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Technical Management: Part 1 Maximizing Design Time While Minimizing Mistakes by Barry Dixon, True House Inc., based on his BCMC 2002 presentation

At BCMC 2002, I was given the opportunity to present a seminar in which I focused on a technical issue that was near and dear to all in attendance: how to maximize time spent on technical work while minimizing the potential for mistakes made in that process. Based on my experience with managing a technical department, I was able to share real-life solutions to improving the flow of technical work and lead a discussion as to how we can avoid mistakes in the process. Everything that I addressed is also an issue that my company is working through in our own plant as we speak. The seminar presented us with the perfect opportunity to share ideas for each of our operations to run more smoothly. Below is a summary of the seminar: “Maximizing Design Time While Minimizing Mistakes.”

The key, as I've found, to good technical department management is based on a thorough assessment of these fundamental points:

1. Ensure that your technicians are doing what they were trained to do. The chances are good that if you've never pondered this notion, you have one or more technicians performing tasks that should or could be delegated elsewhere. This is most common in small operations. I call it the “small plant mentality,” a working environment where everyone on staff knows how to perform every task. Often overlooked is the reality that as we grow and increase our volume of production while inevitably taking on more technical work, a keen awareness of the intended tasks for your technicians proves invaluable. Remember that you hired him or her to design trusses and design them accurately. The most crucial determination and designation you can make for the benefit of your operation is between technical and clerical work. It is truly a balancing act.

2. Manage interruptions for decreased error and increased productivity. The more interruptions our technicians face, the more room we leave open for error. In my business, there is no room for error; managing interruptions is imperative. I've learned one secret and will gladly pass it on to all of you: we will do ourselves a favor if we acknowledge interruptions as an ever-present conflict. We have to accept interruptions in our companies rather than fight to make them disappear. We should identify the few interruptions that we can control. Carefully outline what qualifies as an “emergency interruption” and a “non-emergency interruption.” You will be amazed at the number of unnecessary interruptions that can and should be managed during one workday.

One example of a non-emergency interruption that has the potential to disrupt a technician's attention to detail is the walk-in conversation, which can be managed easily. We all have people who walk in to our office space, with the intent to ask a non-emergency question, and stay for 45 minutes. This is a threat to the technical process, if not a colossal waste of time.

3. Place office tools strategically. We place tools strategically in the plant, why shouldn't we do it in the office? It certainly creates a more efficient office environment. For instance, are the printers and plotters positioned efficiently throughout the office? In the time it takes you to walk the corridors of the office to pick up a printout, you could take hours off your life. Does it make sense for six people to share one printer? It may lead to confusion and cause waste. What about the flow of job folders? When one project is done, the next one should be organized and lined up, with no time for anyone to wonder what the next task may be.

As for workstation ergonomics, keep in mind that technicians sitting for several hours on end will be more productive and less disrupted if they feel comfortable in their environment.

What happens when phone use in the office becomes a disruption? Calls from customers that should really be going to the sales staff are significant interruptions. Isn't it typical that a sales call would come in to bother a technician, throwing everyone into a whirlwind of confusion and mayhem while the technician, with the best intentions, tries to help the client? We have just implemented a system that accommodates outgoing calls only. Analyzing these points should give you an idea as to where your technicians need extra support or rearranging.

ORDER FORM

Organization during this step of the process is crucial, no matter if you use a paper process or an electronic format. If you are looking to convert from a paper to an electronic system to correct an organizational nightmare, consider that if you have trouble organizing on paper, it is unlikely that you'll find the solution electronically. It is very important to nail down the “paper trail” before you jump to electronic formats to organize your system. At True House, we have a backup to the paper trail. Most of our orders come to us via email and we transfer that onto a paper copy.

Design criteria must be included on this order form; load information, storage and handling details, overhang or wind zone specifications. It is essential to list anything specific to the job that the technician will need to keep in mind during the design process. Other areas of the initial order that are often overlooked are contact information, job identification, job number, customer, unit and subdivision. Assigning a second set of eyes for double-checking this important order form information can save valuable time and hassles early on in the design process.

MANAGEMENT INPUT & OUTPUT

Here is another spot where you should define clerical and technical work. Copying of jobs is very crucial. Even if you are building the same house 100 times in a year, you need to copy that information properly every time. A technician should only do the aspects of this job that require technical expertise to ensure that it is done correctly, otherwise one is generally only copying information from one job to another in rote fashion. This is potentially time consuming, so here is another example of why distinguishing clerical work from technical work can make sure that you are getting full value out of your technicians' time spent.

Are your technicians spending more time than they should be getting delivery packages together, organizing, and printing plans on the back of WTCA Jobsite Warning Posters? This has the potential of turning into an extremely time-consuming project. Ask if the technicians are involved in the clerical process to the point of being inefficient. If so, you always have the option of passing the more clerical tasks on to another department.

JOB FLOW CHART

The customer places an order via phone, napkin, in person or email. The sales department reviews and verifies the order for completeness, then completes an internal order form. Next is the clerical data input process. This person will most likely be the most consistent and efficient with this task, while minimizing the margin for mistakes early in the project's flow through various departments. Next, the job is ready for the technician to take over. Once the computer software inputs are complete, there should be some type of quality check. At True House, we've found that an internal quality control process serves us well, simply because our customers are paying us to do the job right the first time. Our two-step quality control process goes through a primary control that checks that our product meets all requirements specified in the field and that all codes are being met. A second engineering control exists where the accuracy of the design is verified by our professional engineers that undertake this review. If a raised seal is required, the paper flow will change dramatically to account for this need. Following the two-step quality control check, the design is delivered back to the customer for final approval.

MANAGING INTERNAL RELATIONSHIPS

Technician/Production Relationships: Recognize that good rapport between departments is crucial to the success of the entire operation. For instance, the design of the truss really affects productivity of the plant personnel. One suggestion we've implemented is holding monthly meetings to discuss that relationship between the plant and the truss designs being produced. Set aside an hour for technicians to spend time out in the plant. They will begin to see and think about what the plant people are experiencing as a result of their technical work.

Technician/Sales Relationships: Here is the perfect example of the importance of distinguishing be-teen non-emergencies and actual emergencies. Due to the nature of their work, your sales staff is most likely in and out of the office several times each day. In many respects, they are a very separate, albeit necessary, entity for the business. Because they are not part of that ongoing office process, the sales staff has a tendency to interrupt the work of the office for non-emergencies and seemingly at the most inopportune moments. For productivity's sake, these interruptions must be kept to a minimum, so the technical department's concentration is not broken. A mutual respect between the sales and technical staff must be present in order to preserve their working relationship.

Giving Ownership: Your technical staff will move mountains if they can claim a sense of pride and ownership in their work. Instilling ownership can be as simple as assigning specific client accounts to the same person with each job. Over time, that customer/technician relationship will become strong and they will come to fully understand the company's commitment to that customer. We take that a step further and assign a sales-person to that same customer. You could also track technician performance and productivity weekly. Depending on how these

projections look on a weekly basis, you can discuss how to rearrange the tasks of your technical staff to better accommodate the workload.

IF ALL ELSE FAILS, MONITOR CONSTANTLY!

Last, but certainly not least, monitor constantly! This doesn't mean you need to play “Big Brother” to get the results you want from your technical team. Maintain constant contact with technicians and encourage them to provide feedback as to what you can do to provide adequate work conditions to help them to achieve their full potential. I truly believe that if you spend more time with the technical staff up front, you will save more time and money in the end. There is something to be said for exercising caution up front.

SBC HOME PAGE

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