efforts, you've found what needs fixing immediately.

Move Beyond Tribal Knowledge, Be Experts in Production Management

Two decades ago when I was a carpenter apprentice I was taught a few basic survival tactics: 1) If you have nothing to do, pick up a broom and sweep, 2) If you have to stand around, don't stand near the windows where you can be seen, and 3) If all else fails, walk fast and look worried. That's a true story. I was literally taught to walk fast and look worried. And when it was necessary, it worked. I learned very quickly that, in general, most supervisors consider productivity as "pretty good" if people are busy all the time, putting forth max effort, and in compliance with policies and rules. Unfortunately, much of that "tribal knowledge" approach to evaluating productivity still exists.

It turns out that "busyness," effort, and compliance are lousy indicators of

production efficiency. So are the other two tools we typically use to manage productivity—labor cost reports and schedules. The weaknesses inherent in those tools are that they: 1) Provide incomplete information late and after the fact 2) Define success vs. budgets not process efficiency, and 3) provide little to no definition of conditions required to support an efficient process.

The very definition of productivity tells us we often take the wrong approach. Defined simply, productivity is value divided by cost. Where most project teams can tell me very quickly how much a crew costs per hour, very few are able to answer how much value is being produced during that hour and which steps of a process produce the value. Experts know that information.

Here's an example from a project I worked on a couple of years ago.

A customer accepted a bid to hang drywall at a unit price (labor only for this example) of $1.12 per square foot of drywall hung. At $1.12 per square foot, a 4' x 12' sheet of drywall has a value of $53.76 (48 sq. ft. x $1.12.) Using process mapping techniques, we identified value-adding steps to install a single sheet (not tops) at 3.5 minutes. Maintaining steady flow of value-adding steps at a 3 ½-minute cycle time could potentially produce 17 sheets of throughput per hour. That's $913.92 of value … per hour. After doing the analysis, the team then defined the conditions required in the work areas for the ideal process to happen reliably and what crew size was required to maintain those conditions. The first step taken was to define areas or "batches" of space on the floors that could support that rate of production, then make certain all upstream work was completed 100 percent, material staged in exact quantities, and the desired process validated with the crew (overwhelmingly the crew had no issues with the process, it's how they wanted to do it anyway.)

We never achieved the 17 sheet per hour target. Our average ended up at 12 per hour, or 96 sheets per crew. Even so, falling short of the potential target by 30 percent still yielded a 35 percent labor savings and a significant reduction in schedule time, which freed up resources to go produce more profitable work—not an insignificant fact.

When it comes to the numbers, your mileage may vary, but the approach should be clear—understand the value of your product and the rate at which you can cycle that value—in detail. Cost accrues on projects continuously. What is value doing? Most teams fixate on cost, but my experience is that cost isn't what kills production—not producing value kills production. If a crew encounters a ½-hour delay it's not the cost of the crew that kills performance, it's the $450 in lost production value that kills performance.

My experience is that crunching the numbers on the dollars is only required at the project management and field leader level—they need to know the business end of the information to make the best business decisions. But when it comes to crews most of them could care less if they must clean up a room first and then install drywall or if they can just install drywall. Most of them would prefer to just install drywall—it's easier and less of a hassle. The responsibility to stop putting crews in environments that force them to do unproductive, non-value adding work is Leadership and Leadership alone. Crews can provide a lot of useful information about processes and constraints holding them up, but we must earn their trust by demonstrating we intend to fix the conditions they are working in.

Set New Standards

If you think of or use your estimates and budgets as standards or predictors of what the work should cost, you need new standards. Estimates and budgets are simply statements of what the customer has agreed to pay for the work. They are based almost entirely on how we've done it in the past and include all the waste and non-productive time ever included during daily time card completion. And the waste is always included. By definition, improving means NOT doing it the way we've always done it.

Set new standards. To do so, study your processes in detail. What could be more important? Learn to identify the direct, value-adding steps to install conduit or drywall or duct work. Use the 80/20 rule to start, 20 percent of your work processes likely drive 80 percent of your labor costs. What does that work look like? What do you want it to look like? What are the basic conditions required to make work areas ready so that the process can be effective? Learn to process map, process chart. Learn to communicate and plan for conditions to support a process. Make it about process, not people. In organizations that attribute inefficiency to people without first learning and coaching proper production management techniques I find that real problems of production are seldom discussed and never solved. Encourage people to set aggressive targets and communicate routinely about why work didn't go as planned.

Set standards that strive for perfection. The game isn't about achieving perfection, it's about learning continuously what keeps you from being perfect, so you can solve problems, definitively, one at a time, over and over and over again. That's the very definition of improvement.

Brian Lightner is an associate director with Maxim Consulting Group, responsible for evaluation and the implementation processes with our clients. He has worked with construction firms of various, including the first ISO 9000 certified general contractor in the United States, to lead process improvement initiatives. Maxim Consulting Group welcomes the opportunity to assist with your jobsite productivity. Contact us at (303) 688-0503 or info@maximcon¬sulting.com.