Targeting Continuous Improvement with Laser Focus

- Iris Nielsen

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Continuous improvement, at its core, involves a never-ending effort to achieve perfection. Whether focused on exposing and eliminating the root cause of a problem, identifying waste in a process, or adding customer value, it is a perpetual effort with many incremental advances that can never create a truly perfect result. Even though true perfection is impossible, those involved in continuous improvement initiatives should strive to come as close to it as possible.

The following four factors are essential to successful continuous improvement programs and, when implemented properly, can help professionals reach near-perfect results:

1. **The support of an organization's executive team** is arguably the number-one requirement for an effective continuous improvement initiative. Leaders must demonstrate support for the initiative and model the behaviors they want all employees to emulate. This ultimately comes down to guidance and providing the necessary backing to make a lasting change. If these two aspects are lacking, then the team members who are charged with implementing the advancement will be performing nothing more than a series of isolated efforts.

2. For an individual, team, or company to implement change, **the time and mental capacity required must be present and available**. Often the very problems that need fixing are the sources of a series of small failures that constantly distract professionals from identifying and solving the root cause of the real issue at hand. In these scenarios, everyone is working harder, rather than smarter. Even worse, some company cultures celebrate and reward those people who resolve the most glitches, which removes the incentive to prevent them in the first place. Be aware of individuals who do not follow procedures, cut corners, or cause chaos, as they often are the instigators of this form of crisis management.

3. W. Edwards Deming offered 14 key principles to follow in order to significantly improve business effectiveness. The first principle talked about **constancy of purpose**. This unrelenting, unwavering focus on improvement is critical to maintaining and sustaining forward momentum. It's critical that changes are not forgotten and don't grind to a halt through fatigue or resistance. Leaders of successful continuous improvement programs understand that progress is not merely a management initiative but, rather, a long-term practice that permeates the core of the organization.

4. Managers often are very focused on meeting monthly or quarterly targets, so it can be counterintuitive to prioritize improvements that won't make an impact right away. However, continuous improvement is as much about mind-set as it is about actions. Professionals must **consider the potential, long-lasting effects of the work** and appreciate the fact that a quarterly dip in performance can be tolerated if it means that the company is in a better position financially and in its ability to deliver outstanding products and services to customers.

Making the shift

Ophir-Spiricon provides a complete line of laser measurement instrumentation, including power and energy meters, beam profilers, spectrum analyzers, and goniometric radiometers. Its modular, customizable solutions serve manufacturing, medical, military, and research industries around the world. Recently, team members there achieved several small wins after a continuous improvement implementation. The developments included

process improvements, effective workspace realignment, refined packaging configuration, and heightened safety practices.

The organization used the Shingo Model (see sidebar) to support the objectives, incorporating the philosophy as a way to add customer value. Moreover, the initiative was specifically designed to ensure that every employee was empowered to suggest improvements. Additionally, all were part of lightbulb teams that met for one hour twice a month in order to work on existing projects and innovate new strategies. The teams were led by peers, and significant effort was made to include a cross-section of departments. Both visual and computerized tracking of project status were employed.

The products offered by Ophir-Spiricon are highly complex and scientific in design. As such, during the initial stages of the continuous improvement journey, several employees complained that they lacked the knowledge required to improve the product line. Management therefore endorsed a peer-led lunch-and-learn program during which product experts showed employees how each particular product functions. Supply chain professionals also contributed segments from suppliers in order to demonstrate the products that are sourced. Employees and suppliers were engaged in dialogue about product use and challenges related to functionality.

Incentivizing employees was another key element of the continuous improvement plan. Rewards could include recognition at company-wide meetings; an award or certificate; lunch with the boss; and, of course, monetary prizes. Ophir-Spiricon professionals' opinions of what were the best rewards were just as diverse as company employees, as everyone is motivated by different stimuli. The prospect of rewards drove workers to learn more about the business, the materials, and the products that are used and made; to stretch and explore new ideas and concepts; and to become true experts who continually assess the current state of processes and pursue a better future state. Because improvements were integrated within job functions, each employee accepted responsibility for enhancement of their daily work. All involved now grasp that their jobs and their efforts are part of a much bigger picture.

Tiny triumphs

Ophir-Spiricon experienced many small yet meaningful advancements as a result of the continuous improvement journey. First, employees noticed that there were numerous damaged cameras and meters returned from end users for repair. When team members investigated, they discovered that the reason for the damage was that customers were using the wrong power supply. In response, employees developed a red warning sticker that could be placed on units indicating the correct power supply. This seemingly minor innovation has drastically reduced the number of returns.

As another example, several initiatives from production technicians involved inventory optimization and control. Setup time was reduced by relocating parts by product families in the warehouse, making it easier for people to find the components. Team members also established vendor- managed areas for small, inexpensive parts that are accessible by technicians, further reducing setup time.

In addition, the company uses a variety of highly polished, optical windows, lenses, and filters in its manufacturing process. During the assembly process, the optics attracted debris or smudges and required cleaning. This was time consuming and not 100 percent effective. Technicians took action and developed a propriety method for cleaning the optics that requires significantly less time and, therefore, reduces the overall assembly time for finished goods.

Along the way, professionals at Ophir-Spiricon realized that organizational performance can be greatly improved from knowledge gained through experience. After all, lessons learned from mistakes mean those mistakes are less likely to be repeated. For continuous improvement to be successful, company professionals must learn from past experiences and translate this knowledge into improved performance. At Ophir-Spiricon, part of that learning process involved trying different approaches, exploring new methods, and testing ideas.

This experimentation proved to be a very important part of organizational learning. Naturally, many worker-led experiments will fail, so it was important for executives to recognize that there always will be some risk associated with experimentation. Business leaders discovered three key lessons during this part of the process: First, management learned to avoid the tendency to judge employees harshly if an improvement failed. Second, improvements generally come in modest increments of progress. Third, it is wise to establish environments that reinforce the notion that risk is good.

Problem-solving was the driving force behind Ophir-Spiricon's improvement. Actually, it became a way of life that was embraced by managers and workers alike. Employees now are trained to spot problems that interrupt, or have the potential to interrupt, the smooth flow of work through the system. When such issues occur, they are resolved quickly. Likewise, people are trained to seek improvements in inventory, setup time, cost, output rate, waste, and inefficiency.

No standing still

The driving force behind continuous improvement is dissatisfaction with the status quo, no matter how great a firm is perceived to be. All areas of a company have a responsibility to fuel the process and must hold a relentless, steadfast focus on sustaining progress in the long term. Even the smallest, most incremental advances can add up to major improvements over time if they are achieved continuously. This concept relies on smart tactics as well as the drive to change the culture of the organization to one that emphasizes opportunities for advancement rather than problems.

When expectations are clearly and unmistakably communicated, processes can be designed to meet customer needs and give them what they value. To accomplish these goals, every employee must strive for perfection, know what to look for in a process, and possess the ability to act when a process is not creating a good product or service. Only then will real innovation be realized.

The Shingo Model

Industrial engineer and manufacturing authority Shigeo Shingo wrote: "Improvement means the elimination of waste, and the most essential pre- condition for improvement is the proper pursuit of goals. We must not be mistaken, first of all, about what improvement means. The four goals of improvement must be to make things easier, better, faster and cheaper."

Superior continuous improvement must indeed incorporate these goals; however, at Ophir- Spiricon, team members learned that continuous improvement also demands that a company deliver all of the myriad aspects of value as perceived by customers. Further, these values are constantly evolving. Today, for example, flexibility and corporate social responsibility are rising toward the top of the list. Tomorrow it may be something completely new.

There are five tenets within the Shingo Model that can help professionals respond to these demands. Ophir-Spiricon applied these theories during its continuous improvement initiative. The principles are

1. focus on process
2. embracement of scientific thinking
3. flow and pull value
4. assurance of quality at the source
5. a drive for perfection.

To learn more about the Shingo Model, read *The Shingo Model for Operational Excellence* at **http://bit.ly/ShingoModelHandbook**.

Iris Nielsen is a senior buyer at Ophir-Spiricon, a division of MKS Instruments, where she leads the Lightbulb Innovation Team. She has been involved in supply chain management for 30 years, having worked in several capacities at ATK Space Systems and Thermo Fisher Scientific prior to her current role. Nielsen may be contacted at iris.j.nielsen@gmail.com.