Making Data Work for You

Improve project management outcomes by obtaining more accurate data.

By Dr. Perry Daneshgari and Dr. Heather Moore, MCA, Inc.

When it comes to electrical construction projects, job-site intelligence implies a level of knowledge. It is essential to have that knowledge to express wisdom in the process of project management and effective decision making. Knowledge is not inherited, and it is not gifted. Knowledge is developed through a well-defined hierarchy.
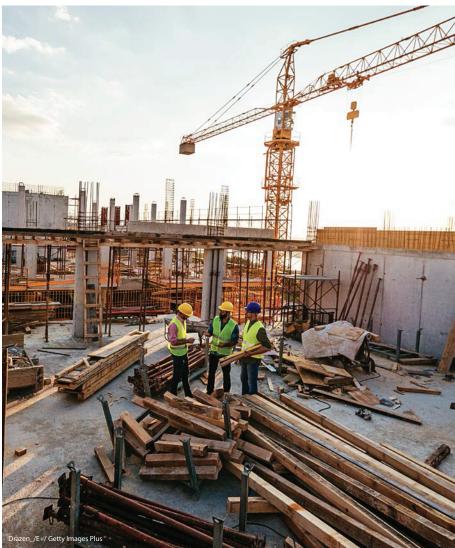
To gain the knowledge needed for effective project management, you must begin by having data. That data must be synthesized properly to provide information. Only when you have the correct information gained from high-quality, accurate data will you have sufficient knowledge to make intelligent decisions.

WHAT TO LOOK FOR AND WHY IT MATTERS

The most vital information on a construction project can be categorized into a few simple buckets:

• What is the plan for today, tomorrow, and the next few days? Not "what will we work on?" Rather, what deliverable work do we plan to complete each day?

• What resources are needed at the job site to complete the planned work? Think of resources in terms of the three M's: money, material, and manpower.

• At the end of the day, was the scheduled work entirely completed as planned? Be careful: the question you need to answer is not "Did I you work on it all day?" Instead, ask yourself if you completed everything that you planned — the things that are not in the time sheet.

• For each task not completed as planned, ask yourself why not? What prevented the labor from completing the intended installation work each day?

Each of these questions must be answered with data, not opinions. This is

Drazen_/E+/ Getty Images Plus

important because the synthesis process will require identifying the frequency and the severity of each cause of failing to complete the work as scheduled.

Only with good data will information indicating what is causing slower-than-needed installation, less-than-optimal productivity, and declining profitability to become visible. At that point, you can take proper and timely corrective action.

HOW TO LOOK FOR THE NEEDED DATA

There are three steps in the process of data collection:

1. You need to have a standard process

for data reporting, including the plan for each day, the work accomplished (or not accomplished) each day, and the reason(s) why.

2. You need to look at the data provided each day, synthesize using proven analytical methods, and roll it up against overall expectations.

3. When things do not seem right, you need to go to the job site and look. Simple observations by someone who is not buried in the daily tasks and ongoing mayhem of the job site can often bring to the surface quite simple explanations for job-site challenges.

WHAT TO DO WITH THE DATA AND NEWFOUND INFORMATION

Job-site intelligence is having information that is gained from data, consistently presented in a way that the real driving factors are visible and ensuring that when changes are made, measurement of improvement is immediately visible. Most importantly, following these guidelines enables corporate learning and sharing the lessons learned on any one job with the project teams managing all other jobs.

Do not jump straight back to accounting and financial results. First, you need to monitor and manage the operational results. This is done using the trends and simplified control charts. This is the job-site intelligence that allows you to know you are detecting issues promptly, correcting them effectively, and sharing the learning universally to ensure your jobs and your company meet financial expectations.

TECHNOLOGY THAT CAN HELP

It is necessary to use the proper software tools to simplify these steps. Such resources will be capable of capturing and retaining the plan, the schedule, the achievements, and the interruptions as seen from the field installers' perspective each day. Proper software tools will ensure that non-mathematicians can perform proper analysis and provide results that are timely, consistent, and ready for management to review each week. These tools cannot be encumbered by the limited reality known at the time of estimation or the slowness of monthly accounting reports (by the time you learn of an issue, identify the issue(s), and make a few iterations of corrections, your job may be over while you never had time to recover lost profitability). You need tools that can consolidate data from all three sources, synthesize results, and present meaningful job-site intelligence in near real-time. **EC&M**

Daneshgari is president and CEO of MCA, Inc., Gland Blanc, Mich. Moore is vice president of operations. They can be reached at perry@mca.net and hmoore@mca.net.