

The Process of Discovery and Continuous Improvement – An Important Driver of Fluctuations in Project Priorities, Total Cost of Quality and Culture Change

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Fifteen years ago, we moved into a home with a pine tree in the front yard. Its pine-tree shape was sadly hidden by branches that grew helter-skelter from top to bottom. It looked more like a 10-foot tall bush than a tree because it had not been trimmed since it was planted.

One Saturday morning I decided to trim that tree to make it look like a tree. This was my first attempt at tree trimming. I took my time “sizing up the tree” to determine what branch to trim first, and decided that the best approach would be to start at the bottom and work my way up. I felt certain that a more appealing shape was hidden in there somewhere, but wasn’t sure exactly what the end product would look like. I was hoping to uncover that “story-book tree shape”, the kind we drew when we were in elementary school with a uniform trunk and a balanced triangular shape.

I picked the first branch to remove and began to cut. After the removal of each branch, I discovered that it was easier to determine which branch to trim next. A surprisingly art-like trunk shape began to emerge, much like a bonsai tree. The end result was an eye-catching tree that was the centerpiece of the front landscape. Even the neighbors commented on how great it looked.

While reflecting on what I learned that day about tree trimming, I recognized similarities between the process for finding the optimum shape for a tree and processes for optimizing operational and financial performance. Shaping a tree is a process that has an end-goal in mind, potential for improvement, and a cycle of steps for trimming, analyzing and prioritization that are repeated until the end result is achieved. Each removed branch sets the priority for the next branch to be removed, and sometimes the next branch selected for removal changes as the shape of the tree begins to emerge.

When improving an organization’s performance, we start by believing that we have opportunities for improvement, even though we might not know exactly what all of them are when we start. We do our best to quantify the opportunities as we find them and we prioritize which ones to go after first, second and third. Then, we assign resources and apply the appropriate tools and methods to capture the lost value and optimize the end product.

A subtle but important dynamic in every improvement program is the “process of discovery”. In the tree trimming process, the priority set for the next step is continuously evaluated to achieve the best result. That iterative evaluation step becomes an integral part of the process. Similarly, recognizing the “process of discovery” as a natural and expected part of optimizing your

organization's performance gives you permission to change your mind about priorities as you progress on the learning curve of continuous improvement. Further, how management reacts to "discovery" is key for sustaining their improvement program and driving culture change.

Changing Priorities

As employees learn how to recognize opportunity, they begin to see their work and recurring problems differently. **What used to be a problem that continued to recur (i.e., it seemed to be "part of the process") will suddenly be viewed as an opportunity for improvement that really can be fixed.** As that problem is analyzed and action plans are implemented, another problem may surface. If the second problem carries a higher opportunity cost than the first, employees need the flexibility to re-prioritize so that the second problem gets fixed first if resources permit.

The first year in every improvement initiative is a learning year and should be viewed as such by management and employees. Employees are learning to use new tools and concepts that help them "see" hidden improvement potential for the first time. Management is also learning how to manage the program with words and actions that encourage and energize employees and sustain improvement. Giving the workforce permission to change priorities as they develop expertise in process improvement allows them to do what makes sense to maximize improvements in operational and financial performance during that all-important learning curve phase.

Change in the Value of "The Gap"

I recommend that improvement potential be defined as the difference between actual and optimum performance (however optimum is defined). Dollar values (Cost of Quality or Opportunity Costs) are usually assigned to this gap for individual opportunities, as well as the infrastructure or value stream. Recognizing the "Process of Discovery" as part of continuous improvement means that total for Opportunity Cost dollars will increase and decrease as projects are identified and problems are solved, especially in the early years of an improvement initiative. This is an important concept for management to understand and respond to appropriately because traditionally success with improvement is measured as a reduction in losses.

Here's an example that illustrates how an increase in total dollars can be a good thing:

Initial gap is valued at \$50M. New projects are added the first year and the gap grows to \$60M. Improvements are made and the gap shrinks to \$40M. Management reports a \$20M addition to cash flow in the annual report. THEN... other opportunities are discovered and the gap grows again to \$50M. It looks like we are getting worse instead of better.

Question: “How should management interpret this fluctuating value that is still out on the table to get?”

Answer: An increase in ore reserves would be reported positively because it increases mine life and value to shareholders. Similarly, an increase in the value of opportunities “left to get” does not automatically mean that you are losing ground with your improvement program. If your people are making improvements and continuing to find opportunities, the total value of all opportunities is likely to increase periodically. (Note: A gap analysis is warranted to confirm how much of the increase is due to “discovery. As long as “discovery” is a cause of the variance, the increase reflects continuing efforts of employees to identify opportunity, despite successful efforts to reduce losses in other areas). The Board of Directors and shareholders should be educated about this dynamic.

Impact on Culture Change

Being critical of “when” opportunities surface can stifle the problems that come forward for discussion in the future, especially when they relate to controllable events or processes that have been out of control or poorly managed for some time. Examples would include the processes for managing planned downtime for operations and maintenance. **It takes courage for managers to admit that a process could have been managed better**, especially in a culture that is quick to criticize but seldom praises good work. When managers are trying to drive and sustain improvement initiatives, it is not the time to make people feel bad about not taking action earlier; instead, **it is the time to congratulate them** on their new level of responsiveness or urgency to a chronic problem.

I have seen management teams “judge” operations for recommending a change in priorities, especially in the first year of their improvement initiative’s roll-out. **Being critical of changing priorities in this early phase can also stifle future discoveries** and limit the overall benefit your program will deliver.

Employees will tell you what you want to hear. Be sure they know that management welcomes every opportunity discovered (even if you wish the order could have been different), so that the organization gets the opportunity to maximize the lost value that is captured.

NOTE: Kay Sever implements continuous improvement with a unique and balanced approach between continuous improvement concepts/tools and the people side of improvement. She works with every organizational level and across functional areas to 1) remove the barriers that hide opportunity and prevent sustainability and culture change, and 2) promote cooperation and measurable improvement in all departments to maximize the natural synergies that exist between production and all the departments that support it. She also coaches management teams on Improvement Leadership and helps them modify their management processes to drive and sustain process improvements and improvement initiatives. More detail about her services is available at her website: miningoportunity.com. She resides in Arizona and can be reached at 480-545-9095 or via email: kay@miningoportunity.com.