



When Things Go Bad, Don't Ask Who, Ask ...

By Miles Free – Director of Industry Research and Technology

In my experience, when things go bad, the first questions asked are usually, "Who did this? Who is responsible?" These are the wrong questions to ask and will actually create obstacles to conducting the root cause analysis needed to make a permanent corrective action. Before we look at the questions to be asked, let's take a look at the Human Performance System to see where the performer fits in.

The Human Performance System

The Human Performance System had its origins in the behavioral psychology work of Thomas Gilbert, Geary Rummler and Karen Brethower. Mr. Gilbert's original model noted that performance is a result of the interaction between a person's behavior and their environment. As the model gained an acceptance, it was further amplified to reflect behavioral psychology, looking at stimulus, response and consequences.

Just as a single tool alone is not the sole contributor to a machining failure, the performer alone is only one aspect of the company's system of parts production. The failure of the company's production system should look at the entire system, and not only the performer.

Why it Probably isn't the Performer at Fault

The human performer has the physical, mental and emotional capacity to do the work. They do until they fail. Why would we think they suddenly did not have what it takes to succeed? The human performer has the knowledge and skill through the training, education and practice or experience they have brought to the job. Why would their knowledge or training suddenly fail them?

The last place to look for a system failure, in my experience, is the "Who," or the human performer.

We need to look at the system.

Three Questions to Ask

There have been many times when as a shift supervisor, plant manager or division director bad news developed and needed to be reported to me. The questions I asked were not led by "who." They were led with, "Was anyone hurt and is the area safe?" After assuring that no one was hurt, I asked these three questions in this order.

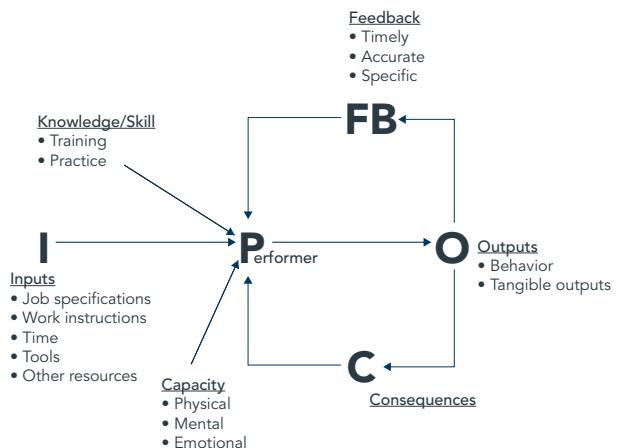
Is There a Process?

Not a practice, a process. A defined, written and detailed description of the scope of responsibilities, authorities, tools and steps to complete the work to the defined standard. If there is not a process, there is no reason to blame the performer. They did their best to achieve a result despite the absence of a process. It's not the performer.

"The performer is only one aspect of our system of providing products to our customers."

Was it Followed?

If there is a well-defined, written process, the next logical question becomes, "Was it followed?" If the process was not followed, then we need to ask not "who," but "why?" Was it not followed because of an exception or workaround dictated by conditions or circumstances? Was it not followed because the process was over-ridden by a supervisor's new instructions? Did materials, tools or methods change beyond the normal scope of the process instructions? Is the performer being pushed to exceed capabilities of the tools on hand? It is difficult to hold the performer to ac-



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count for failing to follow a process where the inputs are not as spelled out and may not be relevant to the work being attempted.

Was it Effective?

Just because there is a written process (and work instruction), doesn't mean that it is effective. What circumstances have changed since the process was first laid out. What has changed? In addition to changing inputs and tools, could it be that the outputs desired were not appropriate to the process as defined? Trying to hold too fine a tolerance, or take too heavy a cut? Changing expected outputs without reviewing the entire process including inputs such as job specifications, work instructions, time allotted, tools or other resources is not likely to work out well.

Is There a Process? Was it Followed? Was it Effective?

These are the questions to ask when an unexpected event occurs in your shop. The question "who?" is not appropriate until after asking and answering these three queries. In my experience, after considering these three questions, it is generally not necessary to ask "who?" The "who" is the performer, the one that brought their capacity and knowledge and skill to do their best with the inputs that we gave them. They created the outputs that reflected the real state of our system. The performer is only one aspect of our system of providing products to our customers.

Is there a process? Is it effective? Is it being followed? These are the three questions you can use to audit your shop right now to see if you have a significant emotional event in the making.

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Two PMPA Members Selected for 2018 STEP Awards

served on the Chicago Renaissance Council, the Chicago Public Schools for Manufacturing Advisory Council and several other prestigious organizations. She is a long-standing advocate for manufacturing in the community and has shared her experiences often to help make a difference and educate about the opportunities available.

The stories of Nancy and Joan are both inspiring in their accomplishment as well as instructional as to how they truly made a difference throughout their careers in manufacturing. Our industry is better for their involvement and the differences they have helped to lead.

Their stories make it clear that there is plenty of need for strong talent, regardless of gender, in our precision manu-

facturing shops today. They have had an important part in helping their companies improve technologies, systems and processes while helping their people to upskill and adapt. Today, 82 percent of manufacturers report that they cannot find the skilled workers they need. With women making up 50 percent of the workforce, but only 25 percent of the manufacturing workforce, the STEP Awards show the contributions that women can and do make in manufacturing.

Manufacturing makes a difference in the economy, and these women make a difference in manufacturing. Every dollar of final sales in manufactured products supports \$1.89 in output from other sectors, the largest economic multiplier of any sector.

Why Join PMPA? GROW!

To grow and profit today, you have to work smarter. You have to relentlessly eliminate waste. PMPA is the way to expand your knowledge and increase your capabilities in order to grow your business. Through daily interaction with PMPA staff members, you have access to our expertise on important issues. You're also able to tap the collective knowledge of your peers: those who have "been there" and "done that."

Through the meetings, resources and online connections, reports and more, we give you the tools to grow. We look at emerging markets and let you know what's hot and what's not. PMPA programs help you understand your markets so you can make sense of the issues. And we provide relevant information to help you make informed decisions.