

Involve employees in mistake-proofing



**RICK
BRIMEYER**

Brimeyer
LLC

He is president of
the Ames, Iowa,
consulting firm

I've written previously about how important mistake-proofing is in order to meet today's customer-expected levels of quality in our products and services.

As a quick review, mistake-proofing recognizes that humans aren't perfect; we all make mistakes. But through creative design of products, services and processes, those mistakes don't have to turn into product or service defects at the customer.

This month I want to delve deeper into how to implement mistake-proofing within your organization.

First, it makes sense to understand the defects that already are escaping to your customers. Let's hope a system is in place to capture customer complaint data. Use that data to identify a high-frequency defect.

Once a defect has been selected, use the experts who produce the product or service to identify the human error that causes the defect. More often than not, they will know.

At this point, we typically call the troops together and announce, "Be careful so you don't forget to ..." But, this approach is only effective when the root cause of the error is lack of knowledge, not human fallibility. And, so the defect occurs again.

For example, the fact that I know I'm supposed to turn off the coffee maker each morning doesn't mean that I will do it 100 percent of the time. A warning message on the machine would be of little use. Instead, the coffee maker is designed to automatically turn off if a certain temperature is exceeded, a more effective mistake-proof.

With mistake-proofing, once the human error has been identified, the fun and creative work begins. In order of preference, we want to identify an entirely effective means for:

- Preventing the specific human error from happening in the first place (Level 1 mistake-proof).
- Immediately detecting the human error if it does occur (Level 2).
- Effectively identifying the defect if it occurs (Level 3).

Let's assume we have a call center and workers occasionally forget to complete a required date field on an electronic form. Or, perhaps they occasionally mistype and enter an invalid date.

A Level 1 mistake-proof might involve improving the form so that workers click on the date on a calendar within the field rather than typing the date info.

A Level 2 mistake-proof might turn the field red immediately and not allow the worker to exit it until a valid date has been entered.

A Level 3 mistake-proof might inform the workers that the date field contains invalid data when they go to submit the completed form.

Frequently, effective mistake-proofs can be implemented at minimal cost. Like identifying the error that caused the defect, using the creativity of the folks who produce the product or deliver the service to brainstorm and select the mistake-proof is highly recommended.

Years ago, a supervisor friend was frustrated by recurring reports of units failing prematurely because an extra washer was included. The washers were about the size and thickness of a large soup can, except perfectly flat and smooth. My friend took an example of a failed unit to a team meeting, split the group into two teams and challenged them to independently identify the human error that resulted in two plates being assembled and

a means to prevent the error.

Both teams agreed that the error was caused by assemblers mistakenly grabbing two washers instead of one. This was exacerbated by the fact that the washers were thin, flat and tended to stick together due to the oil coating used to prevent rust.

One of the teams came up with a slick idea for a washer dispenser similar to the coin dispensers that car hops used years ago. The washers were loaded into a tube constructed of PVC with a slot at the bottom wide enough to accommodate only a single washer. A few hours and 10 bucks later, the idea was being piloted.

The team later switched from PVC to steel for the dispenser as the members learned that continuous use caused the critical slot width to grow.

Communicating customer feedback and involving workers in eliminating defects provides double benefits of telling workers that their ideas are valued while also greatly increasing the idea pool. That's a winning combination.

RICK SAYS

Like identifying the error that caused the defect, using the creativity of the folks who produce the product or deliver the service to brainstorm and select the mistake-proof is highly recommended.