

Applying Lean Six Sigma at the Forward Support Company Level

Lean Six Sigma methods can be applied at any level of an organization where there is significant leadership support, dedicated team activities, and a focus on process improvement.

■ By Capt. Luke P. High

The Army has successfully implemented Lean Six Sigma (LSS) at the strategic level and in top-tier operational units, but not at the tactical level. The purpose of this article is to provide recommendations, based on my experience as a forward support company (FSC) commander, for how units at the tactical level can improve their processes by implementing LSS.

Sustainment organizations at the brigade combat team (BCT) level and below should implement continued process improvement to identify deficiencies and create efficiencies. The recommendations that follow are geared toward FSCs within light infantry BCTs.

Identify and Train Team Members

The first step in implementing LSS is to identify which members of the unit will be part of the LSS team. These Soldiers must be trained through the Army's LSS training program. A trained and experienced team is critical to successful LSS implementation. The initial training investment will pay dividends in realized savings from successful projects.

Team members must contact an Army LSS deployment director located within their major command. The LSS deployment director maintains training seat quotas and assigns mentors who help students complete the projects required to receive LSS certifications and additional skill identifiers.

Class seats are assigned through the Army Training Requirements

and Resources System (ATRRS). Deployment directors can register candidates for Army LSS training in ATRRS using school code 142.

In an FSC, the LSS team should be composed of six individuals of various military occupational specialties and ranks. These team members should report directly to the FSC commander.

The company executive officer, a first lieutenant who oversees the FSC's maintenance operations, should lead the team. Ideally, the first lieutenant will have been in the position for one year and have at least three years of total experience in sustainment operations.

The chief warrant officer two in charge of executing the battalion's maintenance operations and planning should also be on the team. This warrant officer will bring at least eight years of experience to the team.

The maintenance control sergeant first class should serve as the senior adviser to the warrant officer and will have at least 10 years of experience. The team should include the senior mechanic or a shop foreman, a staff sergeant with at least six years of experience.

The fifth member should be the transportation section leader from the distribution platoon. This individual, who is in charge of the brigade support battalion's largest fleet of rolling stock, will bring at least six years of experience and vehicle operations knowledge.

The last member of the team should be a general mechanic in the rank of specialist or private first class. This

Soldier will be the daily "wrench turner" and will need to be able to process critical information and provide it to senior team members.

Implementing LSS

Once the team members are selected and trained, they should plan the implementation of their LSS project using the define, measure, analyze, improve, and control approach illustrated in Michael George's *Lean Six Sigma Pocket Tool Book*. All steps of the model are equally important to the success of the LSS project.

One of the most significant issues that I faced as an FSC commander was the unavailability of vehicle repair parts, which increased customer wait times and decreased unit readiness. I will use the problem of repair part unavailability as an example for how to apply the LSS phases.

Define. The first step is to identify the problems from the customer's point of view. The team should conduct interviews and surveys and hold discussions with customers to understand their concerns. Internal processes should be reviewed and staff concerns aired. In the end, the top reasons for a lack of available parts should be identified and thoroughly defined.

Measure. The standard measurement for the output and turnover rate of vehicle repair is guided by the Army Maintenance Allocation Chart in Army Training Publication 4-33, Maintenance Operations. It is the Army standard for conducting maintenance operations.

Current operations, in my experience, fall below the published standards and need to be accurately measured against the standards to achieve a maintenance baseline. When trying to resolve parts shortage issues, the team should start the clock when a maintenance work order has been placed and stop the time once the vehicle is repaired, the work order is closed out, and the vehicle is picked up by its operator.

Analyze. During the analyze step, the team examines the issues directly related to the problem of parts availability. The team should analyze shop and bench stock inventory levels, vehicle and equipment utilization rates, and any excess property that may be authorized.

If the shortage of parts is truly the unit's fault, the team may discover that orders were not filled because of budget constraints, were canceled by a higher headquarters, or were never placed because of other repair priorities.

Improve. The improve step requires three activities: brainstorming to create solutions, testing the solutions, and assessing the outcomes of the solutions.

Using the FSC maintenance example, two possible solutions could be proposed. First, a policy could require all units to maintain their shop and bench stocks at 100 percent. Most organizations typically have less than 50 percent of their stocks on hand. However, the Army mandates that fleets be kept fully mission capable and to the -10/-20 maintenance standard for readiness reporting.

In order to mitigate this problem, units could place underused vehicles and equipment in the Army's Low Usage Equipment Program so that they are not required to be maintained at such a high standard. This could free parts for the maintenance of regularly used vehicles.

Second, the FSC could turn in excess vehicles and equipment to the Defense Reutilization and Marketing Office. Most units have vehicles and equipment on their property books that are not authorized by their modified tables of organization and equipment. Turning in equipment would remove it from the unit property book and eliminate its tracking and maintenance requirements. This would also free funds for regularly used vehicles.

Before implementing a full-scale improvement, the team should conduct a test run on a sample group, for example, one FSC in the BCT. If the team and the BCT commander are satisfied with the outcomes, the improvement could then be implemented across all FSCs within the BCT.

Control. In the control step, leaders and the LSS team monitor the implemented processes, observe benchmarks, and collect relevant qualitative and quantitative data to capitalize on and continue process improvement. This step ensures that processes are controlled and observed to identify and eliminate or mitigate any unplanned variables in the system. Successes, failures, and standard operating procedures should be shared with other organizations.

By improving maintenance processes, sustainers can properly maintain repair parts inventory levels and reduce customer wait times. This is just one example of the growing opportunity for LSS use at the tactical level in the Army.

Leaders should seek areas of process improvement by identifying deficiencies, implementing efficiencies, and continually assessing their processes as missions, situations, and environments change. Process-driven management will make the organization more effective and efficient while saving money. In the end, LSS will result in a better trained organization, a mission-ready fleet, and a lethal fighting force.

Capt. Luke P. High is a management instructor within the Department of Behavioral Sciences and Leadership at the United States Military Academy. He holds a bachelor's degree from Ohio University and an MBA from the Poole College of Management at North Carolina State University. He is a graduate of the Combined Logistics Captains Career Course, Ranger School, Jumpmaster School, Pathfinder Course, and Aerial Delivery and Materiel Officer Course.



Two maintainers from Forward Support Company H, 2nd Battalion, 5th Cavalry Regiment, 1st Armored Brigade Combat Team, work to recover a light medium tactical vehicle on May 25, 2016. (Photo by Capt. Joseph Best)