

Increasing Support for Improvement



By *Deborah Hopen, Deborah Hopen Associates Inc., and*



James J. Rooney, ABS Consulting

Although many team members find the define, measure and analyze phases of the lean Six Sigma (LSS) process challenging for a variety of reasons, the situation usually changes noticeably during the improve phase. The process of proposing and shaping solutions that remediate or eliminate the validated root causes requires creativity and can be a great deal of fun. Team members tend to work most collaboratively during this phase, as they brainstorm ideas and build on one another's suggestions.

Shaping those initial solutions into a comprehensive approach that provides an effective countermeasure to the root cause takes some technical skills and patience, but most team members can easily see the connections and feel as if they are nearing the goal line for a touchdown. Care must be taken to avoid incorporating solution components that go beyond the required remediation. However, applying tools such as waste and value-add analysis, or failure mode and effects analysis, provide

straightforward ways of spotting these unnecessary elements and eliminating them quickly.

From a human perspective, the most difficult part of the improve phase follows these fairly enjoyable endeavors. Even when the team has determined its preferred solution, it must verify that the solution works as intended without creating negative consequences. Pilots, designed experiments and other approaches are used to prove the worthiness of the solution and determine changes that may be required to make it address the root cause sufficiently. For many team members, these steps seem a bit anticlimactic, and they require a disciplined approach that seems to undermine the free-spirited work involved in solution development.

After a tactical plan is developed with detailed steps for implementing the solution, assignments are made and the plan is transacted, the team's energy level may decline. But developing a thorough action plan is essential to preventing recurrence of the problem. At first, this work seems to be dull and even mechanical, but that's not really the case. Behind every step in the implementation plan are substantial human-factor considerations.

The implementation process is not as procedural as it seems—if care is taken to investigate and deal with the reactions of people who must live with the change. It's easy for the team to forget that the improve phase is where the process owners first get to experiment with and experience the proposed changes, interacting with the new process. Although the official transition of process ownership doesn't

occur until the control phase, the wise team knows that involving the process operators more directly in the improve phase can avoid myriad undesirable roadblocks to implementation, including resistance.

Obedience and conformity

Social psychologists study how people think about, influence and relate to one another. Research on obedience and conformity is associated with this field, and it is used to estimate how affected people may respond to proposed changes.

Obedience. The human tendency to follow directions and respect leaders serves as a deterrent to resistance. During the 1960s, Stanley Milgram conducted the most famous—and most controversial—experiments related to this area.

Subjects were asked to teach and test learners (who were colleagues of the researcher) on a list of word pairs. The learners appeared to be wired to an electric shock machine. Each time the learner answered a test question incorrectly, the teacher was required to apply an increasingly higher shock. Although no shock was actually applied, the learners feigned increasing degrees of discomfort and pain, including shrieking in agony and begging for relief.

Amazingly, 63% of the teachers continued to escalate the punishment when encouraged by the researcher—even though the teachers were clearly distressed by the process. The following situation factors were most likely to increase obedience:

- The person giving the orders was close at hand and was perceived as a legitimate authority figure.

- The authority figure was associated with a prestigious institution.
- The victim was depersonalized or located at a distance from the subject.
- There were no role models for resistance.

When this research is incorporated into the implementation plan, the LSS team can create a more favorable response to its proposed solution. For instance, the team should identify a credible champion as the spokesperson for the change. Affected people are more likely to set aside their low-level concerns and follow a leader who is respected, trusted and perceived to be an authority figure.

It's also worthwhile to work with behind-the-scenes leaders who express reservations about the intended changes. Whenever possible, merge these potential resistors into the change process and develop an implementation plan that resolves their concerns.

Conformity. Suggestibility, a tendency to adjust behavior or thinking toward some group standard, is a key aspect of this social psychological concept. Solomon Asch, another noted social psychologist, conducted a simple experiment to determine the power of this human inclination.

Imagine five people seated at a table, looking at a diagram with several lines of varying lengths on it. Each person is asked which two lines are the same length, and everyone at the table makes the same selections. After several rounds of this process, people seem to be getting bored, but then something amazing happens.

The first four people all select two lines that obviously are quite different in length. By the time the experimenter asks for the final per-

son's selections, he or she is feeling incredibly uncomfortable. When subjects were presented individually with the lines, their error rate was less than 1%. That value, however, increased to more than 33% when the subjects were grouped with peers who were actually confederates of the researcher. In other words, the subjects ignored reality and conformed to the group assessment more than one-third of the time.

Conformity is greatest under the following conditions:


- The subject feels insecure or incompetent.
- The group has at least three people.
- The other members of the group show unanimous agreement.
- The subject admires the status and attractiveness of the other group members.
- The subject hasn't made a previous commitment to a response that conflicts with the other group members.
- The subject knows other group members are observing him or her.
- The subject's culture encourages respect for social standards.

This experiment demonstrates what is called normative social influence—being sensitive to accepted rules of behavior. Interestingly, modifications of Asch's original experiments indicate that people are more likely to conform when the task they are facing is more difficult or when the weight of their decision is more critical.

These learnings on conformity can be applied to the action-planning steps by meeting individually with a few key respected personnel to resolve any potential issues and asking them to speak favorably of the change when it is announced to the group at large. Describe how

the change fits with the culture and accepted practices of the organization and workgroup, as well as how the change uniquely aligns with the expertise and experience of the affected people's capabilities.

It's also important to allow sufficient time for 60 to 75% of the affected people to get on board with the change. Incorporate cycles of evaluation, feedback and improvement where the team members interact with the people who are affected by the change to build commitment and transfer ownership.

Ultimately, flexibility is a key skill for successful implementation. The human social psychology tendencies associated with obedience and conformity may be used to pave the way for successful change, but they must be seeded with approaches that build respect and trust for leaders of all types, who establish the drumbeat for others to follow. The answer not only is in establishing a change process that leverages these natural human factors, but also one that reinforces that it is safe and secure to follow the leaders without being unduly concerned about personal risk or dissatisfaction. 

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DEBORAH HOPEN is the owner of Deborah Hopen Associates Inc. in Federal Way, WA. She has a bachelor's degree in applied science, pulp and paper technology from Miami University in Oxford, OH. As a past president and chair of ASQ, Hopen is an ASQ fellow and the editor of the Journal for Quality and Participation.

JAMES J. ROONEY is director of Department of Energy programs and director of quality and lean Six Sigma services at ABS Consulting in Knoxville, TN. He has an MBA from the University of Tennessee in Knoxville. Rooney is a past chair of ASQ and holds several ASQ certifications.