



FOUR WAYS TO "FIX" A PROCESS

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As Dr. Wheeler noted when the practitioner is faced with a difficult process problem “you can either fix the process or fix the numbers”. Let’s see what the options are.

Suppose we have a typical example, such as a process with an unacceptably high nonconformance rate.

How can we “fix” the process? There are four choices:

1. Find and remove the cause(s) of the nonconformities (i.e., fix the process)
2. Change the specifications limits or what we define nonconforming
3. Change the quality characteristics to be checked
4. Change the nonconforming opportunity count

Let’s rule out, for the sake of argument, actually fixing the process. Then the politically motivated practitioner proceeds to item two. Actually, this is a worthwhile area to pursue if it is done honestly because the specifications may have been improperly set to begin with (the probability of this is reasonably high) [Flaig, 2002]. Of course if this action is a ruse to ship poor quality product, you may hear about it in the future when the returns roll in.

If the second option has been exhausted, the worried practitioner might consider item three. Redefining what needs to be checked so that yields automatically go up and cycle times go down. This approach falls in the “instant pudding” effect category described by Dr. Deming. All the problems are solved instantly and everybody is happy – at least in the short run. However, in the long run, if the customers complain and returns start rolling in, the practitioner will again find themselves in hot water.



So if item three is not viable we still have the fourth option -- change the metrics. Instead of counting the number of nonconforming units as a percentage of the number of units produced. We cleverly propose a new metric called DPMO (defects per million opportunities). On the surface this seems like a reasonable metric (and it is as long as it is not abused). How can we make the process look good? Easy, just increase the defect opportunity count. With a little number juggling the desperate practitioner can make things look pretty good. The irony in this last scenario is that the practitioner should be working to reduce the opportunity count whereas they are actually inflating it so that the paper results look better, but unfortunately this does not change the process results. This last technique has been used effectively by some Six Sigma Black Belts to achieve "marvelous results".

Ethics is always a touchy subject in any area of endeavor. Each of the three techniques listed above, if used with the honest intent, is reasonable and justifiable. However, if they are used for deception, then perhaps we have drifted (or been pushed) into the realm of unethical behavior. We as quality professionals need to guard against this ethical drift as much as possible because our personal integrity and that of our profession are at stake.

References

Flaig, J. J. (2002). Process Capability Optimization. Quality Engineering, Marcel Dekker, Vol. 15, No. 2, pp. 233-242.

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