

A Plan to Better Project Management Through Data.

A Technology White Paper

Having transparency into the labor data on construction projects is critical to the bottom line. As stated by Guy Gast, President of Waldinger Corp—Iowa Division and Sheet Metal & Air Conditioning Contractor's National Association (SMACNA) Contractor of the Year on a recent ICT webinar, ***“If we lost 10% of production on labor, we might lose the entire margin on the job and to the converse, if we improved labor production by 10%, we would probably double our margin.”***¹ Pretty compelling.

Why data or business intelligence (BI) metrics are important.^{2,3}

- **Accelerate business pace**—Making business data available for every department in real time allows users to take quick data-driven action. Centralization of data and accessibility through any device via the cloud reduces workload and significantly boosts productivity.
- **Obtain deeper insights**—In the construction industry, data sources are heavily siloed or stored at different locations, making effective data integration a challenging affair. An abundance of data can be an asset, but data mishandling or not integrating the data sources properly will lead to different versions of the truth and outdated reporting.
- **Achieve tailored reporting**—Reporting is an essential step for driving business decisions. Reports interactively display data to turn it into actionable information. A report can have multiple levels of interactivity like the ability to drill down, filter, and sort, as well as additional capabilities such as self-service editing to provide further exploring of the data for even more insights.
- **Project Performance** —Even if a project has an acceptable profit, did the project perform as estimated? Were there opportunities to potentially improve gross margin?
- **Project Controls**—Project controls must be repeatable and scalable, particularly as contractors grow and onboard new talent. Are your people consistently executing for steady results?
- **Labor**—Labor management is the top driver of project success or failure for self-performing contractors. As your work program and craft labor workforce grows, is your labor productivity management getting stronger or weaker?

- **Equipment**—Tracking equipment hours and understanding utilization are critical for optimizing fleet performance and yielding a return on capital-intensive assets. For the millions of dollars, you've invested in equipment, are you realizing an acceptable return?
- **Manage cash flow**—Avoid poor cash flow and do not jeopardize your company's livelihood. With today's competitive business landscape, smaller margins, fewer sales and staffing it is more important than ever to manage cash flow.
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Choosing the right technology and process.

- **Define a process.** This cannot be done from the top down or the bottom up. To be effective, both leadership in the office and in the field need to make a commitment to understand the goals, the process, and the tools to build a successful process. David Francis, CTO of Innovative Construction Technology states, "When I look at technology, it must have a plan, we need to have goal metrics, we need to have a champion to lead the process. If not, that is where things die."
- **Selecting technology**—**Number one**, ask yourself the question, Can I do business without it i.e., make a profit. **Number two**, is it easy? Is it easy for the field foreman to use? Does it require him to do anything more? Because if you don't make it easy for him, it won't be effective. **Number three**, do I need it because I need to retain or recruit talent. Let's face it, a lot of young foreman and a lot of young people in our industry rely on and value technology to do business so if you want to pretend that you don't need it, there is a whole cast of folks out there saying, I want to work for the cool place that has it. **You need to start treating technology like a tool and tracking it like a tool. Charge it up to a job like a tool. Everyone acts like computers are these amazing, crazy things and but at the end of the day it is just a tool.**
- **Implementing technology**—Whenever a new software tool is chosen, you still need to map out an implementation plan that includes ongoing training and support. You must stay committed to the technology until you've got it etched in stone.

At the end of the day, it's all about the data.

So.... You have chosen a technology, a process, a timeline to implement... now what to track.

Percent complete seems to be the Holy Grail of knowing where you are on a project. But is that information reliable or is it still following a best guess from the field?

- The field needs the ability to report against categories and match to the way they install the work in place.
- They need cost codes and activities that are of the right durations depending on the activity.
- You must give the field easy tools to report on the project's progress. Simple, if it's hard to figure out what they spent their time on, it won't get reported correctly.

Budget vs actual work performed. Not only is percent complete important, but you also need to know actual man hours based on measured productivity rates.

- Understand installation status and identify scheduling issues to prevent margin slip and protect project profits.
- Gain knowledge of future schedule productivity rates to feed back into estimating and win more jobs.

Improve Your Payout App Process Managing payout applications is a complex and frustrating processes for contractors. Payout applications work closely with the schedule of values. Together, they show the percentage of each work item that a contractor has completed, and the amount they should be paid for it. Most importantly, we need to keep in mind, contractors get paid for work completed, if it's documented

Types of metrics to track. It is more than just a picture, you need real data, with real dates to know where you are on a project. Data such as:

- Cost codes
- Pounds, pieces, feet
- Status of installation:
- Installed, not installed, needs rework

ICT Tracker: A Tool Toward Better Project Management

Innovative Construction Technology's ICT Tracker, is a model-based production app that automates installation progress tracking by digitizing field data collection and delivering comprehensive construction progress reporting for real-time visibility.

The ICT Tracker mobile app replaces manual and inaccurate methods or expensive 3D scanning systems by digitizing the collection of data on site. Using patent pending technology, the user can view the actual 3D design model on an iPad and compare it against as-built systems onsite. This gives contractors real-time data to track, measure, and improve project installation productivity.

With ICT Tracker, contractors can accurately track construction projects, control costs, and make better decisions based on detailed, real-time information from the job site.

Sources:

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